

IS CULTURAL DISTANCE BENEFICIAL? EVIDENCE FROM OUTWARD FDI FLOWS IN AN EMERGING MARKET CONTEXT

Emre Bilgiç, Fevzi Ölmez, Ines Kersan Skabic

Abstract

This research explores the impact of cultural distance (CD) on Türkiye's outward foreign direct investment (OFDI) by examining Hofstede's six cultural dimensions, focusing on a country that shares several similarities with other Southeast European (SEE) countries. Using panel ordinary least squares, random effect, and quantile regression models, the study analyzes Türkiye's OFDI to 26 partner countries from 2001 to 2022. The findings reveal a statistically significant positive effect of CD on OFDI, consistent across all cultural dimensions. This research enhances the limited literature on the relationship between CD and OFDI in Türkiye. The divergent findings provide new insights, highlighting the importance of understanding the nuanced dynamics between CD, cultural incongruence, and cultural conflicts in FDI. These results underscore the necessity for a contextual approach in examining the interplay between cultural factors and FDI, offering a more comprehensive understanding of how CD influences OFDIs.

Key Words: Cultural Distance, Outward FDI, Türkiye, Panel Quantile Regression

JEL Classification: A13, E02, F21

1. INTRODUCTION

In consideration of FDIs, one of the central topics is the analysis of factors that influence a host country's attractiveness to foreign investors, that comprises the economic and institutional determinants. This article aims to contribute to literature by focusing on one such institutional factor - cultural distance (CD) - as a determinant of FDIs, exploring its implications in greater depth.

Within the scope of FDI, culture has been explored through various conceptualizations, including: cultural similarity, cultural proximity, cultural attractiveness, and CD (Johanson and Vahlne 1977; Li, Zhao, and Shen 2017; Fiorini et al. 2021). Culture constitutes a component of investment risk, it is closely associated with trust and value systems, and contributes to transaction costs. Cultural differences can influence individual behavior and, in turn, pose challenges for conducting business internationally. The literature addresses this

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issue through the concept of CD, defined as the extent to which the shared norms and values in one country differ from those in another (Kogut and Singh 1988). The most widely used approaches to measure CD are those introduced by Hofstede (1984) and Hofstede and Minkov (2010).

There is no definitive evidence supporting either a consistently positive or negative impact of CD on FDIs (Kim and Gray 2009). This ambiguity arises from the context-dependent nature of CD, implying that its significance may vary across investor countries.

Therefore, this paper seeks to contribute to literature by providing a detailed analysis of the influence of CD on Turkish OFDIs. Türkiye, an emerging market, represents a compelling case as a country that aspires to align with Western norms while retaining distinct cultural foundations making Türkiye a unique context for examining the relationship between CD and FDIs. Only a limited number of studies have considered culture as a significant explanatory variable (Adamoglou and Kyrkilis 2018) of FDI in/from Türkiye. Moreover, when CD is incorporated into the analysis, these studies typically focus on a broader set of host countries rather than Türkiye specifically (Kayalvizhi and Thenmozhi 2018; Steigner, Riedy, and Bauman 2019; Kristjánsdóttir and Karlsdóttir 2020). This reveals a notable gap in literature concerning the role of CD in FDIs of Türkiye. In response, this study focuses on a more multifaceted analysis of CD using the dimensions proposed by Hofstede (2010).

The contributions of this paper are threefold: (i) by examining the underexplored relationship between CD and FDI, the study contributes to the advancement of literature; (ii) the focus on Türkiye offers a context-specific perspective that may generate novel insights; and (iii) the findings will provide actionable

knowledge for MNCs and other stakeholders seeking to establish or expand economic ties with Türkiye. To offer a comprehensive understanding and generate robust results, this study employs three econometric methods panel ordinary least squares (POLS), random effects (RE), and panel quantile regression (PQ).

2. LITERATURE REVIEW

FDI location choices have traditionally been explained within the framework of neoclassical economic theory (Behrman 1969). However, when the uncertainties and risks associated with investing abroad, as well as the institutional differences between home and host countries, are considered, the explanatory power of neoclassical models appears limited. Herein, it becomes crucial to consider the degree of similarity/divergence between the institutional environments of home and host countries, as these shape MNCs' FDI behavior (Johanson and Vahlne 1977). Accordingly, examining the role of culture-as a relatively underexplored institutional factor in FDIs-represents a meaningful effort to advance understanding of the determinants of FDI.

2.1. Understanding the Dimensions of Culture

Hofstede's cultural dimensions are among the most widely applied models for conceptualizing culture. Initially developed by Hofstede (1984) and expanded by Hofstede (2001) and Minkov (2007), the framework comprised six dimensions of national culture: uncertainty avoidance (UNAV), power distance (POWD), masculinity (MAS), individualism (IND), indulgence (INR) and time orientation (LTOR). These six dimensions and their relevance to business activities are summarized in Table 1. While each dimension carries

Table 1. Hofstede Cultural Dimensions

Dimensions	Explanation	Implications in Practice
POWD	It refers to the extent to which members of a culture expect and accept that power is distributed unequally in society.	It has implications in organizational structure, possibility of participative management, and leadership style.
IND	It is an indicator of the extent to which individuals are autonomous within society.	It has implications in decision making, reward systems and ethics&values in the organization.
MAS	It refers to the extent to which the dominant values in a society are related to masculine or feminine roles.	It has implications in motivation, networking and rewards valued by individuals.
UNAV	It refers to the extent to which members of a society can adapt to situations that are uncertain or not clearly defined and structured.	It has implications in attitudes towards corporate planning, budgeting, control systems and risk taking.
LTOR	It is about how long a period the expectations, goals and plans of individuals in a society cover in the future.	It has implications in the level of focus on past and traditions, duration of plans, and resistance to change.
INR	It is an indicator of the extent to which human impulses are normalized in a society.	It has implications in auditing and obedience to rules.

distinct practical implications, they collectively illustrate how societies address fundamental challenges they encounter. As such, these dimensions are considered influential in shaping the behaviors and decision-making processes of individuals and organizations, including those related to FDI.

2.2. The Concept of Cultural Distance and Its Influence on FDIs

The concept of distance began to attract attention in the 1970s, notably through the notion of psychic distance within the framework of the Uppsala internationalization model (Johanson and Wiedersheim-Paul 1975). Kogut and Singh (1988) introduced the concept of CD by converting Hofstede's (1984) national culture dimensions into a composite index. CD is defined as the extent to which the shared norms and values in one country differ from those in another (Kogut and Singh 1988). Theoretically, it is argued that greater CD between home and host countries impedes FDIs due to diminished social legitimacy and increased information and management costs (Grosse and Trevino 1996; Yiu and Makino 2002). However, empirical evidence remains mixed (Nayak and Scheib 2020, Kapás and Czeglédi 2020). In a meta-analysis, Bailey (2018) found that CD reduces a country's attractiveness for FDI and negatively impacts IFDIs. Regarding Hofstede's cultural dimensions, some studies utilize the raw scores provided by Hofstede Insights, while others incorporate these scores into measures of CD (Kayalvizhi and Thenmozhi 2018; Steigner, Riedy, and Bauman, 2019; Izadi, Rashid, and Izadi, 2023). Tang (2012) demonstrated that CD in POWD, UNAV, and MAS discourages FDI, while CD in IND promotes it. Conversely, Kristjánsdóttir and Karlsdóttir (2020) found that CD, measured by POWD, IND, MAS, and UNAV, has an insignificant effect on OFDIs. Findings in literature remain inconclusive, highlighting the need for a more contextualized understanding of the relationship between CD and FDI.

