Determinants of Voluntary International Financial Reporting Standards Adoption in Poland

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The paper examines the determinants of voluntary International Financial Reporting Standards (IFRS) adoption in Poland. In doing so, it empirically confirms the impact of diverse CEO and supervisory board characteristics on voluntary IFRS adoption. The paper focuses on 446 publicly traded production companies from Poland. The analysis is based on logistic regression analysis. The empirical investigation confirms the impact on voluntary IFRS adoption of such factors as company size, international investors, international supervisory board, number of supervisory board members, CEO nationality. The paper contributes to the assessment of voluntary IFRS adoption determinants, by presenting for the first time CEO and supervisory board characteristics and their impact on voluntary International Financial Reporting Standards (IFRS) adoption, and the determinants of IFRS adoption from Central and Eastern Europe. The paper enhances existing knowledge of voluntary IFRS adoption by incorporating new CEO and supervisory board characteristics, thus closing a gap in the relevant literature. The results of the paper are significant from the supervisor’s perspective, the quality of financial statements and the effectiveness of corporate governance systems.

Keywords: International Financial Reporting Standards; Chief Executive Officer; supervisory board; production companies.

1. Introduction

International Financial Reporting Standards (IFRS) are the most widely employed accounting standards. In some countries, non-consolidated financial statements have to be prepared according to IFRS (e.g. in Bulgaria, the Czech Republic, Estonia, Latvia and Lithuania) in others it is forbidden (e.g. Hungary). In Poland, the preparation of non-consolidated statements in accordance to IFRS takes place on a voluntary basis.

IFRS-based financial statements increase their comparability, mitigate investors’ risk as well as information risk (Parlakayaya et al., 2011; Houqe et al., 2016). Voluntary IFRS adoption increases the quality of public disclosures (Bassemir and Novotny-Farkas, 2018), reducing the significance of private information (Arsen et al., 2010). There is a positive capital markets’ reaction and increased value relevance of accounting information from an investor perspective after IFRS adoption (Kouki, 2018, Petren et al., 2019). Previous studies reported that IFRS adoption have a greater impact on the quality of financial statements in countries with less advanced accounting systems (Hope et al., 2006; Rehman et al., 2014), IFRS also reduce the earnings management practices (Yang and Abeysekera, 2018.)

It was claimed that IFRS adoption in countries with less advanced accounting systems, like Poland may enhance the reliability and quality of financial reporting (Borowski and Kariozen 2007; Waniak-Michalak et al, 2012). IFRS increase the comparability and application of financial statements (Kędzior and Grabiński, 2018). Up to now, research on voluntary IFRS adoption have focused on West European countries (Dumontier and Raffournier, 1998; André et al., 2012; Pichler et al., 2018). There are also studies on the factors influencing IFRS use in emerging countries (Graham et al., 2017). However, there are no contributions verifying the determinants of voluntary IFRS adoption in Central and Eastern European (CEE) countries. Researchers focused on the determinants of voluntary IFRS adoption at a company level (Bassemir, 2018; André et al., 2012), at a country level (Hope et al., 2006; Paj and Bonito, 2018, Damak-Ayadi et al., 2020; Salem et al., 2017; Zahid and Simga-Mugan, 2019), and both at a company and country level mostly in high developed countries. The literature does not cover the different CEO and supervisory board characteristics, which could have a potential impact on voluntary IFRS adoption.
The purpose of this research is to identify the factors facilitating identification of IFRS, in terms of CEO and supervisory board characteristics in Polish companies.

The structure of the study is as follows. Section 2 presents the most significant research studies on the determinants of voluntary IFRS adoption. Section 3 discusses the applied research methodology involved a three-stage approach model to assess the impact and significance of identified determinants on IFRS adoption. Section 4 presents the results of empirical research. The article is completed by presenting the conclusions and references.

The paper’s contribution is twofold: (i) it introduces the CEO and supervisory board characteristics that determine the use of high-quality accounting standards such as IFRS, (ii) it presents international corporate governance mechanisms which affect voluntary IFRS adoption.

2. Literature and hypotheses development

Stakeholder oriented corporate governance systems are applied in Polish companies (Collier and Zaman, 2005). The first level of corporate governance is management, which apart from operating activities, is responsible for creating an accounting system with a specific role assigned to CEOs. CEOs not only sign financial statements, but are also responsible for company account plans and accounting policies. Supervisory boards, on the other hand, are responsible for a wide range of supervisory activities including the oversight of financial reporting.

