

ARAŞTIRMA MAKALESİ / RESEARCH ARTICLE

BUILDING A NEW BUSINESS MODEL USING CANVAS MODEL: AN APPLICATION FOR A SHOPPING CENTRE*

KANVAS İŞ MODELİ ANALİZ YÖNTEMİ İLE YENİ BİR İŞ MODELİ ÜRETİMİ: ALIŞVERİŞ MERKEZİ ÖRNEĞİ

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ABSTRACT

Technological developments and changes in customer demands cause businesses to handle business models repeatedly. At this point, canvas business model is used as an analysis method in order to successfully revise the old business models and build new business models on a more solid basis. In the study, a renewal and improvement models are designed on a business model for a large shopping center in Isparta. A questionnaire study is conducted for the examination of the customers, and the canvas business model canvas and score table are prepared for the current situation. As a result, suggestions about the necessary changes are presented, the success of the shopping center and the success of the strategies for bringing the customer satisfaction to the targeted level are demonstrated numerically and visually by the analysis approach of the canvas business model.

Keywords: Canvas Business Model, Customer Key Factors, Improvement.

JEL Classification Codes: L16, L81, M31.

ÖZ

Teknolojik gelişmeler ve müşteri isteklerinde meydana gelen değişimler, işletmelerin iş modellerini yeniden ve sürekli olarak ele almalarına neden olmaktadır. Bu noktada, eski iş modellerinin başarılı bir şekilde revize edilebilmesi ve yeni iş modellerinin daha sağlam temeller üzerine kurulması amacıyla kanvas iş modeli analiz yöntemi karşımıza çıkmaktadır. Bu çalışmada, Isparta ilinde faaliyet gösteren büyük bir alışveriş merkezi için iş modeli üzerinde yenileme ve iyileştirme modeli tasarlanmıştır. Müşterinin incelenmesi için anket çalışması yapılmış ve elde edilen veriler ile mevcut durum için kanvas iş modeli tuvali ve puan tablosu oluşturulmuştur. Sonuçta, yapılması gereken değişikliklerle ilgili öneriler sunulmuş, alışveriş merkezinin rekabet üstünlüğü ile

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müşteri memnuniyetinin hedeflenen seviyeye getirilmesi için ortaya konulan stratejilerin başarısı kanvas iş modeli analiz yöntemi ile sayısal ve görsel olarak gösterilmiştir.

Anahtar Kelimeler: Kanvas İş Modeli, Müşteri Anahtar Faktörleri, İyileştirme.

JEL Sınıflandırma Kodları: L16, L81, M31.

1. INTRODUCTION

A business model that has developed a company, whether that model is openly articulated or not. On the other hand, the business models consider thought or technology taken to market through two different business models will yield two different economic results at the same view. They are needed in consequence of the features of market economies using consumer preference, transaction costs, heterogeneity amongst consumers and producers, and competition (Stuckenberg, Fieft and Loser, 2011: 2).

Nowadays, as with any other field, there are innovative approaches to the business model development process. The models, which are designed for the companies of the future, which reveal the disadvantages of the old business models, are always one step ahead. So, the service in companies is fostered by way of the increasing global competition, advances in technology, and the search for market opportunities (Zolnowski, Weiß and Böhmman, 2014:719). As with any other field, there are some innovative approaches to the business model development process. The customers, partners, and also, suppliers as a stakeholder attach importance to the total value creation of a business model for building up the entire value. Some opportunities are supplied to unveil the potential or confidential technological value using a business model from the managers. As a result, considering the right value, segmentation, creating a value chain, cost structure, profit potential, value network and competitive strategy strengthen the business model on the commercialization process (Coes, 2014: 85).

This paper aims to analyze the existing business model for a shopping centre and then, how the new business model can be designed considering the developing technological effects and aspects on customer behaviors by designing a canvas business model. The rest of this paper is organized as follows: in section 2, the canvas business model is explained in detail by using a related literature. Then, a case study with a questionnaire is provided on a shopping centre of Isparta, Turkey in section 3. After determining the requirements, the experimental study is given in section 4. Finally, conclusions with considering on the further research are given in section 5.

