THE GAP OF IMPORTANCE OF DESIGN IN BUSINESS BETWEEN 2014 AND 2016

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Introduction

As a result of dynamic changes on the market and a tightened competitiveness struggle, design is becoming one of the key business triggers to gain the essential competitive advantage in business.

Bruce and Bessant (2002) state the major benefits of design management: increase profit by increasing sales or by decreasing manufacturing costs, increase market share, gain a competitive advantage, revamp mature and failing products, and provide a strategy for growth. Design is a way of launching a new product of service. Bloch (1995) also states that a good design attracts consumers to a product and adds value to the product by increasing the quality of the usage experiences associated with it. Managers are well aware of what design is and of the fact that it can add value in a competitive environment (Kramoliš, 2015).

While products are more and more technically alike, it is the design that is becoming an instrument of competitiveness as well as the criterion for end consumers' decision making. Design management is a term for which there is no clear-cut definition. However, it is evident that this term stands for connecting two fields – design and management.

Design, quality, reliability, and price are essential factors of business management; concurrently, they are important requirements for the successful development of a business (Kramoliš, 2015).

In this paper, the author evaluates the four main factors of business prosperity related to design and the possible market risk due to underestimating the power of design. These important aspects of business management are further quantified and evaluated in a comparative analysis. Research results presented in this paper and the conceptual structure are original, and they have been

conducted on the Czech market for a long period of time (2012-2016).

1. Theoretical Background

The term "design" can be found in various studies (Nigel, 2008; Otto & Wood, 2001; Bloch, 1995), and is mostly described as: product design; architectural design; urban design; communication design; industrial design; interior design; fashion design, etc.

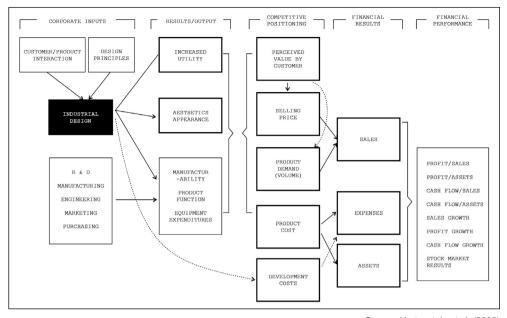
Generally, according to Thompson (2011), design is a human activity which combines resources (knowledge, skills, experiences, creativity, tools, materials, etc.) to meet a need, accomplish a goal, or create an artefact. Design thinking is a strategic capability that contributes value to creation based on a generic managerial competency.

Mozota (2002) deals with the topic of design as providing a competitive edge. The author measures the impact of design on a product, classifying the reasons for launching new products and the tacit knowledge of design. This research can be useful for professional design managers because it isolates variables that are pertinent to explaining how design transforms management processes and which processes it changes.

Moreover, Gorb (1988) also defined corporate identity design and its contribution to effective management. Another study proved that typography does influence advertising responses (Amar et al., 2017). This study highlights the important role of typography in print media destination advertising and enriches this field with a new variable: attitude toward the typography. The relationship between design, aesthetics and marketing was also covered by Hertenstein et al. (2005): Authors present a conceptual model of how design translates into financial performance. This issue is typically linked to engineering, manufacturing, and

Fig. 1:

Conceptual mapping of product development, financial results and performance



Source: Hertenstein et al. (2005)

marketing. More specifically, designers' focus on improving customers' ease of product use and their graphic and aesthetic capabilities help differentiate competitive product offerings and attract customers. These activities along with successful marketing campaigns enhance for customers the perceived product value, which in turn strengthens demand and/or justifies a relatively higher selling price, thus increasing sales revenue (Fig. 1).

Bruce and Bessant (2002) have claimed that the most companies perceive design as a way to improve the image of their company, while research by Kramoliš (2015) shows similar results. Corporate managers know that they can measure the effects of design terms of economic indicators. also investigated the relationship (2016) between commercial success. competitive advantage. economic performance. design to demonstrate benefits that design can generate for companies. However, the reasons to invest in design are not reduced to the commercial success of firms. Other issues are that economic performance based on design becomes significant throughout time (Rae, 2013; 2014) and that disruptive ideas are not always immediately successful in the market. Qualitative and quantitative dimensions and variables of the value of design (Braga, 2016) according to the perspective of different groups (users, companies, and society) and domains reported (economics, marketing, business, management, design) were also defined.

According to Bruce, Cooper and Vazquez (1999), small companies have a range of business needs for design, but have varying levels of awareness and competency to manage design effectively. Two different types of companies could be discerned from the study: 'confident' and 'apprehensive' design users. The former companies had experience with design, typically in previous work experience, and the latter had little awareness of design. For the inexperienced (apprehensive) design companies, various factors were identified that assisted the effective design outcome: the relative simplicity of the project, possession of strong briefing skills acquired in a different discipline, sourcing skills, such as personal recommendation from a trusted intermediary. and evaluation skills obtained through an intermediary or acquired in a different discipline. Ključnikov et al. (2016) published a study concluding that entrepreneurs indicated they felt an intense influence of market risk, which creates challenging business conditions. An important finding is that entrepreneurs with a higher education are better prepared for business because in comparison with other entrepreneurs, they present a better stance to defined quality parameters of the business environment.

