Business Model Attributes of Value Proposed Regarding the Postindustrial Era

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Abstract

The business model is a managerial tool to understand the logic of a company. Business model tells how a company creates values for customers, what are these values, and identifies how it is compensated for values provided. Business model consist of several blocks. These blocks are built by elements. In this paper the elements of a block of proposed value are observed and studied to clarify the relationship between them. The research was conducted on 231 Slovak companies in 2013/2014 using a questionnaire survey. After gathering, the data were analyzed using both MS Excel and PSPP. These data were tested for correlations, a regression model was made and the hypotheses were tested for their significance. The value of this paper is to help not existing and emerging companies to create their business model, to existing companies to understand their model and to innovate it, and for scientists to understand deeper the relations of business model components of proposed value.

Keywords: business model, value proposed, business model components, competitive advantage

JEL Classification: M10, M21

Introduction

Business model is an actual topic in the field of Business studies. It is an important part of a company especially in high competitive environment of postindustrial era we live in. Business model describes the logic behind a company. It is about the value proposed, the value creation and the compensation for it. Orsterwalder and Pigneur (2011) define business model as a fundamental principle of how a company creates, captures and delivers values to customers. A complex analysis of business models done by Slavik (2011) identified three common elements that are typical for a business model. These elements are: product, organization and profit formula. Business model carries the competitive advantage and the prosperity of a company. Business model is a very broad topic so in this paper we will focus on value proposed as a central mover for company's success.

The research presented in this paper was done on 231 Slovak companies in 2013/2014 using a questionnaire survey and analyzed using statistic software.

The objective of this paper was to analyze and to explain the intragroup relationship between proposed value elements of business model. This is important because a company has to understand the relationship between these elements so it can gain advantage from potential synergic effect or reduce its effort spent on

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a value that is not as important as initially believed. For example if a company would know that to be competitive it brings more to focus on performance than focusing on price, it could concentrate more on the element with stronger impact.

1 Literature Review

Osterwalder and Pigneur (2011) define business model as a fundamental principle of how a company creates, captures and delivers values to customer. They created a method of business model visualization called Canvas. Business model Canvas describes the business model in four blocks: infrastructure, product, customer relationships and finance. These blocks consist of nine elements: customer segments, value proposed, channels, customer relationships, revenue streams, key sources, key activities, key partners and cost structure. Each element represents an important contribution to company's existence and can be a source of competitive advantage and is a candidate for innovation. As for the purpose of this paper Osterwalder and Pigneur (2011) offer a way how to describe value proposed. They use novelty, performance, customization, design, work facilitation, brand/ status, price, cost reduction, risk reduction, accessibility and comfort as alternative ways how a company can propose value to its customers. The business model Canvas is illustrated on the Figure 1.

<table>
<tr><th>Infrastructure</th><th>Product</th><th>Customer relationships</th></tr>
<tr><td>Key Partners
Key Activities
Key Sources</td><td>Value Proposed</td><td>Customer Relationships
Customer Segments
Channels</td></tr>
<tr><td colspan="3">Finance</td></tr>
<tr><td colspan="2">Costs Structure</td><td>Revenue Streams</td></tr>
</table>

Figure 1: Building blocks of Business Model Canvas

Boston Consulting Group (Lindgart et al. 2009) describes a business model as two basic blocks: value proposed and operating model. Value proposed carries the answer to questions what the company offers and to whom it is offered. Value proposed consists of target segment answering the question who are the customers and what need have to be satisfied, offered product answering what is offered to customers to satisfy their needs, revenue model answering how to be compensated for the proposed value. The operating model deals with how to offer a product and stay profitable. It captures business decisions in critical areas as value chain, dealing with questions how to create value, what needs to be outsourced and what is going to be created in-house, costs model answering what is the assets configuration to maintain profitability, and organization dealing with how to place and develop human resources in order to develop the competitive advantage. Innovation can take several forms. Due to BCG (Lindgart et al. 2009) innovation of value proposed can have a form of experience (Apple), trust premium (Whole foods) or can be free (Google).

