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A MEDIATORY ROLE OF FINANCE EDUCATION IN PERCEPTION OF CHOSEN ECONOMIC ASPECTS IN FAMILY AND NON-FAMILY FIRMS

ZNACZENIE EDUKACJI EKONOMICZNEJ JAKO WPŁYWAJĄCEJ NA PROCES PERCEPCJI WYBRANYCH ASPEKTÓW EKONOMICZNYCH W FIRMACH RODZINNYCH I NIERODZINNYCH

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Abstract: Proper goals setting respects the current market circumstances, considers assessment of facts, respects various options and takes into consideration their consequences. Different decisions in companies are often taken fast, under stress, when emotions or other factors are likely to influence their results. The paper considers three aspects: self-assessment of the companies' performance related to the industry, economic goals and economic education. The aim is to investigate whether education can mediate the interrelation between self-assessment of companies' performance and salience of their economic goals. With the use of linear regression models of mediation and correlation coefficients it was pointed out that the self-esteem of companies' performance compared to the sector as a factor of financial decision is mitigated by economic education.

Keywords: company's objectives, economic education salience, mediations models.

Streszczenie: W turbulentnym otoczeniu jednym z czynników sukcesu jest „podejmowanie właściwych decyzji". System decyzyjny powinien uwzględniać uwarunkowania zewnętrzne, właściwie oceniać fakty, przewidywać najróżniejsze opcje i brać pod uwagę konsekwencje wdrożonych rozwiązań. Jest to istotne, gdy decyzje podejmowane są szybko, czasami pod presją stresu oraz gdy emocje lub inne czynniki wpływają na końcowy rezultat procesu decyzyjnego. W artykule poruszono trzy aspekty: samoocenę wyników ekonomiczno-finansowych przedsiębiorstwa na tle branży, znaczenie celów ekonomiczno-finansowych oraz rolę edukacji ekonomicznej. Celem było zbadanie, czy edukacja ekonomiczna jest w stanie mediować relacje pomiędzy samooceną wyników ekonomicznych a znaczeniem celów przedsiębiorstwa. W procesie badawczym wykorzystane zostały modele regresji liniowej poprzedzone analizą związków korelacyjnych. Na ich podstawie udało się stwierdzić, że edukacja ekonomiczna wywiera wpływ na postrzeganie zależności pomiędzy pozostałymi zmiennymi.

Słowa kluczowe: cele przedsiębiorstwa, znaczenie edukacji ekonomicznej, modele mediacji.

1. Introduction

Companies continuously are analysing their market position, economic and financial performance and the extent of goals' realisation to take new appropriate decisions and set future objectives for the months and years to come. The ultimate decision is a result of numerous factors that have an impact on the decision processes. Frequently, it is a tough issue to show to which extent a given decision is a consequence of conscious or subconscious reasons. Furthermore, in reality there is little likelihood of considering all, more or less important, conditions that create the decision background. The investigation of the decision processes, in most cases, is conducted in accordance with the *ceteris paribus* prerequisite. This means that some decision factors are isolated while interrelations and reciprocal ties are being sought. The whole process is directed in such a way that firstly main interrelations and influences are found. Subsequently, more profound analyses are conducted to identify the mechanism of the decision processes. Within the existing research various survey tools, analytical and logical models are used to simplify the relationships considered.

In this paper three aspects that could mould the decision processes were considered, namely: self-assessment of the companies' performances related to the industry, economic goals salience and financial and economic education salience. The aim is to investigate whether the education can mediate the interrelation between self-assessment of companies' performance and salience of companies' economic goals. Additionally, the same types of investigation were conducted in the group of family and non-family firms to point out whether there are any similarities or differences among these groups of companies.

2. Significance of economic education for companies

Currently, human capital is one of the most important factors of a company's competitiveness. Much is said that the dynamic nature of the business, recognizing the importance of continuing to learn and develop for all the individuals within the organization, not only in the group of top management, but also among the ordinary staff, influences the success of the organization over time [Neff 2011]. The impact of education on the company's management and functioning may by analysed in three main areas: outward perception of the company, intrinsic relations, and management processes.

Firstly, it influences how company is perceived by other groups of stakeholders (co-operators, competitors, employees and the like). A higher range of staff education connected with long term development of their competences is deemed to be an important aspect which creates and enhances the company's market image. Sometimes the managers and COSs emphasise their competences by presenting officially their academic degrees or other post graduate qualifications.

