

# National differences in intrinsic and extrinsic work values: The effects of post-industrialization

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## Abstract

In this article, we develop a new approach to further understand cross-national differences in work values by examining the effects of post-industrialization, an important social institution, on work values. We hypothesize that post-industrialization is positively related to intrinsic work values and negatively related to extrinsic work values. Using Hierarchical Linear Modeling, we control for national culture and test our hypotheses on 30,974 individuals from 25 countries. Results showed partial support for our hypotheses. Specifically, we find that post-industrialization is negatively related to both extrinsic and intrinsic work values. We discuss the counterintuitive findings for intrinsic work values. However, the study provides support for our fundamental assertion that social institutions, and in our case, post-industrialization, are important in understanding cross-national differences in work values. We discuss the implications of our study for future research and for practicing managers.

## Keywords

Extrinsic and intrinsic work values, hierarchical linear modeling, post-industrialization, social institutions

With the globalization of business and the need to manage workers in different national contexts, the transferability of management techniques has increasingly practical and theoretical consequences

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(Hofstede, 1980; Ralston et al., 2008, 1999). As such, the practical application and theoretical development of motivational or leadership theories based on assumptions regarding worker needs and values, preferences for outcomes, or preferences for incentives demand the investigation of national differences in what people prefer to achieve from working (i.e., work values).

To date, most research on work values (not to be confused with the general cultural values of workers) provides only descriptive studies of the values in one country or a few countries (e.g., Bae and Chung, 1997; Harpaz, 1990). Less often, work values are linked to broader cultural values, typically using cultural dimensions proposed by Hofstede (2001), Schwartz (1992, 1999), or Trompenaars (1993) (e.g., Ros et al., 1999). More recent work has examined how different religions are related to specific work values (Parboteeah et al., 2009). Although studies of national differences in work values and their cultural antecedents provide valuable insights, they nevertheless give an incomplete view of macro-level societal effects on work values. Absent are investigations relating work values and social institutions. This is in spite of calls to link work values to social institutions (Nord et al., 1988; Super and Sverko, 1995) and recent research showing relationships between social institutions and general cultural values held by managers (Gray and Marshall, 1998; Ralston et al., 1997).

Given the above mentioned gaps, in this study we contribute to the work values and institutional literature by investigating the relationship between a critical social institution, namely post-industrialization, and work values. Specifically, we focus on the relationship between levels of post-industrialization and intrinsic and extrinsic work values of 30,974 individuals from 25 countries. Given the long-standing sociological tradition of linking institutions to individual-level outcomes (Durkheim, 1982) as well as managerial practices (Brookes et al., 2011; Gooderham et al., 1999) and recent developments in sociological theories of institutionalism (Cullen et al., 2004; Ingram and Clay, 2000; Parboteeah et al., 2008), our institutional approach to work values research is anchored primarily in macro sociological theory and methods. In addition, we rely on the extensive institutional research in comparative economics (e.g., Durham, 1999) and political science (e.g., Duch and Taylor, 1993) for sources of institutional measurement and additional theory (e.g., Clark, 1998). Our study shows the efficacy of using social institutions to explain cross-national differences in work and supplements the more established national culture perspective (Hofstede, 2001).

## Work values and social institutions

Rokeach (1973: 5) defines a value as “an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence.” He also notes (1973: 20) that “values are the cognitive presentation not only of individual needs *but also of societal and institutional demands*” (emphasis ours). Rokeach's (1973) conceptualization of values is consistent with Hofstede's (2001) view that “culture is the collective programming of the human mind that distinguishes the members of one human group from those of another. Culture in this sense is a system of collectively held values.”

The literature generally distinguishes between broadly targeted values, such as those proposed by Hofstede (2001), House et al. (2001), and Schwartz (1999), and specific values regarding desirable end states in the work setting (Nord et al., 1988; Roe and Ester, 1999; Ros et al., 1999; Schwartz, 1999). General values such as a preference for collectivism or uncertainty avoidance apply to all or most life domains, whereas work values focus specifically on the values given to outcomes realized from working (Roe and Ester, 1999).<sup>1</sup> Brown (1996) defines work values as the values that

individuals believe should be satisfied as a result of their occupational work. Our study focuses on those values pertaining specifically to the work setting.