2.3. Determinants of FDI Flows in Türkiye

Studies on FDIs in Türkiye have mainly focused on macroeconomic determinants (Aybar 2016; Binatlı and Sohrabji 2019; Khudari, Sapuan, and Fadhil 2021), while the institutional environment has been examined to a relatively lesser extent (Acaravci et al. 2018; Heavilin and Songur 2020). Also, the culture as determinant of FDIs has been rarely examined. Demirbag, Tatoglu, and Glaister (2009) provided the analysis

based on foreign affiliates of Turkish MNEs and found no evidence supporting the effect of CD on the equity ownership mode of Turkish MNEs. Aybar (2016) identified a significant and negative relationship between cultural proximity and Turkish OFDI, treating cultural proximity as a single variable and analyzing data for 14 countries over the period 2002–2011. The present study distinguishes itself from these earlier works in terms of sample size, time frame, and the comprehensiveness with which it conceptualizes CD.

2.4. Hypotheses Development

The concept of psychic distance (including CD) was first popularized by the Uppsala School and is frequently employed to explain both export behavior and FDIs (Johanson and Wiedersheim-Paul 1975). The central argument is that MNEs' ability to recognize and assess business opportunities in foreign markets is impeded by factors that disrupt the flow of information between countries. These disruptions not only reduce awareness but also heighten risk by increasing the likelihood of misinterpreting/mismanaging opportunities. Herein, CD emerges as a factor that elevates both information and management costs. Furthermore, CD creates challenges related to social legitimacy; as the cultural gap widens, it becomes increasingly difficult for MNEs to understand and relate to local populations (Yiu and Makino 2002), thereby complicating the execution of FDI. Considering literature on the Uppsala model and the role of social legitimacy, the research hypotheses are:

H1: As the CD (in terms of IND; INR; LTOR, MAS, POWD and UNAV) increases, OFDIs of Türkiye decrease towards the host country.

3. DATA AND RESEARCH METHOD

The study investigates the role of CD on Türkiye's OFDIs to its twenty-six partner countries Algeria, Austria, Azerbaijan, Belgium, Brazil, Bulgaria, China, Egypt, France, Georgia, Germany, Indonesia, Iran, Jordan, Kazakhstan, Luxembourg, Malta, the Netherlands, Pakistan, Russia, Saudi Arabia, Spain, Switzerland, Tunisia, the United Kingdom and the United States. Data sources vary according to availability and empirical analysis covers the annual period 2001–2022 (Table 2).

By considering variables' integration degrees, we initialize our research by employing POLS under the assumptions that there are no omitted variables

Table 2. Variable Definition

Variable	Definition	Source
lnOFDI	OFDI per share of each partner in Türkiye's total OFDI	Central Bank of the Republic of Türkiye
lnGDP	Real GDP of each partner country	World Bank
lnBREX	The real bilateral exchange rate between Türkiye and its each partner country	World Bank
CPI	Consumer price index of Türkiye and its twenty-six FDI partners countries	International Monetary Fund
lnIND	Individualism vs collectivism	https://www.hofstede-insights.com
lnINR	Indulgence vs restraint	https://www.hofstede-insights.com
lnLTOR	Long-term orientation vs short-term normative orientation	https://www.hofstede-insights.com
lnMAS	Masculinity vs femininity	https://www.hofstede-insights.com
lnPOWD	Power distance index	https://www.hofstede-insights.com
lnUNAV	Uncertainty avoidance index	https://www.hofstede-insights.com

and heteroscedasticity in error term. We establish six different models to block correlation between independent variables in the context of national cultural dimension. Guiding Haq et al. (2018), Neves, Almeida, and Vieira (2022) and Izadi, Rashid, and Izadi (2023) studies, our theoretical models are as follows:

$$\ln OFDI_{n,t} = \alpha_1 + \lambda_{11} \ln GDP_{n,t} + \lambda_{12} \ln BREX_{n,t} + \lambda_{13} \ln IND_{n,t} + u_{1t} \quad (1)$$

$$\ln OFDI_{n,t} = \alpha_2 + \lambda_{21} \ln GDP_{n,t} + \lambda_{22} \ln BREX_{n,t} + \lambda_{23} \ln INR_{n,t} + u_{2t} \quad (2)$$

$$\ln OFDI_{n,t} = \alpha_3 + \lambda_{31} \ln GDP_{n,t} + \lambda_{32} \ln BREX_{n,t} + \lambda_{33} \ln LTOR_{n,t} + u_{3t} \quad (3)$$

$$\ln OFDI_{n,t} = \alpha_4 + \lambda_{41} \ln GDP_{n,t} + \lambda_{42} \ln BREX_{n,t} + \lambda_{43} \ln MAS_{n,t} + u_{4t} \quad (4)$$

$$\ln OFDI_{n,t} = \alpha_5 + \lambda_{51} \ln GDP_{n,t} + \lambda_{52} \ln BREX_{n,t} + \lambda_{53} \ln POWD_{n,t} + u_{5t} \quad (5)$$

$$\ln OFDI_{n,t} = \alpha_6 + \lambda_{61} \ln GDP_{n,t} + \lambda_{62} \ln BREX_{n,t} + \lambda_{63} \ln UNAV_{n,t} + u_{6t} \quad (6)$$

$$u_{k,t} = e_{k,t} + \delta_t + v_{k,t} \quad (7)$$

where $n(n=1,2,3,...,N)$ and $t(t=1,2,3,...,T)$ refer to cross-sections and time dimensions. For all models, $k(k=1,2,3,...,K)$ presents each model error term that includes $e_{k,t}$ (unobservable individual effects), δ_t (unobservable time effects) and $v_{k,t}$ (remainder residual). $\ln OFDI_{n,t}$ is per share of each partner country in Türkiye's total real OFDIs. On the one hand, while

$\ln GDP_{n,t}$ states real GDP, $\ln BREX_{n,t}$ denotes the real bilateral exchange rate between Türkiye and FDI partner countries. The $\ln BREX$ is defined as the number of domestic currencies per foreign currency, and it is transformed from nominal to real term according to consumer price indexes of partner countries. Cultural components are tested separately in each model to preserve their uniqueness and to reduce collinearity problems that may occur due to their high integration of these components (Izadi, Rashid, and Izadi 2023). To do this, we follow Kogut and Singh (1988) calculation technique for each cultural dimension namely $\ln IND_{n,t}$ (individualism vs collectivism), $\ln INR_{n,t}$ (indulgence vs restraint), $\ln LTOR_{n,t}$ (long-term vs short-term orientation), $\ln MAS_{n,t}$ (masculinity vs femininity), $\ln POWD_{n,t}$ (power distance index) and $\ln UNAV_{n,t}$ (uncertainty avoidance index). Variables in the estimated models are used in natural logarithms.

In the predicted models, if the variables have their own unobservable individual and time effects, estimating these models with Fixed Effects (FE) or Random Effects (RE) model gives more consistent results^a. It is appropriate to use the FE model to make inferences about the set of cross-sectional units and the RE model to make inferences about the population from which the cross-sectional data units come (Atici and Guloglu 2006). In other words, unobservable individual and time effects are correlated with explanatory variables, FE model should be performed. However, if this relation is not justified, the RE model gives more consistent results and should be performed (Erdem and Nazlioglu 2008). To specify the correct model form, there is a pre-testing Hausman Test proposed by Hausman and Taylor (1981) to determine whether there is a relationship between unobservable

individual with time effects and explanatory variables.

POLS estimator gives unbiased and consistent results if the following assumptions are satisfied: (i) the error term has zero mean and constant variance (homoscedasticity), (ii) the error term's distribution is normal, (iii) its normal distribution is identical (i, i, d). Nonetheless, satisfying the classical regression assumptions is difficult due to the complexity of socioeconomic data. Ignoring the socioeconomic data characteristic may be biased and inefficient POLS outcomes (Lin and Xu 2017). Moreover, classical linear regressions focus on the conditional mean value impact of independent variables on dependent variables. This fact may lead to under/overestimation of the relevant coefficient, and even failure to detect a significant relationship between the variables, if there is. However, PQ allows us to have several advantages over linear regressions. In first, there is no need for presumptions regarding the formation of the moment function. In second, this method relatively provides accurate and robust results when there are cases of outliers and fat tail distribution (Bera et al. 2016). In last, PQ also pays regard to normality and heteroscedasticity presumptions that error term may include. At this point, to avoid these assumptions and present a detailed picture of our research question we employ PQ that is proposed by Koenker and Bassett (1978) and equation is as below:

$$Q_{Y_{n,t}}(\tau|X_{n,t}) = X_{n,t}^{\tau} \gamma_{\tau} \quad (8)$$

where $Q_{Y_{n,t}}(\tau|X_{n,t})$ refers to the dependent variable's τ th quantile, $X_{n,t}^{\tau}$ consists of explanatory variables as specified in previous models for τ th quantile^b. γ_{τ} denotes the coefficients of independent variables in the τ th quantile. To consider more disaggregated quantiles and reach detailed inferences, we determine the τ as ten decimal divisions.

