

# The influence of demographic, cultural, and educational background in the boardroom on firm performance–The Croatian evidence

---

Pavić Kramarić, Tomislava; Miletić, Marko

Source / Izvornik: **Zbornik radova Ekonomskog fakulteta u Rijeci, 2022, 40, 79 - 95**

Journal article, Published version

Rad u časopisu, Objavljena verzija rada (izdavačev PDF)

<https://doi.org/10.18045/zbefri.2022.1.79>

Permanent link / Trajna poveznica: <https://um.nsk.hr/um:nbn:hr:227:880349>

Rights / Prava: [Attribution-NonCommercial-NoDerivatives 4.0 International/Imenovanje-Nekomercijalno-Bez prerada 4.0 međunarodna](#)

Download date / Datum preuzimanja: **2024-12-26**

SVEUČILIŠTE  
U  
SPLITU



SVEUČILIŠNI  
ODJEL ZA  
FORENZIČNE  
ZNANOSTI

Repository / Repozitorij:

[Repository of University Department for Forensic Sciences](#)



UNIVERSITY OF SPLIT

  
dabar  
DIGITALNI AKADEMSKI ARHIVI I REPOZITORIJI

Original scientific paper

UDC: 005.58:658(497.5)

<https://doi.org/10.18045/zbefri.2022.1.79>

## The influence of demographic, cultural, and educational background in the boardroom on firm performance – The Croatian evidence\*

Tomislava Pavić Kramarić<sup>1</sup>, Marko Miletić<sup>2</sup>

### *Abstract*

*This study investigates the demographic, cultural and educational features of management boards of Croatian manufacturers. The analysis, conducted using static panel analysis, encompasses the period from 2015 to 2019. To the impact of different board characteristics on firm performance expressed with accounting-oriented performance measures such as return on assets (ROA) and return on equity (ROE), this study includes several explanatory variables comprising CEO tenure, age of the board members, the share of foreigners in the boardroom and finance educational background. Additionally, a few firm-specific variables included in the research are firm size, leverage, and firm age. The analysis findings reveal that board composition plays a crucial role when explaining the firm's profitability. Furthermore, the firm's maturity and leverage additionally prove to be significant factors affecting corporate performance.*

**Key words:** *demographic board diversity, cultural board diversity, firm performance, Croatian manufacturers*

**JEL classification:** *G30, G34, J24, L25*

---

\* Received: 07-12-2021; accepted: 14-06-2022

<sup>1</sup> Associate professor, University of Split, University Department of Forensic Sciences, R. Boškovića 33, 21 000 Split, Croatia. Scientific affiliation: corporate finances, insurance, financial institutions, financial analysis. E-mail: [tpkramaric@forenzika.unist.hr](mailto:tpkramaric@forenzika.unist.hr)

<sup>2</sup> College professor, University of Split, University Department of Professional Studies, Kopilica 5, 21 000 Split, Croatia. Scientific affiliation: corporate finances, capital budgeting, taxation. E-mail: [mamiletic@oss.unist.hr](mailto:mamiletic@oss.unist.hr)

## 1. Introduction

In the last decades, the issue of corporate governance diversity has obtained an increased importance in empirical literature. A significant amount of research focuses on gender diversity (e.g. Campbell and Mínguez-Vera, 2008; Gallego-Álvarez et al., 2010; Martín-Ugedo and Mínguez-Vera, 2014), but demographic, cultural and educational features of boards are also widely investigated topic among researchers (e.g. Kim, 2005; Simsek, 2007; Rose, 2007; Horváth and Spirollari, 2012; Kaczmarek et al., 2012; Dikolli et al., 2014; Li and Chen, 2018 etc.).

Since the management board of the firm bears the most responsibility for the firm's operations and for meeting the set objectives and strategic goals, as well as keeping its reputation as a responsible and trustworthy firm, it is of crucial importance to ensure that the management boards of the firms have the necessary competences and resources to conduct their specific duties successfully. These competencies relate primarily to the required knowledge, skills, education, expertise and experience (Annual Report on Corporate Governance 2019, Croatian Financial Services Supervisory Agency and Code of Corporate Governance, Croatian Financial Services Supervisory Agency & Zagreb Stock Exchange). Therefore, the purpose of this study is to examine the demographic, cultural and education features of management boards of Croatian manufacturers that employ two-tier board structure. This is the most common corporate governance structure among Croatian companies and the management board is hereinafter referred to as *the board*.

This research examines the influence of different features of board members, including demographic characteristic such as CEO tenure and age of the board, cultural diversity stemming from a foreign origin of the board member as well as their financial educational background on the performance of Croatian large-sized manufacturers in the period 2015–2019. It contributes to the existing corporate governance literature due to the fact that it relates to the emerging market with legal, economic and socio-cultural setting differing from developed markets which were mainly the subject of the analysis so far. Furthermore, most of the previous papers dealing with board diversity, at least in the Croatian context, focus on gender diversity, whereas this study employs a more extensive range of diversity measures including demographic, cultural and educational diversity.