Design by Bruce and Bessant (2002) is essentially the application of human creativity to a purpose - to create products, services, buildings, organizations, and environments which meet people's needs. It is the systematic transformation of ideas into reality. Also Oakley (1990) deals with a specific field of designers and management. He presents the differences between these very different perspectives. The differences between the managers and designers are mainly in the area of personality. habits of thinking and working, and educational background.

Kathryn Best (2006) uses the term Design management which includes three phases:

- Managing design strategy the aim is the identification of and search for conditions most suitable for successful design management. This includes mainly implementation of design into organization strategy, identification of opportunities for design, interpretation of customers' needs, and looking for design's benefits for business:
- Managing design process the realization of design itself and making it visible. It helps the organization to identify opportunities for particular projects concentrating on design, making a creative team, visual communication of the organization, and presenting its ideas outward;
- Managing design implementation this phase concentrates particular on project management in practice, design specification. specifying the level cooperation and ethical responsibility. The evaluation of the project forms an essential part of the implementation that stimulates a positive response regarding design efficiency.

In the context of innovations, there are specific interpretations of the term design (Stam, 2008). The first one claims that design is a tangible outcome and a creative activity. The author also emphasises the fact that design is the process by which information is transformed into a tangible outcome. Moreover, Trueman and Jobber (1998) refer to four different levels of understanding design: design seen as "styling", design being about better products, design sharing the interface between a company and audiences, and design integrating the whole process. In the area of design management. a wide variety of perspectives exist that reflect the rich array of individuals, professions and context involved (Best, 2006). Hollins (2010) defines design management as the organisation of the processes for developing new products and services.

Bessant (2002)Bruce and fundamental questions of design management: How do particular perspectives fit into the design process and what can they bring? How can design professionals support these different contributions? How are tools/techniques available to help make this contribution? How can effectiveness of the design process be measured? How can the process be improved?

According to the Design Management Institute in Boston (2014), the definition encompasses design management as the ongoing processes, business decisions, and strategies that enable innovation and create effectively-designed products. services. communications, environments, and brands that enhance our quality of life and provide organizational success. On a deeper level, design management seeks to link design, innovation, technology, management customers to provide competitive advantage across the triple bottom line: economic, social/ cultural, and environmental factors. It is the art and science of empowering design to enhance collaboration and synergy between "design" and "business" to improve design effectiveness. The scope of design management ranges from the tactical management of corporate design functions and design agencies. including design operations, staff, methods and processes, to the strategic advocacy of design across the organization as a key differentiator and driver of organizational success. It includes the use of design thinking or design processes to solve general business problems. Almost

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similar results have been found by authors Mahmoud-Jouini, Midler and Silberzahn (2016): Design management has been highlighted by practitioners as potentially valuable for improving innovative outcomes, whether they are products, services, or strategies in business. Design thinking is a strategic capability that contributes to value creation based on a generic managerial competency.

Kramoliš and Staňková (2017) published a study on how managers feel about the impact of design. The results confirmed that the impact of design can be seen in the business economic results. Indeed, the authors highlighted that design itself has a greater impact on the economic results of firms. Their research showed that companies in the Czech Republic increase their competitiveness by investing in design. The economic results include increases in revenue, sales, and/or brand value. In this context, Kristensen, Gabrielsen and Zaichkowsky (2011; 2012) concluded that useful product design is linked to the financial performance.

Design offers four directions through which to create value in management, and these four directions can be seen as a system with the vision in the center, according to Mozota (2002; 2003; 2010). The design value model and its application through the Balanced Scorecard toolkit provide a common language for designers and managers, and this can help the design profession effect a change from project-based to knowledge-based.

A Design value model as defined by Celaschi et al. (2011) includes three ways in which it may be possible to create value. The proposed design value model explains various actions that may be triggered through different approaches to design. Understanding the outcomes of these approaches can help companies learn to choose and facilitate particular processes to achieve specific outcomes, enable end users to contribute value themselves, and activate concealed values. Demonstrating the economic value of complex design activities and communicating it properly to top management and stakeholders remains an area that needs further research. Designers must also design their own system of measurability and show results in every step of the projects.

Most published studies deal with the technological aspect of design. The issue of

design management and its business impact has been very rarely empirically researched world-wide. Therefore, this issue becomes important for the extension of the quantitative relation between business success and design management, especially for producers of products that may use design management as a vital additional competitive advantage.

