

“Mediation of human resource management in the linkage between performance and culture in an emerging economy”

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MEDIATION OF HUMAN RESOURCE MANAGEMENT IN THE LINKAGE BETWEEN PERFORMANCE AND CULTURE IN AN EMERGING ECONOMY

Abstract

The linkages between corporate culture, corporate performance, and human resource management (HRM) practice have been broadly investigated, but, none of the previous studies have analyzed a mediation mechanism in the relevant research models. This article aimed to analyze the complicated linkages among corporate culture, performance, and HRM practice. Especially, it aimed to underline the mediation of HRM in the research model. The research data were collected in Vietnam as one of the quickly developing countries, receiving a humble amount of research on that issue. Multiple regression analyses were employed to scrutinize the causal correlation from corporate culture to performance, while the mediating procedures were applied to investigate the mediating mechanism. The research findings reveal that clan, adhocracy, and market cultures likely improve corporate performance, whereas hierarchy culture negatively influences corporate performance. Furthermore, HRM practice was evidenced to partially mediate the effects of clan, market, and hierarchy culture on performance. Nevertheless, it fully mediates the influence of adhocracy culture on performance. This research is one of the first to link HRM practice to the relationship between corporate culture and performance, and then explore HRM mediation. The empirical results could help researchers and business managers in developing economies more deeply understand the complicated links among corporate culture, performance in business, and the mediation of HRM practice to make better decisions on corporate culture and HRM for their enterprises. Ultimately, they can gain better corporate performance.

Keywords

clan, adhocracy, market, hierarchy culture, human resource, missing linkage, mediating mechanism, Vietnam

JEL Classification

L25, M12, M14

INTRODUCTION

Recently, enterprises have been struggling to survive and develop in tremendously dynamic business environments (Fekete & Bocskei, 2011). To maintain and achieve success in such turbulent, complicated and uncertain business environments, enterprises have to augment their capability to notice variant in business environments in time and to respond suitably and quickly so that can take promising business opportunities, obtaining competitive advantages (Felipe, Roldán, & Leal-Rodríguez, 2017). Furthermore, various factors improve corporate performance, one of which is corporate culture proposed by Yesil and Kaya (2013). Corporate culture is a combination of common beliefs and assumptions normally shared and effectively held by an enterprise's employees, indicating what is suitable to do (Zhao, Teng, & Wu, 2018). These corporate culture patterns will shape the way the employees behave and adapt to gain the best possible performance.

Corporate culture has been widely deemed extremely important and significant to individuals and enterprises; therefore, a large amount of attention has been paid to this area (Yesil & Kaya, 2013). The causal relationship between corporate culture and performance has been greatly investigated in developed countries (Yusoff, 2011). However, most of the studies have not offered the expected findings. This could be partly because of a lack of important factors in the research model on corporate culture. Numerous previous studies have discussed and investigated the influences of different components of firm culture on performance (Yusoff, 2011; Ali, Said, Abdullah, & Daud, 2017; Kim, 2004; Zhao et al., 2018; Yesil & Kaya, 2013). However, most of them only paid attention to the association from firm culture to performance in a separate model. Almost none of them have taken into account the omission of other factors in the research model of corporate performance and culture, such as HRM practice. Several enterprises located in developing countries, including Vietnam, have been doing their best to compete directly with their rivals in developed economies. To obtain the best successful outcomes, they are obligated to employ the efficient practice of HRM that could be essential effectiveness-improving determinants in responding fast and positively to extremely dynamic business environments. F. Lee, T. Lee, and Wu (2010) revealed there had been an established positive effect of the effective practice of HRM on corporate competitive advantages, leading to higher corporate performance. Based on the contingency viewpoint on HRM, Li, Qin, Jiang, Zhang, and Gao (2015) explained that the relationships among the practice of HRM, job, and corporate performance are conditional upon various other variables. Empirical studies on this point of view have indicated that HRM's effectiveness is contingent on corporate characteristics, including corporate culture.

Besides, a recent review of research by Ali et al. (2017) on the causal relationship between corporate culture and performance discovered that the empirical findings from prior research on this relationship are inconclusive, so suggested more study should be performed to clarify that issue. Whereas Yusoff (2011) illustrated all the four elements of corporate culture that are "clan," "adhocracy," "market," and "hierarchy" affect corporate performance, only one of them positively affects corporate performance. Furthermore, Yesil and Kaya (2013) indicated insignificant evidence on the causal relationship between corporate culture and performance. In contrast, Lee and Kim (2017) explicated all four corporate culture dimensions to significantly influence corporate performance. Potential clarifications for this heterogeneity can be based on missing vital elements in the research model (Surroca, Tribó, & Waddock, 2010). Anchored in the discussions mentioned above, it could propose that when investigating the causal relationship between corporate culture and performance, it should address the identification of missing imperative elements, such as the practice of HRM; and the research should be conducted in an emerging country such as Vietnam.

