
Analysis of Family Engagement in the Evaluation of Organisational Effectiveness in Family Businesses

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Abstract:

Purpose: This elaboration features an attempt of describing the research sample's uniformity and estimating the average engagement of family members in the family business' functioning (hereinafter referred to as family engagement). The study's context was based on a set of organisational effectiveness factors (identified independent variables) and an evaluation of their significance. In this paper, the effectiveness is deemed as the engagement of family members in the functioning of family businesses.

Methodology: The paper presents the results of surveys conducted among 200 Polish family businesses with registered seats in two voivodeships. Organisational effectiveness was measured in terms of 8 key analysis fields identified.

Findings: The paper presents the results of own research on organisational effectiveness in family businesses. It especially confirmed the alternative hypothesis that the dependent variable, i.e. family engagement, in terms of evaluating 8 independent variables using statistical tests, does not have a normal distribution.

Practical Implications: The obtained results provide the basis for selection and future use of advanced statistical tests enabling the verification of a substantial dependency between the dependent variable (e.g. family engagement) and the independent variables identified within organisational effectiveness fields.

Originality/Value: The conducted study supplements the knowledge on strategic management by specifying a set of family member engagement factors in family businesses. When analysing the widespread phenomenon of organisational effectiveness in family businesses, the authors analysed family engagement in terms of the effectiveness' studied variables.

Keywords: Family business, organisational effectiveness, engagement of family members.

JEL: G32, J53, M12, M54.

Paper Type: Research article.

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1. Introduction

Measurements of the phenomenon of family member engagement in the functioning of family businesses make contemporary researchers come together to focus on issue and may constitute a new field of studies (Więcek-Janka, 2014). The authors are of the opinion that many entrepreneurs are not aware of the full potential of family engagement and are treating the behaviours taking place in the company as organisational routine (Drewniak, 2020; Charupongsopon and Puriwat, 2017; Hys, 2016). The phenomenon constituted the basis for identifying the research problem covered in the question: what organisational effectiveness factors are specific for the functioning of family businesses?

H. Piekarz and A. Stabryła stated that “organisational effectiveness refers (...) to all positive results that derive from the given organisation’s activity” (Bieniok, 2014, 73; Ziębicki, 2012, 382). Setiawan et al. defined organisational effectiveness as “a manner in which an organisation uses its resources to achieve its objectives” (Setiawan et al., 2020). This interpretation of organisational effectiveness was adopted by the authors of this publication, the empirical part of which was referred by them to family businesses (Bolesnikov *et al.*, 2019; Hys, 2017; Breckova, 2016).

The subject literature does not include any definition of organisational effectiveness in family businesses. It is usually presented with reference to organisations in general. Therefore, the authors noticed a research gap in this field and made an attempt to identify the organisational effectiveness factors for family business by focusing on one of its resources, i.e. related to family member engagement in the functioning of such businesses. The spectrum of interest covered, among others, such general factors as: legal status, activity profile, establishment method, company size, territorial range, and operation time. Furthermore, the analysis covered personal factors concerning family members working for family businesses, including age of the person in charge and type of position held by particular family members.

When classifying an enterprise as a family business, the authors relied on the definition proposed by R.K.Z. Heck and E.S. Trent, according to which a family business is an organisation in which at least one family member is the owner or manager (Sułkowski, 2012, 13). It is possible to assume that the manner of functioning of each enterprise is individual and inherent to the given family business, which is reflected in the company’s identity and image which is conveyed to the environment (Dacko-Pikiewicz, 2019a). This method will be referred to as the business model. J. Magretta stated that a business model is like writing a story explaining how an enterprise operates (Magretta, 2002, 4).

2. Background

When studying the subject literature, the authors pointed to the described phenomenon of familiness, which in the last two decades has been clearly gaining in importance in scientific statistics. K. Leszczewska combines family engagement with the familiness term, which is given the status of a unique resource in a family business (Sułkowski and Marjański, 2016, 12). Familiness in family business is a field that is often picked up in studies on the economic activity of family businesses (Frank *et al.*, 2017, 1). Science representatives who notice the resource's importance deem familiness as one of the elements intended for building reputation and competitive advantage strategy, it gives the enterprise a unique and distinguishing nature as well as ensures loyalty and engagement of its key stakeholders (Mikuła and Pietruszka-Ortyl, 2006; Dacko-Pikiewicz, 2019b).

