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Does School Principals' Leadership Vary Vis-A-Vis Cultural Differences from West to East or South to North?

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Abstract

The aim of this study was to investigate the extent to which the country's societal cultural values and well-being predict school principals' instructional leadership in different regions of Europe. The secondary data analysis using several different recourses such as the Organisation for Economic Co-operation and Development (OECD) Teaching and Learning International Survey (TALIS) 2018, the Country Comparison tool of Hofstede's six-dimensions model, and the Eurostat database for the data on the Government expenditure on education as a percentage of gross domestic product (COFOG) 2019 was employed in this study. A sample of 22 countries of Europe was included in the final analysis. First of all, multiple linear regression models with and without controlled dummy variables for the regions of Europe were implemented in the analysis of the data. Secondly, the one-way ANOVA with post hoc Tukey's honestly significant difference (HSD) analysis was employed. The regression analysis indicated that the country's societal cultural dimensions have significant predictive power for principals' instructional leadership presented in the TALIS 2018 results. The results indicated that Individualism dimensions have a positive relationship with instructional leadership. More specifically, the regression analysis with controlled dummy variables for the regions of Europe revealed that in the countries of Northern Europe, Individualism and Uncertainty Avoidance are strong significant predictors of school principals' instructional leadership. Meanwhile, in Southern, Western, and Eastern Europe, only Individualism is a significant predictor. This study uncovered that the country's well-being, measured by COFOG, is a strong, but negative predictor only in the countries of Northern Europe. In the countries with higher COFOG, school principals' instructional leadership is lower. This study has added new evidence with a particular interest in the effects of contextual influence on principals' leadership in international surveys such as the TALIS.

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1. Introduction

We live under the conditions of globalization and competition, which are changing the lives of societies. Globalisation makes the recognition of societal culture and cross-cultural similarities and differences more, not less, important (Dimmock, Walker, 2000). Recently, national policy-making has been increasingly influenced by the findings and recommendations of international studies and/or organizations. Such major organizations as the Organisation for Economic Co-operation and Development (OECD), the World Bank, the United Nations Educational, Scientific and Cultural Organization (UNESCO), and others play a major role in national decision-making in the education sector (Sahlberg, 2016; Steiner-Khamsi, Waldow, 2018). Recent studies (e.g., Jakupec et al., 2019) have increasingly recognized that the OECD seeks to standardize and universalize education systems while ignoring local contexts and national curricula.

Literature on management has provided strong evidence of the relationship between societal culture and organizational outcomes (Konrad, 2000). Research (e.g., Belchetz, Leithwood, 2007) has shown that leadership is context-dependent. Konrad (2000) argues that "culture affects the kinds of leader behaviours that are considered desirable and are accepted" (p. 346). Most of the leadership characteristics and/or behaviors have been culture-specific, and their desirability has been significantly related to the culture of the country (Dorfman et al., 2012). The importance of the country's societal cultural context has also been highlighted in international research on student achievement (Minelgaite et al., 2018). The research carried out by the authors revealed that the country's societal cultural domains and well-being (GDP) are predictors of educational leadership index in the OECD PISA 2015. The inclusion of societal culture as a factor in investigations covering such themes as the curriculum, teaching and learning as well as leadership and school-based management has been seen as an imperative for the future development of comparative education (Dimmock, Walker, 2000).

Another important aspect affecting education is the country's well-being. One direction of research focuses on how the country's well-being depends on education and the quality of education (e.g., Hanushek, Wößmann, 2010). Another focus is on how the national well-being and the size of investment in education at the national level (GDP per capita) affect different areas of education (e.g., Hanushek et al., 2013). The study conducted by Hanushek, Link, and Woessmann (2013) showed that in the case of the OECD PISA research, autonomy over academic content, personnel, and budgets exerts a positive impact on student achievement in developed countries but has a negative effect in developing countries.

For the above-mentioned reasons, this article aims to reveal how the sociocultural context is related to the results of school principals' instructional leadership in the Teaching and Learning International Survey (TALIS), taking into account the different regions of Europe. The idea of carrying out the analysis on a non-national basis but by the regions of Europe is based on insights from the science of leadership, stating that there are differences between "cultural clusters" and leadership styles (House et al., 2004). The results of the well-known GLOBE project show that leadership styles in Eastern Europe (in the GLOBE project, it includes such countries as Hungary, Albania, Slovenia, Poland, Russia, Georgia, Greece, and Kazakhstan) differ most from those in the Nordic countries. However, there is a paucity of research analyzing school-based leadership. Therefore, this study provides new insights into the education sector by conducting international research, highlighting the importance of societal cultural dimensions, and recognizing regional differences of Europe.

2. Literature review

Societal cultural dimensions

Research focusing on societal culture and its affect in different fields is gaining increasing attention. As Dimmock and Walker (2000) argue, in the context of globalization, countries' socio-cultural differences are more important than ever. In this article, we follow Hofstede's (2011) concept of societal culture defined as "the collective programming of the mind distinguishing the members of one group or category of people from another" (p. 3). Meanwhile, the cultural dimensions are understood as "core axes around which significant sets of values, beliefs and practices cluster" (Dimmock, Walker, 2000).