The actual impact of company management on various aspects of financial reporting have been widely studied. A business entity’s management frequently affects accounting policies in a conscious way. Managers often resort to accounting policies to signal future cash flows or to decrease the probability of debt covenant violation (Young, 1998). Accounting policies are also used to justify management’s high bonuses (Inoue and Wayne, 1996). It should be noted that accounting policies can be used both to increase and decrease company earnings (Astami and Tower, 2006; Lo et al., 2017), choices made in the process of accounting valuations at fair value increase the ability to manage profits in time, or even manipulate them (Barth and Taylor, 2010). When managers apply the concept of fair value, measurements in accounting do not always meet neutrality criteria (Baluch et al., 2011; Khurana and Kim, 2003), especially when a business entity applies earnings management (Salvary, 2006). Managers are actively engaged in exerting influence on the quality and quantity of disclosures. It should be noted that some executives “manage” the volumes of disclosed financial information (Choi and Meek, 2005; Nobes and Stadler, 2015). Lang and Lundholm (2000) found out that the range of disclosed information is wider when a publicly traded company intends to sell a package of shares in capital markets. According to Broberg et al. (2010), companies with high levels of management ownership disclose less information than other entities. In contrast to managers, a supervisory board is mainly engaged in monitoring the process of financial reporting (Pathak and Sun, 2013; Cho and Rui, 2009; Anderson et al., 2004; Leuz and Wüstemann, 2003). The Securities and Exchange Commission, the Financial Accounting Standards Board as well as the world’s major stock exchanges continuously stress the significance of supervisory boards in overseeing the activities of business entities (Anderson et al., 2004). This process includes the oversight of alternative accounting solutions, accounting policies with regard to disclosures, internal control processes and the selections of independent auditors. Vafeas (2000) shares the same view on the basic role of supervisory boards. Supervisory boards are responsible for assuring the quality of information presented in financial reports. According to Yang et al. (2011), a supervisory board’s main objective is to monitor managers’ behaviour, overview and audit financial statements submitted by directors, oversee company assets as well as assess and monitor the finances of business entities. Cho and Rui (2009) believe that a supervisory board should make sure that an entity’s financial and operational condition is presented accurately, fairly and completely. The effectiveness of control mechanisms relies heavily on the independence of supervisory boards (Pathak and Sun, 2013). Well-functioning supervisory boards reduce information asymmetry (Ilieva et al., 2018). The quality of supervision is generally improved if it is exercised by women and persons with academic experience (Ran et al., 2015). As the CEO and supervisory board may be conditioned by the size and the way of organizing the company, we included into our analysis also company size and investor characteristics, in terms of nationality.

2.1. Company size

Larger companies incur lower information production costs as well as lower costs of competitive disadvantage associated with their disclosures (André et al., 2012), hence they find it easier to meet stricter requirements related to disclosures according to IFRS. The necessity of a greater number of disclosures results from the fact that large companies acquire financing from foreign capital markets. Therefore, IFRS adoption can be treated as a component of corporate governance, which is significant in the case of external financing, especially for big companies (Francis et al., 2008a). In addition, high political costs in large companies support the use of IFRS (Matonti and Iuliano, 2012). Bassemir (2018) notes that big firms usually sell more products abroad and have more overseas subsidiaries, which increases information requirements as well as agency costs. Hence, a greater number of disclosures and IFRS adoption is more possible (Tarca, 2004). Larger companies also possess
the necessary financial resources needed to implement IFRS (Pichler et al., 2018). Thus, it is hypothesized that:

**H1: Larger companies are more frequently inclined to voluntarily adopt IFRS than smaller entities.**

### 2.2. International investor

According to the International Accounting Standard Board (IASB), globally harmonised accounting standards have a positive impact on decreasing information asymmetry between national and international participants of capital markets, especially in emerging markets (Bova, 2007). Covrig et al. (2007) noted that companies, which voluntarily adopt IFRS, have a greater potential to attract foreign investors. They disclose more information, which is presented according to widely used standards.

According to Bagaev (2006), emerging markets can face the problem of the lack of foreign investment due to limited confidence in the quality of disclosures. Therefore, investors frequently require local businesses to adopt IFRS or US GAAP. Foreign shareholders particularly insist on using IFRS if their shareholding is dispersed (Pichler et al., 2018). They also rely heavily on high-quality, global accounting standards that are familiar with and understand as opposed to local standards (Matonti and Iuliano, 2012). This phenomenon is intensified if the foreign parent company also uses IFRS. Klai and Omri (2013) stress that foreign investors have a positive impact on the quality of accounting in emerging markets as well as on earnings quality and transparency. Firth et al. (2007) confirm investors’ impact on the earnings response coefficients and discretionary accruals and provide empirical evidence confirming a positive correlation between earnings quality and foreign shareholding. On the other hand, An and Naughton (2007) provide empirical evidence confirming a positive correlation between foreign investor share ownership and the conservatism of financial reporting. Therefore, they will strive to improve the quality of accounting in local markets, so the likelihood of using IFRS increases.