2. Problem Formulation

The basic aim is to evaluate the four main essential factors of business prosperity (design, quality, reliability and price) with the context of the possible market risk due to underestimating the power of design in companies in Czech Republic. These important aspects of business management are further quantified and evaluated.

The secondary aim is to quantify the differences between 2014 and 2016, using simple comparative analysis.

This paper also attempts to analyze and identify the awareness of companies of various sizes of the importance of design. The emphasis is put on the issues related to the correct targeting of such activities closely related to the importance of design within companies. Finally, based on an analysis of the data collected, the comparative study shows the current situation in Czech businesses. This comparative study is a continuation of a research issue published in 2015 by Kramoliš, Staňková, and Richtr (2015).

2.1 Research Methods

The research consists of two main parts of collecting data. The first part of collecting data was done from January to March 2014 and the second part of collecting data was from January to May 2016. The method of smart internet questionnaires was used. This research concept was designed by the authors of the paper based on experience from their previous research. In both research parts, the same companies (more closely specified in Chapter 2.2 – Research file characteristics) were addressed.

The primary aim was to investigate the companies' concern for design in relation to other factors of importance (price, quality, and reliability). This was done by asking specific questions in online questionnaires. The questionnaire form contained 16 questions. The responses were divided into several categories with common features. In total, 168 entries

collected from 305 addressed respondents took part in the research in 2014 and 121 entries in 2016. The results were analyzed using quantification and basic statistical indicators and visualized by spider charts.

The secondary aim was to investigate the companies' concern for the importance of design itself and differences between 2014 and 2016. The results were analyzed using quantification and basic statistical indicators, and visualised by bar charts and spider charts and by chi-square test of independence. The comparative study was based on a model by authors Kramoliš, Staňková, and Richtr (2015). The results were subjects to a critical assessment, and a synthesis with already discovered and published data (secondary data) was carried out.

2.2 Research File Characteristics

The table below (Tab. 1) shows the occupational structure of companies in the Czech Republic who participated in the research. The only companies approached were those who: a) are large enough to work with design; b) are not strictly managed by a multinational corporation and can decide about their own design; c) have products whose design may be of importance. Then, this list was sent to be filled in through the internet research questionnaires.

The presented data from both research parts were similar, therefore, the characteristics stated in the table are aggregated and averaged.

Tab. 1 indicates that B2B and B2C were almost equally represented (45.8% and 54.3%) in the investigated sample.

Tab. 1: Research file characteristics

	Relative (%)	Market orientation	
Subcontractor	26.8	B2B (45.8% averaged)	
Producer	30.1		
Service provider	29.4		
Merchant	13.7		

	Relative (%)	Market orientation	
Subcontractor	9.7		
Producer	33.8	B2C (54.3% averaged)	
Service provider	35.3		
Merchant	21.1		

Source: own processing

Tab. 2: Research sample characteristics: Business size distribution

Number of employees/company size	2014 Relative (%)	2016 Relative (%)	Relative (%) Averaged
1-10 (Micro)	16%	21%	18.5%
11-50 (Small)	17%	19%	18%
51-200 (Medium-sized)	22%	17%	19.5%
200+ (Large)	45%	43%	44%

Source: own processing

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Moreover, it is evident that some companies operate in both fields (mixed B2B and B2C), whereas a certain number of companies operates in one field only (further referred to as "pure B2B" or "pure B2C"). This segment contains less than 20% of the entire research sample.

The sample used for the purpose of this paper contained 23% service industry, 15% trade industry, 10% construction industry, 13% engineering industry, 4% food industry, 1% textile industry and 34% respondents that operate in other (not specified in more detail) industry.

3. Problem Solutions

The current state of the importance of design in the business concept of Czech companies is examined on the Czech market by research questions in an online questionnaire. In case of a majority consensus, the data are quantified by a relative indicator and supplemented by important findings in the form of a comment. In case of fragmentation of answers, only the most important findings in the surveyed area are listed.

Based on the above issue, two hypotheses were formulated. Hypotheses were tested on the level of significance of $\alpha = 0.05$. Statistical

tests of the hypotheses were done using the Pearson's chi-squared χ^2 test of independence (Lemeshko, 2015) and P-value.

The chi-squared formula used for the teststatistic calculation:

$$\chi^{2} = \sum_{i=1}^{r} \sum_{j=1}^{c} \frac{(O_{ij} - E_{ij})}{E_{ij}}$$
 (1)

Where: O_i = an observed frequency in a given contingency table; E_i = an expected (theoretical) frequency, asserted by the null hypothesis; r and c are the number of rows and columns in the table, respectively (Hindls, 2007).

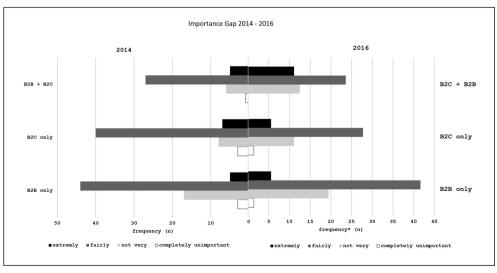
For a brief outlook of the research sample, standard deviation (s), variance (s), arithmetic mean, and median value were calculated. This enabled to see up to what extent typical cases vary within the set of examined values.