Although recently, other dimensions of societal cultural values based on research have been emerging with increasing frequency (e.g., Dimmock, Walker, 2000). In literature on management, the dimensions identified during the GLOBE project have attracted considerable scholarly attention (House et al., 2004). Hofstede's 6-D model of societal cultural values is probably the most widely used model in the research field. Even though there are studies (e.g., Williamson, 2002; Fang, 2003; McSweeney, 2002) that criticize Hofstede's 6-D model, Societal cultural dimensions proposed by Hofstede's are considered to be sufficiently justified and are used in cultural evaluations, in various international marketing studies on cultural and school-based values, in intercultural management of organizations as well as in intercultural situations in general (Çağatay, et al., 2022; Thien, Chen, 2022); they are also used to interpret results (Çağatay et al., 2022; Sasson et al., 2022; Thien, Chen, 2022).

To take advantage of Hofstede's paradigm of cultural dimensions and to link it to the extent to which the cultural values and well-being of the country's society provide for the leadership of principals, we employed the 6-dimensional model with the following dimensions:

- Power distance. Inequality exists in every society: some have more power to make decisions and influence others; some accumulate more wealth, are of higher status or are more respected by others. In reality, there is almost always an obvious gap between those who do not have and those who have one or another power: political power, wealth power, status-related power, or even the power of physical force. Hofstede's Power Distance Index makes it possible to measure and reveal this gap in different countries. In other words, it allows for comparisons between countries (Ugrin et al., 2018).

- Individualism versus collectivism shows whose interests are more important in society – those of an individual or a group (Ugrin et al., 2018; Hofstede, 2011). This index does not show how much power a state has; it, however, reveals how much power is exercised by groups. Collectivist culture focuses more on the group than the individual. It is based on the attitude that that the well-being of the group or society is more important than personal needs. Organizational goals are more important than personal ones. A strong sense of belonging requires the employee to be loyal to the group, to avoid open confrontation of opinions, since it is believed that the opinion of the group is more important than that of individuals (Mooij, Hofstede, 2011).

- Masculinity versus femininity. This indicator shows the distribution of dominant roles between the genders. A high or low indicator of masculinity shows whether society is dominated by a traditional male role or not. In countries with a high level of masculinity, gender differentiation prevails, and male society defines gender roles quite strictly. In such cultures, it is the male role that dominates in society, while women play a secondary role. In countries with lower levels of masculinity, gender differentiation and discrimination are very low. In such cultures, women are equal to men in any situation in society. According to Hofstede (2011), feminine culture is more characterized by compassion and sympathy for weaker members of the group, mutual assistance, social contacts, emphasis on warm relationships with each other, and rejection of values such as business relationships.

- Uncertainty avoidance. This characteristic defines the tolerance of ambiguities and spontaneous ideas in society and how members of society feel in the face of completely new and unexpected conditions. A low level of uncertainty avoidance indicates that society is more receptive to spontaneous ideas. Such society is more flexible, less controlled by various rules; it adapts more quickly to innovations and is prone to making risky decisions (Hofstede, 2011). In high uncertainty avoidance cultures, people are expressive, active, emotional, and aggressive.

- Long term orientation versus short term normative orientation. The indicator of the long-term goal orientation shows whether society is inclined to be guided by long-term commitments and respect for traditions. In such society, there is a strong work ethic and the belief that hard work will be well rewarded in the future. The indicator of the short-term orientation of goals suggests that society is reluctant to support a long-term strategy, i.e., it is not constrained by any commitments in the future and can accept societal change at any time (Mooij, Hofstede, 2011).

- Indulgence versus restraint. The indulgence index is higher in those societies that generally support the free satisfaction of basic natural human needs and desires. Restraint prevails in societies in which reward and satisfaction are tightly controlled and regulated by a variety of social norms and rules (Hofstede, 2011). Since this dimension has been established recently, there are still few interpretations, and it is not easy to find data by country.

Hofstede (2011) confirmed his theoretical insights into cultural differences through extensive research. The six dimensions of culture proposed by the researcher are considered to be sufficiently justified and are used in cultural evaluations, in various international marketing studies on cultural and school-based values, in intercultural management of organizations as well as in intercultural situations in general; they are also used to interpret results. Although in his theoretical insights, Hofstede (2011) does not pay special attention to the problems of intercultural communication, he inevitably touches on this aspect when discussing ways of expressing different dimensions and problems resulting from the clash of cultures (e.g., international management of organizations, cooperation, negotiation, acculturation, etc.).

School principal's instructional leadership

Research (Leithwood et al., 2008; Louis et al., 2010; Robinson, 2006) shows that the school principal's leadership has an indirect impact on student achievement. In other words, the quality of teachers' work directly depends on the school principal's leadership, which (along with other factors) determines student achievement. It is recognized that in the context of changes, school principals' orientation towards the improvement of teaching and learning processes in organizations is important. In other words, in addition to managerial processes, the school principal must understand educational processes in order to be able to ensure the improvement of these processes at the organizational level. The role of the principal as an instructional leader is thus highlighted. In addition, studies show that school principals' instructional leadership has greater effects on student outcomes than transformational (Robinson et al., 2008) or distributed (Hattie, 2009) leadership.

