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Study of the Quality of Accounting of Family Businesses in Hungary

Summary

In this paper, we investigate the accounting quality of family firms within the Hungarian domestic SME sector between 2017 and 2022. We use data from direct industry competitors and from leading industry competitors of these firms in separate comparisons. We group these observations by control samples to refine some observations both technically and methodologically. The findings of the research indicate that there are differences in the accounting quality of domestic family SMEs, their direct representative industry competitors, and industry leading enterprises, which can be identified over the business years and business cycles of the research. However, these differences cannot be characterised as statistically significant based on the multivariate regression model measuring accounting quality in the domestic accounting environment, only partially for the sample and control sample 1, which do not show any persistent detectable trends.

Keywords: family enterprises, small and medium-sized enterprises, accounting quality

JEL-codes: M40, M41, M49

Introduction

Family businesses are an area of increasing interest for stakeholders in both the business and social spheres. This broad interest is driven by a number of interrelated factors. These perspectives encompass the significant role of family businesses in the global economic system, their substantial contribution to employment, innovation, and the sustainability of local communities, and the steady increase in the diversity of published material on the subject (Anderson et al., 2018; Bertrand and Schoar, 2006; Burkart et al, 2003; Tong, 2007). According to a number of studies, family businesses play a pronounced and dominant role in the global economy, producing a significant share of global GDP (McKinsey & Company, 2023), contributing to overall economic growth (Zellweger, 2017) and playing a key role in the small and medium enterprise sector in many countries, including Hungary (Wieszt, 2019). In view of the aforementioned factors, the quality of data from accounting information systems and annual reports plays a pivotal role in informing stakeholders and shaping specific market relationships. An understanding of the particularities of family businesses is also essential for effective decision-making, so that trends behind certain data can be understood beyond an examination of industry-specific factors.

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The present study focuses on the analysis of the characteristics of family SMEs in Hungary, with a particular emphasis on accounting quality. In developing the research methodology, emphasis was placed on the consideration of theoretical and empirical research aspects. The analyses compared the data of the sampled family businesses with their direct industry peers over the period analysed (2017 to 2022), as well as with industry leaders, thus facilitating a thorough and detailed interpretation of the results.

The present study is founded upon the following research question:

Do significant differences exist in the accounting quality of Hungarian family SMEs, their direct industry competitors, and industry leaders between the sample and the periods under investigation? In the event that such differences are confirmed, the subsequent objective is to ascertain the direction and significance of these variations.

Literature Review

The quality in general

The concept of quality is characterised by a number of conceptual approaches, which can be significantly different depending on the specific discipline or field of enquiry. This variability arises due to the emergence of different interpretations, measurement methods and approaches to definition in various sciences and disciplines. In his book "Quality Is Free: The Art of Making Quality Certain" (1979), Crosby discusses quality in terms of the balance of costs and benefits it generates, from both the corporate and consumer perspectives. He stresses that high quality does not necessarily result from high prices and costs. In subsequent works, Crosby (1984) shifted his focus towards the concept of quality as the alignment of customer needs, product and service attributes, and consumer experiences. Armand Vallin Feigenbaum (1991) defines quality as the set of design, production and marketing qualities and characteristics of products and services that emerge during the use of the product or service and the satisfaction of consumers.

In the field of engineering, the concept of quality is frequently associated with the functionality and reliability of products and processes. Quality management systems, of which ISO 9001 (ISO 9000 family of standards) is an example, provide standardised, well-defined methods for meeting and maintaining quality requirements and for identifying and expressing deviations from expected quality. The concept of quality can be delineated in terms of measurable parameters and indicators, including but not limited to defect rate, scrap rate, and the ratio of expected to actual performance or durability indicators.

Within the economic sciences, quality is most often understood in the context of consumer satisfaction, quality perception and market competitiveness (Garvin, 1984 and 1987;

Isaksson, 2006). In the social sciences, the concept of quality is often related to the efficiency and effectiveness of public policies and social services. A plethora of quantitative and qualitative methodologies persist in being utilised in contemporary settings to gauge and appraise the quality of education, social services and public services.

It can be concluded that the concept of quality is multidisciplinary and context-dependent. Each discipline employs its own distinct approach and methodologies for defining, assessing, and, when deemed necessary, modifying and enhancing quality. Despite these differences, there is a shared objective that quality should contribute to fulfilling the requirements expected or needed in the field, thereby enhancing the satisfaction and well-being of those involved, whether actual or perceived.