2. CANVAS BUSINESS MODEL

According to scientific literature, the lean canvas business model is fundamentally a form to describe the business and it is a well-known approach, especially in start-up-based companies. It starts with an opinion, then, building the product, and then, to measure the different metrics when the product is ready to use. The obtained data is evaluated with a new insight under lean thinking and planning (Nidagundi and Novickis, 2017: 100). Another study is developed a new business model approach for service environments is called as Service Business Model Canvas (SBMC) (Zolnowski et al., 2014: 720). In the SBMC, the development of a canvas is possible to use beginning points indifferently. All activities that are created value for the customer cause with a specific cost. What is expected here is that all the cost-element activities add more value to the goods or services produced by the company (Ulgen and Mirze, 2014: 122). As a BMC table is given by nine buildings are listed and given in Figure 1 for the Business Model Canvas (Osterwalder and Pigneur, 2010: 44). These are the elements that make up the definition of the four main elements (customer-value proposition (or the thing which is sold)- infrastructure-financial continuity) that provide the existence of a company or business. These elements are explained in detail (Osterwalder and Pigneur, 2010: 16-17; Pembe Muhtaroglu, Demir, Obalı and Girgin, 2013: 33-36; Coes, 2014: 19):

- Customer Segments are a group of customers or businesses that an organization is aiming to sell products or services. They determine the target customer portfolio of an organization.
- Value Propositions can be explained as products and value-added services supplied by an organization in order to complete customer needs and are of value to customers.

- Channels describe how organizations keep in touch with their customers and suppliers' value propositions to them.
- Customer Relationships are the connections between the value propositions and customer segments. By the way, the customers are connected to a company.
- Revenue Streams define by delivering value propositions to consider the incoming money stream of an organization.
- Key Resources are inputs and abilities for the required organization needs to deliver value to customers.
- Key Activities describe the acts that organizations carry out to create, market, and deliver value propositions to their customers and a make profit out of them.
- Key Partners focus on the voluntarily initiated cooperative agreement of an organization with other organizations to carry out activities relevant to value propositions. It is required for the value creation in business models because these key partners complement the organizational resources.
- Cost Structure explains the costs acquired by a firm for delivering value propositions to its customers and doing all other business activities. It can be described depending on the business model as cost-driven, value-driven, fixed costs and variable costs.