The next section of this study is the section "Literature review" that will review the related literature, followed by the section "Aim" that emphasizes the research's main purpose. The section "Hypotheses" will propose the research hypotheses. Subsequently, the section "Methods" establishes how to measure the variables used in the research and how the data will be collected. The next section, "Results," tries to explain the findings. Then, the section "Discussion" will give some discussions on the empirical results. Finally, the section "Conclusion" provides a summary of the research.

1. LITERATURE REVIEW

1.1. Causal relationship between corporate culture and performance

According to Al Mamun and Hasan (2017), good corporate culture is recognized as one of the important driving forces, enabling the workers to linger in the enterprise. Therefore, enterprises

could draw and stimulate workers by adopting the sound corporate culture, which likely results in improved job performance and so the enterprises can obtain the best possible corporate performance. Lee and Kim (2017) classified corporate culture in four components, which are "clan," "adhocracy," "market," and "hierarchy." As Yesil and Kaya (2013) argued, clan culture refers to an affable workplace for the whole family to work collectively to obtain a common goal. The character-

istics of clan culture consist of self-esteem, oath, convention, teamwork, cooperation, involvement, harmony, personality development, and loyalty. Lee and Kim (2017) believed that clan culture highlights agility and flexible power, concentrating on comparative relations within the enterprise where collaboration and involvement are more imperative than formal regulations. This is because clan culture pursues sustainable HRM advantages in high coherence, which is one of the driving forces of firm performance. Previous research affirmed that clan culture likely improves corporate performance since commitment, loyalty, and confidence in the enterprise are the fundamental causes behind the positive linkage between clan culture and corporate performance (Fekete & Bocskei, 2011). Because of the concentration on the association among family members, enterprises in which clan culture occurs may underline the importance of workers' improvement to maintain sustainable competitive advantage and gain the best possible corporate performance (Lee & Kim, 2017). Furthermore, clan culture could generate employees' positive thoughts on the enterprise and engage them in business activities, leading to better organizational performance (Wilkins & Ouchi, 1983).

Grounded on previous researches (Yesil & Kaya, 2013), adhocracy culture is epitomized as a self-motivated, industrial, ingenious, and innovative place of work, which underlines the development of new goods and services, flexibility, expansion, adjustment, effectiveness, and experimentation within the enterprise. Additionally, the adhocracy attribute is recognized as one of the elements of corporate culture reflecting external tendency, that is innovative and reacting better to turbulence in business markets, which help the enterprise to establish a new business, make new products and services, and so achieve superior competitive advantages (Lee & Kim, 2017). An enterprise where adhocracy culture is prevalent tends to adapt itself to turbulence in external business environments, faces uncertainty, and seeks to attain finance and human resources to sustain its growth. As Kim, Lee, and Yu (2004) recommended, adhocracy culture emphasizes the significance of instant and deliberate reactions of workers to external business turbulence, making enterprises notice development to attain their main goal of

obtaining competitive advantages. Besides, Yesil and Kaya (2013) revealed that an enterprise with an adhocracy culture would consider changes as business opportunities, stimulating it to succeed. Similarly, J. Iivari and N. Iivari (2011) discovered organizational dynamism is related to adaptability and suppleness, which is considered the ability of enterprises to adapt to uncertainty in the business environment, helping to achieve the best possible corporate performance. Overall, it could suggest adhocracy culture is a driving force of the corporate performance.

The market culture emphasizes the accomplishment of objectives and the domination of markets, which are oriented to obtain the highest achievement (Yesil & Kaya, 2013). Keeping closer to the client is an important factor for the enterprise to acquire useful market-related information, achieving competitive advantages over its rivals (Waterman & Peters, 1982). The corporate culture oriented to the market could create competitive advantages for the enterprise, resulting in positive corporate performance (Felipe et al., 2017). The external orientation of market culture, such as dedication to forecasting, responding quickly to the market's requests, and aggressive changes can lead to access to a wide set of precious knowledge outside the enterprise. In this line, Worley and Lawler (2010) assented market culture can develop externally oriented attributes that may support workers' uninterrupted relations with other stakeholders. Therefore, it is easier for the enterprise to obtain valued information related to markets, making better business decisions. Standards innate to corporate culture's market attributes are connected to the efficiency and good achievement of objectives (J. Iivari & N. Iivari, 2011). Market culture is an important driving force of firm performance because this kind of culture could help facilitate organizational innovation and flexibility. Generally, the arguments mentioned above suggest that market culture highlights external contexts and the importance of helpfulness, competence, and competitiveness to enhance corporate performance.