4. EMPIRICAL FINDINGS

We conduct our empirical analysis in four-steps in three subsections namely POLS, RE and PQ results^c. Initially, we begin with detecting variables' unit root or stationary properties to determine appropriate estimator. To do this, first generation Levin, Lin, and Chun (LLC, 2002) and Fisher-type ADF (Maddala and Wu 1999) tests are carried out, and our evidence illustrates that the null hypothesis of unit root is rejected for all variables at least in one model (Appendix Table A1).

4.1. POLS Results

We employ POLS, FE, and RE models to clarify which method tends to yield biased results, which one produces unbiased outcomes, which approach integrates elements of both biased and unbiased methodologies, and which method consistently delivers stable results. This approach gives us allowance to reach more accurate and reliable empirical outcomes to examine the impact of CDs on Türkiye's OFDIs to host countries. Herein, we utilize POLS under the assumption of there is no individual and time effects, cross-sectional dependence, and heteroscedasticity in the second step.

As depicted in Table 3, statistically significant effects on OFDIs of Türkiye are negatives for GDP, and positives for the InBREX in all sample. Likewise, when the impacts of CDs are significantly positive for all except IND. 1% increase in the InGDP of the host country leads to a 0.06% rise in InOFDI in Model II, whereas it decreases by 0.22% and 0.12% in Model III and IV, respectively. Conversely, InBREX exhibits a positive effect on InOFDI. Across all models, a 1% appreciation in the InBREX has resulted in an increase of 0.16%, 0.18%, 0.07%, 0.08%, 0.18%, and 0.18% in InOFDI, respectively.

Regarding CDs, a positive relationship is observed between InOFDI and CD with the host countries in terms of all culture dimensions. However, this

Table 3. POLS results

Variable	Model I	Model II	Model III	Model IV	Model V	Model VI
Constant	-5.958*** [-9.898]	-6.227*** [-9.897]	-3.980*** [-6.118]	1.909*** [3.293]	-0.570 [-1.048]	-4.260*** [-5.395]
lnGDP	0.039 [1.645]	0.058** [2.232]	0.000 [0.018]	-0.211*** [-10.846]	-0.115*** [-5.490]	-0.019 [-0.671]
lnBREX	0.162*** [6.536]	0.178*** [7.886]	0.070*** [4.056]	0.077*** [2.899]	0.180*** [7.979]	0.176*** [7.359]
lnIND	0.024 [1.986]					
lnINR		0.157*** [4.156]				
lnLTOR			0.641*** [10.768]			
lnMAS				0.456*** [10.093]		
lnPOWD					0.470*** [51.888]	
lnUNAV						0.061*** [4.189]
Obs.	572	572	572	572	572	572
PesaranCD	0.836	0.794	0.858	0.318	0.331	0.702
R²	0.039	0.050	0.130	0.309	0.208	0.045

Note: "****", "***" and "**" denote the significance of the statistics in the models at the 1%, 5% and 10% levels. In the Pesaran_{CD} test introduced by Pesaran (2004), the null hypothesis, which suggests the absence of cross-sectional dependence, is not rejected in all models. The numbers in parentheses are the t-ratios. White cross-section (period cluster) is used for computing the coefficient standard errors.

relationship is only statistically insignificant in Model I. A 1% increase in lnINR, lnLTOR, lnMAS, lnPOWD, and lnUNAV leads to a respective increase of 0.16%, 0.64%, 0.46%, 0.47%, and 0.06% in lnOFDI.

4.2. RE Model Results

Excluding individual and time effects in analysis may bring biased results, potentially leading to erroneous economic policy decisions. To address this concern and account for unobserved characteristics and time-specific factors in our data, we first employ an F-test across all models. Additionally, we conduct the Hausman test proposed by Hausman and Taylor (1981) to determine whether these effects are best represented as fixed or random effects model. The test results reveal the presence of individual effects in cross-sections, with these effects being random in each model (Table 4). Consequently, we proceed to

estimate the one-way RE model while considering individual effects in the series as the third step.

RE analyses have provided similar outcomes as in POLS predictions. Even though lnGDP effects are the same in Model III and IV, the number of statistically significant impacts of the lnBREX have decreased against before. Particularly, three CD variables have insignificant effects on lnOFDI, however, their overall robust impacts are positive in all models. The impact of lnGDP on lnOFDI exhibits a negative pattern across all models, although statistical significance is only observed in Model IV and Model V. 1% increase in lnGDP leads to a decrease of 0.25% and 0.19% in lnOFDI to these countries in Model IV and Model V, respectively. Conversely, the lnBREX demonstrates a positive effect on lnOFDI. Except Model IV, 1% appreciation in the ln-BREX between Türkiye and its OFDI partners results in an increase of 0.24%, 0.24%, 0.18%, 0.23%, and 0.26% in lnOFDI, respectively.

Table 4. RE model results

Variable	Model I	Model II	Model III	Model IV	Model V	Model VI
<i>Constant</i>	-1.720 [-0.605]	-1.801 [-0.616]	-1.023 [-0.320]	2.968 [1.435]	1.475 [0.621]	0.577 [0.185]
<i>lnGDP</i>	-0.117 [-0.996]	-0.113 [-0.921]	-0.121 [-1.084]	-0.249*** [-3.422]	-0.187* [-1.984]	-0.190 [-1.591]
<i>lnBRES</i>	0.237** [2.205]	0.240** [2.439]	0.177** [2.118]	0.127 [1.331]	0.227** [2.527]	0.256*** [2.539]
<i>lnIND</i>	0.027 [0.390]					
<i>lnINR</i>		0.043 [0.198]				
<i>lnLTOR</i>			0.421 [1.166]			
<i>lnMAS</i>				0.455** [2.391]		
<i>lnPOWD</i>					0.483*** [10.624]	
<i>lnUNAV</i>						0.132** [2.528]
Obs.	572	572	572	572	572	572
PesaranCD	0.285	0.275	0.276	0.106	0.105	0.224
R²	0.009	0.009	0.013	0.044	0.027	0.013
F_{cross-sections}	48.720***	48.243***	44.787***	34.979***	41.306***	48.593***
F_{period}	-1.642	-1.614	-1.480	-1.288	-1.480	-1.687
Hausmanchi-square	4.367	4.862	5.649	4.260	3.795	2.241

Note: "****", "***" and "**" denote the significance of the statistics in the models at the 1%, 5% and 10% levels. In the Pesaran_{CD} test introduced by Pesaran (2004), the null hypothesis, which suggests the absence of cross-sectional dependence, is not rejected in all models. The numbers in parentheses are the t-ratios. White cross-section (period cluster) is used for computing the coefficient standard errors. $F_{\text{cross-sections}}$ and F_{period} represent the unobserved individual and time effect test statistics. Hausman_{chi-square} is the test for zero correlation between individual random effects and independent variables.

Similarly, consistent with the results obtained from the POLS analysis, we observe a positive relationship between OFDI and all culture dimensions. However, significant effects are only evident in Model IV, V and VI. Specifically, a 1% increase in *lnMAS*, *lnPOWD*, and *lnUNAV* leads to respective increases of 0.46%, 0.48%, and 0.13% in Türkiye's OFDI. When heteroscedasticity and non-linearity are present, conventional panel estimators may produce results that lack reliability. Additionally, methods solely focusing on providing

the conditional expectation (mean value) might hinder the accurate assessment of the entire dataset. To address these limitations and yield more reliable and robust outcomes, we employ PQ alongside POLS and RE in the fourth step of our analysis. This approach allows us to present a comprehensive portrayal of the effects of *lnGDP*, *lnBRES*, and CDs on OFDIs from Türkiye, considering both heterogeneity and non-linearity in addition to the conditional expectation.