Although previous research identified a large number of work values under different labels (e.g., MOW International Research Team, 1987), most work value researchers identify two prime categories of valued outcomes from working (Ros et al., 1999). Given that values are socially defined expressions of human needs (Rokeach, 1973), these are similar to need theories of motivation. They include (1) values regarding the intrinsic or self-actualization outcomes from working and (2) values regarding the extrinsic or security outcomes from working.

While the notion of extrinsic work values refers to values related to external factors of work, the notion of intrinsic work values refers to the actual content of work (George and Jones, 1997). Intrinsic work values express preferences for openness to change, the pursuit of autonomy, growth, creativity, and the use of initiative at work. Extrinsic work values express preferences for income, job security, and less demanding work. Consistent with previous conceptualizations (Furnham et al., 2005; Twenge et al., 2010), we agree with the multidimensional view of work values and therefore consider these two independent work values variables.

We also note that previous research has used the terms intrinsic and extrinsic motivation and intrinsic and extrinsic work values almost interchangeably (e.g., Furnham et al., 2005). This is understandable because examination of intrinsic and extrinsic work values has often focused on the relationship of these work values with some aspects of work motivation (Benabou and Tirole, 2003). However, we use the term intrinsic and extrinsic work values consistent with more recent scholarship (Twenge et al., 2010) and consistent with recent conceptualization of these variables (Parboteeah et al., 2009). Intrinsic and extrinsic motivation refer to more specific reasoning as to why someone would engage in a specific behavior (e.g., see Richer and Vallerand, 1995, for an example of assessment of subordinates preparing presentations to supervisors based on intrinsic or extrinsic motivation) compared to work values that relate more broadly to characteristics of work that people perceive as important. As such, work values relate more to enduring aspects of people's orientation toward work as opposed to specific jobs more typical of intrinsic or extrinsic motivation research (Furnham et al., 2005).

A social institution may be defined as a "social organization that has evolved in society and has been assigned the task of specializing in the maintenance and enhancement of selected subsets of values" (Rokeach, 1973: 24–25). Social institutions act as contexts that provide "stimuli and phenomena that surround and thus exist in the environment external to the individual, most often at a different level of analysis" (Mowday and Sutton, 1993: 198). Through human interaction, social institutions produce formal and informal norms that provide people with a freedom/constraint duality of prescribed behaviors, attitudes, and values within some acceptable boundaries (Ingram and Clay, 2000). That is, social institutions provide individual and organizational actors (albeit imprecisely) with sense making and assumed heuristics to know what is reasonable, appropriate, and legitimate (Biggart and Guillén, 1999; Scott, 1995). Although actors may act with self-interest (Ingram and Clay, 2000), they have constraints on their behaviors, attitudes, and values (Nee and Ingram, 1998). Thus, "people adapt their own values to fit the opportunities and demands of the significant societal institutions in their lives" (Schwartz and Sagie, 2000: 470).

Early sociological institutionalism accepted the notion that nation-level social institutions have consequences for economic and social action (e.g., Bendix, 1956). More recent research shows that social institutions affect managerial actions from entrepreneurship (Busenitz et al., 2000) to the rise of automobile industries (Biggart and Guillén, 1999) to HRM practices worldwide (Brookes et al., 2011; Gooderham et al., 1999). The idea of particular organizational forms arising in countries rests

on the premise (albeit unobserved) that “gain-seeking entrepreneurs and managers have no alternative but to work within institutionalized structures of meaning if they hope to succeed” (Biggart and Guillén, 1999: 726). Social institutions, through incentives and coercive and normative constraints, shape not only organizational forms but also individual-level values regarding work (Parboteeah and Cullen, 2003).