Many authors have linked instructional leadership to classroom processes, active student learning, and the strong influence of the school leader (Alsaleh, 2022; Walker, Qian, 2022; Shaked, 2022). Research (e.g. Blasé, Blasé, 1999) show that when a school principal is characterized by instructional leadership, teachers are more likely to apply self-reflection and improve teaching practice on its basis; they are not afraid to take risks and apply new teaching strategies; they are more responsive to the diversity of their students; and they plan and prepare lessons more carefully.

Instructional leadership describes the scope of the concept, the role of the leader, and the outcome of instructional leadership. Such concept of instructional leadership includes improving students' learning in and out of the classroom, fostering moral values, promoting entrepreneurship, and shaping national values (Sharma, 2012). However, at the instructional leadership level, it is not only the academic performance of students that is important. Great attention is also paid to the development of values, responsibility, sustainable leadership, nationality, emotional intelligence, entrepreneurship, employee involvement, process evaluation, and the use of data for feedback (Çağatay et al., 2022; Sasson et al., 2022; Thien, Chan, 2022). Instructional leaders monitor and evaluate teacher achievement, conduct and organize mentoring and educational leadership, plan teacher professional development, and organize group work and collaborative training (Hallinger, Lee, 2013; Alig-Mielcarek, Hoy, 2005). As a result, this would lead to a shift in focus from administrative and management functions to leadership functions aimed at academic vision, strategic planning, the formation of deeper layers of leadership, and the creation of a learning culture and community.

In fact, it is important to understand that it is school leadership that creates a safe and well-equipped working environment for teachers, helps to find out what impact their professional activities have on student achievement, and outlines the general direction for improving the school education process. Teachers' activities are characterized by reflective dialogue, instructional leadership, and interpersonal relationships. Instructional leaders focus on improving curricula and the learning process as well as on assessing the school environment and the achievement of its goals.

2. Materials and methods

Data and Sample

The secondary data analysis was carried out using several different recourses. Firstly, the data from the results of the recent Teaching and Learning International Survey (OECD TALIS, 2018) was employed. For the scope of this research, only the school-level (specifically, from the Principal Questionnaire) data was included in the analysis. A total of 48 countries and economies around the world participated in the TALIS 2018. Secondly, the quantitative measurement of societal cultural dimensions based on Hofstede's model was employed in the analysis. These data

are available at https://www.hofstede-insights.com/country-comparison/. Government expenditure on education as a percentage of gross domestic product (COFOG) 2019 was chosen. Data from 29 countries are available. The data were retrieved from the Eurostat database.

Based on the availability of data (excluding those countries where data were missing) from different recourses, a total of 22 countries of Europe were included in the final analysis. In this research, multi-country (22 countries) and cluster-country (4 clusters) datasets were used. In this study, country clusters (see Table 1) were coded on the basis of EuroVoc, the official thesaurus of Europe (https://eur-lex.europa.eu/browse/eurovoc).

Table 1. Country Clusters

Cluster	Countries
Northern Europe	Norway, Sweden, United Kingdom, Denmark, Estonia, Finland, Latvia, Lithuania
Eastern Europe	Slovak Republic, Hungary, Czech Republic, Bulgaria
Southern Europe	Spain, Portugal, Italy, Malta, Slovenia, Croatia
Western Europe	Austria, Belgium, France, the Netherlands

Variables

For the purpose of the research presented in this article, principals' instructional leadership (T3PLEADS) was chosen as a dependent variable. This scale represents a leader-centric approach as it is built on the answers of school principals.

The instructional leadership scale in OECD TALIS includes three items assessed through a 4-point Likert-type scale ranging from 1 (rarely or never) to 4 (very often) (see Table 2).

Table 2. Items From the TALIS 2018 Principal Questionnaire (PQ) Used to Measure Leadership

T3PLEADS	
TC3G22D	I took actions to support co-operation among teachers to develop new teaching practices
TC3G22E	I took actions to ensure that teachers take responsibility for improving their teaching practices.
TC3G22F	I took actions to ensure that teachers feel responsible for their students' learning outcomes.

The scale represents the factor scores calculated in the Confirmatory Factor Analysis (CFA) framework and already available as part of the OECD TALIS database (OECD TALIS, 2018).

The main independent variables in this study include the country's societal cultural values and economic well-being. For the investigation of societal cultural values, Hofstede's six dimensions, i.e., Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Long-term Orientation, and Indulgence (Hofstede, n.d.), were chosen based on the rationale outlined in the literature review. As can be seen in Table 3, the six cultural dimensions are on a scale from 0 to 100, with a mean close to 50.