Thus, the authors aim to test this relation and propose the main hypothesis that demographic, cultural and educational characteristics of the board members have an impact on firm performance.

The remainder of the manuscript is structured as follows. The following part discusses the existing literature relating to the influence of board members' features

relating to demographic, cultural and educational diversity on firm performance. This part includes a discussion of the variables selection and provides empirically-based evidence for the potential impact of individual variables. Section three discusses the methodology, while the fourth section deals with empirical data and results. The fifth section provides discussion, while the last section draws the conclusions.

## 2. Literature review

Management board composition is a widely investigated topic in research studies as expected to have a crucial impact on the board's decision-making procedures, activities, and outcomes and ultimately on overall firm performance. The demographic feature that has drawn the attention of researchers in recent decades is the gender of the board. Still, several studies dealing with other board characteristics also arise, encompassing other demographic, cultural, and educational background characteristics of board members such as CEO tenure, the average age of the board, the share of foreign nationals, and financial background. Different diversity variables are considered drivers of "firm-level outcomes because of cognition as well as social identity" (Kagzi and Guha, 2018), even though the previous research provides inconclusive findings on this issue. It suggests the importance of gaining deeper insight into board diversity of demographic, cultural, and educational background and its potential effect on firm performance. Several distinguished studies that research the structure of boards are in this paper grouped and investigated according to the board features and presented in the lines below.

Demographic attribute such as CEO tenure is widely employed in the existing research that includes papers, for instance, by Simsek (2007), McKnight and Weir (2009), McCann (2016), and Kaczmarek et al. (2012), to name a few. Regarding tenure, longer CEO tenures are usually associated with benefits such as familiarity with decision-making processes (Walters et al., 2007), cumulated knowledge and experience, and job-specific skills (Simsek, 2007) as well as "comprehensive knowledge and understanding of the company's operating environment" (DeBoskey et al., 2019: 659). The positive impact of CEO tenure on firm performance measured with Tobin's Q is found by e.g. Kaczmarek et al. (2012) while Dikolli et al. (2014) found a positive influence of CEO tenure on past performance in a sample of public US firms in the period from 1996 to 2005. However, the existing empirical research does not provide clear results. Specifically, McCann (2016) states that besides being in a dominant position to impact board decisions, the CEOs become more engrained and less likely to protect and manage shareholders' interests as the tenures lengthen. Longer-serving CEOs can strongly identify with their role but not necessarily aligned with the goals of the board or shareholders (Kaczmarek et al., 2012 citing Hillman et al., 2008). Moreover, Kaczmarek et al. (2012) found that CEO tenure

is detrimental to a company's value creation expressed with Tobin's Q while Chen et al. (2019) found evidence of better corporate social responsibility performance in a CEO's early tenure on a sample of US firms. It is worth noting that Walters et al. (2007) found that low to moderate tenure levels positively influence returns to shareholders that do not hold true if tenure increases to higher levels.

The age of the board presents another demographic characteristic of the board or human capital variable (Kim, 2005). Although the results of prior research on the impact of board age on company performance are inconsistent, it is worth noticing that older and younger executives differ from each other in many segments. Above all, they are different according to their risk propensity. Younger executives usually show more willingness to accept more risk and undertake major structural changes (Horváth and Spirollari, 2012). Moreover, they can be expected to demonstrate their capabilities motivated by reputation concerns and thus, be more aggressive (Arioglu, 2021). Also, often cited in the literature that younger decision-makers tend to be more creative and innovative (Bonn et al., 2004). Nevertheless, Li et al. (2017) also add that, according to the market learning hypothesis, younger executives might be more conservative and avoid risky decisions that might lead to negative consequences which might harm the market perception of their skills. For example, Darmadi (2011) found that the share of young board members is positively associated with market performance. On the other hand, older executives have more experience (Bonn et al., 2004) but, as suggested by Waelchli and Zeller (2013), the cognitive abilities of senior executives deteriorate, and they are less motivated as opposed to their younger colleagues. Horváth and Spirollari (2012), using a sample of 100 large US companies in the period 2005–2009, find that the age of the board negatively influences the price-to-book value ratio. It is also so when controlling time effects, although the variable becomes statistically insignificant. Moreover, Bonn et al. (2004) also found that the age of directors is negatively related to the performance of Japanese firms. On the other hand, Xu et al. (2018) examine the role of board age in the context of committing corporate financial fraud suggesting that older executives are usually more experienced and have more to lose in case they do not succeed in their monitoring roles. Consequently, they are more capable and motivated for monitoring CEOs' activities and are therefore less likely to be involved in corporate financial fraud. Moreover, McIntyre et al. (2007) expected a positive influence on the average age of board of directors' members but found it to be insignificant.