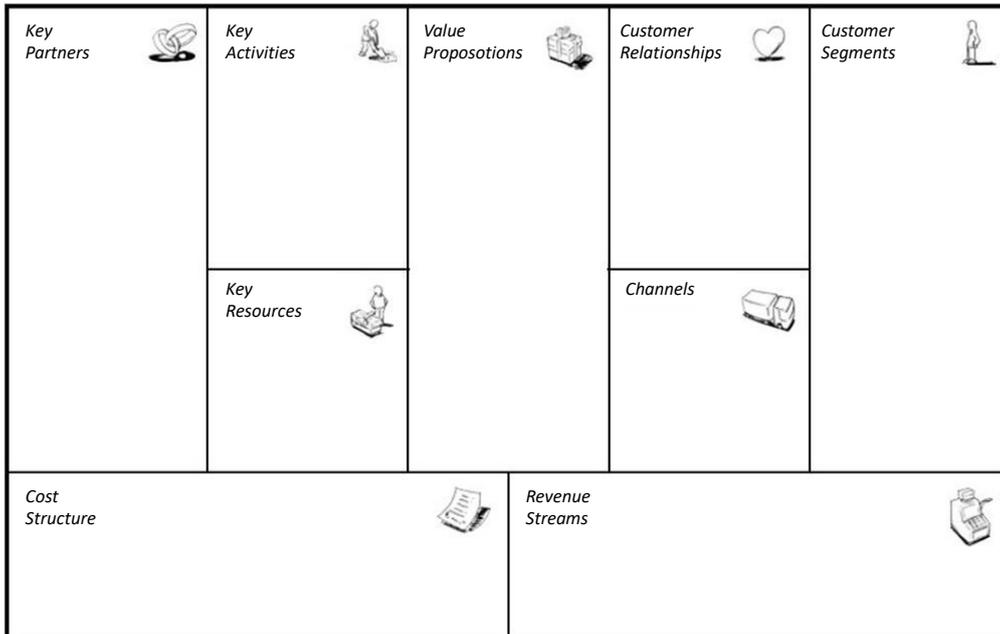


Figure 1. Business Model Canvas Chart

Source: (Osterwalder and Pigneur, 2010: 44)

Using these elements, BMC makes to detect the level of the ineffective and excessive cost in the value-creating process to customer minds at first. Moreover, it detects the level of the lost economic profit in all measures for the customers. Thus, BMC gives an opportunity for making effective budgeting with determining the coming changes for the whole environment (Dudin, Kutsuri, Fedorova, Dzusova, and Namitulina, 2015: 292). Similarly, Triple Layer Business Model Canvas (TLBMC) given in Figure 2 as a practical tool is also developed for integrating economic and social concerns into a holistic view of an organization's business model. TLBMC method supports creative searching for reaching a sustainable business model (Joyce and Paquin, 2016: 1476). Their study is defined the Business Model Canvas (BMC), which can help system users for clarifying the organizational aspects.

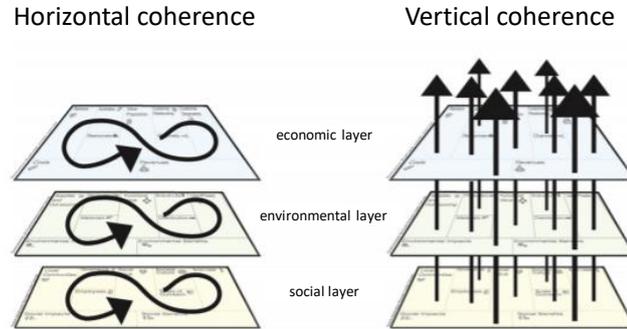


Figure 2. Triple Layer Business Model Canvas Approach

Source: (Joyce and Paquin, 2016: 1482).

All of these models which are designed for the companies of the future, reveal the disadvantages of the old business models are always one step ahead. Business Model Canvas is also an analysis method used by leading companies around the world such as Google, Apple, Twitter, etc. However, there are not enough cases as an application in Turkey. So, this paper wants to take into account BMC and its advantages for industrial practitioners and researchers. Consequently, the aim of this study is to extend the Business Model Canvas analysis method so that the companies in Turkey can adopt this method and increase their service qualifications. It is also aimed to raise awareness of this issue.

In this study, Iyas Park Shopping Center (IPSC), which supported the project and examined its processes within the scope of the project, constitutes the first step of this innovation movement. In this context, it is aimed to determine the deficiencies of IPSC, which has been operating since 2010 in Isparta City of Turkey, by investigating on the current business model, and to start to implement a customer-focused business model that will provide more profit with minimum cost. In line with these objectives, goals to be achieved are to increase the competitiveness, to increase customer satisfaction, then to increase the interest of customers and to increase the profitability of IPSC at a significant rate by responding to the needs of the day. In this study, before designing a new business model, we interviewed the shopping center and made inferences about the methods and management strategies that were already implemented and conducted a survey for the examination of the focal point to the customer. Within the scope of the survey, the customer segments of the shopping center and at the same time, the customers' shopping tendencies, desires, needs and dissatisfaction were determined in detail.

3. CASE STUDY

Firstly, the preliminary information has been given with a presentation for IPSC about the research problem as a project. Then, the project was discussed with the authorities and it was introduced with the help of the idea presentation and necessary permissions were obtained. After the preparations completed, the survey conducted and evaluated in detail.