For a more precise visual representation of the measured results, the axis values in the spider figures were adjusted to intervals 2.0 to 4.0. For the visual interpretation of results in the spider chart, figures were assigned variables as follows:

Importance in Design $-IM_{_D}$ Importance in Quality $-IM_{_Q}$ Importance in Price $-IM_{_P}$ Importance in Reliability $-IM_{_R}$

Fig. 2:

Evaluation gap regarding the importance of design from the perspective of companies and their business activities in the markets



Source: own processing

Design with Respect to the Market Type

Concerning the evaluation of design as one of the most important factors in the company, the following hypotheses for both examined periods were formulated. The "company prosperity" issue in this first hypothesis is constructed with regards to the published results by Hertenstein et al. (2005).

H1.: Referring to the importance of design in relation to the company prosperity, there is a difference between the companies conducting business in B2B and B2C markets.

H1,: Referring to the importance of design in relation to the success rate of the company. there is no difference between the companies conducting business in B2B and B2C markets.

Gap figure visualization was constructed by adjusted values. For year 2014, n = 168and for 2016, n = 121. For the purpose of a comparative analysis, the data for 2016 were adjusted. The calculation is as follows: the scale in 2014 is considered as default (1.0) and the multiple coefficient in 2016 (frequency*) is 1.388 (n_{2014}/n_{2016}) .

The above figure demonstrates the gap in importance of design within the company according to its field of business. It is evident that across the spectrum, 'fairly important' prevails. According to these numbers, companies in B2B market only (pure B2B) are aware of the great importance of design. Slightly lower numbers are recorded within companies in the B2C market. Companies conducting business in B2B and in B2C markets at the same time took last place in year 2014, slightly improving their position in 2016. Extreme numbers at both poles, i.e. 'extremely important' and 'completely unimportant', are very rare in 2014. In 2016, there is moderate increase of 'extremely important' in B2B + B2C companies. There is a steady decrease of "completely unimportant" in all companies.

The next part focuses on the importance of design from the companies' point of view. In the following Pearson's chi-square test for independence, the researchers strived to evaluate the importance of design from the companies' point of view. The criterion of evaluation concerning the importance of this factor consisted of four levels: extremely important, fairly important, not very important, and completely unimportant.

H1 Chi-square Test

A chi-square test of independence was performed to examine the relationship between business fields (pure B2B, pure B2C, mixed B2B and B2C) and importance of design. The relation between these variables was not significant, X^2 (1, N = 168+121) = 0.28, p > .05. The result is that the examined variables are independent.

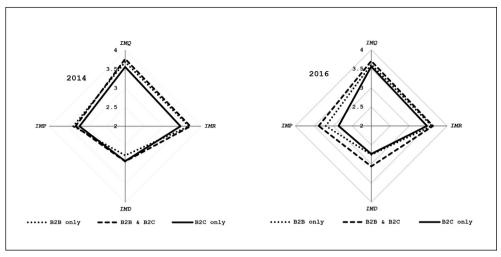
Based on the hypothesis, when the p-value at a 0.05 significance level is calculated with a result of 0.579, the hypothesis H1 is rejected. This means that there is a difference between the companies from B2B or B2C markets with respect to the importance of design.

For the visual representation of respective factors concerning the importance of the companies' activities in the markets, a simple spider graph analysis for each year was drawn up. The spider analysis includes criteria based on which the companies consider their importance. These are quality, reliability, design, and price. Low numbers mean insignificant importance (1 - completely unimportant), whereas high numbers represent great importance (4 – extremely important). This reflects degrees of importance concerning the evaluation of internal factors based on a well thought-out indicator system. This factor rating enables to answer the following questions: 'What are the most important factors within companies' and 'What is the situation regarding the selected factor within a company'. A structure of the factor-rating model is to be found in Fig. 3 below.

The explanation of results for the year 2014 in variables and observed values is as follows: The spider chart (Fig. 3) represents that in the pure B2C market, the most important factor is IM_{Ω} with a value of 3.56, then there is IM_{R} with a value of 3.46, IM_P with a value of 3.20, and finally IM_D with the lowest value of 2.92. In the B2B only market, IM_o with a value of 3.69 is the most important factor together with IM, which has a very similar value of 3.68. The variable $IM_{\rm p}$ reached a lower value of 3.37 and $IM_{\rm p}$ is again of the lowest importance with a value of 2.76. In the companies that conduct their business activities in B2B and B2C markets, the situation is almost identical. IM_{\odot} is again the most important factor with a value of 3.77, then IM_{p} with a value of 3.72. IM_{p} is at a value of 3.31, and IM_p has the lowest importance with a value of 2.92.