Hierarchy culture underlines solidity, power, and internal preservation through rules, which support inescapability, competence, and exactness (Lee & Kim, 2017). Similarly, formal and fixed

regulations, well-established procedures, and smooth-running processes within an enterprise are usually viewed as the key attributes of a hierarchy culture (Yesil & Kaya, 2013). This kind of culture tends to impede knowledge sharing within an enterprise since it is extremely formal and conditional on working measures, regulations, prescribed guides, and rules used to make business decisions (Felipe et al., 2017). Insignificant judgment in business and retaining with care top-down contact, consistency, standardization, and well-arranged measures are considered the internal characteristics of hierarchy culture (Cameron & Quinn, 2011). Such characteristics enable the enterprise to be slowly reacting to turbulence in the business environment because hierarchy culture is inclined to maintain the existing business situation unchanged by retaining regulations and orders instead of adapting itself to the variation in business environments. Fekete and Bocskei (2011) found a negative influence of the hierarchy characteristics of corporate culture on performance. Too much formalization of a hierarchy culture might result in temporary success for an enterprise because it puts enormous emphasis on corporate performance in the short term. However, in the long term, employees and clients become less disturbed and less reactive to corporate growth (Lee & Kim, 2017). Executives who used to work in a hierarchical structure often find it hard to quickly react to changes in business environments to lack flexibility in enhancing their corporate performance (Crocitto & Youssef, 2003). Furthermore, Lee and Kim (2017) provided statistical evidence that corporate culture's hierarchy type negatively determines corporate performance.

1.2. Missing linkage of HRM

The causal relationship between corporate culture and performance has been explored by previous studies (Kim et al., 2004; Lee & Kim, 2017; Yesil & Ahmet, 2013); nonetheless, these projects generally only focused on the association between corporate culture and performance but ignoring potential missing links that could interfere between them. Various studies suggested a tough correlation between the practice of HRM and corporate culture (Vetráková & Smerek, 2015; Osibanjo & Adeniji, 2013; Badea, 2013; Kosiosek & Szczepańska, 2016). Meantime, others emphasized the association be-

tween HRM and corporate performance (Sabiu, Ringim, Mei, & Joarder, 2019; Alzyadat, Alatyat, & Alnsour, 2015; Lee et al., 2010; Li et al., 2015). As the studies mentioned above showed, HRM's practice is a determinant of corporate performance and a consequence of corporate culture; therefore, to comprehensively explore the association from corporate culture to performance, it should include the practice of HRM into the research model. Furthermore, Surroca et al. (2010) asserted that an omitted variable could make research results contradictory or inconclusive. Hence, this research tries to enter HRM into the model from corporate culture to performance to clarify the relationship among them.

In a research project related to the causal relationship between corporate culture and HRM, Kosiosek and Szczepańska (2016) explicated the effect of the characteristics of corporate culture could manifest themselves in all the features of HRM, consisting of training, development, participation, motivation, payment, and performance appraisal. An enterprise where hierarchy culture is dominant usually concentrates upon the effectiveness of normal and replicating jobs, which is expressed in the compensation of incentive actions targeted at eradicating innovative activities and flexibility. In contrast, an enterprise dominated by adhocracy culture will develop a promoting system supporting flexibility and freedom at work. In such an enterprise, employees are encouraged for behaviors oriented to wide open-mindedness for uncertainty and risk; inspiration and research for new products and services are considered incentive instruments and accepted.

Clan culture is reflected in flexibility, mutuality, consistency, self-esteem, and concentration on HRM practice. Enterprises where market culture is dominant are likely to promote their workers to take part in rivalry and contention. Such enterprises tend to encourage actions oriented to collaboration and the making of the cooperative decision. Therefore, it can emphasize the practice of HRM is not only affected by corporate culture, but it also influences workers' behaviors and feelings. Numerous prior studies highlighted the significance of corporate culture in shaping HRM practice in business (Vetráková & Smerek, 2015; Osibanjo & Adeniji, 2013; Badea, 2013). Corporate

culture adapts gradually to deal with dynamic business environments and satisfies the enterprise's changing requirements to help obtain competitive advantages. Hence, encouraging corporate culture types are regarded as an encouraging tool to motivate an enterprise to run efficiently and gain high efficiency.

Furthermore, Sabiu et al. (2019) highlighted that HRM's research has obtained significance in the management literature for the last decades and, most significantly, its influence on corporate performance. Sheehan (2014) and Alzyadat et al. (2015) emphasized the significance of HRM in business and recommended that HRM's best practice can lead to the best possible corporate performance. The practice of HRM could be composed of training and development, participation, payment, and performance evaluation (Huselid, 1995; Becker & Gerhart, 1996). Furthermore, other scholars indicated that enterprises adopting HRM better practice would motivate their employees to work better, resulting in advanced corporate performance (Lee et al., 2010; Li et al., 2015). Innovative enterprises consider HRM practice a good managerial tool to motivate group responsibilities and develop good relationships with their consumers via participation and empowerment, helping to renovate products and services. Consequently, an enterprise must employ the best practice of HRM, which could encourage and motivate their workers to be more creative to create more success for the enterprise.