Secondly, education and competences of various groups of employees build up intrinsic relations in the company. It may help to keep relevant interrelations and, for instance, it could be a tool which is used to solve company conflicts [Hofstrand 2009; Stewart 2013]. Unquestionably, a higher level of awareness as to the professional knowledge creates the company's culture as a whole. Additionally, good education of several employees persuades the others to improve their own competences.

Finally, economic and finance education may play a significant role in management of the company. This impact of education seems to be most crucial because it affects almost everything the company does as a market player. There is a shared knowledge that the CEO's educational background is one of the key determinants of the firm's policies and it is essential for the management appointments [Smith et al. 2006]. Generally, successful CEOs understand that strategic planning using a mash-up of experience, education and perspectives of the management team is a highly effective means of developing focus in management and competitive advantage in the marketplace [Northup 2005]. According to the survey conducted in Poland, education and competences have a good impact on a company's competitiveness and innovativeness. A high level of managers' qualifications fosters the ability of the company to adapt in the changing and unpredictable environment. Furthermore, companies that are run by well-educated management staff tend to not only absorb more new technological novelties, but also the state-of-the-art organisation solutions and cooperation with other organisations and business entities in the field of product and services development [PARP 2010].

The company's capability to learn new things fast, to seek up-to-date knowledge and skills is recognised as one of the building blocks of the company's intellectual capital. As mentioned above, it propels creativeness, innovativeness, ability to adapt and productivity, and therefore contributes to the growth of a business entity [Stokes, Wilson 2010; Narayan, Smyth 2004].

The results of the survey provide evidence that not only the level of education, but also the type of professional skills affects the intrinsic management relations in the company. Interestingly, the boards of directors made up of members representing various academic qualities, were more efficacious than the board where a single profile of its members is prevailing, e.g. technical, economical or any other [PARP 2010].

The consideration presented above seems to provide clear evidence that education has a general positive impact on the company's functioning. Most results presented by scholars and practitioners prove the positive relation between education and achieving companies' objectives.

Yet, by contrast, it should be noted that not all evidence confirms a positive impact of education. Desk research reveals that some researchers present different findings. One such example is the study of Sitthipongpanich and Polsiri [2012], who found a negative relation between the advance of the family company CEOs education and the firm's value. Moreover, by their study, professional CEOs have more advanced education than family company CEOs [Sitthipongpanich, Polsiri 2012]. This result is especially interesting in the context of the aim formulated at the beginning of this paper. The question could be raised how to comprehend such relations?

In other studies, family CEOs with advanced education are found to spend more resources on research and development activities [Schoenecker et al. 1995]. That kind of behaviour influences short term profits negatively. Furthermore, well-educated managers are criticised for having high self-confidence and taking too many risks during the decision-making processes because such behaviours are deemed necessary for the business innovation and success [McMillan, Thomas 2005]. In this prospect the issue raised is that education may spark negative aspects of agency conflicts (for more see: [Jensen, Meckling 1976]). CEOs with advanced education may find opportunities to exploit private benefits by selecting strategies that serve their interests, because higher risk exposure derived from their decisions will be shared among all the shareholders [Gedajlovic et al. 2012]. In this case one can say that, in fact, education, influences what kind of decision is going to be undertaken and it affects the directions of the company's development.

As outlined above, in part unclear impact of education on the decision processes of the company was a springboard to verify whether there are some mechanisms describing which way education can mould the decision processes. In particular, the mediatory role between the self-esteem of companies' performance and companies' goals' salience is investigated.

3. Problem formulation[1]

To put forward the main problem, primarily a couple of intermediary issues should be clarified. Perhaps the most important one is how to measure and express company performance (or company's financial performance – CFP). Finance and economic performance related to the companies' objectives can be measured by effectiveness, efficiency, quality, timeliness, productivity and safety [*How to Measure*… 1995]. Laitinen and Gin [2006] indicated that measurements could fall into internal and external factors. The internal factors include costs, production factors, efficiency of activities, product properties, revenue, competitiveness and financial performance. The external factors cover cost allocation, access to production factors and features of the product [Laitinen, Gin 2006].

[1] The Data used in the paper was collected during the National Science Centre project no. 2012/07/B/HS4/00455 *Corporate governance, ownership structure and other financial issues of family enterprises in Poland and Austria – a comparative analysis*.