Thus, it is hypothesized that:

**H2: Companies with international ownership are more supportive of IFRS adoption.**

### 2.3. Number of supervisory board members

According to Chiraz and Anis (2012), there is a correlation between board size and earnings management. Larger boards are often composed of experienced financial experts. According to Bouchareb et al. (2014), large boards have the ability to monitor earnings management, and their experienced administrators are capable of reducing its impact. Similar results were obtained by Abbadi et al. (2016).

Research conducted by Karagul and Yonet (2012), show that the scope of voluntary disclosures is positively correlated with the size of the board and the number of its independent members (Karagul and Yonet, 2012). According to Upadhyay and Sriram (2011), the supervisory board size has a positive effect on the transparency of information reported by the entity. On the other hand empirical research indicates that small supervisory boards contribute to increasing the informativeness of earnings (Vafeas, 2000). Attention should be drawn to correlation between the scope of voluntary disclosures and supervisory board size. Generally, larger supervisory boards have a positive impact on accounting quality and will therefore be more likely to voluntarily apply high-quality accounting standards such as IFRS. Thus, it is hypothesized that:

**H3: The scope of IFRS application is broader for companies with numerous supervisory board members.**

### 2.4. International supervisory board

Palmer and Varner (2007) identified a growing number of international supervisory boards in European business entities. This trend may prevail as a result of the increasing volumes of sales in overseas markets (Davarcigolu, 2011). Foreign supervisory board members (foreign external directors) should be treated in a similar manner to foreign CEOs. Generally, they are more independent in terms of their connections with the network of local contacts. External board members reflect the extent to which boards can retain their independence in monitoring issues related to financial reporting (Pathak and Sun, 2013; Cho and Rui, 2009). External independent directors are not familiar with local accounting and governance standards, which can hinder the process of supervision and assessments of business entities (Masulis et al., 2010). It can encourage the application of widely used and accepted standards, e.g. IFRS. Often, companies that have international stakeholders also have international supervisory boards, which require more standardized financial statements, e.g. IFRS (Pichler et al., 2018). Greater practical knowledge of IFRS among foreign board members increases their acceptance (Damak-Ayadi et al., 2020). Thus, it is hypothesized that:

**H4: Supervisory boards composed of members from different countries are more likely to voluntarily adopt IFRS.**

### 2.5. CEO nationality

In big European entities, a CEO usually comes from the country where the company has its headquarters (Weber, 2010). They are often regarded to be highly educated business leaders. Foreign CEOs, then, can be regarded as independent decision-makers (Ruigrok et al., 2007). Foreign CEOs have even more independence than their counterparts who are outside members but come from the same country. In most cases, they are appointed as CEOs, but do not act as board chairpersons.
Chang and Sun (2009), Klai and Omri (2013) stress negative correlations between CEO duality and the likelihood of non-compliance with accounting standards and lower financial reporting quality. The positive impact of the company's most senior managers from abroad on reducing the scale of earnings management and accounting quality has also been confirmed by Du et al. (2017). Therefore, it can be assumed that foreign CEOs will make independent choices with regard to accounting standards and will improve accounting quality, or will even prefer the widely known standards to the local ones. Duan et al. (2019) noted, in turn, that CEO with experience acquired abroad rely more on models, solutions, global standards (e.g. IFRS) in relation to local practices. Thus, it is hypothesized that:

**H5: Foreign CEOs are more determined to adopt IFRS.**

### 2.6. CEO’s academic degree

Education has a positive effect on disclosure quality in business entities (Reeb and Zhao, 2013). On the other hand, academic knowledge about the diversity of accounting in individual countries prevails in theory rather than practice (Conesa and Martinez, 2004). Bancel and Mittoo (2004) observed that the vast majority of CEOs in European listed companies have university degrees (above 70%), whereas 40% hold MBA certificates. It cannot be expected that a large group of CEOs will have academic titles (Reeb and Zhao, 2013; Graham et al., 2005). Adebayo and Sharma (2017) believe that the introduction of IFRS-related issues to academic curricula increases their acceptability in business practice. Lack of proper education, including academic education, hinders the introduction of IFRS (Siregar et al., 2017). It is hypothesized that:

**H6: CEOs with academic degrees (PhD) are more likely to voluntarily adopt IFRS.**

### 2.7. CEO gender

Women are more cautious in making various financial decisions and are more likely to act in compliance with rules and regulations. Also, they are more compliant in tax-reporting decisions than men (Barua et al, 2010). Musteen et al. (2006) investigated the acceptance of change among both male and female CEOs acting as managing directors. They found that women present a more liberal attitude to organisational changes than men do, when holding key positions in organisations. Ruigrok et al. (2007) stress that females who perform key functions in business entities are more independent. As compared with males, they less frequently hold simultaneous key positions in other businesses. Thus, they are likely to make more independent choices with regard to accounting standards. In general, women in managerial positions generally have a positive impact on accounting quality (Garcia-Sanchez et al., 2017). Hence they are more likely to be willing to introduce high-quality accounting standards such as IFRS. Thus, it is hypothesized that:

**H7: Entities managed by female CEOs are more likely to voluntarily adopt IFRS.**

### 2.8. CEO age

Age - to a significant extent - determines the acceptance of change in organisations (McClelland et al., 2010). It should be noted that senior managers are less likely to accept higher business risk with age (McClelland and O’Brien, 2011). According to Lin et al (2014), age has an impact on the accepted level of risk. Senior managers are less inclined to take a risk and tend to make more conservative decisions. They are less interested in significant, difficult and time-consuming changes in financial reporting, such as the introduction of IFRS.

Huang et al. (2012) investigated the relationship between the quality of financial reporting and CEO age. The findings suggest that there is a positive correlation between the age of CEOs and the quality of financial reporting. On the other hand, older and long-serving employees may significantly influence their colleagues, to the detriment of financial reporting (Hunton et al., 2011). Davidson et al. (2007) note that people nearing retirement age may generate higher agency costs (the so-called horizon problem). CEO nearing retirement age may no longer cares about the accounting quality, being concerned with current rather than future gains. Thus, it is hypothesized that:

**H8: With older CEOs, entities are less likely to voluntarily adopt IFRS.**

### 2.9. CEO ownership

On the basis of studies conducted in Western Europe it can be concluded that executive ownership usually does not exceed 5% of share capital (ca. 85% of cases), hence CEOs have relatively limited share ownership in listed companies, and in most cases they are minority shareholders (Bancel and Mittoo, 2004).

However, empirical research does not confirm a positive impact of CEO ownership on the quality of accounting (Yasser et al., 2017). According to Machuga and Teitel (2009), there is a negative correlation between earnings quality understood as income smoothing, timely loss recognition and conditional accruals and CEO ownership. When managers hold less than 25% of shares, managerial opportunism decreases. However, when ownership exceeds 25%, managers are more likely to apply aggressive income-increasing discretionary accruals. Eng and Mak (2003) found that the low level of managerial ownership has a positive impact on increased disclosures. It should be noted that investors themselves do not find correlations between managerial ownership and earnings high predictive value (al-Dhamari and Ismail, 2013). In view of the above, managers who own shares in the company do
not support a higher accounting quality and they will also not be willing to apply the IFRS if their shareholding in the company will be significant. Thus, H9: CEO with share ownership in the entity is less supportive of IFRS adoption.

3. Material and Methods

The study methodology involved a three-stage approach: (i) identification of variables that may influence the adoption of IFRS (ii) investigation of the correlation between identified variables (iii) estimation a logit model to assess the impact and significance of previously identified determinants on IFRS adoption.

The research focused on manufacturing companies under US SIC 1000 – US SIC 3999 classification. According to other studies, the production sector applies IFRS more frequently than other industries (Wu and Zhang, 2009). This sector is characterised by higher debt levels, so production companies may need IFRS to monitor agency conflicts between investors and lenders (Dumontier and Raffournier, 1998). Companies from this sector have more freedom in implementing independent financial policies than financial or service businesses. The production sector is characterised by similar core operational activities, production cycles as well as similar financial categories (Kędzior, 2012). Production is the largest sector in Poland in terms of the number of businesses, hence the results of the analysis can apply to all Polish business entities.

We examined the companies listed in the Polish market in 2016. The analysis covered 445 companies, 61% of the total. The data was collected from the Orbis database and companies websites.