2. AIM

The current paper aims to analyze the mediating role of HRM as a missing linkage in the relationship between corporate culture and performance in Vietnamese businesses. The research also investigates how corporate culture can affect corporate performance.

3. HYPOTHESES

Grounded on the discussions mentioned above related to the effects of corporate culture on corporate performance, it can lead to the following hypotheses:

- H1: *Clan culture likely has a positive effect on corporate performance.*
- H2: *Adhocracy culture likely has a positive effect on corporate performance.*
- H3: *Market culture likely has a positive effect on corporate performance.*
- H4: *Hierarchy culture likely has a negative effect on corporate performance.*

As the arguments mentioned above stressed, corporate culture affects both corporate performance and HRM practice, which influences corporate performance. Based on Baron and Kenny (1986), it could argue that HRM practice likely interferes in the causal relationship between corporate culture and performance, and it can transmit the effect of corporate culture partially or totally through it into corporate performance. These discussions could come to the following hypotheses:

- H5: *The practice of HRM likely mediates the causal relationship between clan culture and corporate performance.*
- H6: *The practice of HRM likely mediates the causal relationship between adhocracy culture and corporate performance.*
- H7: *The practice of HRM likely mediates the causal relationship between market culture and corporate performance.*
- H8: *The practice of HRM likely mediates the causal relationship between hierarchy culture and corporate performance.*

4. METHODS

4.1. Instruments

Grounded on prior research (Yesil & Kaya, 2013; Lee & Kim, 2017; Deshpandé, Farley, & Webster, 1993; Felipe et al., 2017); the current research measures "corporate culture" on the four following dimensions: (1) "clan" – CL is formed from three elements; (2) "adhocracy" – AD is composed of three elements; (3) "market" – MA is

constituted from three elements; and (4) “hierarchy” – HI consists of three elements. Drawing on the measurements used in previous studies (Huselid, 1995; Becker & Gerhart, 1996), this research concentrates on the four principal dimensions of “the practice of HRM” – HR that are “training and development,” “participation,” “payment,” and “performance evaluation.” Each of the dimensions is calculated with a single element. Corporate performance is evaluated on two items (ROA and ROE), adapted from Lee and Roh (2012) and Huynh (2018).

Lastly, this research controlled for corporate risk – RIS, leverage – LVE, and size – OSI. Aggarwal and Verma (2020) indicated that corporate characteristics, including corporate leverage and size, have a significant influence on the practice of HRM. Likewise, Özutku and Öztürkler (2009) investigated linked firm characteristics, for example, firm size, industry sector, national culture, and firm age to the practice of HRM. Besides, firm size and risk are evidenced as the determinants of capital structure decisions (Wahome, Memba, & Muturi, 2015), so it can suggest they are also driving forces of HRM practice. Other researchers (Martínez-Ferrero, 2014; Surroca et al., 2010) affirmed the influence of corporate size, leverage, and risk on corporate performance and the practice of corporate social responsibility. Drawing on previous relevant research (Surroca et al., 2010; Martínez-Ferrero, 2014), the corporate risk is evaluated using the market model’s beta. Corporate leverage is measured as the ratio of debt to equity (Aggarwal & Verma, 2020; Martínez-Ferrero, 2014). The natural logarithm of equity’s market value is taken to evaluate corporate size (Martínez-Ferrero, 2014).

4.2. Data collection

Southeast Asia is one of the most turbulent economic areas. Vietnam is one of the most rapidly developing countries in Southeast Asia; accordingly, enterprises operating there (an emerging economy) are supposed to apply as many sound managerial practices as possible to struggle squarely with the competitors in developed nations. Nevertheless, only a little research on such efficient managerial tools has been analyzed in emerging economies (Yesil & Kaya, 2013), so it

is necessary to undertake more studies in this field in emerging nations, including Vietnam. Consequently, Vietnam was nominated as a case study for the current research.

For the measurements’ fitness, a pilot test of construct measures interviewing 20 executives involved in management was performed before the data collection (Bowden, Fox-Rushby, Nyandieka, & Wanjau, 2002). The research sample consisted of 1,749 enterprises listed on Vietnam’s three chief Stock Exchanges. The biggest one – Ho Chi Minh Stock Exchange – encompassed 383 listed enterprises, the second biggest – Hanoi Stock Exchange – included 368 listed enterprises, and the third biggest – Unlisted Public Company Market – comprised 898 listed enterprises.