Quality in accounting

Accounting quality refers to the accuracy, reliability and relevance of a company's financial reporting, which are essential to support economic decision-making. Quality accounting information plays a key role in enabling stakeholders of a reporting entity to draw conclusions that are relevant to them about the financial position, performance, financial position and changes in the state of the entity's assets and liabilities (IASB, 2018).

The quality of accounting is determined by a number of factors, including the regulatory environment, the audit process, and the competence and ethical standards of accounting professionals within the company. Standards for accounting, such as those set out by the International Financial Reporting Standards (IFRS) or the United States Generally Accepted Accounting Principles (US GAAP), provide a clear framework that promotes comparability and transparency of financial information. Transparency is of particular importance as it contributes to market confidence and reduces information asymmetry between the company and its stakeholders. A paucity of accounting quality can also pose significant risks for many economic operators. Such practices compromise the financial soundness of the company, endangering its own operations from multiple vantage points and exerting a detrimental influence on industry and national economic performance. The global financial crisis of 2008, for instance, underscored the grave repercussions that erroneous or deceptive financial reporting can have on a worldwide scale. Consequently, regulators and professional bodies are continually endeavouring to enhance and enforce accounting quality standards, thereby mitigating the impact of distorting factors such as earnings management, creative accounting and accounting fraud (Griffiths, 1986; Healy, 1985).

In consideration of the aforementioned points, it can be concluded that the quality of accounting practices occupies a pivotal position within the economic environment. The provision of relevant, reliable and transparent accounting and financial information is conducive to the success of individual companies and the enhancement of the stability of the economic system in its entirety. It is therefore essential to maintain a commitment to quality accounting at both the corporate and regulatory levels.

Measuring accounting quality

A variety of quantitative and qualitative models and methods are employed to measure accounting quality. One of the better-known areas is the study of earnings management appearance. In professional research, accounting quality is typically measured using metric measurement variables in empirical analyses based on multivariate regression models. These estimators encompass industry-specific and cross-industry and cross-market approaches, utilising outcome and explanatory variables that are professionally pertinent to the issues under study. The objective of the measurement of earnings management is to identify and quantify manipulations and distortions in financial and accounting reporting, thus ensuring the reliability of financial and accounting data and the assessment of the state of accounting quality.

In the present study, the model developed by Kothari et al. (2005) was adopted for the purpose of estimating accounting quality. This was based on preliminary estimates, with the aim of examining the evolution of the R2 values of the most well-known and widely used significant models (Dechow et al., 1995; Teoh et al., 1998; Kothari et al., 2005) in the international literature over the periods under study. The results of this examination can be found in *Table 2*.

The basis of Kothari et al.'s (2005) model is that firms' earnings management can distort the quality of accounting data, which negatively affects economic decision making. Earnings manipulation refers to discretionary (accruals) cost accounting or revenue management that deviates from non-discretionary accruals that are part of the normal business operations of the firm and corporate regulations. The model is designed to estimate the total amount of influence (TAit) in a given year and the deterioration in accounting quality from the value of the error term in the multivariate regression equation, which is used as an absolute value in comparisons.

A notable innovation of the Kothari model is its consideration of firm performance in the estimation of discretionary accruals. The model utilises the return on assets (ROA) of the company as a performance indicator, thereby facilitating more precise identification of accruals from normal operations.

The variables are given in the formula below:

TAi,t = ΔCurrent Assetsi,t – ΔCashi,t – ΔCurrrent Liablitiesi,t –Depreciationi,t

where:

TAi,t = total accruals in year t for firm i;

CurrentAssetsi,t = current assets in year t less current assets in year t – 1 for firm i;

ΔCashi,t = cash in year t less cash in year t – 1 for firm i;

ΔCurrentLiabilitiesi,t = current liabilities in year t less current liabilities in year t – 1 for firm i;

Depreciationi,t = depreciation and amortization expense in year t for firm i.

Based on the total accruals, the basic formula of the model can be written, which is:

$$\frac{TA_{i,t}}{A_{i,t-1}} = \alpha_1\left(\frac{1}{A_{i,t-1}}\right) + \alpha_{1,i}\left(\frac{\Delta SALE_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}}\right) + \alpha_{2,i}\left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + \left(\frac{ROA_{i,t}}{A_{i,t-1}}\right) + \varepsilon_{i,t}$$

where:

TAi,t = total accruals in year t for company i;

ΔSALEi,t = change in sales revenue of company i in year t and t-1;

ΔRECi,t = change in receivables of company i in year t and t-1;
PPEi,t = gross property, plant, and equipment in year t for company i;
ROAi,t = the return on assets of company i in year t;
Ai,t-1 = total assets of company i over year t-1;
εi,t = error term in year t;
i = the indices of the enterprises given;
t = indices for the periods under examination;
α, β = company-specific parameters.