Table 3. Descriptive Statistics

Variables*	N	Min.	Max.	Mean	Std. Deviation
ILEAD	22	10.13	11.30	10.954	0.273
PDI	22	11	100	49.95	20.544
IDV	22	27	89	60.45	17.898
MAS	22	5	100	41.05	26.943
UAI	22	23	99	68.32	21.643
LTO	22	28	82	58.27	15.926
IND	22	13	78	44.00	20.436
COFOG	22	3.90	6.90	5.118	0.816

*ILEAD – Instructional Leadership; PDI – Power Distance; IDV – Individualism; MAS – Masculinity; UAI – Uncertainty Avoidance; LTO – Long-term Orientation; IND – Indulgence; COFOG – Government expenditure on education as a percentage of gross domestic product

To investigate whether school principals' instructional leadership (ILEAD) can be related to economic well-being, COFOG on education in 2019 was chosen. The data are presented as a percentage of gross domestic product (GDP). The data are loaded into the Eurostat Reference Database once validated by Eurostat (https://ec.europa.eu/eurostat/cache/metadata/en/gov_10a_exp_esms.htm). As shown in Table 3, the percentage of the GDP on education in our sample ranges from 3.90 % to 6.90 %.

Analyses

The data analysis was performed using IBM Statistical Package for the Social Sciences (IBM SPSS), version 23.0. The skewness and kurtosis of the distribution were used to check the normality of the variables. Parametric statistics were calculated for variables with skewness <−1 or >1 and kurtosis <−3 or >3. The analysis of the research data indicated that all variables were distributed normally.

The multiple linear regression was employed in this study as the primary data analysis method. In order to conduct multiple regression analysis, multicollinearity was checked by correlation matrix and variance inflation factor (VIF). High correlation values (greater than +0.8) and VIF > 4 indicate multicollinearity. Autocorrelation in the residuals of a linear regression model was checked with the Durbin-Watson test. The test statistic ranges from 0 to 4. A value near 2 indicates no autocorrelation (Hair et al., 2019).

Before proceeding to the main data analysis, the Pearson's correlation was conducted as a preliminary analysis to look at the relationships between all the variables. Then, linear regressions were conducted to examine whether and how societal cultural dimensions and the country's well-being (COFOG) predict principals' instructional leadership. At this stage, a multi-country (22 countries) dataset was used. For this purpose, the following linear models (Field, 2009) without the effect dummy variables for the regions were used:

Model:

$$ILEAD_i = \beta_o + \beta_1 PN1 + \beta_2 IDV + \beta_3 MAS + \beta_4 UAI + \beta_5 LTO + \beta_6 IND + \beta_7 COFOG$$

At the second stage of the analysis, multiple indicator variables were created. The country clusters (see Table 1) were coded as dummy variables. In the regression analysis, the effect size of the predictor variables is given by the beta loadings. In interpreting the effect, size gives the following guidance: 0 – 0.1 weak effect, 0.1 – 0.3 modest effect, 0.3 – 0.5 moderate effect, and > 0.5 strong effect (Cohen et al., 2018).

Means for societal cultural values between different regions of Europe were compared by one-way ANOVAs followed by Tukey's post-hoc tests. The Brown-Forsythe (B-F) test was used for testing the equality variances (homogeneity of variances) among different regions of Europe. The homogeneity of variance results among different regions of Europe showed that data is vali for the one-way ANOVA test. Moreover, the effect size coefficient of societal cultural values were assessed using partial eta squared (η_p^2). The calculated η_p^2 values of 0.01, 0.06, and 0.17 can be interpreted as small, moderate, and large effects, respectively (Lakens, 2013).

To determine significance, an alpha level of 0.05 was used for all analyses.

3. Results

First of all, a Pearson's correlation was conducted as a preliminary analysis to look at the relationships among all the variables included in the multiple linear regression models (see Table 4).

As seen in Table 4, correlations among dependent and independent variables vary. The analysis showed a significant correlation between instructional leadership and several country's societal cultural values. More specifically, it was found that there is a positive significant correlation between principals' instructional leadership and Long-term Orientation ($r = .468$, $p < 0.05$), while Indulgence has a negative correlation with principals' instructional leadership ($r = -.500$, $p < 0.05$). The data analysis also revealed a strong significant correlation between

instructional leadership and the country's well-being, measured by COFOG (r = -.525, p < 0.05). Moreover, there are strong significant correlations between independent variables. The country's societal cultural values such as Masculinity (r = -.540, p < 0.01), Uncertainty Avoidance (r = -.429, p < 0.05), and Indulgence (r = .467, p < 0.05) have statistically significant relationships with the country's well-being (measured by COFOG).

