

IR SYSTEMS AND WELL-BEING IN OECD COUNTRIES, 2000-2012: A TWO-DIMENSIONAL APPROACH

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Introduction

- **What are antecedents of well-being?**
 - Most political and ideological debates ultimately focused on construction of appropriate policies and the enhancement of quality of life
- **Characteristics of IR system may be considerable antecedent of well-being**
 - Critical human needs are met through work and employment
 - IR system, as a subsystem of a national system, is an important factor that influence a nation's level of health and well-being
- **Present study examines impact of national IR systems on broader society**
 - Classic IR theorists focused on the impacts of IR on directly work-related issues such as “industrial democracy” (Webb and Webb, 1897), “web of rules” (Dunlop, 1958), and “the two faces of unionism” (Freeman and Medoff, 1984)
 - This study expands the potential range of IR outcomes by investigating international variation in happiness and social problems of crime, suicide, and family break-up

Two-dimensional IR approach

- **Country's state of IR can be assessed with two dimensional index of efficiency and equity (Barbash, 1984; Meltz, 1989)**
 - This methodology sees IR's two core objectives as efficiency and equity (Kim et al., 2014)
- **Efficiency: maximizing output with minimum input**
 - Country with high efficiency in IR: free to utilize HR efficiently; workers circulating freely; IR systems supporting minimization of HR transaction costs
- **Equity: satisfaction of both procedural /distributive justice**
 - Country with high level of equity in IR: enjoys high level of social consultation on labor rights and human dignity; system of distributive and procedural justice institutionalized among employers, unions and state

Efficiency prevailed over equity in early 21st century

- **According to pluralistic philosophy, if public policy tilts to one extreme, undesirable consequences for society will result**
- **Excessive emphasis on efficiency at expense of equity**
 - Leads to wage gaps and income inequality
 - Results in labor disputes or other forms of employee resistance in both workplace and wider society
- **Focusing on equity alone**
 - Weakens the basis of economic activity by lessening motivational potential of capitalism
 - Leads to labor market rigidity, free-rider problems, and lack of innovation
- **Period (2000-2012) covered by this paper was one in which efficiency concerns prevailed over equity concerns after Thatcher-Reagan era**
 - Present study's hypotheses based on view that unbalanced pursuit of efficiency likely to have negative consequences; relatively greater emphasis on equity likely to produce desirable results

Hypotheses

- **One-sided pursuit of IR efficiency while ignoring IR equity undermines happiness**
 - Result in excessive competition and lack of IR equality
 - Increasing income inequality reduced happiness in U.S. and Europe (Helliwell et al., 2015)
 - Growing inequality started to undermine life satisfaction after a few years of rapid economic transformation in Poland (Grosfeld and Senic, 2010)
- **IR equity promotes happiness**
 - Equity is the satisfaction of both procedural and distributive justice by guaranteeing human dignity and human rights
 - Equity helps to build cooperative and supportive relationships among co-workers, one dimension of human happiness (Lu and Argyle, 1991)
 - Happiness is enhanced by companionship, and social support (Borooah, 2006)

Hypothesis 1A. *In this period, efficiency emphasis in a national IR system is negatively related to happiness.*

Hypothesis 1B. *In this period, equity emphasis in a national IR system is positively related to happiness.*

Hypotheses

- **Two theories, one conclusion**
- **Relative income hypothesis (RIH)**
 - Lack of equity detrimental to social cohesion and social trust, in turn increases personal stress and mortality, at least for developed countries (Wilkinson, 1996)
 - Relative socioeconomic inequality affects negatively health primarily through psychosocial stress (Wilkinson and Pickett, 2009; Pickett and Wilkinson, 2015)
- **Psychosocial environment theory**
 - Lack of equity affects life expectancy through two main pathways: stress and behavior (Wilkinson, 1996)
 - Low economic status leads to chronic anxiety, production of stress hormones such as cortisol and adrenaline → high blood pressure, weak immune system, obesity, and heart disease (Marmot et al., 1984)

Hypothesis 2A. *In this period, efficiency emphasis in a national IR system is negatively related to life expectancy.*

Hypothesis 2B. *In this period, equity emphasis in a national IR system is positively related to life expectancy.*

Hypotheses

- **Suicide not collection of individual actions but social phenomenon (Durkheim, 1951)**
 - Social networks, trust, and social ties are important social institutions that reduce likelihood of suicide (Berkman et al., 2000; Helliwell, 2007)
- **Unilateral pursuit of IR efficiency in national system while ignoring IR equity**
 - Encourages competition between individuals, reduces the level of trust among co-workers, and precipitates depression (Rosenfeld, 2000)
 - Leads to weak social bonds, networks, and trust, meaning that suicidal individuals less likely to be rescued by others
- **Societies emphasizing equity over efficiency**
 - Stronger social ties between individuals reduce social isolation and depression
 - Individuals less likely to commit suicide in this environment