Methods

The sample of family businesses required to carry out empirical analyses was determined based on the following criteria when constructing each research methodology: the analysed enterprise is an SME based in Hungary, and at least two family members are owners (with an aggregate shareholding above 50%), and at least one of the owners is involved in the management processes or day-to-day operations, and the analysed enterprise is considered a family enterprise according to the ownership, or at least one of the non-owner family members is involved in the management processes or day-to-day operations, and the ownership of the enterprise is considered to be a family business, or a generational change (within the family) has taken place or is planned within the enterprise, or informal family work is active in the management and day-to-day running of the enterprise, or the family is the primary or a factor to be taken into account in the provision of other resources (financial, non-financial).

For each sample of family firms, a simple random sample of representative direct industry competitors and industry-leading firms were assigned based on the EMIS and OPTEN enterprise databases and query systems. The final number of items and the distribution of companies included in the survey are shown in *Table 1.*

Table 1. Distribution of enterprises included in the studies by sample and control samples

	Frequency	Percentage	Cumulative percentage
Sample	170	42.70 %	42.70 %
Control sample 1.	170	42.70 %	85.40 %
Control sample 2.	58	14.60 %	100 %
Total	398	100 %	–

Source: based on own editing (2025)

When comparing the various models measuring accounting quality, the statistical modelling results are evaluated on the basis of the R^2 values of the tests and their average over time. In the analysis, the model with the best explanatory power is selected and used to examine the differences between the sample and the control samples using a one-factor analysis of variance.

Results

Subsequent to the construction of the variables of the statistical models utilised and the collection of additional data from the accounting reports, multivariate linear regression analyses and calculations were conducted, resulting in standardised values of the error terms (εi,t) for each equation by year and the explanatory power of each model by year, as illustrated in *Table 2.*

Table 2 shows that among the models measuring accounting quality, the measurement model by Kohari et al. (2005) fits the data best both in terms of R2 and adjusted R2, which show moderate explanatory power. In the light of the results, only the model constructed by Kohtari et al. (2005) was used to estimate accounting quality. The sample averages of the mean accounting quality estimates of the chosen model over the years and over the whole period are reported in *Table 3.*

Table 2. The value of R2 according to the examined models, 2017-2022

Measurement model	R^2 type	2017	2018	2019	2020	2021	2022	Mean
Dechow et al. (1995)	R^2	0.082	0.955	0.942	0.242	0.532	0.391	0.524
	Adjusted R^2	0.075	0.954	0.942	0.234	0.528	0.386	0.520
Teoh et al. (1998)	R^2	0.016	0.910	0.903	0.033	0.098	0.002	0.327
	Adjusted R^2	0.011	0.910	0.903	0.028	0.094	0.001	0.325
Kothari et al. (2005)	R^2	0.383	0.977	0.972	0.485	0.724	0.624	0.694
	Adjusted R^2	0.147	0.955	0.944	0.235	0.524	0.390	0.533

Source: own editing based on SPSS and JASP software results (2025)

Table 3. Descriptive statistics for the absolute values of the accounting quality model results of the examined companies by year and sample, 2017-2022

Measurement model /Sample type	Statistics	2017	2018	2019	2020	2021	2022	Mean
Kothari et al. Sample	Mean	0.6750	0.6478	0.5457	0.5828	0.6745	0.6521	0.6297
Kothari et al. Control sample 1	Mean	0.7631	0.7042	0.7564	0.7633	0.7482	0.7265	0.7436
Kothari et al. Control sample 2	Mean	0.7399	0.7059	0.4382	0.6003	0.6920	0.5727	0.6248

Source: own editing based on SPSS and JASP software results (2025)

The descriptive statistics for each sample, when considered in isolation and without the application of a comparative framework, lack the technical detail required for meaningful analysis. The basis for comparison, which takes into account the different size of the enterprises, is satisfied by the values of the error terms of the models used, and thus the observations can provide meaningful results for the measurement of accounting quality. The descriptive statistics presented indicate that the estimated accounting quality characteristic values of family firms and leading industry competitors are more closely correlated and typically higher (the model suggests a lower value is better) than those of direct industry competitors. This phenomenon may be attributed to a correlation between the risk aversion of family firms (Hiebl, 2012) and the absence of accounting and financial influence, and the regulated and professional nature of prominent industry leaders. In order to investigate the research question of whether the accounting quality of Hungarian family SMEs has a statistically detectable difference with respect to their direct industry competitors and industry leading firms, a one-way analysis of variance was applied. This method enables the determination of whether there is a significant difference between the means of two or more groups or populations.