Company size, presence of international investor, supervisory board characteristics and CEO characteristics were considered as the possible factors that may influence adoption of IFRS. Company size is measured by operating revenues (Euro); this variable is defined in a similar way by André et al. (2012), and Bessieux-Ollier and Walliser (2012). Supervisory board characteristics was analysed in terms of presence of international board and size. A similar approach to measure the supervisory board in terms of nationality was presented by Masulis et al. (2010); Klai and Omri (2013). Supervisory board size – was measured as the number of board members. The identical approach was presented by Chiraz and Anis (2012), Vafeas, 2000; Karagul and Yonet (2012). CEO was analysed in terms of nationality, education, gender, age, share ownership. CEO nationality was analysed in terms of the country of origin of the entity and academic degree in terms of holding a PhD degree. A similar approach was adopted by Anderson et al., 2004; Bradbury et al. (2006); Karagul and Yonet (2012).

The correlation between the identified variables was estimated. Following that, a logit model was specified and estimated in order to assess the impact and significance of identified determinants on IFRS adoption. The logit model was used by a number of authors in similar research studies: André et al. (2012); Bessieux-Ollier and Walliser (2012); Bassemir (2018); Dumontier and Raffournier (1998), and Wu and Zhang (2009).

The model is specified as follows:

\[
\text{logit (Probability of IFRS)} = \beta_0 + \beta_1(\text{Company size}) + \beta_2(\text{International investors}) + \beta_3(\text{Supervisory board size}) + \beta_4(\text{International supervisory board}) + \beta_5(\text{CEO nationality}) + \beta_6(\text{CEO academic degree}) + \beta_7(\text{CEO gender}) + \beta_8(\text{CEO age}) + \beta_9(\text{CEO ownership}) + e
\]

Data is shown with means, standard deviations, medians and interquartile ranges, differences were calculated with Mann-Whitney test and Wilcoxon signed-rank test. A p-value of less than 0.05 was considered statistically significant. We used STATISTICA, Statsoft (2011), version 13.3.

4. Results

Across the firms in our sample (445) the average operating revenues is 8,579,000 € (table 1). Moreover, 38.65% of the sample firms have operating revenues lower than 1,000,000 € and 20.45% higher than 10,000,000 €. The number of persons in supervisory board is on average 2.57 and in 79.55% of the sample, the number of board members is lower than 4 persons.

Table 1.

| Variables | Mean (SD); Median [Q1 – Q3] |
|-----------|-----------------------------|
| Company size (thousand €) | COMPS | 8,579 (31,826); 1,346 [345;5,019] |
| Supervisory board size (person) | SUPBOS | 2.57 (2.66); 1.00 [1.00;3.00] |
| CEO age (years) | CEOA | 52.0 (13.3); 53.0 [42.0;63.0] |

| n (%) |
|-------|
| Company size (thousand €) | COMPSR |
| <1,000 | 128 (28,76) |
| 1,000-10,000 | 98 (20,02) |
| >10,000 | 91 (20,45) |
| CEO age (years) | CEOAG |
| <40 | 219 (49,21) |
| 41-60 | 98 (20,22) |
| >60 | 128 (28,76) |
CEOs have an average age of 52 years, and almost 50% of them is 41–60 years old. There are no international investors and international supervisory board in 84.50% and 91% of the sample firms, respectively. The statistics show that 97.30% CEOs are Polish and 3.26% of CEOs have a Ph.D. The findings reveal that female CEOs lead only 32 of the sample firms (8.70%). In 141 companies, CEO holds the firm’s shares.

Our study revealed that IFRS adopted 77 companies (17.30%) (table 2). Firms, which adopt IFRS voluntarily are bigger than entities applying local accounting standards. We found statistically significant differences between companies that confirmed (IFRS) and not confirmed IFRS adoption in terms of supervisory board size, international investor presence, international supervisory board and CEO nationality. In companies that adopted IFRS the supervisory board is thrice as big as in nIFRS companies. The average number of people in IFRS companies’ supervisory board has on average 6,30 members, while in nIFRS companies 2,57. In almost 40% of IFRS companies and in 15% of nIFRS ones we observed the presence of international investor.

Table 2.

Variable comparison companies that confirmed (IFRS) and not confirmed (nIFRS) International Financial Reporting Standards adoption