The procedures of simple random sampling were undertaken to decide on 600 out of the 1,749 enterprises. The early solicitations were conducted to acquire answers from major informants related to management at the enterprises. One manager involved in management for each of the targeted enterprises was selected to answer the survey questionnaire. Of the 600 questionnaires delivered out, there were only 409 useful responses with satisfactory information, meeting the sample size requirement as Hair, Black, Babin, Anderson, and Tatham (2012) stipulated.

5. RESULTS

5.1. Assessment of instrumental reliability

To analyze the stability of elements within the scales, Cronbach’s α analysis was performed, which produced the outcomes in Table 1. According to Hair et al. (2012), the estimates of Cronbach’s α should obtain the values of larger than 0.6 to be acceptable, and over 0.7 to be good. The item-total correlations should get the values of more than 0.5 to be accepted. Moreover, the estimates of Cronbach’s α if the item is deleted should be less than their total Cronbach’s α to be considered good. As Table 1 shows, the coefficients of Cronbach’s α all achieve the values of nearly or over 0.7, and all of the item-total correlations are greater than the 0.5 level.

Table 1. Reliability analyses of scales

Item	Item-total correlations	Cronbach's α if item is removed	Cronbach's α
CL1	.771	.826	.880
CL2	.786	.813	
CL3	.745	.849	
AD1	.558	.665	.740
AD2	.559	.662	
AD3	.581	.637	
MA1	.520	.603	.699
MA2	.511	.614	
MA3	.516	.607	
HI1	.536	.612	.710
HI2	.533	.615	
HI3	.518	.635	
HR1	.887	.936	.952
HR2	.883	.937	
HR3	.880	.938	
HR4	.884	.937	
ROA	.972	–	.896
ROE	.972	–	

Additionally, all the estimates of Cronbach's α if the item is deleted (ranging from 0.603 to 0.938) are smaller than their total Cronbach's α s (ranging from 0.669 to 0.952). The abovementioned findings indicate all the items are internally stable with their scales. To organize the elements to their latent factors, the exploratory analysis of factors for the variables formed from multiple items was undertaken, the findings of which are presented in Table 2.

The explanatory analysis of factors is a statistical method applied to classify the relations among the variables in the research model, offering a group

of items based on the strength of relationships by employing the sample data. The validity analyses of convergence and discriminant were carried out to determine the validity of scales. As Hair et al. (2012) claimed, the validity of convergence is the extent to which several items are consistent with one another. If the factor loadings and communalities exceed the 0.5 level, the data are convergent.

Besides, the validity of convergence is also conditional on the estimates of AVE (Average Variance Extracted) and CR (Construct Reliabilities). The validity of discriminant is the extent to which items in different groups are divergent from one another. If the cross-loadings exceed the 0.3 level, the data is divergent.

According to Table 2, all the factor loadings and commonalities are greater than the 0.5 level. Furthermore, the AVE values range from 0.586 to 0.880, all above the 0.5 limit, and the values of CR are larger than 0.7 (ranging from 0.776 to 0.936). These figures demonstrate the convergence of the research model. The cross-loadings are all greater than the lowest level of 0.3, indicating the research model's divergence. Moreover, the estimates of KMO surpass the smallest limit of 0.7, and the Chi-square obtains the 4951.483 value at the 1% significance level, revealing the exploratory factor analysis gets good fitness. Overall, the research model obtains the adequate validity of convergence and divergence.

Table 2. Exploratory factor analyses

Item	Communalities	Loading	AVE	CR	KMO	Chi-square	Sig.
CL1	.806	.819	.679	.864	.880	4951.483	.000
CL2	.835	.864					
CL3	.778	.788					
AD1	.674	.782	.601	.818			
AD2	.649	.751					
AD3	.679	.791					
MA1	.615	.709	.586	.776			
MA2	.666	.761					
MA3	.628	.725					
HI1	.664	.784	.595	.815			
HI2	.659	.791					
HI3	.614	.737					
HR1	.883	.826	.679	.894			
HR2	.871	.822					
HR3	.866	.831					
HR4	.870	.817					
ROA	.985	.921	.880	.936			
ROE	.988	.955					

Table 3. Correlations, mean and standard deviation

	ROA	ROE	RIS	LVE	OSI	CL	AD	MA	HI	HR
ROA	1									
ROE	.922***	1								
RIS	-.007	.031	1							
LVE	-.078	-.075	-.040	1						
OSI	.081*	.019	.177***	-.028	1					
CL	.390***	.324***	-.015	-.048	.206***	1				
AD	.279***	.235***	.001	-.018	.149***	.246***	1			
MA	.365***	.320***	.026	-.015	.107**	.440***	.327***	1		
HI	-.274***	-.228***	-.002	.012	-.156***	-.265***	-.323***	-.234***	1	
HR	.480***	.394***	-.006	-.053	.266***	.609***	.425***	.562***	-.327**	1
M	.058	.086	.167	2.058	18.774	3.404	3.445	3.829	2.171	4.047
SD	.264	.489	.549	7.818	2.001	.669	.779	.666	.722	.956

Note: SD: Standard deviation; M: Mean, ***, **, * show significance at the 1%, 5%, and 10% levels (2-tailed); $N = 409$.