In this article, we extend the institutional logic beyond managerial preferences for organizational forms to include all workers' preferences for selected work outcomes (work values). Our approach is similar to the one Schwartz and Sagie (2000) adopted to demonstrate institutional effects on general values. Furthermore, we note that our approach spans levels of analysis as we examine how post-industrialization is related to individually held work values. This method is fairly common in the extant literature (Cullen et al., 2004). Consider, for instance, Parboteeah and Cullen's (2003) empirical examination of social institutions with individual work centrality. Furthermore, we use a statistical technique (Hierarchical Linear Models) appropriate for this cross-level approach (Bryk and Raudenbush, 1989; 1992).

As with managerial preferences for organizational forms, we assume that the mechanism of daily exposure to norms, customs, laws, scripts, and practices of social institutions such as post-industrialization impart societal members with values (Bourdieu, 1972). Our basic hypothesis is that the nation level of post-industrialization creates contexts that legitimize and favor the development of different levels of intrinsic and extrinsic work values.

## **Post-industrialization and work values**

A country's economic system is the core social institution that governs the context in which work takes place (Turner, 1997). That is, the economic system is an “interrelated network or system of beliefs (concerning work, property, constructs, and wealth), activities (extraction, production, and distribution), organizations (business firms, labor unions, consumer associations, regulatory agencies), and relationships (ownership, management, employment, sales) that provide the goods and services consumed by the members of a society” (Olsen, 1991). In this study, to investigate their effects on work values, we focus on one core component of the economic system: the level of post-industrialization of a country.

Modernization theory asserts that societies differ by their degree of evolution of their economic systems through agricultural, industrial, and post-industrial stages (Bell, 1973). However, some criticize traditional modernization theory as too narrow in its view of stages. They note that many development theories model economies primarily based on the characteristics of the developed nations in the West (McMichael, 1996). A modification of development theory, and that followed here, is to focus on effects produced by the variety of social institutions associated with development (Biggart and Guillén, 1999). Differences among nations occur because the development of social institutions facilitates more advanced economic activities. In turn, individuals adapt to these changes and differences by adopting value priorities that reflect the opportunities and constraints in one's life (Gundelach, 1994).

Comparative studies of the degree of industrialization (Inkeles and Smith, 1974) have demonstrated a relationship between industrialization and individual values. Among numerous value changes, priorities increase regarding the value of achievement, initiative, and rewards outside of traditional relationships such as the family (Inkeles and Smith, 1974). More recent research, confirming the forecast of Bell (1973), shows a shift from a materialist value system to a post-materialist value system as economic activities of countries move from industrial manufacturing production

to service and technology production (Inglehart and Baker, 2000). The materialist values that characterize industrial societies emphasize security, affluence, and economic well-being. In contrast, post-materialist values emphasize aesthetics, self-actualization, and quality of life (Inglehart et al., 1998).

We argue that post-industrialization is positively related to intrinsic work values and negatively related to extrinsic work values. Wilson (2005) argues that post-materialism is positively related to values associated with self-direction and universalism motivations and negatively related to security motivations. Similarly, in a comparative study of the two Chinese cities Beijing and Hong Kong, Westwood and Lock (2003) found that as societies move beyond the rigors of industrialization and into the relatively wealthy and comfortable post-industrial stage, people can afford to move from the pressures and motives of immediate, material needs and focus more on the quality of working life. Explanations for the causes of this generally accepted value shift include an array of post-industrial institutional movements. These include socialization changes in educational institutions adapting to evolving economies (Warwick, 1998), urbanization (Duch and Taylor, 1993), and a decreased necessity to work in jobs related to basic human needs (Inglehart, 1997a; Turner, 1997).

Another important explanation for the expectation of a positive relationship between post-industrialization and intrinsic work values and a negative relationship between post-industrialization and extrinsic work values is the principle of diminishing marginal utility (Maseland and van Hoorn, 2009). Specifically, the principle states that once societies have achieved and satiated specific objectives, the value they attach to those objectives falls. As such, as societies move to post-industrial stages, realization of material goals becomes less important as they have enjoyed decades of material wealth (Inglehart, 1997b). Such post-industrial societies place more emphasis on post-industrial objectives such as meaning at work and self-realization (more consistent with intrinsic work values) and place decreasing value on material goals (or extrinsic work values).