Another approach suggests that the CFP can be assessed through the market, accounting and survey measurement. The first one refers to the satisfaction of the shareholders, the next is connected with the internal efficiency of the company, and the third one is based on a subjective estimation of the financial performance [Orlitzky et al. 2003]. The last concept in question was adopted to assess the company's performance in this study.

The measurement was conducted in such a way that the representatives of the business entities declared whether an economic and financial position, determined by particular ratios, is better than the average level of industry, or is contrary (1 – significantly below the average level of the industry, further 2, 3, 4, to 5 – significantly above the average level of the industry). The measurement was conducted on the following ratios and indicators: liquidity, profitability, an extent of innovations, the outlook of growth, risk of activity and a scale of investment activity. Subsequently, the particular ratios were combined into an aggregate variable (as a mean). In the research model the self-esteem of the company's performance plays a role of an independent variable. Similarly, the ordinary scale was used to assess the salience of the company's financial goals. At the adopted scale 1 means "very low significance of the goal, 5 – very high significance.

The quoted scale was used to assess seven detailed variables: long-term growth of the company's value, short-term maximization of profits, maintenance of the company's receivables, the maintenance of high pace of the company's growth, the maintenance of the company's existence, the minimization of economic risk, the maintenance or the creation of new workplaces. Based on these variables the complex index was built as a means of assessment of economic and financial goals salience and in the model, it was the dependent variable. The third aspect used in the considerations was the significance of education in the examined companies as assessed by the representatives and CEOs. Education was included in the model as a mediator.

Based on the variables presented above, the study model was prepared, which is presented in Fig. 1.

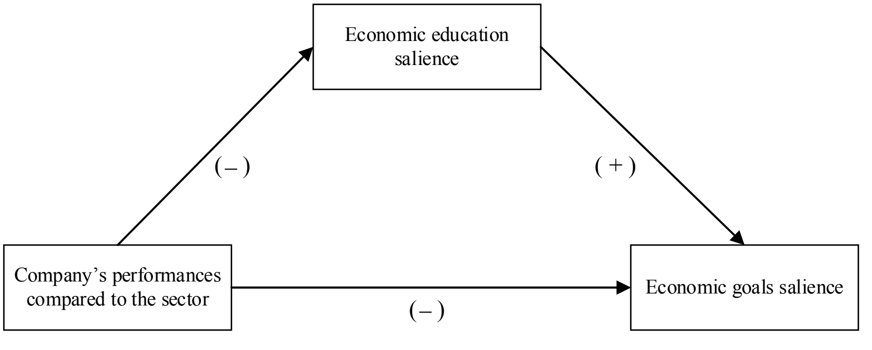

Fig. 1. Study model

Source: own study.

With the presumptions of the model the following three hypotheses were formulated:

- H1: Higher self-esteem of companies' performance compared to the sector has a negative effect on the salience of the company's economic and financial goals.
- H2: Higher self-esteem of companies' performance compared to the sector has a negative effect on the significance of the economic and finance education.
- H3: Growing salience of education not only boosts the significance of economic and financial goals, but also mitigates the influence of self-esteem of a finance situation of the company.

The hypotheses presented above were verified separately for the group of family (FB) and non-family firms (NFB) to examine whether there are differences or similarities among the indicated companies.

4. Problem solutions

The solution of the main problem posed above comes down to the analysis of the interrelations between company's self-assessment related to the industry and salience of a company's goals in the environment shaped by perception of education. The appropriate data that allows to solve this issue was collected in Poland in 2013. The survey covered 758 medium and large companies that represented all the industries according to the Industry Classification Benchmark (ICB). Incorrect data and data gaps were excluded further on during the analysis. The examined companies were divided into two groups with the use of Substantial Family Influence ratio (SFI) introduced by Sabine Klein [2000].

The first sphere of analyses that were conducted separately for family (Table 1) and non-family firms (Table 2) concerns the correlations between the examined variables.

As observed, all the correlations between the dependent, independent variables and the mediator were significant, both in family and in non-family firms. The significance of this correlations is crucial because of the methodology related to the model of mediation [Hayes 2015; Howell 2013]. Control variables i.e. sales revenue (log 2013), balance sheet (log 2013) and employment (log 2013) provide the models with similar information related to the company's size. Therefore, they could present higher level of correlations than the others. During a typical analysis of regression, they should be introduced to the models separately. In this case, because they play only supportive role and they do not participate in the interpretation processes, it was decided that all of them will be introduced to the models.

