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FAMILY AND BUSINESS IN FAMILY ENTERPRISES IN COUNTRIES OF LOW AND HIGH-CONTEXT CULTURES – RESEARCH CONDUCTED USING GREY SYSTEM THEORY

The present paper is a description of research on the differences in the influence of family aspects on the functioning of family businesses in two cultural contexts: low and high. High-context culture was represented by family businesses from Mexico and low-context by family businesses from Poland. The research was conducted using a structured individual interview with family business owners. The collected research material was subject to analysis using Grey Incidence (Relation) Analysis – GRA (Grey System Theory).

The results obtained point to a strong relationship of values and family aspects with the operation of a family business. It may therefore be assumed that the influence of family aspects on the functioning of family businesses in different cultural contexts is similar, both in Poland (low-context) and Mexico (high-context).

Keywords: Grey System Theory, Family Business, Cultural Context, Business Family Responsibility.

1. INTRODUCTION

The entire world population of seven billion people reflects the current diverse demographic situation of the globe. Representatives of particular nations live in 193 UN member states, communicating in around 6 thousand languages. Cultural diversity, discrepancies between nations, geopolitical location, upbringing and education paradigms in various geographical zones are of key significance for current and future decision-making processes in the economic and managerial opera-

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tion of enterprises, states and regions (Berry, 2015; Xie, Altman, 2015; Więcek-Janka, 2011; Boski, 2010; Rozkwitalska, 2010; Koropowicz, 2009; Glinka, 2015; Wach, 2015).

Not all enterprises wrestle with the problem of diversity, e.g. differences tend to be blurred in corporate companies, where standards and procedures are uniformly followed and controlled irrespective of where business operation is carried out.

The situation is different with family businesses, whose number in worldwide terms is estimated by the Family Business Institute (FBI) at 66%. The same source estimates the influence of family businesses on developing the global GDP at 70-90%[1] (data provided by FBI). Such firms operate on the basis of tradition, in many cases multigenerational, and family values are most frequently the indicators of aims and strategies (Lipiec, Lewandowska, 2015; Jeżak, 2014; Więcek-Janka, 2013; Kody Wartości – Raport, 2013; Duran, Contreras Loera, 2015).
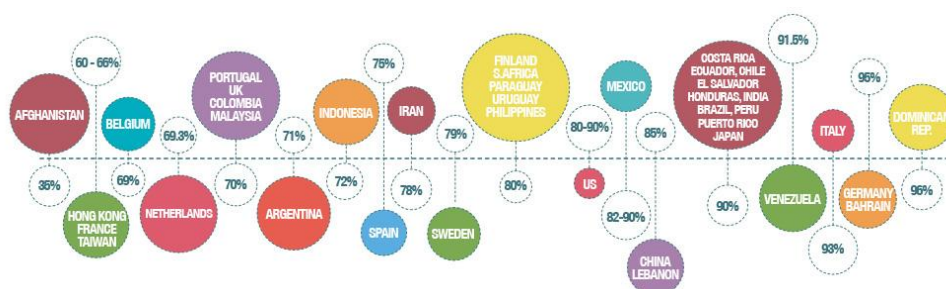

Fig. 1. Percentage share of family businesses in the total number of firms in selected countries, Source: Family Business Institute (ffi.org)

Viewing business values through the lens of regional and national culture, we can intuitively sense the differences between family businesses from distant parts of the world, which seem to be insignificant, yet sometimes so great that without getting to know cultural paradigms they remain incomprehensible.

Progressive globalization calls for a reflection on the significance of intercultural differences in the context of family business internationalization. Getting to know them may become the foundation of an agreement among different nations in their pursuit of transnational cooperation (Boski, 2010; Wach, 2015).

The present paper aims to show differences in the evaluation of selected aspects of family business operation in two separate cultures: Polish and Mexican. The authors formulated a main working hypothesis which maintains that there is a lack of essential differences between family businesses representing different cultures as for the evaluation of selected aspects of influence exerted by the family on busi-

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There are countries where the figure stands at 90%. The population of family businesses is not precisely estimated in Poland. It is roughly at the level of 36-75% (depending on the adopted terminology). There is a similar classification problem in Mexico (82-90% of enterprises in the private sector).

ness. It points to common transnational and transcultural features of family enter-
prises.