In the context of the cultural diversity of the board, foreigners may reflect it as they might provide fresh worldviews, diverse ways of perception of things and interpreting to the group as well as "different sources of information, communication networks and linguistic resources" (Frijns et al., 2016: 12). Ely and Thomas (2001) also add that different cultural backgrounds could provide different sets of experiences and skills. Foreign directors may contribute with

specific knowledge, especially in case of high levels of foreign sales and foreign operations (Frijns et al., 2016) or in case of acquisitions abroad (Masulis et al., 2012). However, Frijns et al. (2016) find that the share of foreign directors impairs a firm's performance while Rose (2007) does not find support that share of foreigners plays vital role in determining a firm's performance since this variable remains insignificant.

Board diversity can also be observed through educational qualifications with financial backgrounds. It denotes social qualities which directors share (Kaczmarek et al., 2012). Following the same authors, financial expertise and literacy are also increasingly important features of board members. Dal Magro and Klann (2021), referring to Dhaliwal et al. (2010), state that directors with financial expertise should be able to check both financial and non-financial data while monitoring corporate governance mechanisms. They also include effects encompassing financial counselling, knowledge of financial markets' operations, and the ability to detect early warning signs of financial and operational fraud. Also, Dionne and Triki (2005) provide evidence that shareholders are better off with financially educated directors on both their boards and audit committees. Mahadeo et al. (2012) argue that diverse boards, in terms of educational background, are of vital importance in complex and turbulent business environments in which companies operate. Although the emphasis is on the necessity of knowledge in finances, law, tax systems, and environmental and ethical issues, their findings suggest that boards with a broader array of educational backgrounds will experience lower firm performance. Moreover, examining political and financial background in board interlocking, Dal Magro and Klann (2021) find that board interlocking with financial background improves the quality of accounting information, which is beneficial to creditors, managers, investors, etc.

### **3. Methodology**

Since the sample analysed encompasses manufacturing firms, mostly not listed on the stock exchange, the authors opted for the accounting-based performance measures, specifically both ROA and ROE. These measures are, for example, employed by Waelchli and Zeller (2013). Furthermore, Kim (2005: 803) uses ROA as a performance measure since it is a "well-understood measure of firm performance, particularly appropriate for manufacturing firms," while Darmadi (2011) uses ROA together with Tobin's Q. Specifically, we calculate ROA as net profit over total assets while ROE as a net profit over equity, both expressed as a percentage.

Static balanced panel data analysis was used for the purpose of conducting econometric data analysis. Specifically, two static panel analyses were conducted

depending on the dependent variables used, one static panel analysis was done with ROA as a dependent variable and the other one with ROE as a dependent variable.

In order to verify the proposed hypothesis, the following research model was estimated:

$$\begin{aligned}
 Y_{it} &= c + \sum_{k=1}^K \beta_k X_{it}^k + \varepsilon_{it} \\
 \varepsilon_{it} &= z_i + u_{it},
 \end{aligned}
 \tag{1}$$

where:

$Y_{it}$  is a dependent variable denoting the profitability of firm  $i$  at time  $t$ , with  $i = 1, \dots, N$ ;  $t = 1, \dots, T$  presented with two different measures of performance/profitability, i.e. ROA and ROE,

$X_{it}$  are  $k$  independent variables including explanatory variables presented with board oriented characteristics including CEO tenure, average age of the board (AGE\_board), proportion of board members with foreign nationality (Foreigners), and board members with financial educational background (FEB) as well as control variables presented with firm size (SIZE), leverage (LEV) and age of the firm (AGE),

$\varepsilon_{it}$  is the disturbance with  $z_i$  being the unobserved firm-specific effect and  $u_{it}$  being the idiosyncratic error.

The presented model is a one-way error component regression model where  $z_i \sim IIN(0, \sigma_z^2)$  and independent of  $u_{it} \sim IIN(0, \sigma_u^2)$ .

Specifically, CEO tenure has been calculated in several years as the difference between the observation year and the year when appointed as CEO. To avoid zero values, one has been added to this difference. The age of the board is calculated as the sum of age of all board members divided by the number of board members. Foreigners' variable relates to the proportion of board members who are not Croatian citizens in order to reflect board cultural diversity and its influence on performance. The financial educational background is employed in the analysis as a proportion of board members that have a financial educational background. With some modifications, this variable is chosen following papers by Rose (2007) and Kaczmarek et al. (2012).

Moreover, several firm-specific variables are employed in the analysis as controls encompassing firm size, leverage and firm age. Firm size (SIZE) is regularly employed variable in the research on determinants of firm performance as well as in those investigating different aspects of board composition (e.g. Rose, 2007; Darmadi, 2011; Cao et al., 2019; Dal Magro and Klann, 2021). It is calculated as the natural logarithmic value of total assets. The findings of the existing research

are mixed. So, Darmadi's (2011) findings show a positive influence of size based on assets on ROA but negative on Tobin's Q. Horváth and Spirollari (2012) find the size to be insignificant when explaining firm performance, whereas, Fernández-Temprano and Tejerina-Gaite (2020) reveal a negative sign of size variable although it is statistically significant in one model only. Specifically, the positive influence of a firm size can be justified by exploitation of economies of scale (Doğan, 2013) and efficiency gains or higher market power (Lee, 2009).