4.3. PQ Results

In fourth step, to enhance the comprehensibility of the PQ findings, we have segmented them into six models, mirroring the structure adopted previous approaches. The PQ has robust results consistent with those of previous estimators. In each model, almost all of $\ln\text{GDP}$'s significant effects are negative. Nevertheless, $\ln\text{BREX}$ positively affects $\ln\text{OFDI}$ in all quantiles, and a significant portion of these effects are positive. In other words, when Türkiye's national currency depreciates, FDIs increase. Similarly, the CD variables present robust results across all estimation methods. Almost all of their significant and/or insignificant effects are positive throughout models, and the signs of the effects remain the same even when the prediction method is changed. This suggests that increasing CD between the relevant sample and Türkiye promotes OFDI.

In Model I of the PQ analysis, a 1% rise in $\ln\text{GDP}$ is associated with a 0.08% decline in $\ln\text{OFDI}$ from Türkiye to countries experiencing high IFDIs (Table 5). Conversely, a 1% appreciation in $\ln\text{BREX}$ yields an increase in $\ln\text{OFDI}$ ranging from 0.14% to 0.28% across all quantiles, irrespective of the magnitude of OFDIs from Türkiye. Notably, this relationship exhibits greater elasticity in countries with substantial IFDIs (in high quantiles). Likewise, the impact of $\ln\text{IND}$ on $\ln\text{OFDI}$ is consistently positive and significant across all quantiles. Specifically, a 1% surge in $\ln\text{IND}$ leads to a corresponding $\ln\text{OFDI}$ increase ranging from 0.17% to 0.66%. Interestingly, it is observed that $\ln\text{IND}$ exerts a more pronounced influence on $\ln\text{OFDI}$ as the levels of IFDIs in recipient countries ascend from the 0.10 to the 0.90 quantile range.

Table 5. Model I and Model II PQ Results

	Variable	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MODEL I	Constant	-8.752** [-2.039]	-3.149* [-1.695]	-4.605*** [-2.960]	-4.727*** [-3.279]	-5.252*** [-4.162]	-4.675*** [-3.737]	-2.432** [-2.032]	-0.967 [-1.055]	0.800 [1.151]
	$\ln\text{GDP}$	0.072 [0.457]	-0.091 [-1.218]	-0.014 [-0.227]	-0.000 [-0.008]	0.035 [0.719]	0.034 [0.739]	-0.019 [-0.452]	-0.038 [-1.191]	-0.076*** [-2.965]
	$\ln\text{BREX}$	0.213*** [3.923]	0.140** [2.190]	0.136*** [4.491]	0.147*** [5.084]	0.177*** [6.131]	0.227*** [7.925]	0.277*** [10.335]	0.207*** [6.697]	0.266*** [11.082]
	$\ln\text{IND}$	0.165*** [2.633]	0.292*** [4.935]	0.312*** [6.804]	0.275*** [5.577]	0.274*** [5.920]	0.306*** [6.145]	0.413*** [7.717]	0.584*** [11.479]	0.664*** [18.177]
	Obs.	544								
	Slope Equality Stat	169.759***								
	Symmetric Quantiles Stat	55.330***								
	Pseudo R^2	0.082								
	Variable	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MODEL II	Constant	-7.715 [-1.445]	-0.764 [-0.392]	-4.704*** [-3.648]	-4.548*** [-3.419]	-5.524*** [-3.995]	-6.697*** [-4.963]	-5.627*** [-4.011]	-2.716** [-2.566]	0.571 [0.518]
	$\ln\text{GDP}$	0.017 [0.088]	-0.214*** [-2.717]	-0.031 [-0.599]	-0.023 [-0.441]	0.023 [0.424]	0.088* [1.697]	0.083* [1.744]	-0.003 [-0.094]	-0.098** [-2.439]
	$\ln\text{BREX}$	0.153** [2.464]	0.060 [0.907]	0.116*** [3.242]	0.130*** [4.368]	0.142*** [4.904]	0.176*** [6.192]	0.217*** [7.355]	0.205*** [7.412]	0.215*** [8.483]
	$\ln\text{INR}$	0.070 [0.557]	-0.048 [-0.874]	0.040 [0.877]	0.002 [0.042]	-0.042 [-0.801]	0.015 [0.230]	0.145* [1.753]	0.205** [2.772]	0.311 [5.687]
	Obs.	566								
	Slope Equality Stat	99.935***								
	Symmetric Quantiles Stat	76.214***								
	Pseudo R^2	0.033								

Note: "****", "***" and "**" denote the significance of the statistics in the models at the 1%, 5% and 10% levels. The Koenker and Bassett (1982a) test examines the equality of slope coefficients named Slope Equality Stat. The symmetric quantiles test presented Symmetric Quantiles Stat entails conducting the Newey and Powell (1987) test of conditional symmetry.

In Model II, a 1% increase in $\ln GDP$ corresponds to reductions of 0.21% and 0.10% in $\ln OFDI$ for countries with low and high FDI reception (0.20th and 0.90th quantiles), respectively. In contrast, for countries with a middle FDI reception, $\ln OFDI$ increases by 0.09% and 0.08% in 0.70th and 0.80th quantiles. Additionally, a 1% increase in $\ln BREX$ results in an $\ln OFDI$ increase ranging from 0.12% to 0.22% across all quantiles (except 0.20th quantile) in countries with high IFDI. Regarding the impact of $\ln INR$ on $\ln OFDI$, predominantly statistically insignificant findings are observed. However, in countries experiencing high IFDIs, this effect is reported as positive and statistically significant. Specifically, a 1% increase in $\ln INR$ leads to $\ln OFDI$ increases of 0.15% and 0.21% in the 0.70th and 0.80th quantiles. This suggests that the influence of $\ln INR$ on $\ln OFDI$ is more pronounced in countries where Türkiye directs a higher volume of FDI.

Findings of Model III in Table 6, the effects of $\ln GDP$ mirror those observed in Model II. A 1% increase in $\ln GDP$ is associated with decreases of 0.16%, 0.21%, 0.18%, and 0.08% in $\ln OFDI$ across low and high quantiles (0.10th, 0.20th, 0.30th, 0.90th). On the contrary, for countries receiving mid-level of FDI, $\ln OFDI$ increases by 0.12% and 0.10% in the sixth and seventh quantiles. While the effect of $\ln BREX$ on $\ln OFDI$ is positive across all quantiles, statistical significance is observed only in the 0.20th, 0.50th, 0.60th, 0.70th, and 0.80th quantiles. A 1% increase in $\ln BREX$ leads to $\ln OFDI$ increases of 0.09%, 0.05%, 0.08%, 0.11%, and 0.16%. Similarly, the long-term versus short-term orientation exhibits a positive and statistically significant effect across all quantiles except the 0.30th quantile. 1% increase in $\ln LTOR$ results in $\ln OFDI$ increases ranging from 0.53% to 0.99%. Notably, the elasticity of this effect is higher in countries with low and high FDI reception compared to those with moderate FDI levels.