Although more broadly targeted and consistent with the above, materialist and post-materialist values closely parallel the extrinsic (e.g., income) and intrinsic (e.g., quality of life) work values, respectively. Consequently, as the institutional structure of economies shifts or varies among countries by their degree of post-industrialization and more general values shift from materialist values to post-materialist values, it seems plausible that these changes are reflected in values regarding work. That is, given that research shows that general values tend to correlate with work values of similar content (Ros et al., 1999; Schwartz, 1999), we expect that work values will tend to be consistent with the general values inherent in the degree of post-industrialization. Thus, because a more post-industrial society encourages general values consistent with intrinsic work values and discourages extrinsic aspects, we expect post-industrialization to be positively associated with intrinsic work values and negatively associated with extrinsic work values.

*Hypothesis 1:* Post-industrialization has a positive relationship with intrinsic work values.

*Hypothesis 2:* Post-industrialization has a negative relationship with extrinsic work values.

## Methods

To test our hypotheses, data are required from two levels of analysis, individual and national. The dependent variables are individual-level measures of intrinsic and extrinsic values regarding the outcomes of work. The prime independent variables are nation-level measures of a country's social institutions.

### Sample and data sources

**Individual-level data.** Individual-level data for the study came from the International Social Survey Program (ISSP) (International Social Survey Program: Work Orientations II, 2000). They were made available through the Inter-University Consortium for Political and Social Research. The ISSP is a 34-nation collaborative effort to collect annual social science data on various topics (see <http://www.issp.org/info.htm> for more information). The National Opinion Research Center at the University of Chicago provides the ISSP headquarters, and the Zentalarchiv fuer Empirische Sozialforschung at the University of Cologne, Germany, provides the data archive.

The ISSP work module data included 27 countries. Both surveys targeted adults 18 years or older (with the exception of three countries in the ISSP study including 16 years or older). In both cases, both national random and quota sampling were used. The surveys use local organizations, either professional (e.g., Gallup) or academic research institutes to collect data and represent extensive data collection efforts.

As a check for construct equivalence across countries and to ensure comparable within-country data (Singh, 1995), we checked the reliability of our work value measures separately for each country. We eliminated from the study countries that had reliability scores under the acceptable 0.70 cutoff. Consequently, the analyses reported below were based on 25 countries and 30,974 individuals. Countries in the study include Bangladesh, Britain, Bulgaria, Canada, Czechoslovakia, Cyprus, Denmark, France, Germany, Hungary, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Philippines, Poland, Portugal, Russia, Slovenia, Spain, Sweden, Switzerland, and the United States.

**Nation-level data.** Data on national social institutions for the countries of the individual subjects came from the world development indicators reported by the World Bank (<http://publications.worldbank.org/ecommerce/products>).

**Dependent variables.** Both international surveys contained measures of work values relating to the extrinsic and intrinsic outcomes of work. Following typical practices in the work value literature, respondents rated the importance of an array of job characteristics.

We measured work values with 5 response category items asking respondents to rate job characteristics from “very important” to “not important at all.” Our 4-item measure of extrinsic work values included items such as “Job security,” “Income,” and “Good advancement” ( $\alpha = 0.73$ ). Our measure is consistent with prior conceptualizations that characterize the importance of comfortable family life and job security through income and job security (Furnham et al., 2005; Twenge et al., 2010).

We measured intrinsic work values with a two-item scale including “To help other people” and “Useful to society” ( $\alpha = 0.76$ ). This is also consistent with prior literature that characterizes intrinsic work values on those aspects that stress the importance of accomplishment and meaning in work (Furnham et al., 2005; Twenge et al., 2010).

**Independent variables: measures of social institutions.** Our measure of post-industrialization derives from those commonly used in the extensive comparative research in economics, political science, and sociology. Previous studies have measured post-industrialization using energy use (Parboteeah and Cullen, 2003) or percentage of workers in the service sector (van der Waal, 2012). Previous studies have shown that as countries progress from industrial to post-industrial

stages, there is sustained demand for energy (Parboteeah and Cullen, 2003). Furthermore, previous studies suggest that post-industrialized societies are also characterized by service sectors as such sectors become critical in the economy (van der Waal, 2012). We therefore included these two measures.