Such an aim focused the research on countries whose cultures are classified on
opposite poles.

2. THE ESSENCE OF CULTURE DIVERSITY

There have been many attempts to give a precise definition of culture. Yet, the
most popular and adequate definition to date seems to be the one by Hofstede, who
defines it as *the collective programming of the mind distinguishing the members of
one group from others* (Hofstetde, Hofstetde 2007, p.17). Hofstetde presents in his
work the psychological dimensions of culture. He underlines that each group has
their own unique culture, whose role is to maintain its coherence at both macro and
micro levels. Culture forms the foundations of collective identity. Collective identi-
ty shapes feelings and values connected with the sense of intergenerational conti-
nuity, memory of the past and the notion of mutual destiny (Hałas, 2001; Więcek-
Janka, 2011). The pursuit of the research aim makes it necessary to look at the
classification of cultures from a variety of perspectives, which entails a brief char-
acterization of selected culture classifications. The first approach discussed refers
to the social structure and way in which messages are expressed and conversations
are run (Hall, 1990). Hall (1990) in his work specifies two cultural paradigms (con-
texts): *high* and *low*. In his opinion, Asian, Arabic, Mediterranean cultures as well
as the people of South and Central America represent high cultural context. In such
a context, non-verbal communication prevails and is highly valued in people as it is
believed that body language establishes the context of a conversation. It is essential
for people brought up in such a culture to maintain interpersonal relations, espe-
cially family relations, which often affects steps taken and decisions made in the
business sphere. Being convinced of group power, and not the power of an indi-
vidual, is of particular importance in making decisions and taking group initiatives.
Relationships between employers and employees are perceived as personal and in
companies in those countries one can spot strong bonds between employees, re-
gardless of positions held. It is particularly important to set up direct contact and
become engaged in conversation, which abounds in gesticulation, touching the
interlocutor, etc. (Reynolds, Valentine, 2009).

Countries representing the American, German, Swiss or Scandinavian groups
are considered to be low-context cultures. They also cover Northern Europe coun-
tries, including Poland. People of these cultures communicate literally, unequivo-
cally, and expect others to say what they think and think what they say (Boski,
2010, p. 347). They approach conversations in concrete terms and are thoroughly
prepared for business meetings. Verbal communication is valued more than body
language. Professional duties are separate from interpersonal relations and the

work environment is formalized. Table 1 features the characteristics of the discussed contexts.

Table 1. Context cultures – social aspect (Hall, Hall, 1990, p. 17)

Differences between high- and low-context cultures	
High-context culture	**Low- context culture**
Communication by means of hidden meaning	Literal communication
Non-verbal communication	Verbal communication
Activities subject to interpersonal relations	Separating work from interpersonal relations
Appreciation of group initiatives and decision-making	Appreciation of individual initiatives and decision-making
Perceiving the employer/employee relationship as personal	Perceiving the employer/employee relationship as impersonal
Relying on intuition and trust	Relying on facts and statistics
Preferring an indirect direct style in written and oral presentations	Preferring a direct style in written and oral presentations
Non-linear logic and drawing approximate conclusions	Linear logic
Acting in accordance with the spirit of the law	Acting in accordance with the letter of the law

Another division concerns an approach connected with the ability to cooperate. Striving for individualism and collectivism illustrates the relations which culture is characterized by according to Reynolds and Valentine (2009). In North America, most Northern and Western European countries, one highly values individualism, independence and self-sufficiency, which is testimony to individualistic cultures. Children are taught autonomy, independent thinking and expressing themselves, asking questions at school, making choices as well as accepting responsibility for their own decisions and deeds (Reynolds, Valentine, 2009). All activities and decisions taken in collectivistic cultures originate in a group. Collectivism is popular in Africa, Asia, the Middle East, Central and South America, partly in Australia and Oceania. Children are brought up to respect senior family members, drawing from them useful values. Differences in the approaches are featured in Table 2.