3.1. The Population of the Study and Sample Size

The population of this study is the consumers of the shopping center in Isparta. All age groups were classified as the population in Isparta, 0-24, 25-35, 36-45, 46-65 and over 65 years old. According to the data obtained from the shopping center, the average number of visitors per day is 20,000.

$$n = \frac{N \cdot t^2 \cdot p \cdot q}{d^2 \cdot (N - 1)} + t^2 \cdot p \cdot q \quad (1)$$

n : Sample Size

N : Population

p : Prevalence of Examined Event (Probability of Realization)

q : Non-Prevalence of Examined Event (Probability of Non-Realization)

d : Significance Level (Sampling Error)

t : Critical Value of t

According to the equation; $N = 20000$; $p = 0.9$; $q = (1-0.9) = 0.1$; $d = 0.05$; $t = 1.96$ since the sample size is calculated as;

$$n = \frac{20000(1.96)^2(0.9)(0.1)}{(0.05)^2(20000 - 1)} + (1.96)^2(0.9)(0.1) \cong 139 \quad (2)$$

According to Eq. (2), the sample size of 139 units can represent the population at $\pm 5\%$ error level.

3.2. Building a Scoring System

When the scoring system was established, at first, the survey questions related to elements were identified and matched. These questions were examined in two groups, demographic questions and Likert scale questions (Bosgelmez, 2006). When the weighting method is applied directly for the Likert questions, demographic questions are scored between 0 and 5, provided that the target group gets the highest score first with nominal valuation. All scores were then collected on the same table and the final score was obtained and the nominal calculation is given as follows:

$$\text{Total Value} = \text{Value} * \text{Number of People} \quad (3)$$

$$\text{Score} = \left(\frac{\sum \text{Total Value}}{\sum \text{Number of People}} \right) \quad (4)$$

$$\text{Percentage (\%)} = \left(\frac{\text{Score}}{5} \right) \quad (5)$$

$$\text{Point} = \text{Percentage (\%)} * \text{Question Point} \quad (6)$$

In the same way, if a sample calculation is done for the weighting method, each sub-segment of each element was scored over 200 points. Since there is no numerical survey average value for demographic questions, the nominal calculation scores shown above have been utilized.

$$\text{Score} = \left(\frac{\text{Survey Average}}{5} \right) * \text{Point} \quad (7)$$

$$\text{Percentage (\%)} = \left(\frac{\text{Score}}{5} \right) * 100 \quad (8)$$

$$\text{Weight} = \text{Score} / 200 \quad (9)$$

According to Table 1, a demographic question was selected as a sample. Since there were no numerical outputs obtained directly from the population, nominal scoring was used and the results were digitized. All the formulas used are given above. All weighed values, people who selected given options and their multiplied total values are listed.

Table 1. A Sample for Calculation of the Nominal Value

No	Question						
2D	Which service offered by Iyas Park Shopping Center is more successful?						
		<i>Value</i>	<i># of People</i>	<i>Total</i>	<i>Score</i>	<i>%</i>	<i>Points</i>
	Shopping	5	76	380			
	Cinema	4	30	90			
	Fast Food	3	38	152			
	Special Day Activity	2	5	10			
	Other	1	14	14			
		15	163	646	3.962	0.792	11.889

Table 2. A Sample for Calculation of the Weighted Nominal Value

Element	Survey Average	Point	Score	%	Weight
(1) Key Partners (5)					
1A	3.108696	5	3.109	62.174	0.0156

Unlike the nominal calculation, weighted valuation method was used directly numerical outputs. As seen on the table, a Likert scale question was given as a sample. The score was calculated with the average value of survey output and question point. As a result, the weights were obtained using given formulas.

