MUHASEBE VE FİNANS İNCELEMELERİ DERGİSİ

Dergi Anasayfası: https://dergipark.org.tr/tr/pub/mufider

EARNINGS MANAGEMENT AND CULTURAL TIGHTNESS–LOOSENESS: INTERNATIONAL EVIDENCE

KAZANÇ YÖNETİMİ VE KÜLTÜREL SIKILAŞMA-GEVŞEKLİK: ULUSLARARASI KANIT

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ARTICLE INFO

Article history:
Received: *05.07.2020*
Revised: *31.08.2020*
Accepted: *20.09.2020*

Keywords: *Earnings management; Cultural tightness–looseness; Cross-country study.*
Jel Codes: *M41; M49; C33*

RESEARCH ARTICLE

BENZERLİK/ PLAGIARISM

Ithenticate :%10

ABSTRACT

This cross-national interdisciplinary research paper empirically investigates the association between cultural tightness–looseness and earnings manipulations. The analyses, which are based on panel-corrected standard errors method, indicate that cultural tightness–looseness, together with investor protection, future–time reference, capital market importance and economic development plays a critical role in shaping financial reporting choices. More specifically, this study finds that the opportunistic manipulations of reported accounting figures are less frequent in tight nations than in loose ones. The results of this study suggest that cultural tightness–looseness is an important explanatory variable that should be considered in future international comparative studies on earnings management behavior. Implications of the results for mitigating earnings management are presented

MAKALE BİLGİLERİ

Makale Tarihçesi:
Gönderilme Tarihi: *05.07.2020*
Düzenleme Tarihi: *31.08.2020*
Kabul Tarihi: *20.09.2020*

Anahtar Kelimeler: Kazanç Yönetimi, Kültürel Sıkışıklık – Gevşeklik, Uluslararası çalışma
Jel Kodları: *M41; M49; C33*

ÖZET

Bu uluslararası disiplinler arası araştırma makalesi, kültürel sıkılık-gevşeklik ve kazanç manipülasyonları arasındaki ilişkiyi ampirik olarak araştırmaktadır. Panel düzeltmeli standart hatalar yöntemine dayanan analizler, yatırımcı koruması, gelecek-zaman referansı, sermaye piyasası önemi ve ekonomik kalkınma ile birlikte kültürel sıkılık-gevşekliğin finansal raporlama tercihlerini şekillendirmede kritik bir rol oynadığını göstermektedir. Daha spesifik olarak, bu çalışma, rapor edilen muhasebe rakamlarının fırsatçı manipülasyonlarının, sıkı ülkelerde gevşek olanlara göre daha az sıklıkta olduğunu bulmuştur. Bu çalışmanın sonuçları, kültürel sıkılık-gevşekliğin, kazanç yönetimi davranışı üzerine gelecekte yapılacak uluslararası karşılaştırmalı çalışmalarda dikkate alınması gereken önemli bir açıklayıcı değişken olduğunu göstermektedir. Kazanç yönetiminin azaltılmasına yönelik sonuçların etkileri sunulmaktadır.

APA STYLE RESOURCE USAGE: Baatour, K . (2020). EARNINGS MANAGEMENT AND CULTURAL TIGHTNESS–LOOSENESS: INTERNATIONAL EVIDENCE . *Muhasebe ve Finans İncelemeleri Dergisi* , *3*(2), 186 – 194 . DOI: 10.32951/mufider.764301

1. INTRODUCTION

An important number of accounting and finance papers have been devoted to the topic of earnings management. El Diri (2018, p. 2) states that the latter concept, sometimes called "profit manipulation", can be conceptualized as the 'within-GAAP' executives' discretionary strategies over accounting numbers by exploiting information asymmetry in the stock exchange, outsiders' bounded rationalities, and some contracting imperfections, through some economic outcomes, a change in the financial reporting treatment, or other complex techniques. This topic has attracted considerable attention from researchers, practitioners and regulatory authorities; especially after the series of global financial scandals involving large well-known firms such as Enron, Tyco, and WorldCom (U.S.), Batam (Tunisia), Nortel (Canada), Oceanic Bank (Nigeria), and Parmalat (Italy). Previous studies document that earnings manipulation activities can mislead financial statement users, threaten the interests of the firm's creditors, and adversely affect capital markets (e.g., Dechow and Skinner, 2000).

Most of prior investigations are conducted within a single research setting (see e.g., Wasan and Mulchandani, 2020). An important shortcoming of these investigations is that they do not take into account the possible influence of the macro-environment of the firm. Explained differently, macro-environmental factors are kept constant or assumed not to play a role in explaining accounting manipulations.