In Business model innovation: coffee triumphs for Nespresso (Matzler et al. 2013) the authors use a business model consisting of 5 parts. Positioning which represents a niche on market or a window in cus-

tomers' mind. Product logic has to be consistent with positioning. They claim that the product can take advantage of its uniqueness only if its price is set under its value proposed. The value creation logic describes how the value is created. The profit formula is about profit creation (revenue stream and costs). Marketing logic deals with company's needs to attract and retain customers.

Alternative view of business model and its visualization is offered by Casadesus-Masanell and Ricard (2011). Their way of understanding business model is a model of causations. Company does decision in field of politics, product and government. These decisions will than have either flexible or rigid consequences. These relations are then processed into a model.

Open business model (Chesbrough 2007) is a way how to effectively create and exchange values with business environment in postindustrial era. Common development in postindustrial era is one where the lifespan of an innovation is shortening what decreases revenues and increases costs. Open business models decrease the costs using value capturing that is created outside the company and increase the revenues by offering created value in form of license, selling the surplus value, disinvesting or spin off.

As a demonstration for business model innovation of value proposed the uService (Bormann et al. 2010) will serve. uService connects aspects of social networks, user generated services, content and mobile environment. For this type of model is characteristic that a share of proposed value is created by customers themselves. uService is connected with the term prosumer what is a combination of words provider and consumer.

Other way how to innovate business model is so called Cloud (Weinhardt et al. 2009). It is a trend in information technologies. It allocates significant share of data from physical space and so creates a potential to process the data by other subjects. It also offers opportunities for collaboration, what affect among other things comfort and accessibility.

The importance of complementary products is discussed by Amit and Zott (2012). The complementary products allows a company to take full advantage of the business model potential and realize revenue stream from all phases of customers' experience with the product and to create barriers for customers' to leave. An example of complementary product model is a cheap coffee machine and expensive coffee like Nespresso where Nestlé first profits from coffee machine and then it creates revolving revenue from coffee cartridges. If a company does not provide the customers with such complementary product customers go and find someone else who will and take a share of potential revenue from them.

Amit and Zott (2001) identified four sources for customer's value creation in e-business. Novelty as a measure of activity system innovation expressed for example with new transaction structure, transaction contents, or new subjects. Second source is locking-in the customer and creating barriers. Barriers can be the costs of switching the provider (loyalty program, dominating design, customization, trust) and network externalities. The next source is complementary goods that increase the value of a product and dependence between business model elements. For example the dependence can be increased between product and service, online and offline, between technologies and processes. The fourth source is efficiency achieved by

interconnection of activities inside the company. The most typical are the synergic effect and economics of scale.

The service sector is in long-term growth. The present growth is caused mostly by providing services to other businesses while services to end-users are relatively stable (Wirtz & Ehret 2013). The ownership of sources is connected with costs, responsibility and liabilities what can overweight the advantages of ownership. This offers a good reason for outsourcing while it is an opportunity for emergence of new models in service sector. This business models differ from other by their orientation on value exchange with extern environment and in positioning in value network of suppliers, buyers and other partners.

2 Hypothesis and Objective

Our hypothesis was that the elements within a group of values proposed are not alone standing alternatives but there is a relationship between intragroup elements that lead to potential synergic effect. Knowing the related values lets us know the hot spots where the actions have the strongest effect.

The objective of this paper was then to describe and to model this relationship. In other words the objective of this paper was to analyze and to explain the intragroup relationship between proposed value elements of business model.

H_0: The values that can be proposed to customers are alone standing. Changing one value does not affect other one in a significant degree.

H_1: At least some of the values are interconnected. Changing one value affects another one in a significant degree.