Leverage (LEV) is calculated as the total debts over total assets ratio following Horváth and Spirollari (2012), Waelchli and Zeller (2013), and Cao et al. (2019). The influence of leverage on performance is twofold. Specifically, according to the agency theory, as suggested by Dionne and Triki (2005), the monitoring in case of debt financing diminishes management's attempts to overspend available cash flows that should consequently result in a better performance. However, excessive indebtedness reduces the investment choices of the firm and makes the debt burden heavier. Dionne and Triki (2005) find the positive influence of leverage, whereas Waelchli and Zeller (2013) and Kagzi and Guha (2018) find evidence of its negative impact on performance. Due to theoretical base and empirical findings, we do not expect leverage to take either negative or positive signs.

Firm age (AGE) is calculated as the difference between the observation year and the year of the incorporation. Due to the large range of values, the authors use a natural logarithm of firm age. This variable is included in the analysis following a large number of studies such as Oxelheim and Randøy (2003), Kim (2005), Kaczmarek et al. (2012), Waelchli and Zeller (2013), and Kagzi and Guha (2018). As stated by Coad et al. (2018: 4), firm age affects firm performance through "routinization, accumulated reputation and organizational rigidity". Waelchli and Zeller (2013), citing Loderer et al. (2012), state that firm age might negatively influence performance due to the inability of older firms to create new growth opportunities. Although young firms are often perceived as more innovative compared to the older counterparts, Coad et al. (2018), question this due to the fact that young firms lack experience, capabilities and routines. Oxelheim and Randøy's (2003) findings reveal that in some models firm age has an insignificant impact, whereas in others significantly and negatively influences firm value measured with natural logarithm of the Q ratio. A negative influence of the age of the firm is found by Kim (2005), Kaczmarek et al. (2012), while Kagzi and Guha (2018) find insignificant or positive influence of firm age, whereas Waelchli and Zeller (2013) document its insignificant or negative impact. Therefore, the influence of firm age on ROA and ROE is ambiguous.

The principal data source consists of the companies' annual financial reports, i.e., balance sheets and profit and loss accounts manually collected for each year from the information system of the publicly available Annual Financial Reports Registry provided by the Croatian Financial Agency (FINA). Primarily, the authors identified



the 58 largest Croatian manufacturing companies with a two-tier board system that did not report negative equity. With a special effort to collect data for each board member, the authors combined the scope of different sources for the required data collection. It includes corporate websites, issuers announcements for the firms listed on the stock exchange, and LinkedIn profiles of board members. Despite the efforts, the data collected for 23 companies have a 68% market share, which over a period of 5 years makes a total of 115 observations. The lack of data, especially on age, was also the problem of previous studies as reported, for instance, by Kang et al. (2007) and Mahadeo et al. (2012). The authors performed static panel analysis using STATA statistical software.

#### 4. Empirical Data and Results

Firstly, descriptive statistics for all variables, i.e. dependent, explanatory as well as for control variables, employed in the research are provided in Table 1.

Table 1: Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
ROA	115	5.6309	7.3305	-25.2831	23.6044
ROE	115	9.9636	14.9422	-67.6850	76.6245
CEO tenure	115	9.0696	11.2193	1	55
AGE_board	115	47.7399	11.2951	21.5	82
Foreigners	115	15.2000	32.9804	0	100
FEB	115	47.6696	37.6234	0	100
SIZE	115	20.0209	2.8146	4.6957	23.8182
LEV	115	44.1007	16.8053	12.3594	85.1386
AGE	115	4.4361	1.4601	1.3863	7.6019

Source: Authors' calculation

Analysis of correlation is performed for independent variables with the aim of finding whether the multicollinearity problem exists. Specifically, for this purpose the matrix of Pearson correlation coefficients was implemented. As it can be seen from Table 2, there was no problem with multicollinearity since there is no absolute value of the Pearson coefficient higher than 0.7 that would indicate a strong correlation between independent variables.

Table 2: Correlation matrix

	CEO tenure	AGE_board	Foreigners	FEB	SIZE	LEV	Firm_age
CEO tenure	1.0000						
AGE_board	0.6512	1.0000					
Foreigners	-0.1211	0.0815	1.0000				
FEB	0.0948	-0.0273	0.0977	1.0000			
SIZE	0.0558	0.0270	0.0787	0.0914	1.0000		
LEV	0.0997	-0.0661	0.0469	0.3973	0.1322	1.0000	
FIRM_age	-0.1031	-0.2898	-0.4251	0.1864	0.0169	0.1229	1.0000

Source: Authors' calculation

Furthermore, multicollinearity was additionally tested by implementing the variance inflation factors (VIF). The VIF scores for each variable are presented in Table 3. VIF factor exceeding value of 5 indicates a strong correlation between independent variables but, as it is evident from Table 3, the highest value reported is 1.97. Thus, it was once again confirmed that the analysis is free from problem of multicollinearity between independent variables.