The correlations, mean and standard deviations of the main factors are shown in Table 3. The correlation between the two main dependent variables is very strong, equal to 0.922 at 1% significance level; however, the correlations among the independent variables (RIS, LVE, OSI, CL, AD, MA, HI, and HR) are weaker, presenting no multicollinearity (Hair et al., 2012). Moreover, the correlations of ROA and ROE with CL, AD, MA, HI, and HR are all statistically significant at 1% level, demonstrating that CL, AD, MA, HI, and HR have statistical influence on ROA and ROE separately.

5.2. Assessment of the causal relationship

To statistically investigate the causal hypotheses, multiple regression analyses were applied to estimate Models 1 and 2, the results of which are exhibited in Table 4. CL, AD, MA, and HI have statistical influence on ROA and on ROE (Models 1 and 2). CL, MA, and HI statistically affect ROA at 1% significance level, while AD statistically influences ROA at 5% significance level. The correlations of CL, AD, and MA with ROA are positive, but that of HI is negative. The model's fitness is significant at 1% level with the F value of 17.701, and R^2 achieves the value of 0.236. Additionally, the estimate of Durbin-Watson obtains the 1.999 value falling in the interval from du to $(4 - du)$, demonstrating no autocorrelation. The estimate of χ^2 from the Breusch-Pagan test attains the value of 0.470 at the 0.495 significance that surpasses the 10% level, indicating no heteroskedasticity.

Similarly, CL and MA statistically influence ROE at 1% significance level, whereas AD and HI statistically affect ROE at 5% significance level. Furthermore, the correlations of CL, AD, and MA with ROA are positive, but that of HI is negative. The model's fitness is significant at 1% level with the F value of 12.326, and R^2 achieves the value of 0.177.

Moreover, the estimate of Durbin-Watson obtains the value of 1.9679 falling in the interval from du to $(4 - du)$, showing no autocorrelation. The estimate of χ^2 attains the value of 0.810 at 0.369 significance that exceeds the 10% level, revealing no heteroskedasticity. The findings mentioned above are in statistical support of Hypotheses 1-4 on corporate culture's effect on performance.

5.3. Assessment of mediation

To statistically explore the mediating hypotheses $H5-H8$, the current research estimated Models 3-5, the outcomes presented in Table 5. The statistical significance for testing mediating effects was estimated using previous research (Goodman, 1960; Krull & MacKinnon, 1999). As shown in Table 5, Models 3-5 are significant at the 1% level with the F values of 67.548, 19.056, and 12.719, respectively. The values of R^2 attain the values of 0.541, 0.276, and 0.203. Besides, the values of Durbin-Watson are 1.814, 2.010, and 1.980, lying in the intervals from du to $(4 - du)$; consequently, claiming no autocorrelation in Models 3-5.

The estimators of χ^2 achieve the 0.030, 0.010, and 2.200 values at the 0.856, 0.908, and 0.138 signifi-

Table 4. Multiple regression analyses to test causal hypotheses

Regressand	Predictor	β	Std. Error	t	P _t
ROA (Model 1)	(C)	-.519	.146	-3.546	.000
	RIS	-.003	.021	-.151	.880
	LVE	-.002	.001	-1.392	.165
	OSI	-.004	.006	-.623	.534
	CL	.097	.020	4.876	.000
	AD	.040	.016	2.435	.015
	MA	.076	.020	3.787	.000
	HI	-.047	.017	-2.737	.006
	Durbin-Watson			1.999	
	$\chi^2 / P\chi^2$			470/495	
	R ²			.236	
F/P _F			17.701/000		
ROE (Model 2)	(C)	-.596	.282	-2.114	.035
	RIS	.037	.041	.893	.372
	LVE	-.004	.003	-1.311	.191
	OSI	-.021	.012	-1.769	.078
	CL	.152	.038	3.968	.000
	AD	.064	.031	2.022	.044
	MA	.130	.038	3.382	.001
	HI	-.076	.033	-2.262	.024
	Durbin-Watson			1.967	
	$\chi^2 / P\chi^2$.810/369	
	R ²			.177	
F/P _F			12.326/000		