With international accounting harmonization, understanding variations in financial reporting choices from a cross-country perspective is becoming more important than ever before (Paredes and Wheatley, 2017). However, only few accounting researchers adopt a cross-country perspective that examines the country-level determinants of the manipulation of earnings.

Given its sophisticated nature, mitigating the manipulation of earnings requires an in-depth understanding of its underlying determinants. The first step in decreasing the possible negative repercussions of this phenomenon is to understand the causes why managers manipulate earnings. Accounting scholars take different perspectives to comprehend the causes of international variations in this opportunistic behavior. The traditional approach, adopted by most accounting researchers (e.g., Chih et al., 2008; Enomoto et al., 2015; Francis et al., 2016), focuses on countries' formal institutional attributes, like accounting standards and corporate governance systems. Chih et al. (2008) and Enomoto et al. (2015) provide evidence, for example, that investor protection is a significant country-level explanatory variable of earnings manipulations. In these seminal studies, the authors offer a rich, quantitative analysis of how the formal institutional attributes of a society can affect the extent of profit manipulation activities.

Recently, some accounting scholars have criticized this perspective for not taking the cultural factors into consideration. An emerging line of research is exploring how national culture explains differences in earnings manipulations. For example, Guan et al. (2005) investigate the potential effect of variations in cultural dimensions on profit manipulations in the Asia-Pacific region. Their cross-country analyses indicate that four out of the five Hofstede's (1980) cultural dimensions can explain the levels of profit manipulations in the studied countries. Interestingly, a significant positive influence of uncertainty avoidance on profit management is found by Nabar and Boonlert-U-Thai (2007). In addition, their results indicate that the cultural factors are significantly linked to earnings discretion but not to earnings smoothing. Somewhat different findings are obtained by Doupnik (2008). Using the Leuz et al. (2003) profit manipulation scores at the national level of analysis; he provides evidence that the degrees of individualism and tolerance for unpredictability are significantly linked to profit manipulations. Using country-level data for 31 countries, Callen et al. (2011) provide evidence of a positive (negative) association between profit manipulations and the level of tolerance for unpredictability (individualism) where profit manipulations are captured by the Leuz et al. (2003) scores and the cultural factors by the updated Hofstede scores. The latter scores were gathered from Tang and Koveos (2008). In a more recent study, Zhang et al. (2013) examine how private benefits of control and earnings numbers are impacted by the social context (e.g., Hofstede's 2001 dimension of individualism, legal enforcement). Their results indicate that profit manipulations and private benefits of control are less widespread in individualist (e.g., Germany) than in collectivist (e.g., United Arab Emirates) societies.

Although scholars (e.g., Schwartz, 1994) have identified a variety of cultural aspects for possible consideration, it is surprising to observe that the cross-country profit manipulation literature has inadvertently relied exclusively on one aspect of

national culture. Most, if not all, studies on the relationship between profit manipulations and culture (e.g., Callen et al., 2011; Desender et al., 2011; Zhang et al., 2013; Paredes and Wheatley, 2017) have focused on values (such as uncertainty tolerance) to explain cultural differences around the world.

The exclusive reliance on cultural values to understand national culture has been criticized by several scholars (e.g., Bond, 1997; Earley and Mosakowski, 2002). Moving beyond cultural dimensions, an emerging line of investigation (e.g., Ozeren et al., 2013; Ustun and Kılıç, 2017) has begun to study how cultural tightness–looseness as a new concept can influence organizational outcomes. The latter concept can be defined as the degree to which norms are extensively shared within a country and the degree to which infringements will lead to sanctions (Crossland and Hambrick, 2011, p. 802). Building on this ground, the present paper aims at filling the gap in the literature by conducting a cross-country study of the effects of cultural tightness–looseness on profit manipulations.