Table 3: Variance inflation factor scores for independent variables (VIF)

Variable	VIF	1/VIF
CEO tenure	1.94	0.514826
Age_board	1.97	0.507632
Foreigners	1.36	0.732765
FEB	1.27	0.786657
SIZE	1.03	0.971828
LEV	1.23	0.809756
FIRM_age	1.42	0.701761

Source: Authors' calculation

To show which panel model was the most appropriate one, F test, Lagrangian multiplier test for random effects and Hausman test were used. Breusch-Pagan test for heteroscedasticity was used in each model. Results of Breusch-Pagan test for heteroscedasticity indicated that the problem of heteroscedasticity was not present. The results of the panel data analysis as well as the results of F test, Lagrangian multiplier test for random effects and Hausman test are presented in Table 4.

Table 4: Parameter estimates of static panel model

Variables	ROA	ROE
CEO tenure	-0.0727801 (0.1048529)	-0.2275305 (0.3800564)
Age_board	0.1383823 (0.0915316)	0.6204294** (0.2652749)
Foreigners	0.0130911 (0.0317320)	-0.2344703* (0.1310541)
FEB	-0.0313672 (0.0231169)	0.0227821 (0.0787812)
SIZE	-0.0403083 (0.2711759)	0.2415199 (0.7890391)
LEV	-0.1251595** (0.0493852)	-0.0174498 (0.1527447)
FIRM_age	-0.7985219 (0.8281784)	27.96489* (16.62146)
cons	10.84984 (8.149775)	-143.2351 (78.64045)
R2 within	0.0870	0.1520
R2 between	0.3241	0.0585
R2 overall	0.2322	0.0214
Model p value	0.0141	0,0443
Lagrangian multiplier test for random effects	chi = 24.38	chi = 11.12
	p value = 0.0000	p value = 0.0009
Hausman test	chi = 8.49	chi = 16.04
	p value = 0.2917	p value = 0.0247
Breusch-Pagan test for heteroskedasticity	chi2 = 0.51	chi2 = 0.09
	p-value = 0.4738	p-value = 0.7698
F test	p value = 0.0000	p value =0.0000

\*, \*\*, \*\*\* Statistically significant at 10%, 5%, 1% level, respectively. Standard errors are between parentheses.

Source: authors' calculation

In model in which ROA stands in as dependent variable, results showed that model with random effect (RE) was the most appropriate one while in model with ROE as dependent variable results showed that model with fixed effects (FE) was the most appropriate one.

In summary, that leverage significantly and negatively determines the profitability of Croatian manufacturers. Furthermore, the age of the board and firm age are crucial factors in explaining the firm's profitability measured with ROE. Specifically, the firm's age, as well as the age of the board, enhances the firm's profitability, whereas the share of foreigners has a negative and statistically significant impact on ROE.

## **5. Results and Discussion**

The results of the empirical analysis reveal that in the model in which ROA served as a dependent variable, leverage is a key factor in determining firm performance. Specifically, its negative influence suggests that high corporate indebtedness impairs performance. Such findings supported by empirical research conducted, for instance, by Waelchli and Zeller (2013) and Kagzi and Guha (2018), suggest that the cause might be frictions induced by financial constraints (Waelchli and Zeller, 2013). Other firm-specific variables such as size, firm age and board composition remain insignificant.

However, in the model where performance is expressed with the ROE variable, firm age significantly and positively affects performance. Such finding explained by Coad (2018) states that young firms lack routines, social capital, being networked and stable ties to customers. Furthermore, the same author provides further reasons that speak in favour of older firms in terms of performance stating that older firms are more disciplined and have better-established routines, a clearer strategic perspective, better business processes and market knowledge due to the experience etc.

Two other variables relating to board composition also play a crucial role in defining corporate performance: namely, the age of the board, and the share of foreigners on the board. This supports McIntyre et al. (2007) who claim that the construction of a team is an important factor in effective team dynamics and performance. Demographic variable age of the board positively affects performance of analysed companies since older directors are frequently more experienced as suggested by Kim and Lim (2010) and Xu et al. (2018) with experience being essential for better decision making (Kagzi and Guha, 2018). Kim and Lim (2010) also state that experience in a particular industry allows independent outside directors to approach tacit knowledge of the competitive conditions, threats, opportunities, technology and regulations while Kagzi and Guha (2018: 1037) note that older boards members have connections with senior associates in well-established firms that "enable the firm to have wider networks for suppliers to reduce the uncertainties." The positive impact of older chairmen on the performance of Chinese firms is found by Cheng et al. (2010) and Kim and Lim (2010), while Korniotis and Kumar (2011), for example, find that experienced and older investors possess greater investment knowledge. Furthermore, the paper by Platt and Platt (2012), as cited by Fernández-

Temprano and Tejerina-Gaite (2020), indicates that firms with older directors are less likely to become insolvent. Another board structure variable that plays an important role when explaining firm performance is the share of foreigners in the boardroom that stands for the cultural and national composition of the board which takes a negative sign. Darmadi (2011), while citing Lehman and Dufrene (2008) and Cox Jr. (1991), adds that nationality and cultural diversity in the boardroom might increase the likelihood of cross-cultural communication problems as well as interpersonal conflicts. Moreover, Cao et al. (2019), who investigate the impact of cultural and nationality diversity on cross-border M&As, find the negative role of proportion of foreign directors on strategic decision-making activities explaining it with cultural differences between foreign and domestic directors that obstruct collaboration and communication within boards.