3 Methods

For the last four years we dealt with the topic of business models. During this time we collected latest theory in the field of business models to build a base for this research. In the beginning we stated hypothesis that should be tested. The main research method to create a platform for testing our hypotheses was questionnaire research. We designed a questionnaire that with 23 questions using the business model Canvas as a base method of modeling business models. In the questionnaire we first collected information about the companies to create categories and then we analyzed segments of business model explained in literature review. After we designed the questionnaire we disseminated it using the help of our students who all had a bachelor's degree in management to assist the completion. As a part of their term paper they had to interview a representative of a company and to fill the questionnaire. We collected 231 usable questionnaires. After collecting the data were processed in MS Excel where the descriptive analysis was made using methods of location as mean and median, methods of spread like standard deviation. Next the data were exported to statistic software PSPP for further deeper analysis. First we analyzed association using the correlation

coefficient. We analyzed 23454 individual data that made 5886 correlations. The purpose was to identify interesting associations within our hypothesis. Our final step of data analysis was to filter the interesting results and to analyze them deeper using regression, ANOVA and hypotheses testing. The requirements for the deeper analysis were that the correlation coefficient should be at least 20 or higher, in regression the coefficient of determination (R^2) at least 20 or higher and there should be a logical relevance of the correlation.

4 Associations of intragroup value proposed

In the intragroup association analysis of value proposed section of business model we studied the relationship between the elements of value proposed. We analyzed the factors of proposed value: novelty (originality), utilization (performance), customization, design, brand, price, decrease of costs, decrease of risk, accessibility and comfort using the standard model of business model Canvas (Osterwalder – Pigneur 2010). Proposed value is the reason why customers chose the company instead of another. It solves customers' problem. The companies rated the values in the scale from 1 to 5, where 1 was insignificant and 5 was of extraordinary importance. In the **Table 1** the data is described. The number of sample varies because of sorting out the data that were filled incorrectly. The highest level of importance (high mean and low SD) was reached by values of utilization (performance) and customization. This means that companies focused on the performance of the product and on adapting the product to customers' needs. The lowest focus was on price. The most volatile results came from design, brand and novelty (originality).

Variable	N	Mean	Standard Deviation	Minimum	Maximum
Novelty / originality	228	3.63	1.01	1.00	5.00
Utilization / performance	229	4.01	.73	1.00	5.00
Customization	230	3.97	.89	1.00	5.00
Design	224	3.25	1.13	1.00	5.00
Brand	230	3.78	1.03	1.00	5.00
Price	227	3.17	.86	1.00	5.00
Decrease of Cost	229	3.34	.91	1.00	5.00
Decrease of Risk	227	3.41	.95	1.00	5.00
Accessibility	228	3.83	.93	1.00	5.00
Comfort	226	3.83	.87	1.00	5.00

Table 1: Data description

The ten common attributes of value proposed were chosen to be analyzed between themselves to find the answer how they interact and how they complement each other or how they exclude each other. In the **Table 2** the correlation analysis is presented. As we can see there are nine relevant correlations between elements of proposed value that are also significant. These correlations are between following elements:

- Novelty (originality) and Utilization (performance)
- Novelty (originality) and Customization
- Novelty (originality) and Design
- Novelty (originality) and Brand
- Utilization (performance) and Customization
- Design and Brand
- Decrease of Costs and Decrease of Risk
- Decrease of Risk and Accessibility
- Accessibility and Comfort

There is a moderate relation between novelty (originality) and utilization (performance) as a value proposed ($r = 0.25$; sig = .00). The explanation is that a product to be perceived as original it has to bring a high dose of performance. It also indicates that if products are innovated the performance is a focus for innovation.

The moderate relation between novelty (originality) and customization ($r = 0.23$; sig = .00) can be explained as followed. When a company adapts the product to customer's needs it is perceived as original. Also there is a pressure to customize the product as a way of innovation.

Novelty (originality) and design has a little stronger correlation than moderate ($r = 0.35$; sig = .00). It is the strongest correlation of novelty (originality) in this group. This indicates that the way how most companies innovate their product is through design. It seems that the fastest way how to influence customers' perception is by proposing a new or better design.

Novelty (originality) and brand are moderately correlated ($r = 0.24$; sig = .00). Part of originality perception is a strong brand and a status that you gain using this product. When innovating proposed value this can be done through communication and image innovation.