However, we also wanted to construct a more comprehensive measure of post-industrialization. Reviews of the extant relevant literature suggest that post-industrialization is reflected in a number of societal changes. Such changes include a more educated workforce (Warwick, 1998), higher degrees of urbanization (Duch and Taylor, 1993), energy use and demographic change in the workforce (Temple and Voth, 1998), knowledge and information processing as the source of productivity growth (Castells and Aoyama, 1994), and increased use of advanced technology (Bell, 1973; Turner, 1997). As such, consistent with theoretical explanations and descriptions of post-industrialization, we developed a measure that reflected as directly as possible the physical and human resource inputs and outputs that characterize a post-industrial economy (Turner, 1997). Thus, our *post-industrialization* measure included five items: mean years of education of the population to reflect the increased level of education in society, number of computers per 1000 inhabitants to reflect the increased application of technology, per capita energy use, percentage of urban population, and percentage of workers involved in the services sector.

To construct our post-industrialization measure, we examined the statistical properties of the five items. Consistent with theoretical expectations, all five items were highly correlated. Similar to previous practices in the literature, we first standardized the five items and averaged these items to form our post-industrialization measure (Cullen et al., 2004; Parboteeah and Cullen, 2003). Reliability for the measure was 0.92, suggesting that these five items are adequate measures of post-industrialization.

**Individual-level control variables.** The original data sets provided several variables to control for individual-level determinants of work values. Individual-level control variables included age (measured in years), gender (1 = male, 0 = female), and education (years of education). Research has shown that these variables are related to work values at the individual level of analysis (e.g., Mannheim, 1993; MOW International Research Team, 1987).

**National-level control variables.** There is ample evidence that cross-national differences in work values can be explained by both *social institutions* and *national culture* (Hofstede, 2001, Parboteeah and Cullen, 2003; Schooler, 1996). As a consequence, we used Hofstede's (2001) model to control for national culture in our analyses. Although there are several models of the national culture approach (e.g., Hofstede, 2001; Schwartz, 1999), Hofstede's model has remained extremely popular and robust and is one of the most cited works in the Social Science Citation Index (Chandy and Williams, 1994; Kirkman et al., 2006). Furthermore, given that previous research has also shown that work values are affected by the level of economic development (Hofstede, 2001), we also included the country's gross domestic product as a control for such economic development.

Hofstede's model encompasses four dimensions: power distance, individualism/collectivism, uncertainty avoidance, and masculinity/femininity. A fifth dimension called long-term or short-term orientation was appended later (Chinese Culture Connection, 1987). However, we excluded two of these dimensions from our study: power distance (deals with the balance of power between individuals in a society) and long-term orientation (deals with the appropriate way to succeed in society). We excluded power distance because it is highly correlated with individualism/collectivism

(Hofstede, 2001: 60–62). Inclusion of power distance would introduce multicollinearity and produce biased estimates.

We also excluded long-term orientation for a few reasons. First, we follow Kostova's (1997) recommendations of only including those cultural dimensions that are relevant for our study. One can argue for theoretical relationships between uncertainty avoidance, individualism, masculinity, and work values. However, the link with long-term orientation is not as strong. Second, the cultural dimension of long-term orientation (or Confucian dynamism) was developed mostly to reflect Asian societies and is less relevant to the countries included in this study (Hofstede and Bond, 1988; Kirkman et al., 2006). Fang (2003) even questioned the validity of the very notion of Confucian dynamism due to its philosophical and methodological flaws. Finally, it is also important to note that our level-2 sample size of 25 countries limits the number of country-level variables that can be included. Inclusion of all cultural dimensions would overwhelm our model estimation (Parboteeah et al., 2008).

## **Analyses**

The design of the present study assumes that the social institutional context of each country affects the work outcome values of individuals who live in the country. This approach necessitated demonstrating country-level effects controlling for individual factors that might potentially affect work values. This called for a cross-level (Klein et al., 1994) or contextual analysis design (Iversen, 1991) whereby the impacts of variables at a higher level (country level) are related to variables at a lower level (i.e., individual level).