Table 4. Correlations among dependent and independent variables

Variables	ILEAD	PDI	IDV	MAS	UAI	LTO	IND	COFOG
ILEAD	1							
PDI	0.228	1						
IDV	0.142	-.505*	1					
MAS	0.385	0.329	0.079	1				
UAI	0.369	.534*	-.513*	0.242	1			
LTO	.468*	0.294	0.130	0.273	0.093	1		
IND	-.500*	-.448*	0.382	-0.143	-0.370	-.488*	1	
COFOG	-.525*	-0.417	0.345	-.540**	-.429*	-0.087	.467*	1

Note: ILEAD – Instructional Leadership; PDI – Power Distance; IDV – Individualism; MAS – Masculinity; UAI – Uncertainty Avoidance; LTO – Long-term Orientation; IND – Indulgence; COFOG – Government expenditure on education as a percentage of gross domestic product
*Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

To investigate whether the country's societal cultural values and economic well-being predict school principals' instructional leadership, the main analysis in this study employed a multiple linear regression model with/without the country effect controlled. The results of correlation (Table 4) and VIF (Table 5) shows that there is no multicollinearity between the predictors. Thus, multiple linear regression is possible. As shown in Table 5, Model indicates that school principals' instructional leadership is significantly predicted by societal cultural dimensions. The first model was an unconditional model without the country effect controlled.

Table 5. Results of the regression analysis

	Unstandardized Coefficients		Standardized Coefficients	t	p	VIF
	B	SE	β			
(Constant)	10.945	0.490		22.326	0.0001	
PDI	-0.001	0.003	-0.049	-0.222	0.827	2.008
IDV	0.009	0.003	0.559	2.465	0.027	2.152
MAS	-0.001	0.002	-0.093	-0.432	0.672	1.952
UAI	0.005	0.003	0.376	1.873	0.082	1.682
LTO	0.004	0.004	0.223	1.054	0.310	1.877
IND	-0.004	0.003	-0.278	-1.200	0.250	2.239
COFOG	-0.160	0.078	-0.479	-2.061	0.058	2.255
F-Statistics	3.975				0.013	
R	0.665					
R^2	0.498					

Note: ILEAD – Instructional Leadership; PDI – Power Distance; IDV – Individualism; MAS – Masculinity; UAI – Uncertainty Avoidance; LTO – Long-term Orientation; IND – Indulgence; COFOG – Government expenditure on education as a percentage of gross domestic product

Multiple regression analysis shows that the country's societal cultural values and economic well-being, as predictors, explain 49.8 % of the variance (R^2 = .498, F = 3.975, p < 0.05). The assumption that the residuals are uncorrelated with the independent variable is satisfied

because the Durbin–Watson value (d = 1.941) is close to 2. The model does not have any autocorrelation problem. The results indicated that only Individualism is a strong significant predictor of school principals' instructional leadership (β = .559, p < 0.05). Meanwhile, the country's economic well-being, measured by COFOG, is not a predictor of school principals' instructional leadership.

The following multiple regression analysis was based on the country effect controlled (see Table 6) using controlled dummy variables for the regions of Europe. As seen in Table 4 and Table 6, the multicollinearity is therefore not a concern in the regression analysis. As well as all models do not have any autocorrelation problem (the Durbin–Watson value are close to 2). The first model was created to examine which societal cultural values and whether economic well-being predict school principals' instructional leadership in the countries of Northern Europe. The results indicated that such societal cultural values as Individualism (β = .477, p < 0.05) and Uncertainty Avoidance (β = .675, p < 0.05) are significant predictors of instructional leadership. COFOG is also a significant factor in principals' instructional leadership (β = -.658, p < 0.05); with higher COFOG, countries score lower in leadership. Societal cultural values and COFOG explain 72.2 % of the variance (R^2 = .722, F = 4.228, p < 0.05) in principals' instructional leadership in the countries of Northern Europe.

Table 6. Results of the regression analysis with dummy variables

	Unstandardized Coefficients		Standardized Coefficients	t	p	VIF
	B	SE	β			
Model 1 (Northern Europe) (R^2 = 0.722; F = 4.228, p < 0.05; d = 1.627)						
(Constant)	10.540	0.525		20.067	0.0001	2.255
PDI	0.001	0.003	0.070	0.319	0.755	2.271
IDV	**0.007**	**0.003**	**0.477**	2.166	0.049	2.169
MAS	0.000	0.002	0.018	0.084	0.934	3.248
UAI	**0.009**	**0.003**	**0.675**	2.561	0.024	2.120
LTO	0.006	0.004	0.341	1.603	0.133	3.747
IND	0.000	0.004	0.016	0.056	0.956	2.818
COFOG	**-0.220**	**0.082**	**-0.658**	-2.681	0.019	2.255
Model 2 (Southern Europe) (R^2 = 0.673; F = 3.348, p < 0.05; d = 2.090)						
(Constant)	11.023	0.521		21.138	0.0001	2.106
PDI	0.000	0.003	-0.021	-0.090	0.930	2.192
IDV	**0.008**	**0.004**	**0.541**	2.307	0.038	2.005
MAS	-0.001	0.002	-0.114	-0.507	0.621	2.058
UAI	0.005	0.003	0.430	1.892	0.081	2.211
LTO	0.003	0.004	0.172	0.728	0.479	2.288
IND	-0.003	0.003	-0.258	-1.075	0.302	2.392
COFOG	-0.171	0.082	-0.512	-2.086	0.057	2.106
Model 3 (Western Europe) (R^2 = 0.672; F = 3.333, p < 0.05; d = 2.077)						
(Constant)	11.097	0.581		19.112	0.0001	2.122
PDI	0.000	0.003	-0.020	-0.088	0.931	2.165
IDV	**0.008**	**0.004**	**0.550**	2.353	0.035	1.979
MAS	-0.001	0.002	-0.079	-0.355	0.728	2.352
UAI	0.004	0.003	0.307	1.261	0.229	3.182
LTO	0.002	0.005	0.128	0.451	0.659	3.971
IND	-0.005	0.004	-0.388	-1.225	0.242	2.312
COFOG	-0.153	0.081	-0.459	-1.899	0.080	2.122
Model 4 (Eastern Europe) (R^2 = 0.690; F = 3.616, p < 0.05; d = 1.856)						
(Constant)	11.010	0.494		22.298	0.0001	2.122
PDI	0.000	0.003	0.004	0.019	0.985	2.173
IDV	**0.008**	**0.003**	**0.536**	2.357	0.035	2.491