Table 5. Multiple regression analyses for mediation

Regressand	Predictor	β	Std. Error	t	P _t
HR (Model 3)	(C)	-4.496	1.645	-2.733	.007
	RIS	-.219	.240	-.910	.363
	LVE	-.011	.017	-.690	.490
	OSI	.229	.068	3.379	.001
	CL	2.192	.223	9.832	.000
	AD	.933	.184	5.083	.000
	MA	1.729	.224	7.708	.000
	HI	-.397	.195	-2.037	.042
	Durbin-Watson			1.814	
	$\chi^2 / P\chi^2$.030/856	
	R ²			.541	
F/P _F			67.548/000		
ROA (Model 4)	(C)	-.428	.144	-2.970	.003
	RIS	.001	.021	.058	.954
	LVE	-.002	.001	-1.265	.207
	OSI	-.008	.006	-1.411	.159
	CL	.052	.022	2.422	.016
	AD	.021	.016	1.267	.206
	MA	.040	.021	1.939	.053
	HI	-.039	.017	-2.318	.021
	HR	.020	.004	4.695	.000
	Durbin-Watson			2.010	
	$\chi^2 / P\chi^2$.010/908	
R ²			.276		
F/P _F			19.056/000		
ROE (Model 5)	(C)	-.460	.281	-1.639	.102
	RIS	.043	.041	1.069	.286
	LVE	-.003	.003	-1.206	.229
	OSI	-.028	.012	-2.368	.018
	CL	.085	.042	2.032	.043
	AD	.035	.032	1.105	.270
	MA	.078	.041	1.912	.057
	HI	-.063	.033	-1.920	.056
	HR	.030	.008	3.592	.000
	Durbin-Watson			1.980	
	$\chi^2 / P\chi^2$			2.200/138	
R ²			.203		
F/P _F			12.719/000		

cance levels exceeding the 10% significance limit, presenting no heteroskedasticity. The arguments mentioned above conclude that Models 3-5 get good fitness to the research data. As Table 4 reveals, CL, AD, MA, and HI impose statistical impacts on ROA (Model 1) and ROE (Model 2). Based on Table 5, CL, AD, MA, and HI have statistical effects on HR (Model 3) that, in turn, puts statistical influences on ROA at 1% level (Model 4) and on ROE at 1% level (Model 5).

Based on Model 1, CL, AD, MA, and HI affect ROA at 1%, 5%, and 10% significance levels with the estimates of 0.097, 0.040, 0.076, and -0.047 ($\beta = 0.097, 0.040, 0.076, \text{ and } -0.047$; $P_t = 0.000, 0.015, 0.000, \text{ and } 0.006$). In Model 4, AD has no impact on ROA ($P_t = 0.206$), while CL, MA, and HI influence ROA at 5%, 10%, and 1% significance levels with the coefficients of 0.052, 0.040, and -0.039 ($\beta = 0.052, 0.040, \text{ and } -0.039$; $P_t = 0.016, 0.053, \text{ and } 0.021$). When entered into the research model from Model 1 to Model 4, HR makes AD insignificant in Model 4 ($P_t = 0.206$) from significant in Model 1 ($P_t = 0.015$). The influential coefficients of CL, MA, and HI on ROA decrease to 0.052, 0.040, and -0.039 from 0.097, 0.076, and -0.047 and at the same time, the significance levels also go down to 5%, 10%, and 1%. These findings suggest a mediating effect of HR on the causal relationship between CL, AD, MA, HI and ROA.

Table 6. Mediation analyses

Regressand	Predictor	t_{indirect}	P_t
ROA	CL	4.255	.000
	AD	3.486	.000
	MA	4.035	.000
	HI	1.905	.057
ROE	CL	3.389	.000
	AD	2.972	.003
	MA	3.279	.001
	HI	1.826	.068

Note: Mediator: HR.

Similar procedures were employed for ROE (see Models 1 and 5). It can propose a mediating effect of HR on the causal relationship between CL, AD, MA, HI and ROE. Subsequently, this research applied procedures proposed by Krull and MacKinnon (1999) and Goodman (1960) to analyze the mediating influences' statistical significance. The analytic procedures generated the results in Table 6. As the figures reveal in Table

6, the mediating effects of HR on the causal relationship between CL, AD, MA, HI and ROA and ROE are all statistically significant. The mediating effects on the associations of CL, AD, and MA with ROA and ROE are significant at 1% level ($t_{\text{indirect}} = 4.255, 3.486, 4.035, 3.389, 2.972, \text{ and } 3.279$; $P_t = 0.000, 0.000, 0.000, 0.000, 0.003, \text{ and } 0.001$). However, those of HI with ROA and ROE are at 10% significance level ($t_{\text{indirect}} = 1.905 \text{ and } 1.826$; $P_t = 0.057 \text{ and } 0.068$). Overall, it can conclude that HR intervenes in the causal relationship between AD and corporate performance (ROA and ROE). In contrast, HR partially mediates in the causal relationship of CL, MA, and HI with corporate performance (ROA and ROE). These abovementioned findings indicate that HR completely transmits the effects of AD on corporate performance (ROA and ROE), while transmits a part of the impacts of CL, MA, and HI on corporate performance (ROA and ROE) indirectly via itself.