Table 6. Model III and Model IV PQ Results

Variable		0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MODEL III	constant	-1.706 [-0.771]	0.517 [0.459]	-0.138 [-0.102]	-3.723** [-2.391]	-5.180*** [-3.814]	-6.677*** [-6.399]	-5.719*** [-5.073]	-1.169 [-0.895]	0.986 [1.196]
	lnGDP	-0.155** [-1.986]	-0.213*** [-5.028]	-0.177*** [-3.442]	-0.022 [-0.353]	0.047 [0.878]	0.123*** [3.060]	0.103** [2.514]	-0.044 [-0.975]	-0.073** [-2.438]
	lnBREX	0.060 [1.300]	0.086* [1.757]	0.016 [0.304]	0.049 [1.343]	0.053* [1.655]	0.076*** [2.796]	0.114*** [4.611]	0.161*** [6.691]	0.007 [0.153]
	lnLTOR	0.649*** [7.716]	0.646*** [9.804]	0.582 [6.892]	0.534*** [5.685]	0.555*** [6.453]	0.615*** [8.007]	0.574*** [8.199]	0.573*** [6.873]	0.990*** [9.171]
	Obs.	566								
	Slope Equality Stat	147.479***								
	Symmetric Quantiles Stat	67.128***								
	Pseudo R ²	0.094								
		0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MODEL IV	constant	2.085* [1.664]	0.933 [0.784]	0.091 [0.076]	-0.788 [-0.578]	-0.665 [-0.448]	-2.866** [-2.246]	-0.480 [-0.255]	4.309** [2.163]	8.759*** [7.655]
	lnGDP	-0.275*** [-5.718]	-0.218*** [-4.845]	-0.174*** [-3.832]	-0.130** [-2.484]	-0.118** [-2.081]	-0.018 [-0.409]	-0.089 [-1.375]	-0.241*** [-3.643]	-0.375*** [-9.611]
	lnBREX	0.033 [0.386]	0.038 [0.774]	0.062 [1.168]	0.038 [0.954]	0.017 [0.479]	0.029 [0.828]	0.031 [0.803]	0.074** [2.259]	0.074*** [2.792]
	lnMAS	0.603*** [9.477]	0.519*** [10.032]	0.442*** [9.525]	0.417*** [7.964]	0.459*** [7.884]	0.462*** [6.986]	0.429*** [5.767]	0.457*** [5.700]	0.571*** [11.614]
	Obs.	547								
	Slope Equality Stat	114.345***								
	Symmetric Quantiles Stat	75.458***								
	Pseudo R ²	0.126								

Note: "****", "***" and "**" denote the significance of the statistics in the models at the 1%, 5% and 10% levels. The Koenker and Bassett (1982a) test examines the equality of slope coefficients named Slope Equality Stat. The symmetric quantiles test presented Symmetric Quantiles Stat entails conducting the Newey and Powell (1987) test of conditional symmetry.

In contrast to the results observed in other models, all effects of $\ln GDP$ on $\ln OFDI$ are negative in Model IV. The magnitude of these statistically significant effects varies across quantiles. 1% increase in $\ln GDP$ leads to reductions in $\ln OFDI$ ranging from 0.12% to 0.38%. On the contrary, 1% appreciation in $\ln BREX$ results in $\ln OFDI$ increases of 0.07% exclusively in countries with high FDI levels. Consistent with findings from previous models, increases in $\ln MAS$ are associated with higher FDIs from Türkiye to relevant countries. Specifically, 1% increase in $\ln MAS$ in countries with low, medium, and high FDI reception leads to $\ln OFDI$ increases ranging from 0.42% to 0.60% across all quantiles. This underscores the attractiveness of FDI in those countries, as evidenced by the positive association between increased masculinity and heightened FDIs.

The predicted results from Model V indicate that, irrespective of countries' low, middle, and high levels of FDI reception (across all quantiles except the 0.60th quantile), an increase in the income of these countries

significantly and negatively impacts FDIs originating from Türkiye (Table 7). 1% increase in $\ln GDP$ leads to reductions in $\ln OFDI$ ranging from 0.11% to 0.26%. Furthermore, examining the effects of the $\ln BREX$ on $\ln OFDI$ reveals that 1% increase in $\ln BREX$ results in $\ln OFDI$ increases within the range of 0.11% to 0.23%. This suggests that as the Turkish Lira depreciates, Turkish investors are incentivized to increase their investments in relevant countries. The findings of CD, it is observed that an increasing $\ln POWD$ between countries not only fails to restrict but actually enhances bilateral FDIs (particularly OFDI from Türkiye). 1% increase in $\ln POWD$ leads to $\ln OFDI$ increases of up to 0.71%, with a minimum increase of 0.35% across all quantiles. It is worth noting that the effect of $\ln POWD$ on $\ln OFDI$ is most pronounced in countries with low levels of FDI reception, with this dominance diminishing as the level of FDI reception increases.

Finally, it is important to highlight that the findings from Model VI exhibit notably similar characteristics to

Table 7. Model V and Model VI PQ Results

	Variable	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MODEL V	<i>constant</i>	1.919 [0.893]	-0.182 [-0.108]	-1.003 [-0.746]	-1.120 [-0.834]	0.532 [0.386]	-1.282 [-0.953]	0.176 [0.156]	1.940* [1.938]	3.520*** [3.569]
	<i>lnGDP</i>	-0.257*** [-3.217]	-0.164** [-2.540]	-0.120** [-2.390]	-0.111** [-2.196]	-0.161*** [-3.132]	-0.077 [-1.596]	-0.113*** [-2.913]	-0.159*** [-4.675]	-0.193*** [-5.495]
	<i>lnBREX</i>	0.202*** [3.841]	0.110** [2.184]	0.124*** [3.520]	0.119*** [4.456]	0.133*** [4.963]	0.192*** [7.735]	0.229*** [10.490]	0.233*** [10.069]	0.210*** [7.624]
	<i>lnPOWD</i>	0.706*** [6.635]	0.561*** [7.766]	0.485*** [7.802]	0.398*** [7.211]	0.387*** [8.016]	0.350*** [8.386]	0.351*** [10.473]	0.393*** [13.178]	0.433*** [15.465]
	<i>Obs.</i>	566								
	<i>Slope Equality Stat</i>	77.640***								
	<i>Symmetric Quantiles Stat</i>	47.364***								
	<i>Pseudo R²</i>	0.149								
MODEL VI	<i>constant</i>	-10.604 [-1.619]	-5.030** [-2.527]	-3.438* [-1.829]	-2.219 [-1.037]	-1.193 [-0.546]	-0.745 [-0.453]	-1.780 [-1.374]	0.351 [0.273]	7.299** [2.518]
	<i>lnGDP</i>	0.116 [0.491]	-0.036 [-0.477]	-0.069 [-1.002]	-0.100 [-1.279]	-0.121 [-1.502]	-0.116* [-1.897]	-0.050 [-1.110]	-0.117*** [-2.679]	-0.344*** [-3.541]
	<i>lnBREX</i>	0.153* [1.840]	0.146 [1.607]	0.138*** [3.593]	0.155*** [4.616]	0.176*** [5.492]	0.221*** [7.350]	0.210*** [6.591]	0.215*** [7.102]	0.283*** [8.633]
	<i>lnUNAV</i>	0.012 [0.138]	0.113* [1.891]	0.154*** [3.163]	0.101** [2.032]	0.145*** [2.728]	0.156*** [2.678]	0.173*** [2.760]	0.180*** [2.874]	0.184** [2.091]
	<i>Obs.</i>	521								
	<i>Slope Equality Stat</i>	70.585***								
	<i>Symmetric Quantiles Stat</i>	57.212***								
	<i>Pseudo R²</i>	0.051								

Note: "****", "***" and "**" denote the significance of the statistics in the models at the 1%, 5% and 10% levels. The Koenker and Bassett (1982a) test examines the equality of slope coefficients named Slope Equality Stat. The symmetric quantiles test presented Symmetric Quantiles Stat entails conducting the Newey and Powell (1987) test of conditional symmetry.

those of Model I. In Model VI, akin to Model I, 1% increase in $\ln GDP$ results in decreases of 0.12%, 0.12%, and 0.34% at the 0.60th, 0.80th, and 0.90th quantiles (for countries with high IFDI). Conversely, 1% increase in $\ln BREX$ leads to $\ln OFDI$ increases ranging from 0.14% to 0.28% across all quantiles (excluding the 0.20th quantile), regardless of quantile levels. Notably, this relationship exhibits greater flexibility in countries experiencing significant IFDs. In terms of CD, an increase in uncertainty avoidance corresponds to heightened FDIs between countries. %1 increase in $\ln UNAV$ leads to rising $\ln OFDI$ ranging from 0.10 to 0.18. Interestingly, as IFDI levels (quantiles) increase, the impact of $\ln UNAV$ also appears to intensify. However, it is important to note that the magnitude of this effect is constrained.