The correlation between utilization (performance) and customization ($r = 0.22$; sig = .00) has moderate intensity. The performance of a value proposed can be gained if customizing and adapting the product to customers' needs.

Little stronger than moderate is the correlation between design and brand (r = 0.36; sig. = .00). The brand and design are naturally correlated because both influence the perception of customers, are a part of communication and are in the spotlight. This also indicates that value of a brand can be valorized by a strong design.

Regarding the social sciences a stronger correlation was identified between decrease of costs and decrease of risk (r = 0.42; sig = .00). This is the strongest correlation overall between elements of proposed value. This correlation highlights the fact that if you propose decreasing of risk you also decrease company's costs. Either because some risks do not emerge and so spare costs or when calculating, lower level of risk is projected in lower coefficient so the calculation of potential costs of risks will be lower.

There is a moderate correlation between decrease of risk and accessibility (r = 0.25; sig = .00). The higher accessibility decreases risk because the risks associated with obstacles, steps, or time involved with limited accessibility are diminished.

Between the elements accessibility and comfort (r = 0.37; sig = .00) a little stronger than moderate correlation exists. The proposed accessibility contributes to proposed comfort. To propose high comfort the condition of easy access must be met.

correlation analysis		**U/P**	**CU**	**DE**	**BR**	**PR**	**DC**	**DR**	**AC**	**CO**
Correlation		**.25**	**.23**	**.35**	**.24**	-.11	.09	.11	-.01	.05
Significance	**N/O**	**.00**	**.00**	**.00**	**.00**	.10	.18	.10	.84	.44
Number		**226**	**227**	**222**	**228**	225	227	224	225	223
Correlation			**.22**	-.02	.01	.16	.00	.10	.06	.14
Significance	**U/P**		**.00**	.78	.83	.02	1.00	.13	.36	.04
Number			**228**	222	228	226	228	227	227	225
Correlation				.10	.04	-.12	-.07	.14	.07	.09
Significance	**CU**			.16	.60	.07	.28	.04	.31	.17
Number				223	229	227	228	226	227	225
Correlation					**.36**	-.13	-.05	.03	-.05	.07
Significance	**DE**				**.00**	.05	.46	.71	.48	.32
Number					**224**	221	222	220	221	221
Correlation						-.15	.04	.08	.13	.16
Significance	**BR**					.03	.55	.20	.05	.01
Number						227	228	226	227	225
Correlation							.13	.18	.14	-.07
Significance	**PR**						.04	.01	.04	.32
Number							226	225	224	223
Correlation								**.42**	.04	-.12
Significance	**DC**							**.00**	.32	.17
Number								**226**	226	224
Correlation									**.25**	.04
Significance	**DR**								**.00**	.54
Number									**225**	224
Correlation										**.37**
Significance	**AC**									**.00**
Number										**225**

Abbreviations: **N/O** = Novelty/Originality ; **U/P** =Utilization/Performance; **CU** = Customization;

DE = Design; **BR** = Brand; **PR** = Price; **DC** = Decrease of Costs; **DR** = Decrease of Risk; **AC** =Accessibility; **CO** = Comfort

Table 2: Intragroup correlations between elements of value proposed

For the better understanding of our findings we undertook the regression analysis with following results. When analyzing using simple linear regression, no R-squared reached by us set requirement of 20 or more. However the multiple regression analysis brought the required result. The model consisting of four variables met our requirements.

For a proposed value to be regarded as original it is required that the product is high performance, high design and has high level of customization. To describe this model a multiple regression was made. The linear regression model is as followed: **N/O = 0.81 + 0.27xU/P + 0.20xCU + 0.29xDE.** The corresponding data is displayed in the **Tables 3, 4 and 5**. This model explains 20 to 21 percent of novelty (originality) value depending if it is derived from the sample or from the population. The biggest impact on novelty (originality) is due to design, next is utilization (performance) and smallest impact is done by customization. The model as a whole is significant and all variables are also significant. Due to the analysis we can accept that the perception of novelty (originality) is influenced by three interactive variables: utilization (performance), customization and design and we refuse that there is no such dependence. If we increase the design, utilization (performance) and customization in this order all by one, the novelty (originality) will be increased by 0.29 from design, 0.27 from utilization (performance) and 0.2 from customization.