2. RESEARCH DESIGN

2.1. Dependent Variable: Profit Manipulation

Profit manipulation is employed as the explained variable to measure the influence of cultural tightness–looseness. Country-year profit manipulation measures were obtained from Cai et al. (2014, Table 3), whose sample consists of 31 countries for which a sufficient information (at least 10 firm-year observations) is available over the period 2000-2009 on the Global Vantage. These measures of profit manipulation are very thorough because they are derived from a very big sample of listed non-financial firms (128,292 firm-year observations). Two sub-indices are used by Cai et al. (2014) in the construction of the index value for each country-year: (1) earnings smoothing using accruals; and (2) the magnitude of accruals. Cai et al. (2014) indicate that their earnings smoothing measure (EM1) is the ratio of the standard deviation of operating earnings divided by the standard deviation of cash flow from operations. EM1 is constructed using firm-level data, and the country's median is its representative score. The use of the magnitude of accruals to attain the desired amount of profits (EM2) is measured by the ratio of the absolute value of firms' accruals to the absolute value of firms' operating cash flows. EM2 is also constructed using each country's median score. To create an aggregate measure of profit manipulations, EM1 and EM2 are combined into the variable EM12 [(-1)*EM1 + EM2]. Following Cai et al. (2014) and El-Helaly et al. (2018), the aggregate profit manipulation index is my explained variable in the analysis conducted below because the averaging process helps to avoid the concerns raised by the calculation methods as much as possible.

2.2. Independent Variable: Cultural Tightness and Looseness

The independent variable in this research study is represented by Culture Tightness and Looseness (CTL). Data for this variable are collected from Uz (2015). This author operationalized cultural tightness–looseness as dispersion, that is, SD. Uz (2015) constructed the CTL index using the EWVS (2006) dataset. The EWVS is by far the largest and most comprehensive survey of cultural values, norms, and behaviors. The integrated data set includes four waves of surveys conducted since the year 1981. Uz (2015) decided to focus only on the 2000 wave in the analysis because it includes the largest number of countries. The data were obtained from responses received from 101,172 people. In order to construct the tightness–looseness index, Uz (2015) grouped the questions in the EWVS according to the domain (i.e., work, family, religion, and politics) they belong to. This was followed by a factor analysis of the domains represented in EWVS to extract the cultural tightness and looseness index. The following three domains were chosen for index construction by Uz (2015) on the basis that they loaded on a single factor accounting for more than 50 percent of variance: family, religion, and work. A weighted score for each domain is computed based on the significance of that specific domain. The weighted average of the above domains SDs was computed. After transformation of the raw data, tightest countries were assigned a score of zero on the index of CTL. The higher scores on index indicate greater looseness.

2.3 Control Variables

Other than the hypothesized cultural tightness and looseness' impacts, a number of control variables are incorporated into the model to reduce the likelihood of reporting spurious results. Specifically, it was controlled for some institutional, linguistic and economic factors. Following earlier research, a control variable is included for the potential impact of

investor protection (Leuz et al., 2003; Paredes and Wheatley, 2017). Consistent with Zhang et al. (2013), investor protection is measured in this study based on the revised anti-director rights index (henceforth "revised ADRI"), which is obtained from Djankov et al. (2008). The relation between investor protection and the level of profit manipulations in a country is expected to be negative. It is also important in cross-national earnings management research (Kim et al., 2017) to include an additional control for the grammatical structure of languages (FTR). FTR is coded as a dichotomous variable, which takes the value of 1 if a language does not mark the differences between present tense and future tense obligatorily (a weak FTR language), and 0 otherwise. Data on language are gathered from Chen (2013). Other than controlling for institutional and linguistic factors as dealt with by Leuz et al. (2003) and Kim et al. (2017), it is also controlled for the effect of capital market development (CMI). Empirical research documents that earnings management activities are widespread in economies with less developed stock exchanges comparing to more developed stock exchanges where minority shareholders are provided more stringent protection (Burgstahler et al., 2006). Following El-Helaly et al. (2018), a control variable is introduced for the importance of the stock markets, which is measured as the market capitalization of listed domestic companies divided by the gross domestic product in the respective year. In addition, the level of economic development (EDEV) is an overwhelmingly important factor in explaining cross-country differences in earnings management behavior (e.g., Shen and Chih, 2005; Desender et al., 2011). Shen and Chih (2005) provide empirical evidence that economic development exerts a negative impact on profit manipulations. Accordingly, it is expected that cross-country variation in economic development may have an influence on managers' tendency to manipulate earnings. Following Desender et al. (2011), economic development is approximated by the natural logarithm of GDP per capita.