Fig. 3:

Spider chart regarding the importance of respective criteria in 2014 and 2016



Source: own processing

The explanation of results for the year 2016 in variables and observed values is as follows: Fig. 3 represents that in the B2C only market, IM_{\odot} is the variable with the highest value of 3.71, then IM_R with a value of 3.62, then IM_R with a value of 3.39, and finally $IM_{\rm D}$ with the lowest value of 3.06. In the B2B only market, IM_{\odot} with a value of 3.62 is the most important factor together with IM_R with a very similar value of 3.59. The variable IM_p reached a lower value of 3.3 and IM_0 has the lowest value of 2.76. In the companies that conduct their business activities in B2B and B2C markets, the situation is almost identical. IM_{o} is the most important factor with a value of 3.71, then IM_R with a value of 3.47. IM_a is at the value of 2.87 and IM_a has the lowest importance with a value of 2.73.

Fig. 3 dual spider chart shows only minor changes. The variables IM_Q and IM_R remain steady (< 0.1). On the other hand, the variable IM_D loses importance (-0.18) in the pure B2C business. Quite similar decreasing values were observed for variable IM_P , in both businesses: B2B only (-0.17) together with B2C only (-0.34).

Conclusions may be explained as follows: values for variable IM_D (design) are not increasing. Rather, B2C business shows a decrease in importance. Another decreasing variable is IM_D (price), the decrease of importance is in "pure B2B" and "pure B2C".

This result can be attributed to the improving economic situation in the Czech Republic. Growing GDP and demand together with low unemployment caused increase of factor "price" (pure B2C reports 10.7% decrease).

3.2 Design with Respect to the Company Size

For the purpose of research concentrating on the gap of importance of design compared to the company size, the following hypotheses were defined.

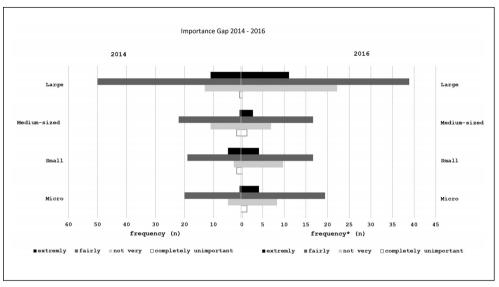
H2₀: Referring to the importance of design in relation to the success rate of the company, there is a difference among small, mediumsized, and large businesses.

H2_A: Referring to the importance of design in relation to the success rate of the company, there is no difference among small, mediumsized, and large businesses.

The gap visualization figure was constructed by adjusted values where year 2014 n = 168 and year 2016 n = 121. For the purpose of comparative analysis, the data in 2016 were adjusted. The calculation is as follows: the scale in 2014 is considered as default (1.0), and the multiple coefficient in 2016 (frequency*) is 1.388 (n_{2014}/n_{2016}) .

Fia. 4:

Gap of the evaluation regarding the importance of design from the companies' size perspective



Source: own processing

Considering the evaluation of design itself as one of the factors that were stated by the companies in the graph above, the following can be noted: Microbusinesses with 1-10 employees and small-sized businesses with 11-50 employees as well as medium businesses with 51-200 employees are of a very similar opinion. Based on their opinion, the statement that design is relatively important occurs most often. A small number of businesses consider design extremely important, not very important or completely unimportant. A very similar situation occurs in large businesses with 201 employees and more where 50 businesses consider design fairly important. The entry 'extremely important' is insignificant and 'not very important' is of almost identical low value as 'extremely important.'

A comparative glance at Fig. 4 indicates some differences between 2014 and 2016. There is a significant shift in 2016 – an increase of extreme importance across micro, mediumsized, and large companies. Importance of 'not very' and 'completely unimportant' remains at almost the same level. Importance 'fairly' is almost similar in both periods.

H2 Chi-square Test

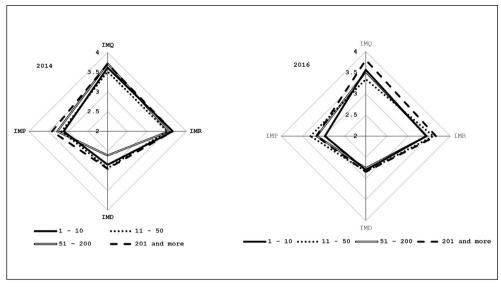
chi-square test of independence was performed to examine the relationship between the company size (micro, small, medium-sized, and large) and the importance of design. The relationship between these variables was not significant, X^2 (1, N = 168+121) = 0.74, p > .05. The result is that the observed variables are independent.

Based on the hypothesis, when the p-value at a 0.05 significance level is calculated with result of 0.863, the hypothesis H2, is rejected. This means that there is a difference among the companies regarding the dependence on number of employees and the attitude towards the importance of design. A comparative view spider graph analyses with visual records of the evaluation of respective criteria from the company size perspective was made.