The results of the analysis of variance (ANOVA) demonstrate that there is no statistically significant difference between the averages of the accounting qualities of the samples examined over the whole periods under study. However, small periodic significant differences are identifiable. The findings indicate that the impact of the pandemic and the economic cycle on the accounting quality of the analysed businesses, particularly in the small and medium-sized enterprise sector, where many enterprises have experienced liquidity and other financial problems, is a significant contributing factor to the observed variations. These financial challenges have also exerted increased pressure on companies' accounting systems, as the need to provide accurate and timely financial information to credit institutions, investors and other stakeholders has increased. Furthermore, the financial support provided by the Hungarian government has imposed additional reporting and administrative burdens on enterprises, which may have resulted in reduced resources and care in preparing accounting reports and recording data. This may have distorted (directly or indirectly) the more accurate reporting that occurs within enterprises where the business environment is less rigid and closed, risk-averse and/or professionalised. On the basis of the aforementioned narrowing criteria, control sample 1 may provide a more distorted accounting quality in the years immediately preceding the crisis situation and in the year of the beginning of the crisis situation.

Conclusions

The results presented in this paper contribute to a more detailed understanding of some of the characteristics of family business studies in Hungary through empirical analyses using control samples.

Table 4. ANOVA tables by accounting quality model and samples, 2017-2022

Sample and Control sample 1		SS	df	MS	F	Sign.
AQ_2017_Kothari	Between groups	0,660	1	0,660	1,385	0,240
	Within groups	161.156	338	0.477	-	-
AQ_2018_Kothari	Between groups	0.271	1	0.271	0.556	0.457
	Within groups	164.843	338	0.488	-	-
AQ_2019_Kothari	Between groups	3.772	1	3.772	5.954	**0.015**
	Within groups	214.126	338	0.634	-	-
AQ_2020_Kothari	Between groups	2.769	1	2.769	5.493	**0.020**
	Within groups	170.381	338	0.504	-	-
AQ_2021_Kothari	Between groups	0.462	1	0.462	0.892	0.346
	Within groups	175.097	338	0.518	-	-
AQ_2022_Kothari	Between groups	0.470	1	0.470	0.824	0.365
	Within groups	192.815	338	0.570	-	-
Sample and Control sample 2		**SS**	**df**	**MS**	**F**	**Sign.**
AQ_2017_Kothari	Between groups	0.182	1	0.182	0.432	0.512
	Within groups	95.350	226	0.422	-	-
AQ_2018_Kothari	Between groups	0.146	1	0.146	0.255	0.614
	Within groups	129.421	226	0.573	-	-
AQ_2019_Kothari	Between groups	0.500	1	0.500	1.347	0.247
	Within groups	83.895	226	0.371	-	-
AQ_2020_Kothari	Between groups	0.013	1	0.013	0.029	0.865
	Within groups	103.014	226	0.456	-	-
AQ_2021_Kothari	Between groups	0.013	1	0.013	0.028	0.867
	Within groups	107.682	226	0.476	-	-
AQ_2022_Kothari	Between groups	0.273	1	0.273	0.583	0.446
	Within groups	105.645	226	0.467	-	-

Source: own editing based on SPSS and JASP software results (2025)

Acknowledging the methodological limitations of the research, it is possible to create new accounting quality measurement models, indicators or procedures in the Hungarian accounting environment, even by creating industry-specific variables, taking into account the statistical characteristics of specific professional and certain phenomena. This will contribute to the dissemination of accounting quality measurement models in Hungary and to the creation of further research directions. A further possibility is to investigate the differences in typological systems for interpreting and classifying family businesses using empirical research methods. This would facilitate the exploration of the differences between the various systems and the evaluation of their practical applicability.

In summary, a variety of approaches are required to characterise the social and economic role and characteristics of family businesses, and the effects and interactions of these factors. A multitude of questions persist, awaiting exploration and elaboration by future researchers and practitioners. To gain new insights and comprehend the patterns and trends of the period, further in-depth studies are necessary.

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