Board composition variable of CEO tenure is insignificant in both models. This variable also has an insignificant influence on Tobin's Q introduced in the analysis by McKnight and Weir (2009) as a dummy variable with the value of 1 if the corporate Tobin's Q is lower than the sample median. Moreover, the financial background is also insignificant as found by Rose (2007), suggesting that the specific educational background is not required for the activities performed in the corporate boardroom. As stated by Rose (2007: 412), if "board members have a university degree/or equivalent skills, board members have sufficient human capital in order to understand information that is provided by the board of managing directors." Moreover, our finding confirms the claim of Mahadeo et al. (2012: 378) that one must have in mind that "prior educational background does not completely reflect a board member's attitudes, expertise and experience."

## 6. Conclusion

Corporate governance and board composition have gained importance over time especially in terms of their influence on corporate performance. Therefore, we wanted to test several board characteristics including its demographic, cultural and educational dimensions on firm profitability using the setting of Croatian manufacturers.

The research findings indicate that the composition of the board is an essential factor in determining corporate performance. This is especially true for the average age of the board and proportion of foreigners in the boardroom, where the average age of the board members positively influence performance and foreigners have a negative impact.

In this context, this research contributes to the existing literature on board composition and corporate performance, especially in emerging markets such as Croatian. It might be helpful for firms, policymakers, and other stakeholders as it

provides resourceful information on board compositions that enhance corporate performance. However, the authors are aware of its limitations: a relatively small number of companies entered the sample due to the data unavailability in spite of their very high percentage of market share. Moreover, since the relationship between board composition and corporate performance may be affected by many aspects, the authors suggest that future researchers investigate some additional corporate governance characteristics and evaluate the findings in other institutional settings and for a longer time span.

## References

- Annual Report on Corporate Governance (2019) Croatian Financial Services Supervisory Agency, <https://hanfa.hr/media/6308/giku-2019-izvjesce-engl.pdf>
- Arioglu, E. (2021) “Board age and value diversity: Evidence from a collectivistic and paternalistic culture”, *Borsa Istanbul Review*, Vol. 21, No. 3, pp. 209–226, <https://doi.org/10.1016/j.bir.2020.10.004>.
- Bonn, I., Yoshikawa, T. & Phan, P. H. (2004) “Effects of board structure on firm performance: A comparison between Japan and Australia”, *Asian Business & Management*, Vol. 3, No. 1, pp. 105–125, <http://doi.org/10.1057/palgrave.abm.9200068>.
- Campbell, K. & Mínguez-Vera, A. (2008) “Gender diversity in the boardroom and firm financial performance”, *Journal of business ethics*, Vol. 83, No. 3, pp. 435–451, <http://doi.org/10.1007/s10551-007-9630-y>.
- Cao, J., Ellis, K. M. & Li, M. (2019) “Inside the board room: the influence of nationality and cultural diversity on cross-border merger and acquisition outcomes”, *Review of Quantitative Finance and Accounting*, Vol. 53, No. 4, pp. 1031–1068, <https://doi.org/10.1007/s11156-018-0774-x>.
- Chen, W. T., Zhou, G. S. & Zhu, X. K. (2019) “CEO tenure and corporate social responsibility performance. *Journal of Business Research*, Vol. 95, pp. 292–302, <https://doi.org/10.1016/j.jbusres.2018.08.018>.
- Cheng, L. T., Chan, R. Y. & Leung, T. Y. (2010) “Management demography and corporate performance: Evidence from China”, *International Business Review*, Vol. 19, No. 3, pp. 261–275, <https://doi.org/10.1016/j.ibusrev.2009.12.007>.
- Coad, A. (2018) “Firm age: a survey”, *Journal of Evolutionary Economics*, Vol. 28, No. 1, pp. 13–43, <https://doi.org/10.1007/s00191-016-0486-0>.
- Coad, A. et al. (2018) “Firm age and performance”, *Journal of Evolutionary Economics*, Vol. 28, No. 1, pp. 1–11, <https://doi.org/10.1007/s00191-017-0532-6>.
- Code of Corporate Governance, Croatian Financial Services Supervisory Agency & Zagreb Stock Exchange, 2019 – ZSE Corporate Governance Code.pdf