The explanation of results for the year 2014 in variables and observed values is as follows: Regarding micro businesses with 1-10 employees, IM_R has the highest value of 3.65. Then, IM_{o} with a value of 3.62 follows. IM_{p} of 3.12 comes third. IM_{p} with the lowest value of just 2.85 takes last place concerning the importance. Small-sized businesses with 11-50

Fig. 5:

Spider charts regarding the importance of respected criteria from the company size perspective in 2014 and 2016



Source: own processing

employees see the importance of respective factors as follows: IM_Q and IM_R with the same value of 3.52, IM_P with a value of 3.17, IM_D has the lowest value of 2.93. Medium-sized businesses with 51-200 employees reached very similar values as small-sized businesses with 11-50 employees. The most important variable is IM_Q with a value of 3.72, IM_R with a value of 3.56 follows. Then, the variable IM_P with a value of 3.28. IM_D takes the lowest value of 2.61. Large businesses with 201 employees and more evaluate the selected factors in the same order as small-sized businesses: IM_Q (3.71), IM_R (3.65), IM_P (3.41), and IM_D (2.95).

The explanation of results for the year 2016 in variables and observed values is as follows: It is evident that regarding micro businesses with 1-10 employees, IM_{Q_c} with a value of 3.57 is of the highest importance. Then, variable IM_{R_c} with a value of 3.43 follows. IM_{P_c} with a value of 2.97 comes third. IM_{D_c} with the lowest value of just 2.80 takes the last place concerning importance. Small-sized businesses with 11-50 employees see the importance of respective factors as follows: IM_{R_c} (3.60) followed by IM_{Q_c} (3.35), IM_{P_c} has a value of 3.31, IM_{D_c} with the lowest value of 2.84. Medium-sized businesses

with 51-200 employees: The highest value is variable IM_Q of 3.52, IM_R with a value of 3.44 follows, then variable IM_P with a value of 3.16. IM_D has the lowest value of 2.76.

Large businesses with 201 employees and more evaluate the selected factors in the same order as medium-sized businesses: IM_Q (3.80), IM_P (3.66), IM_P (3.17), and IM_D (2.85).

A comparative explanation based on dual spider chart (Fig. 5) reports an insignificant shift. There is a zero shift in both variables IM_{P} (price) and IM_{R} (reliability) (shift < 0.1). In contrast, variable IM_{D} increased in medium-sized companies (+0.15) and also in large companies (+0.11). There is a significant increase of the value of the IM_{P} variable in small companies, this increase is +0.14. There was a surprising reduction in importance of the IM_{Q} variable in medium-sized companies (-0.21).

Conclusions may be explained as follows: values for variable $IM_{\scriptscriptstyle D}$ (design) remain steady. A minor increase could be observed in medium-sized companies.

Overall gentle decreases in the importance of price could be observed across all company sizes.

Calculation of selected statistical indexes of the data file under review Tab. 3:

Statistical index	Year 2014	Year 2016
Number of values (n)	168	121
Arithmetic mean	2.86	2.82
Median value	3	3
Variance (s ²)	0.40	0.67
Standard deviation (s)	0.63	0.74

Source: own processing

3.3 The Importance of Design Regarding Characteristics of Data's Position and Variability

From the data collected in both research parts. the following statistical indexes were calculated: characteristics of the data's position (arithmetic mean and median value) and characteristics of the data's variability (variance and standard deviation).

The arithmetic means of 2.86 (2014) and 2.82 (2016) represent a typical value describing a file of various values. It could be stated that there is not a great difference regarding values recorded within respective fields of business or company size. The data examined reach a low variance of 0.4 (2014) and 0.67 (2016) which represents a favorable data consistency. Standard deviation of all entries regarding the importance of design within companies shows how typical cases within the collected data vary. The values of 0.63 (2014) and 0.74 (2016) mean that in most cases the elements within the collected data are alike, therefore only a low disparity occurs.

From the analysed results, it can be concluded that companies with respect to their size and business activities in particular markets see the importance of the following factors: quality, reliability, design, and price. In general, design is least important. In almost all the fields, quality comes first, while reliability together with price are of the same importance in the second and the third place.

Conclusion and Discussion

Nowadays, businesses are definitely aware of design being an important part of business prosperity. One of the major criteria is to become different in the market and for that reason, design is fundamental in this discipline.

Many businesses have already started working on it; others are in the phase of being aware of it but not concentrating on this area. These businesses have not started solving the situation in any way. They probably feel that design is their weakness that they want to work on and improve in the future.