| Variables                  | nIFRS (n=368) | IFRS (n=77) | p-value* |
|----------------------------|---------------|-------------|----------|
|                           | Mean (SD)     | Median [Q1 – Q3] |           |
| Company size (thousand €) | 8,579 [31,826] | 169,900 [581,151] | <0.001** |
| Supervisory board size (person) | 1,346 [345,5,019] | 7,054 [2,452,35,360] |           |
| CEO age (years)           | 53.0 [42.0,63.0] | 52.0 [41.0,60.0] | NS       |
|                           | n (%)         | n (%)       |          |
| Company size – range (thousand €) |           |             |          |
| <1000                     | 160 (43,48)   | 12 (15,58)  |          |
| 1000-1000                 | 151 (41,03)   | 29 (37,66)  | <0,001*  |
| >10000                    | 57 (15,49)    | 36 (46,75)  |          |
| CEO age - range (years)   |               |             |          |
| <40                       | 82 (22,28)    | 16 (20,78)  |          |
| 41-60                     | 177 (48,10)   | 42 (54,54)  | NS       |
| >60                       | 109 (29,62)   | 19 (24,67)  |          |
| Board size – range (person) |            |             |          |
| <4                        | 305 (82,88)   | 49 (63,64)  |          |
| 4-10                      | 50 (13,59)    | 15 (19,48)  | 0,004*   |
| >10                       | 13 (3,53)     | 13 (16,88)  |          |
| International investor    |               |             |          |
| No                        | 311 (84,50)   | 47 (61,00)  | <0,001*  |
The International supervisory board was found twice more often in IFRS companies than in the others. Before employing the regression estimation, we investigated the correlation between independent variables. Table 3 presents correlations between the analysed variables.

A positive impact of company size and supervisory board on voluntary IFRS adoption is confirmed with the impact of company size being more significant. As expected, there is a positive correlation between company size and supervisory board size.

In conclusion, it can be legitimately assumed that significant factors include: international investor, CEO nationality, international supervisory board, company size, and supervisory board size.

To analyze the factors affecting voluntary IFRS adoption we used the binary logit regression model.

The dependent variable (IFRS adoption) is a binary variable assuming the value 1 (IFRS company) or zero (nIFRS company). The logit model, which is based on cumulative logistic probability functions, is computationally easier to use and has the advantage to predict the probability of IFRS adoption in company. The results are presented in Table 4. A positive impact of company size and presence of international investor on voluntary IFRS adoption is confirmed by the results. Our study did not validate the impact of CEO characteristics and supervisory board influence on voluntary IFRS adoption.

### Table 3.

| Variable | COMPS | ININW | SUPBOS | INTSUP | CEON | CEOAD | CEOG | CEOAG | CEOWN |
|----------|-------|-------|--------|--------|------|-------|------|-------|-------|
| COMPS    | 1     |       |        |        |      |       |      |       |       |
| ININW    | 0.2308* | 1     |        |        |      |       |      |       |       |
| SUPBOS   | 0.5981* | 0.3192* | 1     |        |      |       |      |       |       |
| INTSUP   | 0.3342* | 0.3153* | 0.4903* | 1     |      |       |      |       |       |
| CEON     | 0.4861* | 0.3033* | 0.5315* | 0.5820* | 1   |       |      |       |       |
| CEOAD    | 0.0680 | 0.0734 | 0.1559* | 0.1422* | 0.2716* | 1   |       |      |       |
| CEOG     | -0.038 | -0.0012 | -0.0239 | -0.0047 | -0.0663 | -0.0550 | 1   |       |       |
| CEOAG    | -0.0946* | -0.0160 | -0.0344 | -0.0121 | -0.0359 | -0.0004 | 0.0160 | 1     |       |
| CEOWN    | -0.093* | -0.0214* | -0.1779* | -0.1801* | -0.1665* | -0.0850* | -0.0514 | -0.0492 | 1     |
| IFRS     | 0.2446* | 0.2239* | 0.2756* | 0.1427* | 0.1875* | -0.0144 | -0.0122 | -0.0500 | -0.0556 |

**COMPS** = company size; **CEOAG** = CEO age; **SUPBOSR** = Board size; **ININW** = International investor; **INTSUP** = International supervisory board; **CEON** = CEO nationality; **CEOAD** = CEO academic degree; **CEOG** = CEO gender; **CEOWN** = CEO ownership; *p*-values in brackets; * - significant at the 0.01 level; ** - significant at the 0.05 level.

Source: own research
5. Discussion

Our study revealed that bigger companies more often adopt IFRS. The relationship between a company’s size and IFRS adoption was confirmed by André et al. (2012), Wu and Zhang (2009) and Tran et al. (2019). We presume this is because large businesses frequently rely on external financing in foreign markets, and IFRS adoption can reduce the cost of capital. IFRS, unlike various local accounting standards, facilitate adoption of many alternative solutions, which can be employed by large and operationally and geographically diversified entities. Large companies are equipped with necessary financial experts and resources, enabling them to adopt IFRS (André et al., 2012). Also, they incur lower information production costs and lower costs of competitive disadvantage associated with disclosures. They are inclined to disclose more information, which does not pose the threat of losing competitive advantage. As a result, bigger companies are able to meet stricter requirements imposed by IFRS (Bessieux-Ollier and Walliser, 2012). IFRS adoption in large companies can be also positively evaluated by markets as an additional indication of a corporate governance system. Moreover, large companies’ reliability and transparency are, frequently conditioned by IFRS adoption.