Individualistic cultures bring up leaders – individuals capable of dealing with problems, respecting privacy and personal zone. Countries of collectivistic culture, on the other hand, instill into their citizens a conviction that there is a strong interdependency between individuals. Therefore, it is important to form a group and respect and develop interpersonal relations. Hierarchical upbringing teaches distance, respect and being subjected to and dependent on superior individuals. It is often connected with the position held in a given social group, e.g. in an enterprise, family, group of peers.

Table 2. Individualistic and collectivistic cultures – relations (developed on the basis of: Hall, Hall, 1990)

Differences between individualistic and collectivistic cultures	
Individualistic cultures	**Collectivistic cultures**
Making a deal is important (focus on results)	International relations are important (focus on the process)
Short-term benefits	Long-term growth
Content is important (facts, numbers, factors, statistical data)	Context is important (experience, intuition, relations)
Linear thinking	Non-linear thinking
Independence	Dependence
Differences between individualistic and collectivistic cultures	
Individualistic cultures	**Collectivistic cultures**
Competitiveness, decision-making	Cooperation, compatibility
Direct communication, clear message	Hidden message, ambiguous message
Individual accountability	Saving face
Private rooms	Open space
Linear time, impatience	Flexible time, patience

The consequences of not being acquainted with the cultural context and approach to individualism and collectivism may lead to a number of misunderstandings and conflicts. International enterprises should be aware of cultural distinctiveness, which they will have to face during the process of internationalization. Table 3 contains the summary of deliberations concerning the classification of cultures.

Table 3. Summary of the general classification and perception of culture (Reynolds, Valentine, 2009)

Intercultural communication Summary	
North America, Northern and Western Europe, Australia	**Mediterranean countries, Asia, Africa, the Middle East, Central and South America**
Individualism	Collectivism
Focus on achievements	Focus on relations
Competitiveness	Cooperation
Directedness	Indirectedness
Strict treatment of time	Lenient treatment of time
Content is important	Context is important
Linear logic	Non-linear logic
Flat cultures	Hierarchical structures
Believing in the power of words	Believing in the power of silence
Solving disputes in court	Solving disputes through mediation

From the point of view of organization and logic, more populous societies are difficult to be democratically organized, which is conducive to creating the system of hierarchization (Boski, 2010, p. 95). The assigned persons adopt the role of leaders of people. It is easier in smaller groups to distribute responsibilities and solve problems in a democratic way.

3. RESEARCH METHODOLOGY

The research was conducted in two family business populations: Poland and Mexico. The population units were made up of owners of family businesses from both countries. The research was carried out using a structured individual interview with fragments allowing free expression. The interviews were carried out in 25 Mexican and 25 Polish enterprises. The research was conducted between 10 November 2015 and 31 March 2016.

The interviews concerned behaviour and decisions related to a cultural context in the sphere of business and family, i.e. the way of taking decisions in family enterprises; assessment of the role of family in financing an enterprise; determining the level of family's participation in managing a business; assessment of the influence of family values and norms on the sphere of an enterprise; assessment of "family aspects" (as a superior value) in relation to achieving business aims. The interviews were recorded and the results were entered into an Excel spreadsheet, which formed the basis for further analyses.

The main research problem was to compare approaches to the interpretation of family aspects in managing a business sphere by families functioning in different cultural contexts: Mexican in high-context culture and Polish in low-context culture. It was assumed, in accordance with Halls' approach (1990), that Mexican enterprises are characterized by a high context and a collectivistic culture. Hence, family values, norms and traditions may influence business decisions more often than in Polish enterprises.

Regarding the specific character of the problem and a small (exploratory) size of the sample, the further analysis of data was performed using a tool connected with the methodology of Grey System Theory.