Bloch (1995) stated that "the ideal product must accomplish numerous design constrains. It must be superior in its quality, performance, ergonomic efficiency, manufacturability and safety". Currently, results show that companies are becoming more aware of the importance of design regarding their products as well as their marketing materials. Unfortunately, comparison with international research activities, it must be declared that the majority of companies in the Czech Republic still underestimate the role of design. Even though companies pay attention to design, they do not consider it strategically important for business prosperity. By doing the research in the Czech Republic, using a sample of 168 companies. it was found out that there is a difference regarding the perception of the importance of design in the B2B and B2C markets. This corresponds with an increasing importance of design for final consumers. Design represents a very important competitive factor that influences their final decision. On the contrary, the company size specification does not influence the perception of the importance of design in Czech companies.

Companies put emphasis on the quality of products in the first place. In fact, a longterm and transactional marketing considers the quality as one of essential pillars of successful marketing strategy. Reliability comes second, not design. The explanation is clear. Companies' great concern is to offer a high-quality product, to be reliable (accuracy,

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amount, and perfection of supplies, invoice payment, and trust in a business partner). Then, there is the price of the product. The Czech market is traditionally very sensitive to price and companies are definitely aware of this fact. Therefore, design is naturally moving to the last place with respect to these four basic criteria. Novotný and Duspiva (2012) present verv similar results in their research. They define the factors influencing consumers' buying behavior and their importance for enterprises. Based on their research results, a model of identical and non-identical factors influencing consumers' buying behavior and the model cobwebs were drawn. Novotný and Duspiva (2012) define the following top factors: quality, price, design, and service. Also, the research from both years shows quite similar results.

A comparison of both research parts from 2014 and 2016 indicates a slight shift towards an increasing importance of "design" in mediumsized businesses and a decreasing importance of "price" in micro, small and medium-sized companies. The "quality" and "reliability" factors of importance remain almost steady.

Limitations

The research questionnaire structure does not provide detailed information about the increases in sales, profits or brand value of the company directly caused by design management. Companies addressed in both surveys are based on the same number, size and company structure. However, various companies could have answered both surveys. Nevertheless, a general awareness of the market in this field obtained from the questionnaires can be considered meaningful despite certain imperfections in the comparative analysis. The research contains different companies (regarding the type of industry), but not closely specified.

Possible future research

Research could be used to explore this issue across the V4 countries which have similar management problems. Moreover, the same research in Czech Republic could continue in 2018 and results may be compared and evaluated in order to set a trend in this issue.

References

Amar, J., Droulers, O., & Legohérel, P. (2017). Typography in destination advertising: An exploratory study and research perspectives. Tourism Management, 63, 77-86. https://dx.doi. org/10.1016/j.tourman.2017.06.002.

Ben Mahmoud-Jouini, S., Midler, C., & Silberzahn, P. (2016), Contributions of Design Thinking to Project Management in an Innovation Context. Project Management Journal, 47(2), 144-156. https://dx.doi.org/10.1002/pmj.21577.

Bessant, J., & Bruce, M. (2002) Why design? Design in business: strategic innovation through design. London, England: Financial Times Prentice Hall.

Best, K. (2006). Design management: managing design strategy, process and implementation. AVA publishing.

Bloch, P. H. (1995). Seeking the ideal form: Product design and consumer response. The Journal of Marketing, 59(3), 16-29. https://dx.doi.org/10.2307/1252116.

Braga, M. F. (2016). The value of design: an issue of vision, creativity and interpretation. In 2016 Design Research Society 50th Anniversary Conference, 27-30 June 2016. Brighton, UK.

Bruce, M., & Bessant, J. R. (2002). Design in business: Strategic innovation through design. Pearson education.

Bruce, M., Cooper, R., & Vazquez, D. (1999). Effective design management for small businesses. Design studies. 20(3), 297-315. https://dx.doi.org/10.1016/s0142-694x (98)00022-2.

Celaschi, F., Celi, M., & García, L. M. (2011). The extended value of design: an advanced design perspective. Design Management Journal, 6(1), 6-15. https://dx.doi.org/10.1111/ j.1948-7177.2011.00024.x.

Design Management Institute. (2014).What is Design Management? Design Management Institute. Available from http://www. dmi.org/?What is Design Manag, referred on 05/06/2017.

Gorb, P. (1988). Corporate identity design; Its contribution to effective management. European Management Journal, 6(3), 205-208. https:// dx.doi.org/10.1016/s0263-2373(98)90004-4.

Hertenstein, J. H., Platt, M. B., & Veryzer, R. W. (2005). The Impact of Industrial Design Effectiveness on Corporate Financial Performance. Journal of Product Innovation Management, 22(1), 3-21. https://dx.doi. org/10.1111/j.0737-6782.2005.00100.x.

Hindls, R. (2007). Metody statistické analýzy pro ekonomy. Praha: Professional Publishing.

Hollins, B. (2010). Design management education: The UK experience. dmi:review, 13(3), 25-29. https://dx.doi.org/10.1111/j.1948-7169.2002.tb00315.x.