At the next step of the investigation there were several regression models calculated both for family and non-family businesses. All models were calculated with the Ordinary Least Squares (OLS) estimator which was available in the SPSS

Table 1. Means, standard deviations and correlations in family businesses

No		Mean	Std. Deviation	1	2	3	4	5	6	7	8	9
1	Company's age	20.73	8.520	1								
2	Sales revenue (log 2013)	4.4019	0.49951	0.051	1							
3	Balance sheet (log 2013)	4.1780	0.53928	0.038	0.686**	1						
4	Employment (log 2013)	1.9947	0.23529	0.001	0.387**	0.301**	1					
5	ROS 2013	8.32	7.261	–0.012	–0.069	0.039	–0.120	1				
6	Sector (1 – industry; 2 – other)	0.5328	0.49955	0.097	–0.214**	–0.070	0.056	0.149*	1			
7	Company's performances	2.6460	0.61185	0.033	–0.142**	–0.180**	–0.149**	–0.142	0.016	1		
8	Importance of education	3.80	1.113	–0.028	0.014	–0.008	0.088	–0.094	0.024	**–0.216****	1	
9	Economic goals	4.0985	0.53995	–0.040	–0.036	–0.060	0.029	0.108	0.096	**–0.164****	**0.137****	1

Note: ** p<0.01 (2-tailed); * p<0.05 (2-tailed).

Source: own study.

Table 2. Means, standard deviations and correlations in non-family businesses

No		Mean	Std. Deviation	1	2	3	4	5	6	7	8	9
1	Company's age	20.90	11.226	1								
2	Sales revenue (log 2013)	4.4338	0.49318	–0.078	1							
3	Balance sheet (log 2013)	4.2668	0.61474	–0.026	0.566**	1						
4	Employment (log 2013)	2.0119	0.26085	–0.027	0.577**	0.417**	1					
5	ROS 2013	8.43	9.197	–0.179*	–0.022	0.152	0.124	1				
6	Sector (1 – industry; 2 – other)	0.4119	0.49292	–0.042	0.154**	0.131*	0.152**	0.106	1			
7	Company's performances	2.6698	0.70746	0.042	–0.248**	–0.159**	–0.135*	–0.180*	–0.030	1		
8	Importance of education	3.98	1.118	0.017	0.037	0.092	–0.025	0.130	–0.105	**–0.254****	1	
9	Economic goals	3.9424	0.63319	–0.053	0.067	0.087	–0.010	0.205*	–0.080	**–0.187****	**0.201****	1

Note: ** p<0.01 (2-tailed); * p<0.05 (2-tailed).

Source: own study.

software. The regression models to the calculations were adopted consciously because both the variables: company's performance and economic goals' salience were calculated as an average of more detailed variables (see section 3). This caused the indicated variables to take continuous values form the interval of 1-5. Hence the application of the regression model seemed to be more adequate than the logit or probit models[2].

Due to the crosssectionality of the data the heteroscedasticity in each model was tested. White's test did not confirm these phenomena. It should be taken into consideration that all further conclusions were drown on the base of a relatively small value of the coefficients which were in fact statistically significant. This suggests that the reciprocal influences exist, but they are rather weak. This can be perceived as the most crucial weakness of the presented model. On the other hand, the most crucial strength is the ease of inference based on the calculated model. Additionally, cumulated variables (complex indexes, as mentioned above) describe the general areas of companies functioning and allow drawing general conclusions about the ways in which companies are managed.

In models indicated as A (FB) and D (NFB) education salience plays a role of a dependent variable. In these models, company's performances and controls are used as explanatory variables. In both family and non-family businesses the coefficient by the independent variable was significant. Hence, it can be assumed that the hypothesis H2 was fully confirmed. Other models (B and E) presented the relations between the economic goals (as a dependent variable) and controls and self-esteem of the company's performance (an independent variable). In both groups of companies, the coefficients of independent variable (self-esteem of the company's performance) are significant and below zero. Considering this relation, it can be said that hypothesis H1 was confirmed. This means that higher self-perception of an economic and financial situation influences negatively the economic and financial goals salience.