The method and tools of grey system theory are meant to be used in data analysis when the researcher has at his/her disposal a limited amount of data and the mechanisms governing the relations in the analyzed systems are only partially known. The research aims specified in the paper were achieved by the application of the so-called Grey Incidence (Relation) Analysis – GRA. This method allows to analyze mutual relationships between the system characteristic and system factors and it provides information as to what the state of the system is at a given moment (Cempel, 2014, p. 11). The research checked relationships between the following variables:

    – the role of the family in financing an enterprise and the family's participation in running a business,

    – the role of the family in financing an enterprise and the influence of family values and norms on the sphere of an enterprise,

    – the role of the family in financing an enterprise and the influence of a family factor (as a value) on running a family business.

Interdependencies between such factors and the system characteristic, in accordance with the GRA research procedure (Liu, Lin, 2006), were determined by comparing the geometric shape of the so-called observation vectors of the analyzed family business system. Observation vectors map the sequences of empirical data collected in 25 Polish and 25 Mexican family businesses.

Considering the difficulty in obtaining data connected with the high level of family businesses' mistrust in the outside world interfering with family-business processes, it seems that the proposed method will allow to reduce inconveniences such as: incompleteness of data (not all family variables influencing the management of a business were taken into account in the research), qualitative incompleteness of information (which could have been diversely interpreted by the respondents). Thanks to the application of a non-standard data methodology, the analysis performed significantly enriches data analysis methods used so far, not only in Poland but all over the world (cf. Więcek-Janka, Mierzwiak, 2015).

4. CONCLUSION METHODOLOGY

The research procedure followed in accordance with the Grey Incidence (Relation) Analysis – GRA leads to determining the Absolute Degree of Grey Incidence of the observed system factors and characteristic. The particular stages of the research procedure are presented below.

Step 1. Determining the so-called observation vectors of the analyzed system, i.e. system characteristic and system factors

$$X_0 = (x_0(1), x_0(2),..., x_0(n))$$

$$X_1 = (x_1(1), x_1(2),..., x_1(n))$$

$$X_2 = (x_2(1), x_2(2),..., x_2(n))$$

$$X_3 = (x_3(1), x_3(2),..., x_3(n))$$

$$Y_0 = (y_0(1), y_0(2),..., y_0(m))$$

$$Y_1 = (y_1(1), y_1(2),..., y_1(m))$$

$$Y_2 = (y_2(1), y_2(2),..., y_2(m))$$

$$Y_3 = (y_3(1), y_3(2),..., y_3(m))$$

where,

X_0 − system characteristic, the role of the family in financing an enterprise in Polish family businesses; X_1 − system factor, family's participation in managing business in Polish family businesses; X_2 − system factor, the influence of family values and norms on the sphere of an enterprise in Polish family businesses; X_3 − the influence of a family factor on doing business in Polish family businesses; 1, 2, …, n − number of Polish businesses analyzed; Y_0 − system characteristic, the role of the family in financing an enterprise in Mexican family businesses; Y_1 − system factor, family's participation in managing business in Mexican family businesses; Y_2 − system factor, the influence of family values and norms on the sphere of an enterprise in Mexican family businesses; Y_3 − the influence of a family factor on doing business in Mexican family businesses; 1, 2, …, m − number of Mexican businesses analyzed.

X_0 = (5, 2, 4, 4, 5, 2, 2, 5, 3, 3, 3, 4, 2, 4, 4, 5, 4, 5, 4, 5, 5, 5, 5, 4, 2),
X_1 = (5, 5, 3, 5, 5, 2, 2, 5, 3, 3, 3, 4, 5, 4, 4, 4, 4, 4, 4, 5, 4, 5, 5, 3, 2),
X_2 = (5, 3, 4, 5, 4, 1, 3, 5, 3, 3, 3, 3, 5, 3, 5, 5, 4, 3, 4, 5, 4, 5, 2, 4, 3),
X_3 = (5, 2, 4, 4, 4, 4, 2, 5, 3, 3, 3, 4, 5, 3, 3, 5, 5, 3, 4, 5, 4, 4, 2, 4, 2),
Y_0 = (2, 5, 1, 3, 4, 4, 1, 5, 2, 3, 3, 3, 2, 5, 5, 1, 5, 5, 4, 5, 3, 4, 4, 5, 2),
Y_1 = (2, 3, 1, 5, 5, 5, 5, 5, 1, 4, 5, 5, 5, 2, 5, 1, 5, 5, 4, 1, 2, 5, 4, 5, 1),
Y_2 = (2, 3, 5, 5, 4, 4, 5, 3, 2, 5, 4, 4, 5, 3, 3, 5, 5, 5, 4, 5, 3, 5, 4, 5, 2),
Y_3 = (2, 5, 3, 5, 4, 4, 4, 3, 2, 4, 3, 5, 5, 3, 1, 1, 5, 5, 4, 1, 3, 5, 5, 5, 1).