This approach of crossing levels and examining the impact of one higher level on another lower level is not new. The international management literature provides evidence of many studies using this approach (e.g., Cullen et al., 2004; Parboteeah and Cullen, 2003). Consider, for example, the study by Cullen et al. (2004) where the researchers examined how national-level variables such as culture and institutions are related to justifications of ethically suspect behaviors measured at the individual level. This contextual-level approach is therefore an acceptable research design.

To test our cross-level hypotheses, we used Hierarchical Linear Modeling (HLM). HLM addresses problems inherent in the traditional regression methods of dealing with cross-level issues such as aggregation and disaggregation bias, misestimated precision, and unit of analysis problems studies (Bryk and Raudenbush, 1989). The technique is used extensively in the "school effects" research where the objective is to examine organizational and demographic characteristics of schools on individual-level student and teacher outcomes (e.g., Raudenbush and Bryk, 1986). The use of HLM by management researchers facing similar methodological problems is increasing (see Whitener, 2001, for a recent example).

To assess the effects of social institutions on work values, the HLM model consisted of two levels. The level-1 model estimated the relationships between the dependent variables and the individual-level variables of age, gender, and education. This level-1 model effectively controls for typical individual-level variables that could account for variation in the dependent variable.

The level-2 model was an intercept-as-outcome model with level-1 covariates. In this model, the intercepts of separate individual-level regressions by country of work values on the control variables became the country-level dependent measures for equations using social institutions as independent variables. Using the grand mean centering option in HLM, and similar to the multiple classification analysis output from traditional analysis of covariance (ANCOVA), intercepts are mean levels of the dependent variables by group (i.e., country) adjusted for the effects of the individual-level controls



(Bryk and Raudenbush, 1992: 96). Post-industrialization was used in the level-2 analyses. The  $t$  tests for  $\gamma_{0i}$  parameters produced in the level-2 analysis provided the tests of our hypotheses. They show the effects of nation-level variables on work values controlling for individual differences. Since the HLM software does not output standardized slopes as with most regression programs, we standardized all variables to produce standardized coefficients that allow comparisons based on measures using very different metrics (cf. Bryk and Raudenbush, 1992: 89). This has no effect on significance levels.

We also note that HLM does not overinflate estimates that would be more typical of regression. For instance, if the data in this study were disaggregated at the individual level whereby all country-level variables are assigned to the individual in the respective countries and traditional regression models were used to test the hypotheses, the tests would be based on the lower level sample size (individual level in this case) (Hofmann, 1997). Because the assumption of independence is violated in the presence of hierarchical data (i.e., it is assumed that individuals are more similar within countries, thus violating the assumption of independence of observation), ordinary least squares (OLS) methods cannot handle this kind of data. OLS methods produce standard errors that are too small and, in turn, this leads to a higher probability of rejection of a null hypothesis than if the data included independent observation (Osborne, 2000). However, given our research approach, the relevant sample size is the number of countries. HLM provides more accurate estimates for testing our hypotheses.

## Results

Table 1 shows a matrix of level 1 correlations and sample statistics of individual- and nation-level (i.e., social institutions) variables used in this study. Furthermore, we also report a matrix of level 2 correlations to show how the various level 2 (country level) variables are correlated (Table 2).

Table 3 reports the results of the HLM analyses including standardized coefficients of country- and individual-level variables predicting extrinsic and intrinsic work values.

Most of our control variables (individual and national culture) were related to both intrinsic and extrinsic work values. However, given that the emphasis of the present study is on social institutions, we focus our discussion on the relationships between these social institutions and intrinsic/extrinsic work values.

Hypothesis 1 predicted a positive relationship between post-industrialization and intrinsic work values. Results rejected Hypothesis 1. The degree of post-industrialization was negatively related to intrinsic work values. Hypothesis 2 proposed a negative relationship between post-industrialization and extrinsic work values. This hypothesis was supported.