MAS	0.000	0.002	0.022	0.091	0.929	1.879
UAI	0.004	0.003	0.306	1.445	0.172	1.878
LTO	0.004	0.004	0.217	1.025	0.324	2.480
IND	-0.005	0.003	-0.355	-1.459	0.168	2.257
COFOG	-0.158	0.078	-0.471	-2.031	0.063	2.122

Note: ILEAD – Instructional Leadership; PDI – Power Distance; IDV – Individualism; MAS – Masculinity; UAI – Uncertainty Avoidance; LTO – Long-term Orientation; IND – Indulgence; COFOG – Government expenditure on education as a percentage of gross domestic product

As shown in Table 6, other created models (Model 2, Model 3, and Model 4) revealed quite interesting tendencies. Firstly, the regression analysis indicated that school principals' instructional leadership is not predicted by COFOG, as it is in Northern Europe. Meanwhile, it was found that only Individualism in Southern ($\beta = .541$, $p < 0.05$), Western ($\beta = .550$, $p < 0.05$), and Eastern ($\beta = .536$, $p < 0.05$) Europe is a significant predictor to school principals' instructional leadership. Moreover, in all regions this predictor has a strong positive effect. The results of this study suggest that societal cultural values in different regions of Europe have an effect on school principals' instructional leadership. Therefore, an analysis of variance (ANOVA) was employed. The results of the one-way ANOVAs (between the regions of Europe) are summarized in Table 7.

Table 7. Results of one-way ANOVA analysis

Variables		Descriptive statistics				**ANOVA**			**Tukey's post-hoc test ($p < 0.05$)**
		Mean	**SD**	**95 % CI interval**		**F (3, 18)**	**p**	**η_p^2**	
				Lower	Upper				
PDI	Northern Europe	**34.25**	8.242	29,13	39.25	5.440	0.008	0.476	Northern Europe vs. Eastern Europe and Southern Europe
	Eastern Europe	**68.25**	23.329	51.50	89.25				
	Southern Europe	**61.67**	9.026	55.00	68.16				
	Western Europe	45.50	26.665	24.50	66.50				
IDV	Northern Europe	69.50	9.457	63.75	75.88	3.546	0.035	0.371	
	Eastern Europe	55.00	20.559	35.54	73.00				
	Southern Europe	45.50	19.917	32.00	60.83				
	Western Europe	70.25	10.813	61.25	77.75				
MAS	Northern Europe	**22.38**	19.690	11.75	37.13	4.588	0.015	0.433	Northern Europe vs. Eastern Europe
	Eastern Europe	**71.25**	27.609	44.36	96.92				
	Southern Europe	41.50	17.097	29.17	55.00				
	Western Europe	47.50	26.938	24.00	66.50				
UAI	Northern Europe	**48.00**	16.639	37.38	58.62	8.551	0.001	0.588	Northern Europe vs. Eastern Europe, Southern Europe, Western Europe
	Eastern Europe	**73.00**	15.384	58.75	83.50				
	Southern Europe	**87.33**	9.158	80.67	94.33				
	Western Europe	**75.75**	18.154	61.25	90.00				

LTO	Northern Europe	55.63	19.856	43.88	68.63	2.194	0.124	0.268	
	Eastern Europe	68.50	7.853	60.75	75.00				
	Southern Europe	48.50	11.572	38.53	56.17				
	Western Europe	68.00	9.764	61.50	77.25				
IND	Northern Europe	46.75	9.651	27.88	62.99	2.099	0.136	0.259	
	Eastern Europe	26.00	6.782	19.01	30.25				
	Southern Europe	42.33	13.574	33.33	53.33				
	Western Europe	59.00	8.602	51.75	65.50				

Note: ILEAD – Instructional Leadership; PDI – Power Distance; IDV – Individualism; MAS – Masculinity; UAI – Uncertainty Avoidance; LTO – Long-term Orientation; IND – Indulgence; COFOG – Government expenditure on education as a percentage of gross domestic product