Following this position, the paper's authors are critical towards the views presented in the paper of W. Orłowski *et al.* who state that small and medium entrepreneurs pay less attention to the long-term elements of such companies' functioning, such as the organisational context for innovative processes and building lasting relation with partner and the environment, among others (Ropega, 2013, 52; Szczepańska-Woszczyzna, 2018). They also state that when designing their business model, the entrepreneurs pay little and insufficient attention to the development of strategic business relations by adapting the organisation's interests. At the same time, they deem the designing of a family company's business model as an opportunity to create, capture and provide value for all stakeholders (Osterwalder and Pigneur, 2010). On the other hand, R. Amit and Ch. Zott regard that a business model is based on creating value through the use of business opportunities by specifying the cash flow structure, content and management (Zott *et al.*, 2011, 34). Thereby, the authors point out that family businesses are faced with the challenge of achieving a level of family member engagement in the company's functioning, co-operation and linking the organisation's interests with the co-operating companies' interests, that allows the jointly earned profit to remain at the organisations' disposal.

When dealing with the issue of evaluating family member engagement in the family business' functioning, the authors attempted to analyse the issue from various perspectives. Thereby, seven fields of organisational effectiveness were formulated as result of diversifying the fields of evaluation of family member engagement in the family business' functioning. The basis for the fields' identification was the concept of A.Y. Lewin and J.W. Minton, who determined a set of 7 effectiveness fields for basic business models, i.e. purposeful, systemic, regarding internal processes and interpersonal relations (Lewin and Minton, 1986, 514). As result of an in-depth analysis of the subject literature, the paper's authors decided to expand the organisational effectiveness fields with three additional items: method of conducting business, environmental protection and achieved effects. The identified set of foregoing seven organisational effectiveness fields for family businesses also allowed the authors to determine the scope of the conducted empirical studies.

This approach coincides with the position of de Man and Luvison, Szczepańska-Woszczyzna and Kurowska-Pysz, that the fields are linked through the identification of the organisation's own interests with the interests of organisations operating in the environment (de Man and Luvison, 2019; Szczepańska-Woszczyzna and Kurowska-Pysz, 2016).

3. Methodology

The purpose of the conducted study was an attempt to evaluate the significance of the family engagement dependent variable in relation to the identified set of independent variables, i.e. company operation time, respondent's age, type of position, company activity profile, company size, legal status, territorial range and company establishment method. These variables constitute the identified organizational effectiveness factors for family businesses.

Such a defined research objective lead to the adoption of a research hypothesis assuming that if it is possible to study the dependency between the independent variable of family member engagement in the functioning of family businesses (hereinafter referred to as family engagement) and the organizational effectiveness factors (dependent variables), then it will be possible to determine the research sample's distribution based on the sample's metric features.

As result of these consideration, with a significance level $\alpha=0.05$, it was assumed in the zero hypothesis H_0 that the dependent variable (family engagement) has a normal distribution, while in the alternative hypothesis H_A that family engagement does not have a normal distribution. Let us assume that F is the distribution function of the family engagement variable, while F_0 is the distribution function for a normal distribution, then for each $x \in R$:

$$\begin{aligned}H_0: F(x) &= F_0(x), \\H_A: F(x) &\neq F_0(x).\end{aligned}$$

This hypothesis was verified using the Kolmogorov-Smirnov and Shapiro-Wilk statistical tests. The statistical calculations were conducted in the IBM SPSS Statistics program.