## Discussion

The overarching objective of our study was to investigate the nature of the relationship between crucial national-level social institutions and work values. We proposed two hypotheses linking a social institution (post industrialization) to two work values (intrinsic and extrinsic). We also controlled for both national culture using Hofstede's (2001) dimensions to rule out cultural effects and the country's level of economic development. Consistent with previous research, we build on research showing that institutions are related to management practices (Brookes et al., 2011; Gooderham et al., 1999) and work values (Parboteeah and Cullen, 2003). Our study thus makes an important contribution to understanding cross-national differences in work values above and beyond cultural explanations (Tsui et al., 2007).

**Table 1.** Correlations and descriptive statistics for level 1 and level 2 variables.

Variable	Mean	SD	1	2	3	4	5	6	7	8
1. Gender	0.48	0.52								
2. Education	4.70	1.51	0.05***							
3. Age	43.62	16.40	0.01	-0.21***						
4. Extrinsic work values	4.17	0.54	0.01*	0.00	-0.09***					
5. Intrinsic work values	3.95	0.76	-0.09***	-0.04***	0.05	0.30***				
6. Uncertainty avoidance	65.10	22.71	-0.01*	-0.12***	.05***	0.15***	0.07***			
7. Individualism	61.21	18.84	-0.02***	0.14***	.03***	-0.10***	-0.12***	-0.52***		
8. Masculinity	47.73	54.56	0.04***	0.01*	0.04***	0.04***	0.02**	0.20***	0.09***	
9. Post-industrialization	0.01	0.86	-0.04***	0.17***	0.06***	-0.06***	-0.13***	-0.23***	0.67***	-0.26***

N = 30,974.

\*p &lt; 0.1; \*\*p &lt; 0.01; \*\*\*p &lt; 0.001.

**Table 2.** Correlations and descriptive statistics for level 2 variables.

Variable	Mean	SD	1	2	3	4
1. Uncertainty avoidance	65.10	22.71				
2. Individualism	61.21	18.84	-0.53**			
3. Masculinity	47.73	54.56	0.20	0.13		
4. Gross domestic product (US \$ million)	703119	128903	-0.04	0.33	0.34	
5. Post-industrialization	0.01	0.86	-0.42*	0.70**	-0.17	0.44*

*N* = 24.

\**p* < 0.1; \*\**p* < 0.01; \*\*\**p* < 0.001.

**Table 3.** Hierarchical linear modeling analysis and coefficients.

	Intrinsic	Extrinsic
Gender	-0.17***	0.03*
Age	0.004***	-0.004***
Education	0.02*	0.006
National-level controls		
Uncertainty avoidance	0.00	0.01***
Individualism	-0.003	0.00
Masculinity	-0.02	-0.01
Gross domestic product	0.03	0.01
Social institutions		
Post-industrialization	-0.10***	-0.09***

\**p* < 0.1; \*\**p* < 0.01; \*\*\**p* < 0.001.

Consistent with our hypothesis and the often-studied value shift from materialist to post materialist values, we found increased post-industrialization negatively related to extrinsic work values. This implies that post-industrialization is diminishing the priorities workers give to extrinsic sources of satisfaction from work and is consistent with previous research (Inglehart et al., 1998). Furthermore, supporting Maseland and Van Hoorn's (2008) marginal utility assertion, we surmise that people in more post-industrialized nations attach less importance to extrinsic work values. This occurs because years of economic growth in post-industrialized nations lead to a decreased value in materialist goals as such goals have already been satiated (Inglehart, 1997a). In contrast, materialist goals are still important for less post-industrialized nations where such goals are not yet satiated.

Our results for the relationship between post-industrialization and intrinsic work values were nevertheless surprising. We expected that if general cultural values shift from materialist values to more intrinsic life satisfiers (Inglehart and Baker, 2000), work values will follow suit. However, not only was the hypothesized positive relationship with intrinsic work values proved false, but also the relationship was opposite to what we expected. This implies that post-industrialization appears to decrease priorities that people give to intrinsic work values. Thus, it seems that post-industrialization produces one effect on work that is consistent with general value change—a reduction in extrinsic work values—and another effect that is inconsistent—a reduction in intrinsic work values.