5. DISCUSSION AND CONCLUSION

This study examined the role of CD between host countries and Türkiye, a pivotal emerging economy, in OFDIs. Employing POLS, RE, and QE models, the analyses yielded consistent findings, revealing that as the CD between Türkiye and host countries increases across all cultural dimensions, OFDIs to those host countries escalate. These outcomes diverge from theoretical expectations regarding the adverse impact of CD on FDIs. While the research hypothesis was rejected, the principal assertion—that contextual comprehension may furnish significant insights into the discourse on the interplay between CD and FDIs, and that Türkiye may represent a distinctive case as an emerging market—was substantiated. These findings align with prior studies suggesting that companies should not invariably favor culturally proximate countries when making FDI decisions (Tang 2012).

FDI theories grounded in Institutional Theory and Transaction Cost Theory typically assert that various forms of distance, notably CD, impede FDIs between nations due to diminished social legitimacy and heightened information and management costs, which are construed as manifestations of escalated uncertainty stemming from CD (Grosse and Trevino 1996; Yiu and Makino 2002). Nevertheless, alternative mechanisms arising from the distinctive contextual characteristics can counteract the anticipated nexus between CD and FDIs. Herein, the legal framework in Türkiye and the host countries may play pivotal roles. For instance, Malik (2023) observed that a low legal distance and high CD amplify the inclination towards FDI, emphasizing that legal distance and CD can interact and should not be regarded as mutually exclusive. Similarly, Steigner, Riedy, and Bauman (2019)

focused on the dependency of the impact of CD on FDI on the legal origin of the source country, demonstrating that FDI from civil law countries tends to flow more towards destinations characterized by higher MAS, UNAV, and INR scores, and lower LTOR scores. Given Türkiye's classification as a civil law country and the variability in legal distance between Türkiye and most countries in the sample, these findings appear reasonable. Li, Zhao, and Shen (2021) showed that bilateral investment treaties serve as a surrogate for the institutional environment of the host country, mitigating investment uncertainties stemming from CD. Considering that Türkiye has either signed or in force a total of 121 investment agreements between 1962 and 2024, May (UN Trade and Development 2024), it can be inferred that these agreements mitigate uncertainties stemming from CD for Turkish firms. Zdziarski et al. (2017) proposed that being integrated/embedded into country networks is crucial for encouraging adventurous FDI and this integration allows firms to swiftly acquire knowledge, which helps them navigate the uncertainties arising from significant CD and other kinds of distances. Moreover, Jimenez et al. (2017) examined the role of vicarious experience on FDIs and concluded that the increased representation of companies from a particular home country in the host nation mitigates the adverse effects of CD. Considering these studies, it can be asserted that Turkish firms exhibit a collaborative stance within host countries. This collaborative approach serves to minimize the adverse effects of CD, enabling them to adopt a focused strategy towards opportunities within the host country. Also, Nayyar, Mukherjee, and Varma (2022) argue that both developed and emerging economies are significant destinations for strategic asset-seeking FDI. Given the heterogeneity of the research sample, which includes both types of economies, it may be suggested that the strategic asset-seeking motives of Turkish firms could lead them to overlook CD. Moreover, Bailey and Li (2015) find that host country's local demand mitigates the negative relationship between geographic, cultural, and administrative distance and OFDIs. Accordingly, it can be argued that, in the Turkish context, the moderating effect of host country demand may have transformed the negative impact of CD on OFDIs into a positive one.

This study has three main contributions. First, the findings enhanced the rare empirical elaboration of the nexus between CD and FDI. This is important because each empirical finding supports/rejects the common idea in literature, thereby, the extent to which the idea closely reflects reality is illustrated. Second, contradicting results of this study have shown that considering specific cases is important to reach

new perspectives and to have contextual understanding. Herein, it is illustrated that Turkish companies do not perceive CD as a barrier due to several possible reasons such as legal distance and legal origin, existence of bilateral investment treaties, and networks and vicarious experience of Turkish companies. This situation also shows the necessity of inclusion of additional variables into discussions. Third, the positive impact of CD on OFDIs indicates that CD might not be equal to or related with cultural incongruence/conflicts. Therefore, this research remarks the requirement of conceptual clarification between CD, cultural incongruence, and cultural conflicts.

Although this study specifically investigates Türkiye's OFDI, its findings offer valuable implications for the broader SEE region. Türkiye shares several economic, institutional, and historical characteristics with other SEE countries, such as transitional or emerging market structures, increasing internationalization efforts, and the pursuit of strategic assets in developed economies. Additionally, Türkiye maintains strong and expanding economic ties with SEE countries, reinforcing its role as a regional economic actor. From a cultural standpoint, Türkiye exhibits notable similarities with other SEE countries. For example, UNAV scores are comparably high across the region—Bosnia and Herzegovina (87), Bulgaria (85), Croatia (80), Greece (100), North Macedonia (87), Romania (90), Serbia (92), and Türkiye (85)—suggesting a shared cultural orientation. These commonalities strengthen the relevance of the Turkish case to regional investment behavior. The observed positive relationship between CD and Türkiye's OFDI challenges the conventional view that cultural dissimilarity discourages cross-border investments. This unexpected result may reflect a broader pattern among firms in the SEE region, where strategic motivations outweigh the adverse effects of CD. Moreover, the capacity of firms to navigate/even leverage CD may signal a shift in the internationalization strategies of SEE-based MNCs. Herein, Türkiye's experience provides a valuable point of reference for understanding how firms from similar SEE economies respond to CD in their OFDI decisions, thereby contributing to the development of regionally grounded investment theory and policy.

This study offers significant policy implications, particularly underscored by the case study of Türkiye, which demonstrates the potential for converting the negative effects of CD into positive outcomes. This research establishes a connection between such outcomes and various factors, including bilateral investment agreements, vicarious experience, and

networking activities. Consequently, it is recommended that policymakers in nations where companies suffer from CD consider augmenting the number of bilateral investment agreements and facilitating networking events aimed at fostering closer ties among companies. Moreover, given the apparent resilience of Turkish companies to cultural barriers, policymakers in Türkiye are encouraged to adopt measures that promote cultural exchange and facilitate political dialogues emphasizing the value of cultural diversity, thus safeguarding against the transformation of positive impacts into negative ones. Furthermore, to sustain these positive outcomes, policymakers in Türkiye are advised to increase the number of bilateral investment agreements and enhance networking opportunities. Nonetheless, it is essential to approach these policy recommendations with caution, considering the temporal and sample constraints of this study.

This study also has future research recommendations. Future studies should incorporate diverse contextual settings to offer novel insights. Specifically, exploration of emerging markets warrants attention, encompassing both inward and outward FDI. Given the significance of FDI attraction for economic advancement and the pivotal role of overseas investments in facilitating knowledge dissemination, comprehending the influence of CD holds paramount importance, particularly within the context of emerging economies. Moreover, it would be advantageous to consider the effects of various contextual variables, such as bilateral investment treaties, supplementary metrics capturing the notion of distance, legal origin of the host countries, and vicarious experiences. Such an inquiry may augment the existing knowledge base. Additionally, to achieve a more profound comprehension, researchers may consider stratifying the research sample into more homogeneous cohorts based on economic development/regional proximity, subsequently comparing these groups concerning the impact of CD. Such an approach would facilitate the elucidation of differences across distinct groups.

This study has several constraints. Primarily, methodic limitations are evident, notably the short time interval, data mismatches on heterogeneity of FDIs and the restricted sample size. Furthermore, the omission of significant contextual variables, such as bilateral investment treaties, economic conditions/policies, physic and legal dimensions, as well as the legal origin of the host nation, represents a limitation. Considering these variables could yield a more comprehensive understanding. Despite these constraints, the study's findings offer distinctive insights into literature.