Such a defined research objective featured the use of the incomplete induction procedure (Lisiński, 2016), consisting of the following stages and activities:

- I. Stage one – analysis of observation results, including:
 - a) research problem specification (Determination of the scientific study's purpose. Specification of the research sample's size. Specification of the research sample's structure),
 - b) identification of facts (Development of a study survey. Testing the correctness of the test study survey - conducting studies for the research sample (n=15). Verification of the study survey's correctness. Identification of the family

- business' collection. Conducting the proper study for the designated research sample size among family businesses),
- c) analysis of facts (Analysis of the obtained study results).
- II. Theory building, including:
- a) generalisation of facts (Development of a study report),
 - b) formulation of hypotheses (i.e. inductive reasoning),
 - c) derivation of empirical consequences from the hypotheses.
- III. Settlement of the theory's value, including:
- a) theory value confirmation,
 - b) assigning a reliability degree to the hypotheses.

The developed study survey featured 100 statements that were grouped into seven designated business family organisational effectiveness fields, i.e. purposeful, systemic, internal processes, interpersonal relations, method of conducting business, environmental protection, and the achieved effects. Each statement was rated in a seven-point Likert scale, in which the lowest engagement was assigned the rating of 1 and the highest family member engagement was assigned the rating of 7. The survey additionally included 8 metric questions determining the family business' features. The research sample size was estimated at 200 family businesses (N=200) with registered seats within two Polish voivodeships, i.e. Małopolskie and Śląskie voivodeships. The study was conducted in the period from November 2019 to May 2020.

4. Results and Discussion

The study included participation of 200 decision-makers representing family businesses. The profiles of the companies were determined based on the provided metric answers, including such features as: operation time, respondent's age, position type, company activity profile, company size, legal status, territorial range and company establishment method (Table 1).

The basis for the metrics' design is the methodology of using business demography data (Markowicz, 2008)). The analysis has been started with the determination of the research sample's homogeneity. For this purpose, average encoded variables, standard deviation, and the variation ratio were calculated for each of the metric data. It is stated in subject literature that a variation ratio <10 % is a very low variation, whereas a variation ratio <10; 20) % is a low variation, the next level of variation for the range of <20; 40)% is a moderate variation, high variation is characteristic for the range of <40%; 60%) and very high variation applies to values above 60% (Pułaska-Turyna, 2005).

The average value calculated in Table 1 is a weighted average for particular company features taking into account a number of detailed metric questions for each feature. These are not the average family engagement values. The obtained standard deviations allow for the statement that the determined statistically significant research sample

distributions differ from one another. The variation ratio was used to determine the difference between the standard deviations and the average values. It is concluded that the research sample features a low variation of only a single feature, i.e. the company size. Average variation applies to four features, i.e. the company operation time, respondent's age, type of position and company activity profile. Strong variation occurs in three features, i.e. the legal status, company establishment method and territorial range.

Table 1. Features of family businesses in the research sample

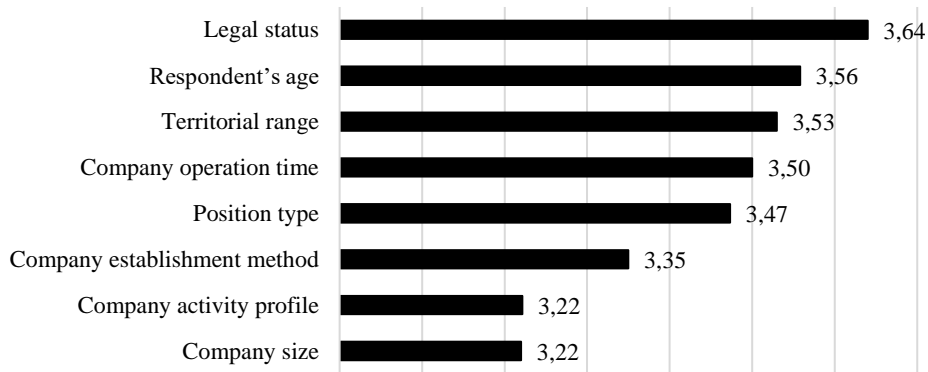
Family feature	N	Average	Standard deviation	Variation ratio V
1. Company operation time	200	2,23	0,678	30,39%
2. Respondent's age	200	3,31	0,936	28,32%
3. Position type	200	2,17	0,678	31,33%
4. Company activity profile	200	5,03	1,786	35,55%
5. Company size	200	1,05	0,260	24,81%
6. Legal status	200	2,98	2,215	74,31%
7. Territorial range	200	1,80	0,940	52,25%
8. Company establishment method	200	1,27	0,700	55,09%

Source: Own creation.