We confirmed the results presented by Covrig et al. (2007), who discovered statistically significant impact of foreign investors on voluntary IFRS adoption. Their study claimed that international investors select targets with which they are well acquainted, and give preference to companies with effective corporate governance systems, which implies high quality accounting systems. We presume that international investors have sufficient financial, human and organizational resources to make the right decisions with regard to the quality of accounting standards (Gul et al., 2010). On the other hand, DeFond et al. (2019) emphasize that foreign investors’ home country institutions affect their reaction to IFRS adoption or other activities. For example foreign investors from countries with weak legal and economic institutions, similar to those in China, are supposed to reduce their investment by a greater amount than foreign investors from countries with strong institutions, like Poland (Popov, 2001).

A high proportion of supervisory board members in companies from Poland come from the company’s country of origin. International supervisory boards still constitute a relatively insignificant group also in West European corporations (van Veen and Marsman, 2008). It can be assumed that the number of members in international supervisory boards in Polish companies will increase due to the economic development of individual countries or companies as well as intensified international trade. As foreign supervisory boards have a positive impact on the quality of accounting in emerging markets, we presume that replacement of local standards with IFRS in less developed markets improves the quality of accounting (Klai and Omri, 2013; Firth et al., 2007; An and Naughton, 2007).

The size of a supervisory board is only partially statistically significant determinant of voluntary IFRS adoption. The results are somewhat surprising because the size of a supervisory board usually leads to improved transparency of financial information (Upadhyay and Sriram, 2011). Larger boards in big entities need comprehensive and high quality information to perform their supervisory functions, hence the likelihood of application of IFRS should be higher. On the other hand, it must be kept in mind that board size is commonly determined by national laws and regulations and is mostly based on the enterprise size and sector (Bezo et al., 2015).

Our study verified positively the hypothesis claiming the impact of international supervisory boards on IFRS adoption, but statistical significance is low. However, to some extent international supervisory boards may be associated with the expansion of
international business activity, which leads to broader IFRS application (André et al., 2012). It will be necessary to develop a business language understandable to all supervisory board members (Palmer and Varner, 2007). Foreign board members can enforce IFRS application – they are better acquainted with international standards. Frequently, as the representatives of foreign investors, they require adoption of accounting standards applied by parent companies. It seems that the impact of this factor on IFRS adoption – to be more significant – should be enhanced by other conditions.

We found that a CEO’s nationality determines voluntary IFRS adoption, but only in small extent. The results seem surprising because foreign CEOs, similarly to foreign supervisory board members, usually have more confidence in generally accepted accounting standards (IFRS). It should be noted that the majority of CEOs in the companies come from their countries of origin. This phenomenon is typical of relatively small entities, with their business activity located chiefly in their country of origin. The confirmation of this phenomenon can be found in Weber’s (2010) research. Indeed, foreign CEOs are significantly more numerous in companies adopting IFRS as compared with businesses applying local standards. They usually perform managerial, not supervisory functions. CEO positions are frequently held by business leaders who have broad practical knowledge (Ruigrok et al., 2007). They are more aware of the possible benefits resulting from IFRS application. People from other countries, who have international professional experience, are more aware of the positive impact of IFRS on the quality of accounting. Foreign CEOs are more likely to favour world and high quality accounting standards (IFRS) than CEOs operating in local markets. Possibly, foreign executives from less developed markets, who lack broad international experience, do not guarantee IFRS application.

A CEO’s academic degree does not turn out to be statistically significant. It seems surprising in light of the fact that literatures attribute much significance to academic education as a determinant of IFRS application (Sucher and Jindrichovska, 2004). It should be highlighted that it is not common for CEOs in Europe to have academic degrees. CEOs are much more interested in obtaining MBA degrees than academic titles (Bancel and Mittoo, 2004).

Our study did not confirm the significant influence of gender on IFRS adoption. We found out that in companies with male CEOs the extent of IFRS adoption was the same as in companies with female CEOs. We did not confirm the Musteen et al., (2006) and Davis et al. (2010) findings, who discovered higher acceptance of change among female CEOs (for example IFRS adoption). We suppose that this maybe because females performing key accounting functions adopt more conservative financial reporting policies.

This was confirmed with empirical studies conducted by Francis et al. (2009) who found that females in key positions, responsible for accounting, are more likely to present financial results on the basis of conservative assessments. This is especially the case for CEE countries, because local accounting standards in these countries are more conservative than IFRS.