Necessary Footnotes

- a. Even though CD variables are time-invariant features in each cross-section, they substantially change across the cross-sections. Hence, it is possible to examine national cultural dimensions in the model by using the FE model.
- b. In PQ analysis, CDs are taken separately as POLS, FE and RE models.
- c. We would like to thank anonymous referees for suggesting considering geographical distance to augment empirical model as a gravity. Although there are not any drastically changes in the outcomes, results of all models are presented as supplementary material.
- d. Mean and variance of CD variables are constant and zero. Hence, their unit root/stationary characteristics cannot be analyzed because of time-invariant conditions.

Statements and Declarations

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Competing interest: The authors declare that they have no conflict of interest.

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APPENDIX A

Table A1. Unit Root Tests Results

Variable	Fisher ADF		LLC	
	Chi-Square Stat	Prob.	LLC Stat	Prob.
Model without Level and Trend				
lnOFDI	45.164	0.738	-2.255**	0.012
lnGDP	172.538***	0.000	-2.658***	0.004
lnBREX	51.476	0.494	-2.171**	0.015
Model with Level				
lnOFDI	72.211**	0.033	-4.364***	0.000
lnGDP	36.146	0.954	0.221	0.587
lnBREX	15.563	0.999	7.783	0.999
Model with Level and Trend				
lnOFDI	36.886	0.944	-1.783**	0.037
lnGDP	62.569	0.150	-1.387**	0.083
lnBREX	81.304***	0.006	-4.098***	0.000

Note: Fisher ADF refers to Maddala and Wu (1999), and LLC presents Levin, Lin and Chun (2002) unit root tests. Maximum number of lags is set to 3 and the optimal number of lags is determined by Akaike information criterion. "****", "***" and "**" denote the significance of the statistics in the models at the 1%, 5% and 10% levels.

TABLE A2. Outward foreign direct investment of Turkey — Pooled ordinary least squares results

Variable	Model I	Model II	Model III	Model IV	Model V	Model VI
<i>constant</i>	-5.389*** [-8.323]	-5.400*** [-8.559]	-3.154*** [-4.373]	1.541*** [3.237]	0.130 [0.215]	-3.002*** [-4.565]
<i>lnGDP</i>	-0.028 [-1.176]	-0.008 [-0.361]	-0.033 [-1.344]	-0.174*** [-6.866]	-0.146*** [-6.311]	-0.072*** [-2.998]
<i>lnBRES</i>	0.167*** [9.026]	0.178*** [10.249]	0.075*** [6.330]	0.091*** [4.840]	0.180*** [10.758]	0.181*** [10.233]
<i>lnDIST</i>	0.178 [1.705]	0.125 [1.330]	0.019 [0.181]	-0.093 [-0.980]	0.028 [0.277]	0.040 [0.418]
<i>lnIND</i>	0.041*** [3.787]					
<i>lnINDULGENCE</i>		0.109*** [4.712]				
<i>lnLTOR</i>			0.616*** [11.330]			
<i>lnMAS</i>				0.371*** [27.606]		
<i>lnPOWD</i>					0.454*** [48.359]	
<i>lnUNAV</i>						0.076*** [7.944]
Obs.	572	572	572	572	572	572
Pesaran_{CD}	0.514	0.532	0.386	0.609	0.783	0.564
R²	0.062	0.068	0.188	0.329	0.299	0.076

Note: "****", "***" and "**" denote the significance of the statistics in the models at the 1%, 5% and 10% levels. In the Pesaran_{CD} test introduced by Pesaran (2004), the null hypothesis, which suggests the absence of cross-sectional dependence, is not rejected in all models. The numbers in parentheses are the t-ratios. White cross-section (period cluster) is used for computing the coefficient standard errors.

TABLE A3. Outward foreign direct investment of Turkey — Random effect results

Variable	Model I	Model II	Model III	Model IV	Model V	Model VI
<i>constant</i>	-5.248 [-0.910]	-4.784 [-0.880]	-4.027 [-0.689]	0.620 [0.181]	-0.531 [-0.120]	-1.451 [-0.270]
<i>lnGDP</i>	-0.091 [-1.914]	-0.095 [-1.663]	-0.091 [-1.357]	-0.142* [-2.026]	-0.119* [-1.803]	-0.117* [-1.957]
<i>lnBREX</i>	0.225** [2.127]	0.222** [2.208]	0.193** [2.745]	0.151 [1.498]	0.215** [2.291]	0.239** [2.324]
<i>lnDIST</i>	0.396 [0.509]	0.308 [0.440]	0.264 [0.387]	-0.086 [-0.175]	0.013 [0.023]	0.025 [0.037]
<i>lnIND</i>	0.091 [0.908]					
<i>lnINDULGENCE</i>		-0.067 [-0.323]				
<i>lnLTOR</i>			0.252 [0.561]			
<i>lnMAS</i>				0.346*** [4.077]		
<i>lnPOWD</i>					0.429*** [6.037]	
<i>lnUNAV</i>						0.132*** [2.951]
Obs.	572	572	572	572	572	572
Pesaran_{CD}	0.737	0.74	0.726	0.703	0.800	0.718
R²	0.012	0.012	0.013	0.033	0.030	0.018
F_{cross-sections}	56.701***	56.530***	53.176***	48.354***	49.628***	56.505***
F_{period}	-2.269	-2.252	-2.08	-1.953	-2.003	-2.282

Note: "****", "***" and "**" denote the significance of the statistics in the models at the 1%, 5% and 10% levels. In the Pesaran_{CD} test introduced by Pesaran (2004), the null hypothesis, which suggests the absence of cross-sectional dependence, is not rejected in all models. The numbers in parentheses are the t-ratios. White cross-section (period cluster) is used for computing the coefficient standard errors. F_{cross-sections} and F_{period} represent the unobserved individual and time effect test statistics.

TABLE A4. Outward foreign direct investment of Turkey — Model I and Model II PQ Results

Variable		0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MODEL I	constant	-7.298** [-1.966]	-1.754 [-0.998]	-5.081*** [-3.805]	-5.047*** [-3.921]	-6.738*** [-5.126]	-7.366*** [-7.073]	-6.856*** [-6.159]	-3.783* [-1.912]	1.016 [0.737]
	lnGDP	0.064 [0.418]	-0.108 [-1.199]	0.039 [0.059]	-0.028 [-0.391]	-0.074 [-0.950]	-0.116* [-1.665]	-0.104 [-1.611]	-0.020 [-0.373]	-0.035 [-0.434]
	lnBREX	0.172*** [2.797]	0.078 [1.360]	0.124*** [3.523]	0.134*** [4.126]	0.165*** [5.755]	0.181*** [7.029]	0.220*** [8.436]	0.181*** [5.309]	0.228*** [7.006]
	lnDIST	-0.194 [-1.171]	-0.185 [-1.027]	-0.166 [-0.940]	0.094 [0.676]	0.503** [2.142]	0.767*** [3.742]	0.732*** [3.233]	0.143 [0.422]	-0.322 [-0.955]
	lnIND	0.068 [0.740]	0.107 [1.130]	0.105 [1.253]	0.058 [0.677]	-0.02098 [-0.805]	-0.025 [-1.339]	-0.009 [-0.473]	0.017 [0.700]	0.029 [1.602]
	Obs.	572								
	Slope Equality Stat	152.174***								
	Symmetric Quantiles Stat	76.541***								
	Pseudo R ²	0.043								
		0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MODEL II	constant	-6.233 [-1.613]	-0.789 [-0.404]	-4.635*** [-3.580]	-4.988 [-3.589]	-6.885*** [-5.080]	-7.549*** [-7.261]	-6.097 [-3.887]	-1.695 [-0.872]	1.467 [1.366]
	lnGDP	0.001 [0.005]	-0.161* [-1.710]	0.014 [0.208]	-0.036 [-0.495]	-0.068 [-0.867]	-0.108 [-1.532]	-0.065 [-0.866]	0.033 [0.590]	0.082 [1.507]
	lnBREX	0.154*** [2.608]	0.045 [0.820]	0.105*** [3.018]	0.135*** [4.243]	0.165*** [5.704]	0.187*** [7.101]	0.226*** [8.739]	0.202*** [8.334]	0.228*** [12.743]
	lnDIST	-0.135 [-0.703]	-0.181 [-1.030]	-0.163 [-0.925]	0.109 [0.471]	0.512** [2.131]	0.775*** [3.762]	0.537 [1.634]	-0.241 [-0.695]	-0.721*** [-2.951]
	lnINDULGENCE	0.021 [0.287]	-0.033 [-0.599]	0.047 [1.024]	0.034 [0.661]	0.018 [0.342]	0.001 [0.026]	0.107 [1.230]	0.248*** [2.813]	0.357*** [6.005]
	Obs.	572								
	Slope Equality Stat	139.005***								
	Symmetric Quantiles Stat	78.959***								
	Pseudo R ²	0.042								

Note: "****", "***" and "**" denote the significance of the statistics in the models at the 1%, 5% and 10% levels. The Koenker and Bassett (1982a) test examines the equality of slope coefficients named Slope Equality Stat. The symmetric quantiles test presented Symmetric Quantiles Stat entails conducting the Newey and Powell (1987) test of conditional symmetry.