- Dal Magro, C.B. & Klann, R.C. (2021) "Political and financial background in board interlocking and earnings management in Brazil", *RAUSP Management Journal*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/RAUSP-10-2020-0245>.
- Darmadi, S. (2011) "Board diversity and firm performance: The Indonesian evidence", *Corporate ownership and control Journal*, Vol. 8, pp. 1–38.
- DeBoskey, D. G., Luo, Y. & Zhou, L. (2019) "CEO power, board oversight, and earnings announcement tone", *Review of Quantitative Finance and Accounting*, Vol. 52, No. 2, pp. 657–680, <https://doi.org/10.1007/s11156-018-0721-x>.
- Dikolli, S. S., Mayew, W. J. & Nanda, D. (2014) "CEO tenure and the performance-turnover relation", *Review of accounting studies*, Vol. 19, No. 1, pp. 281–327, <https://doi.org/10.1007/s11142-013-9247-6>.
- Dionne, G. & Triki, T. (2005) "Risk management and corporate governance: The importance of independence and financial knowledge for the board and the audit committee", CIRPÉE Centre interuniversitaire sur le risque, les politiques économiques et l'emploi Cahier de recherche/Working Paper 05-15, <https://core.ac.uk/download/pdf/6569891.pdf>
- Doğan, M. (2013) "Does firm size affect the firm profitability? Evidence from Turkey", *Research Journal of Finance and Accounting*, Vol. 4, No. 4, pp. 53–59.
- Ely, R. J. & Thomas, D. A. (2001) "Cultural diversity at work: The effects of diversity perspectives on work group processes and outcomes", *Administrative science quarterly*, Vol. 46, No. 2, pp. 229–273, <https://doi.org/10.2307/2667087>.
- Fernández-Temprano, M. A. & Tejerina-Gaite, F. (2020) "Types of director, board diversity and firm performance", *Corporate Governance: The International Journal of Business in Society*, Vol. 20, No. 2, pp. 324–342, <https://doi.org/10.1108/CG-03-2019-0096>.
- Frijns, B., Dodd, O. & Cimerova, H. (2016) "The impact of cultural diversity in corporate boards on firm performance", *Journal of Corporate Finance*, Vol. 41, pp. 521–541, <https://doi.org/10.1016/j.jcorpfin.2016.07.014>.
- Gallego-Álvarez, I., García-Sánchez, I. M. & Rodríguez-Dominguez, L. (2010) "The influence of gender diversity on corporate performance: La influencia de la diversidad de género en el rendimiento empresarial", *Revista de Contabilidad-Spanish Accounting Review*, Vol. 13, No. 1, pp. 53–88, [https://doi.org/10.1016/S1138-4891\(10\)70012-1](https://doi.org/10.1016/S1138-4891(10)70012-1).
- Hillman, A. J., Nicholson, G. & Shropshire, C. (2008) "Directors' multiple identities, identification, and board monitoring and resource provision", *Organization Science*, Vol. 19, pp. 441–456, <https://doi.org/10.1287/orsc.1080.0355>.
- Horváth, R. & Spirollari, P. (2012) "Do the board of directors' characteristics influence firm's performance? The US evidence", *Prague economic papers*, Vol. 4, No. 1, pp. 470–486, <https://doi.org/10.18267/j.pap.435>.

- Kaczmarek, S. & Kimino, S., Pye, A. (2012) “Board task-related faultlines and firm performance: A decade of evidence”, *Corporate Governance: An International Review*, Vol. 20, No. 4, pp. 337–351, <https://doi.org/10.1111/j.1467-8683.2011.00895.x>.
- Kagzi, M. & Guha, M. (2018) Does board demographic diversity influence firm performance? Evidence from Indian-knowledge intensive firms”, *Benchmarking: An International Journal*, Vol. 25, No. 3, pp. 1028–1058, <https://doi.org/10.1108/BIJ-07-2017-0203>.
- Kang, H., Cheng, M. & Gray, S. J. (2007) “Corporate governance and board composition: Diversity and independence of Australian boards”, *Corporate Governance: An International Review*, Vol. 15, No. 2, pp. 194–207, <https://doi.org/10.1111/j.1467-8683.2007.00554.x>.
- Kim, Y. (2005) “Board network characteristics and firm performance in Korea”, *Corporate Governance: An International Review*, Vol. 13, No. 6, pp. 800–808, <https://doi.org/10.1111/j.1467-8683.2005.00471.x>.
- Kim, H. & Lim, C. (2010) “Diversity, outside directors and firm valuation: Korean evidence”, *Journal of Business Research*, Vol. 63, No. 3, pp. 284–291, <https://doi.org/10.1016/j.jbusres.2009.01.013>.
- Korniotis, G. M. & Kumar, A. (2011) “Do older investors make better investment decisions?”, *The Review of Economics and Statistics*, Vol. 93, No. 1, pp. 244–265, [https://doi.org/10.1162/REST\\_a\\_00053](https://doi.org/10.1162/REST_a_00053).
- Li, H. & Chen, P. (2018) “Board gender diversity and firm performance: The moderating role of firm size”, *Business Ethics: A European Review*, Vol. 27, No. 4, pp. 294–308, <https://doi.org/10.1111/beer.12188>.
- Mahadeo, J. D., Soobaroyen, T. & Hanuman, V. O. (2012) “Board composition and financial performance: Uncovering the effects of diversity in an emerging economy”, *Journal of business ethics*, Vol. 105, No. 3, pp. 375–388, <https://doi.org/10.1007/s10551-011-0973-z>.
- Martín-Ugedo, J. F. & Mínguez-Vera, A. (2014) “Firm performance and women on the board: Evidence from Spanish small and medium-sized enterprises”, *Feminist Economics*, Vol. 20, No. 3, pp. 136–162, <https://doi.org/10.1080/13545701.2014.895404>.
- Masulis, R. W., Wang, C. & Xie, F. (2012) “Globalizing the boardroom — The effects of foreign directors on corporate governance and firm performance”, *Journal of Accounting and Economics*, Vol. 53, No. 3, pp. 527–554, <https://doi.org/10.1016/j.jacceco.2011.12.003>.
- McCann, M. (2016) “Board composition and diversification decisions of UK listed companies: a panel data analysis”, *International Journal of Business Governance and Ethics*, Vol. 11, No. 4, pp. 267–289.
- McKnight, P. J. & Weir, C. (2009) “Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: A