Age was not found to be a statistical significant determinant of voluntary IFRS application. CEO average age for businesses applying local standards is slightly higher. Most CEOs are between the ages 30 and 70 years. The literature do not explicitly confirm correlations between age and choices of financial reporting systems. Younger CEOs are inexperienced in business but more likely to accept change and risk (for example IFRS adoption) (McClelland and O’Brien, 2011). This is of key importance for relatively small entities, which prepare non-consolidated financial statements, develop faster, demonstrate higher business risk, and need a dynamic and bold leadership (McClelland and O’Brien, 2011; McClelland et al., 2010). It should be noted that a large number of empirical studies confirm a negative impact of CEO age on the quality of accounting (Srinivasan, 2005; Francis et al., 2008). We presume that it is because people nearing retirement age are not inclined to take a risk and focus on short-term gains, frequently to the detriment of long-term profitability and thus the probability that older CEOs introduce IFRS will be lower. The original enthusiasm, acceptance of risk and openness to new trends (IFRS) can be gradually replaced: unwillingness to take a risk and accept change, and the desire to retain status quo (local accounting standards). Experience and expertise gained in the process of continuous learning confirm the benefits of international standards and lead to IFRS application. It might be assumed that middle-aged CEOs are more likely to adopt IFRS, while the youngest and oldest CEOs are less inclined to apply IFRS for the above stated reasons. We suppose that the uneven impact of age on IFRS adoption may be due to the difference in the labor market (e.g. the level of job rotation, wages). For example the longer an employee is hired at his/her job, his/her ability to taking extra effort at work decreases over time. Rotating the employee to a different job may generate a fresh impulse for effort. However, job rotation also reduces the employee’s time horizon, thus reducing propensity to implement long-term projects, like IFRS adoption (Hakenes & Katolnik, 2017).

CEO ownership is not a clear determinant of IFRS adoption, either. CEOs in the analysed companies may not be fully aware of the numerous benefits of IFRS, being discouraged by the high costs and complexity of IFRS adoption. Voulgaris et al. (2013) claim that given the fair value measurement, IFRS adoption could result in the volatility of balance sheet items. Therefore, IFRS can hinder measurement of managers’ performance according to accounting data. We presume that lack of
influence of CEO ownership on IFRS adoption may be associated with CEO ownership structure rather than the fact the CEO is a shareholder (Banbhan et. al., 2018).

**Conclusions**

The paper analyzed the influence of various CEO and supervisory board characteristics on voluntary IFRS adoption in listed companies preparing unconsolidated financial statements from Poland. It contributes in identifying the major determinants of voluntary IFRS adoption, such as company size and international investors’ presence. We discovered that the size of supervisory boards, the presence of international members in those boards, and supervisory board size have a positive impact on IFRS adoption. The influence of CEO’s gender and age, and CEO ownership were not found to be statistically significant determinants. We conclude that voluntary IFRS adoption depends on the characteristics of supervisory boards, rather than the individual features of CEOs. This should not seem surprising, given a supervisory board’s responsibility for corporate governance good practices, including the choice of accounting standards. The greatest probability of voluntary IFRS adoption is conditioned by the co-occurrence of specific variables: international investor and CEO nationality; board size and international board; board size, international board and CEO gender; CEO age and international investor.

The study contributes to the literature by shedding further light into the new variables determining voluntary IFRS adoption in Polish companies. To the author’s best knowledge, no previous research papers referred to the discussed CEO and supervisory board characteristics as drivers of voluntary IFRS adoption. All the determinants which can be regarded as the international components of corporate governance systems (international investor and CEO nationality; board size and international board) are verified as statistically significant.

Our findings can be useful for regulators as well as various users of financial statements prepared by listed companies. The findings are also significant in the context of voluntary IFRS adoption by publicly traded companies which do not apply IFRS, or by unlisted businesses. This finding adds to the literature, which suggests a capital market benefit to mandatory IFRS adoption in countries with weak standard enforcement infrastructure. We illustrate that IFRS adoption can improve the information environment of firms as they have the economic incentive to achieve higher levels of compliance.

**Limitation of the study**

The paper did not analyze more variables due to data limitations. This problem relates mainly to the NewConnect market in Poland, created for smaller companies, which do not have to meet strict disclosure requirements. Future studies could complement the results of voluntary IFRS adoption analysis for East European countries by comparing them with those focusing on West European companies, including more variables such as: presence of independent managers, proportion of supervisory board members to management board members, and CEO duality.
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