TABLE A5. Outward foreign direct investment of Turkey — Model III and Model IV PQ Results

Variable		0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MODEL III	constant	-3.043 [-1.379]	0.392 [0.341]	0.185 [0.143]	-3.272** [-2.034]	-5.229*** [-3.721]	-6.668*** [-5.856]	-5.817*** [-4.845]	-2.571 [-1.618]	0.953 [1.036]
	lnGDP	-0.168* [-1.800]	-0.243*** [-4.298]	-0.149** [-2.106]	0.002 [0.027]	0.067 [0.965]	0.124** [2.066]	0.103 [1.414]	-0.071 [-1.311]	0.013 [0.134]
	lnBREX	0.055 [1.173]	0.079 [1.515]	0.002 [0.038]	0.037 [1.013]	0.049 [1.471]	0.077*** [2.587]	0.112*** [3.833]	0.167*** [6.878]	0.008 [0.145]
	lnDIST	0.204 [0.930]	0.122 [0.783]	-0.136 [-0.780]	-0.154 [-0.916]	-0.058 [-0.331]	-0.004 [-0.018]	0.012 [0.046]	0.267 [1.159]	-0.290 [-0.779]
	lnLTOR	0.643*** [7.993]	0.656*** [9.715]	0.591*** [7.161]	0.507*** [5.393]	0.580*** [6.473]	0.613*** [7.253]	0.574*** [7.071]	0.564*** [6.565]	0.978*** [8.141]
	Obs.	572								
	Slope Equality Stat	161.055***								
	Symmetric Quantiles Stat	69.398***								
	Pseudo R ²	0.092								
		0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MODEL IV	constant	1.751 [1.154]	0.277 [0.248]	-0.001 [-0.001]	-0.120 [-0.091]	-2.142 [-1.474]	-3.527*** [-2.944]	-2.853 [-1.432]	2.177 [1.088]	7.737*** [7.971]
	lnGDP	-0.208** [-2.343]	-0.073 [-1.056]	-0.163*** [-2.550]	-0.168*** [-2.745]	-0.142** [-2.015]	-0.184** [-2.420]	-0.098 [-1.484]	-0.223*** [-4.396]	-0.168** [-2.307]
	lnBREX	0.075 [1.145]	0.096** [2.204]	0.0878 [1.466]	0.029 [0.828]	0.044 [1.434]	0.054** [2.125]	0.124*** [3.833]	0.151*** [6.778]	0.148*** [9.328]
	lnDIST	-0.234 [-1.367]	-0.442*** [-2.752]	-0.045 [-0.237]	0.025 [0.144]	0.240 [1.106]	0.619*** [2.838]	0.303 [1.203]	0.176 [0.728]	-0.594** [-2.289]
	lnMAS	0.396*** [3.424]	0.372*** [15.640]	0.362*** [16.156]	0.357*** [15.420]	0.352*** [13.736]	0.342*** [10.889]	0.287*** [5.769]	0.321*** [8.276]	0.423*** [18.545]
	Obs.	572								
	Slope Equality Stat	171.980***								
	Symmetric Quantiles Stat	140.415***								
	Pseudo R ²	0.156								

Note: "****", "***" and "**" denote the significance of the statistics in the models at the 1%, 5% and 10% levels. The Koenker and Bassett (1982a) test examines the equality of slope coefficients named Slope Equality Stat. The symmetric quantiles test presented Symmetric Quantiles Stat entails conducting the Newey and Powell (1987) test of conditional symmetry.

TABLE A6. Outward foreign direct investment of Turkey — Model V and Model VI PQ Results

	Variable	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MODEL V	constant	-2.779 [-1.458]	-0.972 [-0.522]	-0.828 [-0.583]	-1.291 [-0.894]	0.034 [0.023]	-0.868 [-0.572]	-0.422 [-0.296]	1.992 [1.545]	4.457*** [5.353]
	lnGDP	-0.430*** [-4.186]	-0.254*** [-3.887]	-0.106* [-1.880]	-0.120** [-2.084]	-0.150** [-2.358]	-0.063 [-1.049]	-0.108** [-2.139]	-0.144*** [-2.609]	0.065 [0.830]
	lnBRES	0.259*** [5.429]	0.128*** [2.660]	0.112*** [3.430]	0.127*** [4.570]	0.131*** [4.856]	0.181*** [6.901]	0.226*** [10.118]	0.228*** [9.377]	0.231*** [11.584]
	lnDIST	1.211*** [3.971]	0.421* [1.697]	-0.069 [-0.422]	0.056 [0.328]	0.026 [0.149]	-0.096 [-0.513]	0.054 [0.247]	-0.056 [-0.227]	-0.981*** [-3.504]
	lnPOWD	0.806*** [9.883]	0.612*** [7.250]	0.497*** [7.847]	0.410*** [7.407]	0.397*** [7.665]	0.378*** [7.870]	0.349*** [9.008]	0.395*** [11.392]	0.471*** [14.244]
	Obs.	572								
	Slope Equality Stat	79.659***								
	Symmetric Quantiles Stat	64.179***								
	Pseudo R ²	0.148								
		0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
MODEL VI	constant	-6.911** [-2.064]	-2.450 [-1.317]	-3.222* [-1.657]	-1.705 [-0.685]	-3.528 [-1.278]	-2.904 [-1.197]	-0.791 [-0.422]	0.596 [0.358]	9.306*** [4.921]
	lnGDP	0.004 [0.030]	-0.158* [-1.906]	-0.012 [-0.171]	-0.097 [-1.227]	-0.124 [-1.552]	-0.117 [-1.598]	-0.022 [-0.396]	-0.099** [-2.026]	-0.351*** [-2.945]
	lnBRES	0.133** [1.975]	0.078 [0.935]	0.125*** [3.500]	0.138*** [4.533]	0.172*** [5.804]	0.210*** [7.420]	0.213*** [7.646]	0.213*** [7.518]	0.273*** [7.214]
	lnDIST	-0.088 [-0.487]	0.018 [0.089]	-0.241 [-1.155]	-0.092 [-0.365]	0.288 [0.866]	0.250 [0.702]	-0.231 [-0.809]	-0.094 [-0.394]	-0.185 [-0.564]
	lnUNAV	-0.069 [-1.461]	-0.031 [-1.226]	0.033 [1.299]	0.054* [1.814]	0.049 [1.497]	0.075** [2.220]	0.153*** [5.185]	0.180*** [6.940]	0.304*** [10.449]
	Obs.	572								
	Slope Equality Stat	145.920***								
	Symmetric Quantiles Stat	52.259***								
	Pseudo R ²	0.048								

Note: "****", "***" and "**" denote the significance of the statistics in the models at the 1%, 5% and 10% levels. The Koenker and Bassett (1982a) test examines the equality of slope coefficients named Slope Equality Stat. The symmetric quantiles test presented Symmetric Quantiles Stat entails conducting the Newey and Powell (1987) test of conditional symmetry.