Ključnikov, A., Belás, J., Kozubíková, L., & Paseková, P. (2016). The Entrepreneurial Perception of SME Business Environment Quality in the Czech Republic. *Journal of Competitiveness*, 8(1), 66-78. https://dx.doi.org/10.7441/joc.2016.01.05.

Kramoliš, J. (2015). Design as a Condition for Prosperity in Czech Businesses – A Comparative Study. *Journal of Competitiveness*, 7(4), 33-47. https://dx.doi.org/10.7441/joc.2015.04.03.

Kramoliš, J., & Staňková, P., (2017). Design and its impact of the financial results of enterprises. *Journal of Competitiveness*, 9(2), 62-77. https://dx.doi.org/10.7441/joc.2017.02.05.

Kramoliš, J., Staňková, P., & Richtr, M. (2015). The Importance of Design in Business Practices of Czech Companies. *E&M Ekonomie a Management*, *18*(2), 151-164. https://dx.doi.org/10.15240/tul/001/2015-2-011.

Kristensen, T., & Gabrielsen, G. (2011). Design Economy – Value Creation and Profitability. *The Handbook of Design Management*, 345-365. https://dx.doi.org/10.5040/9781474294126.ch-022.

Kristensen, T., Gabrielsen, G., & Zaichkowsky, J. L. (2012). How valuable is a well-crafted design and name brand?: Recognition and willingness to pay. *Journal of Consumer Behaviour*, *11*(1), 44-55. https://dx.doi.org/10.1002/cb.368.

Lemeshko, B. Y. (2015). Chi-Square-Type Tests for Verification of Normality. *Measurement Techniques*, *58*(6), 581-591. https://dx.doi.org/10.1007/s11018-015-0759-2.

Mozota, B. B. (2002). Design and competitive edge: A model for design management excellence in European SMEs. *Design Management Journal*, 2(1), 88-103.

Mozota, B. B. (2003). Design management: using design to build brand value and corporate innovation. Skyhorse Publishing Inc.

Mozota, B. B. (2010). The Four Powers of Design: A Value Model in Design Management. *Design Management Review*, 17(2), 44-53. https://dx.doi.org/10.1111/j.1948-7169.2006.tb00038.x.

Nigel, C. (2008). Engineering Design Methods: Strategies for Product Design (4th ed.). Springer.

Novotný, J., & Duspiva, P. (2014). Factors Influencing Consumers' Buying Behavior and Their Importance for Enterprises. *E&M Ekonomie a Management*, *17*(1), 152-166. https://dx.doi.org/10.15240/tul/001/2014-1-012.

Oakley, M. (Ed.). (1990). Design management: A handbook of issues and methods. Blackwell Pub.

Otto, K. N., & Wood, K. L. (2001). Product design: techniques in reverse engineering and new product development. Pearson Education Asia Limited.

Rae, J. (2013). Design-Conscious Companies: What Is the Real Value of Design? *Design Management Institute*, 30-37.

Rae, J. (2014). What is the real value of design? *Design management institute and motive strategies*. 1-9.

Thompson, M. K. (2011). Establishing design as a Discipline in Civil and Environmental Engineering. In *Proceeding of the 1st international workshop on Design in Civil and Environmental Engineering* (pp. 1-4).

Trueman, D. M., & Jobber, P. D. (1998). Competing through design. *Long Range Planning*, *31*(4), 594-605. https://dx.doi.org/10.1016/s0024-6301(98)80052-6.

Von Stamm, B. (2008). *Managing innovation,* design and creativity. John Wiley & Sons.

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Abstract

THE GAP OF IMPORTANCE OF DESIGN IN BUSINESS BETWEEN 2014 AND 2016 Jan Kramoliš, Anna Kotásková

In today's very tough market struggle in the Czech Republic, more and more companies are aware that innovation is one of the key aspects leading to market success.

The main research aim of this paper is to explore how "design" represents a business success trigger. This article examines the importance of four selected factors in the Czech Republic in 2014 and 2016 (design, quality, price, and reliability) in business success. Solutions were identified in two basic hypotheses (H1: Referring to the importance of design in relation to the success rate of the company, there is a difference between the companies conducting business in B2B and B2C markets; H2: Referring to the importance of design in relation to the success rate of the company, there is a difference among small, medium-sized, and large businesses) that were subject to statistical testing using chi-square and p-value. To evaluate results of the research, brief comparative analyses have been compiled.

The conclusion builds on the authors' 2015 study and shows changes researched on the issue of business importance. Design represents a very important competitive factor that influences their final decision. On the contrary, the company size specification does not influence the perception of the importance of design in Czech companies.

The results clearly indicate only a minor shift. The "design" factor as the presumed business success trigger still has a weaker position compared to the rest of the examined factors. Quality and reliability have the strongest importance. In addition, there was a slight decline in the importance of the "product price" factor.

Key Words: Design, importance of design, design management, business success triggers, the Czech Republic.

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