Step 2. Calculating the image of zero starting point:

$$X_i^0 = (x_i^0(1), x_i^0(2),..., x_i^0(n))$$

$$x_i^0 = x_i(k) - x_i(1)$$

$$Y_j^0 = (y_j^0(1), y_j^0(2),..., x_j^0(m))$$

$$y_j^0 = y_j(k) - x_j(1)$$

X_0^0 = (0, -3, -1, -1, 0, -3, -3, 0, -2, -2, -2, -1, -3, -1, -1, 0, -1, 0, -1, 0, 0, 0, 0, -1, -3),
X_1^0 = (0, 0, -2, 0, 0, -3, -3, 0, -2, -2, -2, -1, 0, -1, -1, -1, -1, -1, -1, 0, -1, 0, 0, -2, -3),
X_2^0 = (0, -2, -1, 0, -1, -4, -2, 0, -2, -2, -2, -2, 0, -2, 0, 0, -1, -2, -1, 0, -1, 0, -3, -1, -2),
X_3 = (0, -3, -1, -1, -1, -1, -3, 0, -2, -2, -2, -1, 0, -2, -2, 0, 0, -2, -1, 0, -1, -1, -3, -1, -3),
Y_0^0 = (0, 3, -1, 1, 2, 2, -1, 3, 0, 1, 1, 1, 0, 3, 3, -1, 3, 3, 2, 3, 1, 2, 2, 3, 0),
Y_1^0 = (0, 1, -1, 3, 3, 3, 3, 3, -1, 2, 3, 3, 3, 0, 3, -1, 3, 3, 2, -1, 0, 3, 2, 3, -1),
Y_2^0 = (0, 1, 3, 3, 2, 2, 3, 1, 0, 3, 2, 2, 3, 1, 1, 3, 3, 3, 2, 3, 1, 3, 2, 3, 0),
Y_3^0 = (0, 3, 1, 3, 2, 2, 2, 1, 0, 2, 1, 3, 3, 1, -1, -1, 3, 3, 2, -1, 1, 3, 3, 3, -1).

Step 3. Calculating measures of behaviour (Cempel, 2014, p. 10) of the above vectors by adding and subtracting their values (Liu, Lin, 2006, p. 104):

For X_0 i X_i, where i = 1, 2, 3.

$$|s_0| = \left| \sum_{k=2}^{k=24} x_0^0(k) + \frac{1}{2} x_0^0(25) \right|$$

$$|s_1| = \left| \sum_{k=2}^{k=24} x_i^0(k) + \frac{1}{2} x_i^0(25) \right|$$

$$|s_0 - s_1| = \left| \sum_{k=1}^{k=24} \left[x_0^0(k) - x_i^0(k) \right] + \frac{1}{2} \left[x_0^0(25) - x_i^0(25) \right] \right|$$

and, analogously for Y_0 i Y_j, where j = 1, 2, 3.

Step 4. Calculating the absolute degree of grey incidence between observation vectors X_0 i X_1, X_2, X_3 and Y_0 i Y_1, Y_2, Y_3 (Liu, Lin, 2006, p. 103):

$$\varepsilon_{0i} = \frac{1 + |s_0| + |s_i|}{1 + |s_0| + |s_i| + |s_0 - s_i|}$$

Table 4 contains the values of the absolute relational degree for the observed characteristics (X_0, Y_0) with system factors of Polish (X_1, X_2, X_3) and Mexican (Y_1, Y_2, Y_3) family businesses.