Hypothesis 3A. *In this period, efficiency emphasis in a national IR system is positively related to the suicide rate.*

Hypothesis 3B. *In this period, equity emphasis in a national IR system is negatively related to the suicide rate.*

Hypotheses

- **Unilateral pursuit of IR efficiency in a national system while ignoring IR equity**
 - Greater inequality and resultant low social capital among marginal population elevated stress level and corresponding higher rate of violence
 - In turn, violence increases stress and anxiety within a population and ultimately crimes, i.e. vicious cycle (Kawachi et al., 1997)
 - Leads to large income inequality and causes political and social systems to engage in unethical behavior such as bribery and corruption
- **Societies emphasizing equity over efficiency**
 - Political and social system more supportive of unemployed and low wage earners
 - Likely to increase social cohesion and trust, decrease levels of violence, and discourage corruption and lower rate of crime and incarceration

Hypothesis 4A. *In this period, efficiency emphasis in a national IR system is positively related to prison population size.*

Hypothesis 4B. *In this period, equity emphasis in a national IR system is negatively related to prison population size.*

Hypotheses

- **Unilateral pursuit of IR efficiency in a national system while ignoring IR equity**

- Intensifies interpersonal competition and social hierarchies, which affects social anxiety level and class conflict by eroding social trust and cohesion (Marmot et al., 2008; Uslaner, 2002)
- Societies in efficiency-oriented system more likely to suffer not only higher crime rates generally, but also higher rate of violent crime such as homicide
- Homicide found to be more common in more unequal societies (Hsieh and Pugh, 1993)

- **Societies emphasizing equity over efficiency**

- Higher level of mutual support and trust among working population, and higher income equality
- Corresponding lower rate of competition and social anxiety, class conflict, violence and homicide

Hypothesis 5A. *In this period, efficiency emphasis in a national IR system is positively related to the homicide rate.*

Hypothesis 5B. *In this period, equity emphasis in a national IR system is negatively related to the homicide rate.*

Hypotheses

- **Numerous studies concluded that work-family balance is important factor affecting decision to divorce**
 - Absence of work-life balance causes marital instability (May, 1980; Riley, 1991; Thornton, 1989)
- **Unilateral pursuit of IR efficiency in national system while ignoring IR equity**
 - At organizational level, encourages fierce competition among companies, and makes work systems more stressful for employees with family
 - At individual level, leads to competitive and performance-driven work, long working hours and lack of workplace support, making work-life balance more difficult
- **Societies emphasizing equity over efficiency**
 - Promotes individual human rights and quality of life rather than focusing solely on competition among companies
 - Promotes work-life balance at both organizational and individual level

Hypothesis 6A. *In this period, efficiency emphasis in a national IR system is positively related to the divorce rate.*

Hypothesis 6B. *In this period, equity emphasis in a national IR system is negatively related to the divorce rate.*

Methods

● Sample

- Dataset includes 30 OECD countries from 2000 to 2012
- Collected data from various international organizations, such as OECD, UN, and World Bank.
- GLS regression model combined cross-sectional and time-series variations

● Why study OECD member countries only?

- OECD provides abundant data for each member country, including data on economic and societal phenomena
- OECD members more homogenous; Intent was to minimize outliers that might cause statistical bias

Measurements

- **Dependent variables**

- Well-being is multi-dimensional construct
- Present study defined national well-being as collection of individual components, consisting of
 - (1) happiness as subjective measure
 - (2) social problems as objective measures

- **Independent variables (following Kim et al. [2014])**

- Six efficiency indicators (e.g. freedom to dismiss regular and temporary workers, literacy rate, labor-employment relations, economic growth rates, and labor productivity growth).
- Eleven equity indicators (e.g. union density, public social expenditures, centralized, coordinated wage-setting, collective bargaining coverage, wage bargaining level, Gini coefficient, injuries (deaths), annual hours worked per person, and income distribution)

- **Control variables**

- Six control variables: GDP, Alcohol consumption, political constraint, rural population, population size, and unemployment rate