R	R Square	Adjusted R Square	Std. Error of the Estimate
.46	.21	.20	.88

Table 3: Model Summary (novelty/originality)

	Sum of Squares	df	Mean Square	F	Significance
Regression	45.11	3	15.04	19.31	.00
Residual	167.39	215	.78		
Total	212.50	218			

Table 4: ANOVA (novelty/originality)

	B	Std. Error	Beta	t	Significance
(Constant)	.81	.41	.00	1.96	.05
Utilization /Performance	.27	.08	.20	3.29	.00
Customization	.20	.07	.18	2.90	.00
Design	.29	.05	.33	5.50	.00

Table 5: Coefficients (novelty/originality)

The model means that the product to be considered as new (original) it needs to bring higher level of performance, customization and design as illustrated in **Figure 1**. Three fundamental innovation fields are mentioned. The performance represent the site of what does the product really do. The customization represents how much is the product adapted to consumer's needs. And the design represents the superficial value.

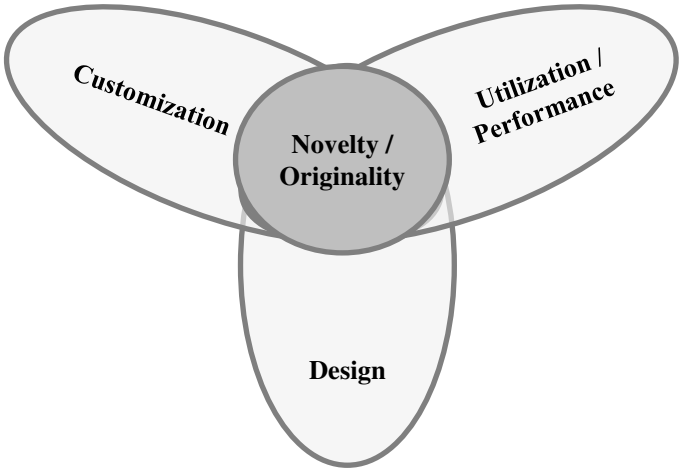

Figure 2: Factors influencing the novelty (originality)

5 Discussion

As presented in the results there are 9 correlations that we consider as significant. This means that there are relations between individual elements of values proposed. Even more significant is a multiple regression that we consider as significant that it implies that there is a synergic effect between customization, design and utilization (performance) influencing novelty (originality). Both these findings strongly reinforce the alternative hypothesis of relation between at least some of the elements. So we accept the alternative hypothesis that there are significant relations between elements of value proposed.

The limitations are that there are only a few correlations and when trying to explain the correlations with simple regression only a weak influence is measured. This could be due to data limitation and should be further studied.

Our finding enriches the present theory by offering to highlight the related elements of proposed value and to group the elements that offer a synergic effect to make these relations evident for business model building or innovation.

In the future research we will focus on other intragroup relations within the business model and will also study the intergroup relations.

6 Conclusion

Our hypothesis that the elements within a group of values proposed are not alone standing alternatives but there is a relationship between intragroup elements that lead to potential synergic effect was accepted. Knowing the related values lets us know the hot spots where the actions have the strongest effect.

Studying the intragroup relation between elements of value proposed within the business model we found nine interesting correlations between novelty (originality) and utilization (performance), novelty

(originality) and customization, novelty (originality) and design, novelty (originality) and brand, utilization (performance) and customization, design and brand, decrease of costs and decrease of risk, decrease of risk and accessibility, accessibility and comfort.

A multiple relation was identified between customization, design and utilization (performance) influencing novelty (originality). To consider a product to be new (original) it needs to bring higher level of performance, customization and design. Three fundamental innovation fields are mentioned. The performance represents the field of what does the product really do. The customization represents how much it is adapted to consumer's needs. And the design represents the superficial value.

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