Models C and D encompass additionally, compared to models B and E, a mediatory variable – i.e. economic and finance education salience. It is worth to remind that the statistically significant interrelations between the importance of education and company's financial performance was identified previously in models A and D. This finding allowed to assume that significance of education may play mediatory role as indicated in the research model presented by Figure 1.

After the introduction of the mediatory variable to model C, the coefficient of the independent variable (self-esteem of company's performances) discontinued to be significant and simultaneously the coefficient of the mediator (economic and finance education salience) became statistically significant, which confirmed the mediatory role of education between the self-esteem of companies' performance and companies' economic and finance goals salience.

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[2] Adequacy of the usage of regression models for ordinary scales was adopted by: [Anderson et al. 2015; Blais et al. 2009].

Table 3. Regression analysis results

Variables	FB			NFB		
	A	B	C	D	E	F
	Importance of education	Economic goals		Importance of education	Economic goals	
Constant	5.106***	4.276***	3.654***	4.996***	3.591***	3.257***
Controls						
Age of company	–0.025	–0.001	0.001	0.001	–0.002	–0.002
Sales revenue (log 2013)	–0.450	–0.074	–0.048	–0.365	0.249*	0.275*
Balance sheet (log 2013)	0.219	0.009	–0.007	0.556**	–0.148	–0.185
Employment (log 2013)	0.539	0.149	0.097	–0.099	0.163	0.169
ROS 2013	–0.008	0.005	0.006	0.007	0.015**	0.015**
Sector (1 – industry; 2 – other)	0.017	0.208**	0.198**	–0.455**	–0.185*	–0.154*
IV						
Company's performances	**–0.286***	**–0.129***	**–0.097**	**–0.538*****	**–0.159****	**–0.124**
Mediator						
Importance of education			**0.138*****			**0.066**
R	0.325	0.298	0.400	0.437	0.417	0.436
R Square	0.106	0.089	0.160	0.191	0.174	0.190
Adjusted R Square	0.058	0.048	0.116	0.138	0.120	0.129
R Square Change	0.106**	0.089**	0.071***	0.191***	0.174**	0.016
F	2.215**	2.148**	3.640***	3.638***	3.214**	3.108**
N=	108	162		116	115	

Note: *** p<0.001; ** p<0.05; * p<0.10.

Source: own study.

A conclusion could be drawn that higher significance of economic education changes the perception of economic goals. Family businesses cease to "ignore" the economic and finance goals salience because their economic situation against the industry or the sector is better than the average. They are more aware that good prosperity can change over time and they pull their weight to more rational assessment of the goals based on education and knowledge. In this way, the hypothesis H3 was confirmed in the group of family firms (Table 3).

An analogical analysis conducted for the non-family businesses showed that in fact by introduction of a mediatory variable the significance of the coefficient of an independent variable became not-significant, but at the same time the significance of the coefficient of the mediatory variable was not confirmed. Thus, one can state that in a non-family firm the education is likely to play a mediatory role between the self-esteem of the company's performance and company's goals salience, but this evidence was not confirmed strongly by the model.

5. Conclusions

Economic and finance education seems to play a significant role as a mediator of various processes in family firms. The mediation models presented above confirm that professional education may influence the perception of crucial aspects of a company. It was presented that education salience mitigates the complacency ties with a good economic and financial position of the company in comparison to the industry or sector. Such relation was not confirmed in non-family businesses. The likely reason is that family business CEOs seem to be generally less educated than the non-family CEOs and parallelly the descendant CEOs have a higher education level compared with the founder counterparts [Huybrechts et al. 2008]. In this case a lower level of CEOs' education in family firms and processes of boosting education can create a noticeable strong mediation effect which can be observed in this group of companies.

As a conclusion one sentence is worth citing: "do not let relatives enter the company without proper education. Everybody should also see the 'big world' before she/he enters the company – work for another company in the field of interest of the family firm" [Zoubková 2009, p. 4]. Indeed, such an approach can best indicate a mediatory role of education in family businesses.

Additionally, it could be taken into consideration that company's goals are related to the company's planning system. In this prospect, the results of the Northup's [2005] study can be analysed. The author proved that companies which prepare plans are 40% bigger, they employ lesser number of employees and are able to create 45% higher income per one employed person in comparison to non--planers [Northup 2005]. Hence, in fact one can conclude that economic and finance education which boost the perception of company's goals can be indirectly decisive in whether the firm is able to outperform the competition.

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