As shown in Table 7, there is a significant variation among three out of six societal cultural values and conditions. More specifically, there are significant variations among Power Distance ($F(3, 18) = 5.440$, $p < 0.01$, $\eta_p^2 = 0.476$), Masculinity ($F(3, 18) = 4.588$, $p < 0.05$, $\eta_p^2 = 0.433$), and Uncertainty Avoidance ($F(3, 18) = 8.551$, $p < 0.01$, $\eta_p^2 = 0.588$) between different regions of Europe, and the effect sizes are large ($\eta_p^2 > 0.17$). Further investigation using Tukey's HSD post hoc analysis revealed several statistically significant differences ($p < 0.05$) between the regions of Europe. In particular, the Power Distance domain in Northern Europe ($M = 34.25 \pm 8.242$) is statistically significantly different from the Power Distance domain in Eastern ($M = 68.25 \pm 23.329$) and Southern ($M = 61.67 \pm 9.026$; $p < 0.01$) Europe. Masculinity in Northern Europe ($M = 22.38 \pm 19.690$) statistically significantly differs from Masculinity in Eastern Europe ($M = 71.25 \pm 27.609$; $p < 0.05$). Finally, a post hoc Tukey's test showed that the Uncertainty Avoidance domain in Northern Europe ($M = 48.00 \pm 16.639$; $p < 0.001$) is statistically significantly different from the Uncertainty Avoidance domain in other regions of Europe. No difference was found between the regions of Europe in the following societal cultural domains: Individualism, Long-term Orientation, and Indulgence ($p > 0.05$).

Overall, it was found that the societal cultural dimensions of the countries measured by Hofstede's 6-dimensional model predict principals' instructional leadership presented in the TALIS 2018 results. More specifically, in the countries of Northern Europe, Individualism and Uncertainty Avoidance are strong significant predictors of school principals' instructional leadership. Meanwhile, in Southern, Western, and Eastern Europe, only Individualism is a significant predictor. Moreover, only in Northern Europe, the well-being of the country, measured by COFOG, is a strong, but negative predictor.

4. Conclusion

The aim of this article was to reveal whether the societal culture and well-being of the country affects the results of school principals' instructional leadership in the OECD TALIS 2018. The distinctive feature of this study is that it sought to reveal this relationship by focusing on different clusters of the regions of Europe. With this aim in mind, the OECD TALIS 2018 school-level dataset including 22 countries of Europe was analyzed.

The first stage of our research (in the total sample of countries) revealed that only Individualism is a strong predictor of the results of school principals' instructional leadership in the OECD TALIS 2018. Meanwhile, the country's economic well-being (measured by COFOG) did not emerge as a predictor. These results of our study are only partially consistent with previous studies. On the one hand, this confirms the notion that the societal cultural context of countries determines the nature of leadership (Konrad, 2000; House et al., 2004). Hanges et al. (2016) state that societal culture can be a powerful factor that shapes who is seen as a leader and which leaders are effective. The majority of leader attributes/behaviors are culturally contingent, and their

desirability is significantly related to culture (Dorfman et al., 2012). On the other hand, it reveals existing inconsistencies in terms of the importance of societal cultural values in international studies such as the OECD PISA, OECD TALIS, or others. A study conducted by Minelgaitė, Nedzinskaitė, and Kristinsson (2018) showed that such societal cultural domains as Power Distance and Individualism as well as the country's well-being (measured by GDP) are predictors, with the moderate effect size, of educational leadership index in the OECD PISA 2015. The results of the mentioned study also revealed that countries with higher GDP score lower in educational leadership (Minelgaitė et al., 2018). Such inconsistencies in the research could be explained by the fact that different well-being measurement indicators were chosen. In the case of our study, not the country's gross domestic product (GDP) per capita, but the COFOG index, which shows Government expenditure on education as a percentage of GDP, was chosen.

In the second stage of the research, 22 European countries were grouped into 4 clusters on the basis of the regions of Europe. The multiple regression analysis with controlled dummy variables for the regions of Europe revealed which societal cultural domains predict the results of school principals' instructional leadership in the OECD TALIS 2018. Significant differences between different regions of Europe emerged. First of all, a significant positive relationship between the Individualism dimension and school principals' instructional leadership was found in all regions of Europe. This is particularly interesting given that, according to Hofstede's 6-D model, Northern Europe (in our case, it includes such countries as Norway, Sweden, the United Kingdom, Denmark, Estonia, Finland, Latvia, and Lithuania), Eastern Europe (in our case, it includes the Slovak Republic, Hungary, the Czech Republic, and Bulgaria), and Western Europe (in our case, it includes Austria, Belgium, France, and the Netherlands) value individualism, meanwhile Southern Europe (in our case, it includes Spain, Portugal, Italy, Malta, Slovenia, and Croatia) attach importance to collectivism. This suggests that in Southern Europe, the well-being of the group or society is more important than personal needs. Organizational goals are more important than personal ones (Mooij, Hofstede, 2011). It is important to note that out of all six societal cultural domains, only Individualism is a significant predictor of school principals' instructional leadership in Southern, Western, and Eastern Europe, and the effect size is strong. Also, in the above-mentioned regions of Europe, the country's well-being is not a predictor.