Step 5. Determining the sequence of the influence of the analyzed system factors on the system characteristic for Polish and Mexican family business.

Sequence of relationship strength X_1, X_2, X_3 z X_0:

$$\varepsilon_{01} \succ \varepsilon_{02} \succ \varepsilon_{03}$$

Sequence of relationship strength Y_1, Y_2, Y_3 z Y_0:

$$\varepsilon_{03} \succ \varepsilon_{01} \succ \varepsilon_{02}$$

The absolute relational degree ε has values in the range [0.5; 1] (Xie, Liu, 2009, p. 308). The calculated values of the absolute relational degrees between the adopted factors and family businesses' characteristic point to:

- a high level of dependency between the role of the family in financing an enterprise and the family's participation in running a business,

- a high level of dependency between the role of the family in financing an enterprise and the influence of family values and norms on the sphere of an enterprise,

- a high level of dependency between the role of the family in financing an enterprise and the influence of a family factor on running a business in both Polish and Mexican family businesses.

Table 4. Values of the absolute relational degree (influence) ε_{0i} i ε_{0j} (own elaboration)

System factors of Polish family businesses	Value of the influence coefficient of system factors on X_0	Value of the influence coefficient of system factors on Y_0	System factors of Mexican family businesses
X1_How extensive is the family's participation in running a business?	$\varepsilon_{01} = 0.9643$	$\varepsilon_{01} = 0.9345$	Y1_ How extensive is the family's participation in running a business?
X2_What is the influence of family owners' values, philosophy and norms on the functioning of a family business?	$\varepsilon_{02} = 0.9590$	$\varepsilon_{02} = 0.8614$	Y2_ What is the influence of family owners' values, philosophy and norms on the functioning of a family business?
X3_How do you rate the influence of a family factor (as a value) on running a family business?	$\varepsilon_{03} = 0.9375$	$\varepsilon_{03} = 0.9679$	Y3_ How do you rate the influence of a family factor (as a value) on running a family business?

5. SUMMARY

Testing the obtained results allows to state that the analyzed family businesses in Poland and Mexico are influenced by the cultural context and family aspects as an internal feature of family businesses. The results obtained point to a strong relationship of values and family aspects with the operation of a family business. One can observe a high level of interdependencies related to family aspects both in Polish and Mexican businesses. It may therefore be assumed that the influence of family aspects on the functioning of family businesses in different cultural contexts is similar, both in Poland (low-context) and Mexico (high-context). Unfortunately, the results do not explain the influence of differences arising from cultural contexts on taking decisions in the family and business sphere. The authors regard this aspect as worth exploring in further research.

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RODZINA I BIZNES W PRZEDSIĘBIORSTWACH RODZINNYCH KRAJÓW NISKIEGO I WYSOKIEGO KONTEKSTU KULTUROWEGO – BADANIA Z WYKORZYSTANIEM TEORII SYSTEMÓW SZARYCH

Streszczenie

W opracowaniu przedstawiono przebieg badań nad różnicami we wpływie rodzinności na funkcjonowanie przedsiębiorstw rodzinnych w dwóch kontekstach kulturowych: wysokim i niskim. Wysoki kontekst kulturowy reprezentowały przedsiębiorstwa rodzinne z Meksyku, a niski przedsiębiorstwa rodzinne z Polski. Badania zrealizowano z wykorzystaniem standaryzowanego wywiadu indywidualnego z właścicielami przedsiębiorstw rodzinnych. Zebrany materiał badawczy poddano analizie z zastosowaniem badania podobieństwa Grey Incidence (Relation) Analysis – GRA (Grey System Theory).

Słowa kluczowe: teoria systemów szarych, przedsiębiorstwa rodzinne, kontekst kulturowy, biznesowa odpowiedzialność rodziny.