Each of the foregoing metric features was used for the statistical analysis conducted with reference to the statements included in the study survey. The activities taken in relation to the conducted analysis of the collected data included the estimation of the average business family owner engagement measured with the level of engagement in a seven-point Likert scale. The obtained average values are numbers providing information on the values of particular elements in the entire research sample in relation to particular metric data (Figure 1).

The presented analysis results constitute an effect of the estimation of average engagement levels in terms of eight metric features for n=100 organisational effectiveness factors (Figure 1). The engagement measurement was based on a seven-point Likert scale. The activities resulted in the claim that the legal status is characterised by the highest average engagement from among all metric data. Four company features, i.e. the respondent's age, the company's territorial range, company operation time and type of position, with reference to engagement are within the range from 3.47 to 3.56 and the calculated average engagement differs between them by 0.03. The lowest average engagement was calculated for three features, i.e. the company establishment method, company activity profile and company size, which amounted to 3.35 for the company establishment method and 3.22 for the other two features.

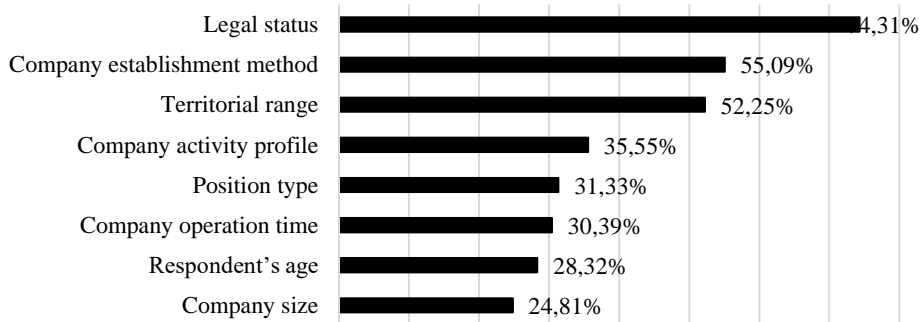
Figure 1. Average family member engagement in the functioning of family businesses



Source: Own creation.

Due to the above, the average engagement values were compared with the calculated variation ratios for the metric features. The authors asked the question of how high is the sample's variation in terms of the company's particular features? The calculation results are presented in Figure 2.

Figure 2. Variation ratio



Source: Own creation.

After concluding the foregoing activities, the conclusions came down to the claims that the calculated results were the basis for analysing the sample's variation in terms of the studied variable feature (Figure 2). The high and very high variation occurs in three statistical feature groups, i.e. legal status 74.31%, company establishment method 55.09% and territorial range 52.25%, and it is assumed that the studied variable in these groups is non-homogeneous in relation to the average engagement. The five other statistical feature groups, i.e. the company activity profile, type of position, company operation time, respondent's age, and company size, feature a

moderate variation in the studied statistical feature. The variation ratio is within the range of <20; 40%).

Then, the analysis covered the dependency between the variable feature and particular organisational effectiveness fields. The distribution normality tests for companies depending on the voivodeship, used for presenting the analyses results, make it possible to settle on the existence of normal distributions (Table 2). This means that it was possible to determine whether the family engagement distribution in terms of organisational effectiveness factors will be a normal distribution, or whether the studied feature will not have a normal distribution.

The study of the quantitative variable distributions was made possible thanks to the calculation and presentation in the first part of the paper of the basic descriptive statistics, such as: the average value, standard deviation, and variation ratio. The next activity required for studying the feature's distributions are the Kolmogorov-Smirnov and Shapiro-Wilk statistical tests. These tests are intended for testing the distributions' compliance with the theoretical normal distribution. The tests were used to check whether the studied features have a distribution similar to normal.