Secondly, a totally different situation was found in Northern Europe. Together with the Individualism domain (the effect size is moderate), Uncertainty Avoidance domain (the effect size is strong) and COFOG (the effect size is strong) are also significant predictors of school principals' instructional leadership. The research results show that the Uncertainty Avoidance domain in Northern Europe (M = 48.00) statistically significantly differs from this domain in other regions of Europe. In other words, Northern Europe has low Uncertainty Avoidance. Therefore, in order to achieve a higher level of school principals' instructional leadership in the Nordic countries, it is important to focus on several key aspects, i.e., low Uncertainty Avoidance indicates that school principals are more flexible, less controlling, more adaptable to innovation, and more willing to take risks, which implies that there is a greater degree of freedom, less control, and fewer formal rules and regulations in schools. The relationship between school principals and teachers is based on trust, not rules. By contrast, in high Uncertainty Avoidance cultures, work environments tend to have clear and formalized rules, experts are seen as authorities, and managers tend to focus more on operational details of activities and planning. A high level of uncertainty avoidance suggests the rule-based management of the school, as well as its desire to control its management by laws and rules in order to avoid misunderstandings and ambiguities (Martinez-Fiestas et al., 2017). As observed by Hofstede (2011), in high uncertainty avoidance organizations, employees feel stressed and need formal as well as informal rules. Compliance with these rules often shifts to punctuality and accuracy. In high uncertainty avoidance cultures, people are expressive, active, emotional, and aggressive. Taking this into account, the organization can use these qualities in its activities. Hofstede (2011) notes that uncertainty avoidance is influenced by the age of the individual – older people tend to have a higher degree of uncertainty avoidance. Meanwhile, no clear relationship between uncertainty avoidance and profession as well as gender was observed (Hofstede, 2011).

Our study once again confirms that there are differences between "cultural clusters" and leadership styles. The results of the GLOBE project show that leadership styles in Eastern Europe differ most from those in Northern Europe (House et al., 2004). Konrad (2000), who conducted a

study on the behavior of middle managers of Western and Eastern Europe, concludes that "the culture affects the kind of leader behaviours that are considered desirable and are accepted" (p. 346). In her study, conducting a secondary data analysis (using the OECD TALIS 2013 data), Liu (2020) revealed that the way leadership is distributed among the school members depends on societal cultural differences. Her research revealed that Anglo countries value individualism, so in these countries, the principal's leadership is the strongest among all the clusters (the principal, the management team, and teachers) examined. Meanwhile, Germanic and Nordic Europe oppose power distance, and it is assumed that this leads to the fact that leadership is shared (Liu, 2020).

This study uncovered that the country's well-being, measured by COFOG, is a strong, but negative predictor in Northern Europe. It means that in the countries of Northern Europe with higher COFOG, the principals' instructional leadership is lower. This is a unique research result because, as mentioned above, the country's well-being is not a predictor of school principals' instructional leadership in other regions of Europe. The uniqueness of Northern Europe in this respect can be explained by the fact that in the case of our study, this cluster also includes the Baltic states, which have lower COFOG compared to Norway, Sweden, or Finland (Eurostat, 2019). We assume that school principals have different orientations towards instructional leadership. In other words, in developed countries, such as Norway, Sweden, and Finland, school principals do not think that their role as instructional leaders is important in their work. For example, Lindberg and Vanyushyn's (2013) study with upper secondary school principals in Sweden showed that even 68 % of the respondents do not think that instructional leadership is important in their work. Even more interesting results are revealed by the research carried out by Salo, Nylund, and Stjernstrøm (2015) with principals from Norway, Sweden, and Finland. The mentioned research shows that in none of these countries do school principals directly apply instructional leadership and they cannot provide any examples (principals' narratives on instructional leadership lack an explicit vocabulary of didactics, examples of face-to-face guidance of teaching as well as direct professional relationships for strengthening teaching practices) of this practice. The authors reaffirm that in "Nordic educational tradition, where there is a strong tradition of democracy and codetermination within the school community" (p. 503), one should not expect to find a lot of examples in practice of instructional leadership.

It is important to note that this research has several limitations too. First of all, the research is limited to the secondary data analysis of the OECD TALIS 2018. Secondly, the analysis reveals a leader-centric approach as it is based on the answers of school principals. Thirdly, the research covers only the European continent. Despite the previously mentioned limitations, this research contributes to the existing body of knowledge in a variety of ways. The study fills an existing research gap by focusing on the importance of contextual factors in international research. Moreover, it highlights the societal cultural differences between the regions of Europe and their impact on school principals' leadership. This study also presents interesting directions for future research. The research could be extended across continents and include responses from not only school principals, but also teachers. A longitudinal study could also be carried out, analyzing data from different years, not just the most recent data.

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