How can this seemingly counterintuitive finding be explained? We can provide several explanations for this intriguing result. Previous research has shown that individuals in societies with higher post-industrialization tend to develop values associated with aesthetics and quality of life (Inglehart et al., 1998). Such changes may also be related to a decreased importance of the value of work in one's life, possibly resulting in increased number of disengaged employees. Consider that Parboteeah and Cullen (2003) found a negative relationship between increasing levels of industrialization and work centrality. Given that both extrinsic and intrinsic work values represent values related to work, it is feasible to argue that post-industrialization is associated with a general decrease in work values. This could also possibly explain our seemingly counterintuitive findings, whereby both values related to work have a negative relationship with post-industrialization.

Yet, another possible interpretation is that people in more post-industrial societies seek sources of intrinsic life satisfaction outside of work settings. Consistent with Schwartz and Sagie's (2000) cross-national findings, this may also reflect an increase in hedonistic values (i.e. leisure, spending time with friends) associated with economic growth and modernization. The current research result warns us that as post-materialism tends to make a society less extrinsic but also intrinsic work values, it may fall into secular consumerist materialism typically exemplified as a result of extreme capitalism. If this is true, the basic assumption of post-materialism that people will be gradually shifting their focus to nonmaterial values could be no longer valid. Such findings deserve future consideration to ascertain whether these predictions hold true.

Despite the intriguing findings, our study had some limitations. First, because we relied on secondary data, measures were limited to available items and their formats. We were unable to craft our own measure and are thus dependent on the quality of the data as collected cross nationally. For instance, while both extrinsic and intrinsic work values have been operationalized with many more items in previous research, we were limited to what was available from the ISSP. In particular, intrinsic work values should be expanded to more directly measure interest, challenge, and responsibilities related to a specific job. Second, although we had data from a large number of countries, our study was not longitudinal and could not directly address issues of change. Third, and finally, one can also argue for the presence of intervening variables between the "distal" relationships we propose. However, we note that our approach to societal effects on individuals is consistent with the fundamental Durkheim thesis and basic assumption of sociology that the social context of society influences individual behavior, attitudes, and values. However, we hope that future cross-national data collections include information on organizations and industries of workers.

***Contributions and implications for future research.*** This article makes some important contributions to the field. First, similar to previous studies showing the utility of institutions in explaining managerial practices (Brookes et al., 2011; Gooderham et al., 1999), we show that social institutional approaches can be useful in understanding cross-national differences in work values. Such approaches are even more crucial in the light that national culture tends to be more static, while social institutions may reflect a more accurate picture of the socio-structural aspects of the work environment (Schooler, 1996). We suggest that future research consider other types of relevant social institutions (e.g., religion, economic development) and perhaps interactive models that consider joint effects of national culture and social institutions. We did not consider such issues in the interest of parsimony, and we hope future studies will examine such possibilities.

Second, our results for post-industrialization also have important implications for future research. Our results show that post-industrialization is negatively associated with work values, both extrinsic

and intrinsic. We suggest that future research examine whether post-industrialization is actually encouraging people to value nonwork areas of life (leisure, charitable activities) relative to work. Furthermore, our results also suggest that, contrary to generally held assumptions, general life values may not always parallel work values. This finding suggests that future research needs a fine-grained view approach to an array of work values possibly influenced by post-industrialization. For example, the various subcomponents of intrinsic and extrinsic work values might be examined separately. Moreover, related constructs such as job satisfaction and commitment might also be considered.

Finally, our research has practical implications for job design and motivation research in the international context. The findings suggest different characteristics of jobs that may have different motivational potentials for people from different nations. Managers need to carefully assess the institutional environments of countries and offer the appropriate aspects of work. Furthermore, given the findings that post-industrialization is negatively related to both aspects of work, multinationals may be well advised to incorporate time for nonwork issues at work. For instance, multinationals may find their employees more motivated if time is given to volunteer for nonwork-related activities. However, future research is indeed needed to examine how nonwork-related activities affect work.

## Note

1. When general cultural values such as collectivism/individualism are studied in an organizational setting, they are occasionally labeled as “work values.” This is a less precise conceptualization of work values than that used here as it refers to the general cultural preferences of the workers or managers being studied not to specific end states from working.

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