Descriptive Statistics

Categories	Variables	Definitions / Measures	Mean	Std. Dev.
Subjective Well-being	Happiness	"Taking all together, how satisfied or dissatisfied are you with your life as a whole these days?" From 0 to 10	6.79	4.12
Objective Indicators of Social Problems	Life expectancy	How long, on average, a newborn can expect to live (in years)	78.90	2.64
	Divorce rate	Annual number of marriages legally ended in divorce, divorces per 1,000	2.10	0.65
	Prison Population	Number of prisoners per 100,000	133.51	118.80
	Homicide rate	Number of unlawful deaths purposefully inflicted on a person by another person, expressed per 100,000	1.97	2.93
	Suicide rate	Number of deaths deliberately initiated and performed by a person in the full knowledge or expectation of a fatal outcome of suicide, expressed per 100,000	13.03	5.98
Control Variables	GDP	Current PPPs (US dollars, constant prices)	32,588.09	13,054.37
	Alcohol consumption	Annual sales of pure alcohol in liters per person aged 15 years and older	9.59	2.61
	Political constraint	Degree of civil liberties from 1 to 4	1.13	0.47
	Rural population	Share of inhabitants by rural region in a given country measured as a percentage of the national population	23.13	10.26
	Population	Present in the country, or temporarily absent from the country, and aliens permanently settled in the country (in 1,000)	39,300	58,500
	Unemployment rate	Number of unemployed people as a percentage of the labor force	7.19	3.79

Results of factor analysis

		2006		2012	
Input	Variables	Factor1	Factor2	Factor1	Factor2
Efficiency	Freedom to dismiss regular workers		.767		.629
	Freedom to dismiss temporary workers		.797		.855
	Literacy rate		.709		.668
Equity	Union density	.727		.748	
	Expenditure on ALMP (active labor market policy)	.840		.799	
	Public social security expenditures	.756		.870	
	Centralization of wage-setting institution	.869		.841	
	Coordination of wage-setting institution	.657		.802	
Process	Variables	Factor1	Factor2	Factor1	Factor2
Efficiency	Labor-employer relations		1.000		.996
Equity	Collective bargaining coverage	.938		.967	
	Wage bargaining level	.938		.967	
Output	Variables	Factor1	Factor2	Factor1	Factor2
Efficiency	Labor productivity growth rate		.928		.742
	Economic growth rates		.884		.742
Equity	Occupational injuries: deaths	.680		.850	
	Annual hours worked per person	.636		.743	
	Gini coefficient	.948		.834	
	Income distribution	.582		.755	

Results of GLS Regression Analyses

	Happiness (H1)	Prison population (H4)	Divorce rate (H6)	Suicide rate (H3)	Life expectancy (H2)	Homicide rate (H5)
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	3.37	-43.28**	2.05***	20.02***	84.19***	-4.21***
GDP	0.00	0.00***	0.00	0.00***	0.00***	0.00
Population	0.00	0.00***	0.00	0.00	0.00	0.00***
Rural Population	-0.01	0.19	-0.03***	-0.16***	-0.04***	-0.03*
Alcohol consumption	0.18	5.19**	0.10***	0.77***	-0.30***	0.22***
Political constraint	1.17	-21.88	-0.10	-4.13***	-3.03***	4.66***
Unemployment rate	-0.01	5.44***	0.00	-0.19*	-0.07**	-0.07
Efficiency (A)	0.37	17.84**	0.21***	2.09***	-0.82***	-0.22
Equity (B)	0.97*	-4.13***	-0.03	-1.57***	0.60***	-0.53**
Log likelihood	-830.19	-1129.02	-284.95	-1061.16	-705.40	-513.37
Wald chi	10.95	532.42***	174.46***	130.58***	661.41***	308.40***
Observations	294	203	356	348	376	244

Note: *** $P < 0.001$; ** $P < 0.01$; * $P < 0.05$

Results

- **Efficiency dimension of IR systems:**
 - **positively related with prison population, divorce rate, suicide rate**
 - **inversely related with life expectancy**
- **Equity dimension of IR systems:**
 - **positively related with happiness and life expectancy**
 - **inversely related with prison population, suicide rate, homicide rate**

Conclusion

- **Empirical results show that efficiency and equity of IR systems significantly associated with wide range of social outcomes**
- **Two important implications**
 - Characteristics of IR systems have wider impact on various social problems related with happiness, health, marriage, and crime
 - Theoretical framework of IR should be expanded to encompass broader set of social outcomes
- **Limitations and Further Research**
 - This study conducted using data from limited period (2000-2012) characterized by strong influence of neo-liberalism; Other periods may produce different results
 - Only examined relatively affluent OECD member countries (excluded developing countries)
 - This study not able to control other variables (e.g., religious attitudes) due to data limitation