- panel data analysis”, *The quarterly review of economics and finance*, Vol. 49, No. 2, pp. 139–158, <https://doi.org/10.1016/j.qref.2007.09.008>.
- Oxelheim, L. & Randøy, T. (2003) “The impact of foreign board membership on firm value”, *Journal of Banking & Finance*, Vol. 27, No. 12, pp. 2369–2392, [https://doi.org/10.1016/S0378-4266\(02\)00395-3](https://doi.org/10.1016/S0378-4266(02)00395-3).
- Rose, C. (2007) “Does female board representation influence firm performance? The Danish evidence”, *Corporate Governance: An International Review*, Vol. 15, No. 2, pp. 404–413, <https://doi.org/10.1111/j.1467-8683.2007.00570.x>.
- Simsek, Z. (2007) “CEO tenure and organizational performance: An intervening model”, *Strategic Management Journal*, Vol. 28, No. 6, pp. 653–662, <https://doi.org/10.1002/smj.599>.
- Waelchli, U. & Zeller, J. (2013) “Old captains at the helm: Chairman age and firm performance”, *Journal of banking & finance*, Vol. 37, No. 5, pp. 1612–1628, <https://doi.org/10.1016/j.jbankfin.2012.12.012>.
- Walters, B. A., Kroll, M. J. & Wright, P. (2007) “CEO tenure, boards of directors, and acquisition performance”, *Journal of Business Research*, Vol. 60, No. 4, pp. 331–338, <https://doi.org/10.1016/j.jbusres.2006.12.001>.
- Xu, Y., Zhang, L. & Chen, H. (2018) “Board age and corporate financial fraud: An interactionist view”, *Long Range Planning*, Vol. 51, No. 6, pp. 815–830, <https://doi.org/10.1016/j.lrp.2017.08.001>.

## Utjecaj demografskih i kulturoloških karakteristika te obrazovanja uprave na performanse poduzeća – Slučaj Hrvatske

Tomislava Pavić Kramarić<sup>1</sup>, Marko Miletić<sup>2</sup>

### Sažetak

*Istraživanje se bavi demografskim i kulturološkim karakteristikama te obrazovanjem članova uprava poduzeća iz hrvatske prerađivačke industrije. Analiza, provedena korištenjem statičke panel analize, obuhvaća razdoblje od 2015. do 2019. godine. S ciljem utvrđivanja utjecaja različitih karakteristika uprava na uspješnost poduzeća izraženih računovodstvenim mjerama uspješnosti kao što su povrat na imovinu (ROA) i povrat na kapital (ROE), obuhvaćeno je i nekoliko varijabli kao što su godine djelovanja predsjednika uprave na toj poziciji, prosječna dob članova uprave, udio stranih državljana u upravi te financijsko obrazovanje. Poduzeću-svojsvene varijable su također obuhvaćene analizom uključujući veličinu poduzeća, zaduženost i godine djelovanja poduzeća. Rezultati analize otkrivaju da struktura uprave igra ključnu ulogu kod objašnjavanja profitabilnosti poduzeća. Nadalje, dokazano je da su zaduženost kao i godine djelovanja poduzeća također značajni čimbenici koji utječu na performanse poduzeća.*

**Ključne riječi:** demografska raznolikost uprave, kulturološka raznolikost uprave, performanse poduzeća, hrvatska prerađivačka industrija

**JEL klasifikacija:** G30, G34, J24, L25

<sup>1</sup> Izvanredni profesor, Sveučilište u Splitu, Sveučilišni odjel za forenzične znanosti, R. Boškovića 33, 21 000 Split, Hrvatska. Znanstveni interes: financije poduzeća, osiguranje, financijske institucije, financijska analiza. E-mail: tpkramaric@forenzika.unist.hr.

<sup>2</sup> Profesor visoke škole, Sveučilište u Splitu, Sveučilišni odjel za stručne studije, Kopilica 5, 21 000 Split, Hrvatska. Znanstveni interes: financije poduzeća, budžetiranje kapitala, oporezivanje. E-mail: mamiletic@oss.unist.hr.