2.4. Model specification

Based on the preceding discussions, the aggregate earnings management index is defined as the dependent variable which is likely to be influenced by cultural tightness–looseness (independent variable), investor protection, future time reference, capital market importance, and economic development (control variables). Accordingly to test the influence of cultural tightness–looseness (and a number of control variables), the following regression may be estimated (see Table 1):

$$EM_{it} = \alpha_0 + \beta_1 CTL\_C_i + \beta_2 INVPRO_i + \beta_3 FTR_i + \beta_4 CMI_{it} + \beta_5 EDEV_{it} + \varepsilon_{it}$$

Table 1: Variable definitions

EM_{it}	Overall earnings management measure for country i in year t, calculated by the sum of earnings smoothing and the magnitude of accruals (obtained from Cai et al., 2014). Earnings smoothing index is multiplied by negative one to reverse the direction and interpret higher values as more profit manipulations.
CTL_C_i	Cultural tightness and looseness score for country i measured using the combination procedure (obtained from Uz, 2015).
$INVPRO_i$	Revised ADRI from Djankov et al. (2008). The index is constructed by summing across six sub-indices capturing shareholders rights: (1) vote by mail, (2) shares not deposited, (3) cumulative voting, (4) oppressed minority, (5) preemptive rights, and (6) capital to call meeting.
FTR_i	Dichotomous variable, which takes the value of 1 if a language does not mark the timining of events in a distinct way, and zero otherwise (source: Chen, 2013).
CMI_{it}	Market capitalization of listed domestic firms as a percentage of GDP between 2000 and 2009. Source: https://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS
$EDEV_{it}$	Natural logarithm of GDP per capita (constant 2010 US $) for country i in year t. Source: https://data.worldbank.org/indicator/NY.GDP.PCAP.KD
ε_{it}	A randomly distributed error term.

Panel-corrected standard errors (PCSE) estimator (with Pairwise option) is employed in the current cross-national interdisciplinary research rather than the random effects estimator because the dataset

comprises 23 panels and 10 years (N > T; Beck and Katz, 1995, p. 637). Ikpesu et al. (2019) point out this statistical method can solve the problems of autocorrelation, heteroscedasticity, and influential outliers, in addition to getting accurate standard error estimates. The use of the fixed effects estimator is not appropriate here because the variable of interest, cultural tightness–looseness, is time-invariant. In this research, data pertaining to 23 countries over the period 2000-2009 (see Appendix 1) have been employed to make the statistical analyses.

Table 2: Descriptive statistics of key variables

Variable	N	Mean	Std. dev.	Minimum	Maximum
EM	230	-0.056	0.217	-0.500	0.764
CTL_C	230	67.517	25.862	3.100	119.800
INVPRO	230	3.760	1.000	2,000	5,000
FTR	230	0.434	0.496	0	1,000
CMI	208	81.759	53.228	12.772	297.983
EDEV	230	10.076	1.135	6.717	11.021

Notes: Please refer to Table 1 for a detailed description of the variables.

The descriptive statistics for the main variables employed in the paper are reported in Table 2. Considerable variation exists with regard to earnings management across nations. EM ranges from -0.500 to 0.764 with a mean of -0.056 during the 10-year period. There is also important variability in the independent variable; CTL_C ranges from 3.1 to 119.8 with a mean of 67.517 per country.

Table 3: Correlation coefficients for the independent and control variables

	1	2	3	4	5
1 CTL_C	1				
2 INVPRO	**-0.249**	1			
3 FTR	0.013	**-0.174**	1		
4 CMI	**0.153**	**0.374**	-0.100	1	
5 EDEV	**0.354**	**-0.214**	**0.453**	**0.200**	1

Notes: Please refer to Table 1 for a detailed description of the variables. Spearman correlation coefficients marked in blue are significant at the 5% level. Spearman correlation coefficients marked in red are significant at the 1% level.

Table 3 presents Spearman correlation coefficients for the independent and control variables. An examination of the correlation matrix indicates that all the correlations among them are less than 0.8 in absolute values (Gujarati, 2003). Subsequently, multicollinearity does not appear to be an issue in my multivariate regression analyzes. In other words, in this study, there is a low threat of multicollinearity.

Table 4: PCSE regression results

Variables	Estimates Coef.
CTL_C	0.0010***** (2.22)
INVPRO	-0.030****** (2.90)
FTR	0.086****** (7.99)
CMI	-0.002****** (7.62)
EDEV	-0.057****** (8.46)

Constant	0.688** (9.66)
Number of countries	23
Number of observations	208

R-squared = 0.34 Wald chi2(5) = 394.80 Prob > chi2 = 0.0000

Notes: Please refer to Table 1 for a detailed description of the variables. Standard errors are reported in parenthesis. "*****" denotes significance at the 5% level. "******" denotes significance at the 1% level.