An analysis of the obtained results allowed for the claim that they are the same for all eight fields. It was ascertained that the obtained results of all Kolmogorov-Smirnov and Shapiro-Wilk tests conducted prove that the studied feature's distribution is not similar to normal. In each case, $p < 0.05$, which means that hypothesis H_0 must be discarded. It can therefore be stated that the obtained results enable the negative verification of research hypothesis H_0 . Thereby, the alternative hypothesis (H_A) has been verified (with an error of 0.05).

Conducting the Kolmogorov-Smirnov and Shapiro-Wilk tests during the first stage of analysis allows for the verification of the formulated hypothesis according to which the research sample in terms of the 8 key features does not have a normal hypothesis. It is the basis for designating the advanced statistical tests that will verify the existence of a significant dependency between the family member engagement in the company's functioning and the company's features as part of the identified organisational effectiveness fields.

1. Conclusion

The paper's purpose was achieved through the presentation of study results in the part providing information on the lack of the research sample's compliance with a population with a normal distribution. The hypotheses' falsification allowed for the claim that the studied feature's distribution is not similar to normal. Wherein, the studied features was the family member engagement in the functioning of family companies (referred to in the publication as family engagement).

Table 2. Distribution normality tests

1 Interpersonal Relations Field						
voivodeships	Kolmogorov-Smirnov ^b			Shapiro-Wilk		
	Statistics	df	Significance	Statistics	df	Significance
Małopolskie	.192	100	.000	.830	100	.000
Śląskie	.145	100	.000	.929	100	.000
2. Systemic Field						
voivodeships	Kolmogorov-Smirnov ^b			Shapiro-Wilk		
	Statistics	df	Significance	Statistics	df	Significance
Małopolskie	.206	100	.000	.845	100	.000
Śląskie	.149	100	.000	.934	100	.000
3. Internal Processes Field						
voivodeships	Kolmogorov-Smirnov ^b			Shapiro-Wilk		
	Statistics	df	Significance	Statistics	df	Significance
Małopolskie	.198	100	.000	.880	100	.000
Śląskie	.212	100	.000	.889	100	.000
4. Purposeful Field						
voivodeships	Kolmogorov-Smirnov ^b			Shapiro-Wilk		
	Statistics	df	Significance	Statistics	df	Significance
Małopolskie	.218	100	.000	.841	100	.000
Śląskie	.186	100	.000	.913	100	.000
5. Method of Conducting Business Field						
voivodeships	Kolmogorov-Smirnov ^b			Shapiro-Wilk		
	Statistics	df	Significance	Statistics	df	Significance
Małopolskie	.218	100	.000	.855	100	.000
Śląskie	.125	100	.001	.924	100	.000
6. Environmental Protection Field						
voivodeships	Kolmogorov-Smirnov ^b			Shapiro-Wilk		
	Statistics	df	Significance	Statistics	df	Significance
Małopolskie	.199	100	.000	.869	100	.000
Śląskie	.174	100	.000	.889	100	.000
7. Achieved Effects Field						
voivodeships	Kolmogorov-Smirnov ^b			Shapiro-Wilk		
	Statistics	df	Significance	Statistics	df	Significance
Małopolskie	.217	100	.000	.832	100	.000
Śląskie	.168	100	.000	.919	100	.000

a. the test takes into account the Lilliefors significance correction, because the average value and the standard deviation for the entire population were not known

Source: Own creation

The distribution normality tests were conducted in terms of the organisational effectiveness fields in each of the analysed cases the significance was in the range of $(0.000-0.001) < \alpha$ for $\alpha = 0.05$. This means that the alternative hypothesis H_A was verified positively. The dependent variable, i.e. family engagement does not have a normal distribution for 8 key features (independent variables, i.e. the operation time, respondent's age, type of position, business activity profile, company size, legal status, territorial range and company establishment method). It is concluded that the first stage of in-depth testing presented in the paper allowed for designating the next statistical analysis tests in terms of business family organisational effectiveness (e.g. crosstabs with an optional Chi-square test). It was also ascertained that the verification of the obtained study results requires further statistical analysis in terms of the engagement dependency in relation to the specific features of a family business

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