6. DISCUSSION

There have been numerous researchers investigating the relationship between corporate culture, corporate performance, and HRM practice. Nevertheless, none or only a few of them have examined mediation mechanisms in the relevant research models. Alsheikh et al. (2017) analyzed the impacts of the practice of HRM and corporate culture on job performance that could lead to corporate performance. They include a missing linkage of leadership style and analyze its moderating role in the influence of the practice of HRM and corporate culture on job performance. At the same time, Çiçek and Özer (2011) investigated the moderation of corporate culture in the causal relationship between outsourcing human resources and corporate performance. Another research project by Omar, Lim, and Basiruddin (2014) emphasized the moderation of corporate culture in corporate governance's effect on corporate performance. Furthermore, Biswas (2009) analyzed the mediating role of HRM practice in the impact of firm culture on transformational leadership. To the best of the author's knowledge, so far, there have not been any studies exploring the mediating effect of the practice of HRM in the causal association from corporate culture to performance. This missing factor could make research results con-

tradictory, inclusive, or inaccurate (Surroca et al., 2010). Therefore, this research tries to analyze the associations among corporate culture, the practice of HRM, and corporate performance; and especially emphasizing the mediating role of HRM in the research model.

The research results are in support of the positive influence of clan culture on firm performance. Clan culture is evidenced as the most important factor in improving corporate performance. This finding indicates that an enterprise where employees share commonalities, behave as part of a big family, try to be active and involved could obtain the best possible corporate performance. On the contrary, adhocracy culture is documented as the least important factor in corporate performance and positively affects corporate performance. Adhocracy culture's lack of complication and bureaucratization makes the enterprises more flexible, which helps respond more quickly to changes in business environments to gain superior corporate performance. This finding contradicts that of Lee and Kim (2017) who discovered a negative influence of adhocracy culture on corporate performance, explaining the great extent of the adhocracy type of culture likely lessens corporate performance. This could be explained that adhocracy culture may promote good attributes in emerging business environments, including Vietnam, in contrast to developed business environments, including Korea, where Lee and Kim (2017) undertook their research.

This research also supports the positive impact of market culture on corporate performance and indicates that it is the second most imperative factor after clan culture to corporate performance. A market culture characterized by the dynamics of competition enables the enterprise to obtain certain performance.

The empirical findings indicate the negative influence of hierarchy culture on firm performance, demonstrating the type of culture based on structure and control likely obstruct organizational growth, leading to worse performance. This result is inconsistent with that by Felipe et al. (2017) who did not discover a negative effect of hierarchy culture on organizational agility as expected; explicating some hierarchy culture attributes might result in more agility. This contradiction can be elucidated that hierarchy culture likely fits better in Vietnam's business environment as an emerging economy than Korea's business environment as a developed economy.

Finally, this research reveals statistical evidence on the mediation the practice of HRM plays in the causal relationship from the elements of corporate culture to the components of corporate performance. If included in the research model of corporate culture and performance, HRM practice will transmit a part of the effects of clan, market, and hierarchy cultures on corporate performance; however, it will transmit the whole influence of adhocracy culture on corporate performance.

CONCLUSION

This research aims to provide directors and researchers with valuable insight into the compound linkages among corporate culture, the practice of HRM, and corporate performance, in which it highlights the mediating function of HRM. The practice of HRM can transmit a part or the whole of corporate culture's effects into corporate performance. Entered into the research model, HRM practice will transmit a part of the effects of clan, market, and hierarchy cultures into corporate performance. Conversely, it will transmit the whole effect of adhocracy culture into corporate performance. These findings could make this research one of the first to link HRM practice to the relationship between corporate culture and performance and then discover the mediating role of HRM in the research model.

The findings are helpful for executive directors in Vietnam and other emerging economies, in general, to make better business decisions on the types of corporate culture that an enterprise should adopt and the styles of HRM it should implement. There are some limitations to the research. First, a single respondent for each enterprise could lead to a bias problem. Future projects should employ other ap-

proaches to avoid possible bias. Second, the study was undertaken in Vietnam as an emerging economy, but the results are expected for other emerging economies. However, business environments are likely dissimilar, and hence the empirical results of this research should be carefully employed.

AUTHOR CONTRIBUTIONS

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