3. FINDINGS

Table 4 presents the findings from the PCSE model specified above. Analyses consider cultural tightness–looseness, after the inclusion of institutional, linguistic, and economic control variables. The PCSE regression model is highly significant at the 1% level of significance. The model's R-squared value of 0.34 indicates that this set of independent and control variables can explain 34% of the variation of profit manipulation behavior across nations. As anticipated the coefficient on cultural tightness–looseness (CTL_C) is significantly positive (0.001) at the 5% level (t = 2.22). Companies in societies with 'tight' cultures are less likely to manipulate earnings opportunistically. In contrast, those in societies with 'loose' cultures are likely to manipulate profits to extract personal benefits. This empirical finding shows that cultural tightness–looseness is an important determinant of variations in profit manipulations and supports prior international research (e.g., Ozeren et al., 2013; Ustun and Kılıç, 2017) that cultural tightness–looseness affects corporate decisions and outcomes. This is an important research result because it implies that when studying earnings management internationally, cultural tightness and looseness should be considered together with investor protection, future time-reference, capital market importance and economic development.

The coefficients on control variables are largely consistent with prior cross-country earnings management literature. For the formal institutional variable, as anticipated, strong INVPRO reduces the extent of profit manipulations ($\beta 2 = -0.030$, $p < .01$). This finding echoes prior literature, suggesting that opportunistic earnings management activities are less prominent in countries with better protection of minority shareholders (Callen et al., 2011; Francis et al., 2016). Contrary to my expectation, the coefficient on future time-reference dichotomous variable (FTR) is significantly positive ($\beta 3 = 0.086$, $p < .01$) and, hence, differs from the results of Kim et al. (2017). Capital market importance has a strong and negative impact on opportunistic earnings management ($\beta 4 = -0.002$, $p < .01$). This finding is consistent with Desender et al. (2011), who document a negative correlation between capital market importance and earnings management. It is also found that economic development is negatively related to profit manipulations, consistent with Shen and Chih (2005).

4. CONCLUSIONS

The concept of cultural tightness–looseness, as an important alternative paradigm to the cultural values approach, has the potential to provide novel insights for accounting and finance scholars regarding the fuzzy concept of national culture (Ozeren et al., 2013). As such, the research gap resulting from the perspective of cultural dimensions can be addressed. Within this research paper, cultural tightness–looseness was introduced as a relevant construct in the accounting research. Its association with earnings management was investigated by conducting a cross-country study of 23 countries over 10 years (2000-2009).

This study documents that cultural tightness–looseness has a positive effect on profit manipulation activities. This study also finds that profit manipulations are positively associated with future time reference and negatively associated with investor protection, capital market importance, and economic development.

The current research paper contributes to the accounting research in at least three significant manners. First, to our knowledge, this is the first study to show that cultural tightness–looseness is a key determinant of profit manipulations across nations; and, as such, contributes to the growing research on national culture and accounting.

Second, the current study adds to the growing body of evidence that employs institutional characteristics, like investor protection, to explain cross-country variation in accounting choices. For instance, Enomoto et al. (2015), Francis et al. (2016) and Kouki (2018) provide empirical evidence that earnings management is related to the country-level investor protection environment. However, none of

these earlier cross-country studies have considered how cultural tightness–looseness influences their findings. It is suggested that cultural tightness–looseness may be an omitted variable in their analyses.

Third, the sample size in the present cross-country investigation is larger than in many earlier studies on national culture and earnings management (e.g., Riahi-Belkaoui, 2004) and thus increases the validity and reliability of empirical findings.

The use of cultural tightness–looseness as an important independent variable in international comparative studies on earnings management is supported by the present study. Regulators' attempts to limit managerial opportunistic behavior and to limit the incidence of earnings management must take into consideration the level of cultural tightness–looseness if such endeavors are to succeed.

Although the current cross-country research paper introduces important findings, a caveat must be acknowledged. Particularly, this earnings management research paper uses only aggregated country-level information and does not capture the influences of intra-country differences. The impacts of cultural tightness–looseness within countries can be the subject of future cross-cultural studies.

Acknowledgments: The author would like to thank the editor, Assoc. Prof. Dr. Feyyaz Zeren, and the two reviewers for their valuable and helpful comments on an earlier version of this paper.

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Appendix 1: Sample of countries

Name of country
Austria
Belgium
Canada
Denmark
Germany
Finland
France
Greece
India
Indonesia
Ireland
Italy
Japan
Netherlands
Philippines
Portugal
Singapore
South Africa
South Korea
Spain
Sweden
UK
USA