4. EXPERIMENTAL RESULTS

4.1. Suggestions

At this stage, an improved model was prepared by making inferences from the obtained data and interpreted in the previous period. Decisions and suggestions are listed below. In the case of reworking on the score table, it is seen that the designed new model is valid and better. Thus, the compatibility between the business model and the operation of the shopping center has been provided in detail:

- **Design:** According to the survey results, it was concluded that the customers did not consider IPSC as open for innovations enough and did not solve their problems seriously. For this reason, innovations and customer interest should be drawn and different experiences should be kept alive to make shop designs more enjoyable and to create differentiated customer experiences.
- **Children's Playing Area:** Based on the 25-35 ages range with the highest income level in the age group, which is the target group of the new business model. Especially with the aim of bringing solutions to the problems of the person who have children playgrounds should be created so that they can make purchases comfortably during their shopping and that they can have a pleasant time entrusting their children safely on time.
- **Customer Relationships:** Based on the responses to the survey questions on customer satisfaction, it was determined that the participants were not very satisfied with customer relations. In order to increase the satisfaction rate, normative information and evaluation meetings with employees of IPSC should be organized and training should be given in the areas where there is incompetence's.
- **'Rosi' Card Application:** Nowadays, it is the greatest aim of marketing activities to create customer loyalty. For this reason, many companies offer cards that earn points during shopping. Likewise, given the need for customers to feel special. Customer information should be recorded in the data base and applications such as sending a message on special days should be realized and customized campaigns for these days should be made. Particularly in cash draws, cash drawers should be more advantageous.
- **Luggage Locker Area Application:** Since IPSC is located next to Isparta coach bus station, it is necessary to provide shopping areas by creating areas where travelers can safely secure their goods during waiting times.

4.2. Creating the Business Canvas Model

In practice, the business canvas is shown in Figure 3. The initial state (red) and the improved state (blue) are also indicated.



Figure 3. Business Model Canvas for Initial and Improved Cases

4.3. Numerical Results

The sample size is surveyed and the replies are examined for the evaluation between initial and improved cases. Numerical results obtained as a result of the study are given in Table 3 together with survey questions. According to results, the strong key performance indicators (KPIs) are brand diversity, decorations, accessible, innovations, solving the problems, after sales, and customer relationship management. On the other way, the weak KPIs are cultural activities and price consistency. In order to design a new road map using Canvas model design, the continuous improvement approach should be applied in every period. About the final evaluation, the initial state score was calculated as 126.865 out of 200, and in the improved case, the segments of each building stone were re-scored to 153.590 as a result of these score improvements. In other words, while the initial evaluation of the business model was 63.4%, this ratio increased to 76.8% after improvement and the relative improvement rate is 21%.

Table 3. Numerical Results for Initial and Improved Cases on Survey

Building Blocks	Initial Case			Improved Case		
	Avg	Pt	Score	Avg	Pt	Score
1) Key Partners (5)						
1A- Iyas Park Shopping Center's brand diversity is sufficient.	3.109	5	3.109	3.109	5	3.109
2) Key Activities (30)						
2A- IPSC's cultural activities are sufficient	2.812	5	2.812	2.812	5	2.812
2B- IPSC's special day decorations are sufficient.	2.920	5	2.920	4.620	5	4.620
2C- I am satisfied with the opening and closing hours of IPSC	2.949	5	2.949	2.949	5	2.949
2D- Which service offered by IPSC is more successful?						
Shopping () Cinema () Fast Food () Special day activity	3.963	15	1.890	3.963	15	1.890
() Other ()						

Building Blocks	Initial Case			Improved Case		
	Avg	Pt	Score	Avg	Pt	Score
3) Key Resources (5)						
3A- How do you spend your expenses at IPSC? Cash () Credit Card () Bank Card () Other ()	1.479	1	0.296	1.681	1	0.336
3B- IPSC is easily accessible.	4.094	1	0.819	4.094	1	0.819
3C- I am satisfied with the communication and relationships with the customers of IPSC.	3.312	1	0.662	3.312	1	0.662
3D- I think IPSC is an obvious shopping centre for innovations.	3.072	1	0.614	3.072	1	0.614
3E- I think IPSC employees are good-humoured	3.413	1	0.683	3.413	1	0.683
4) Value Proposition (45)						
4A- IPSC is easily accessible.	4.094	5	4.094	4.094	5	4.094
4B- I think the prices of the products are appropriate in IPSC	3.225	5	3.225	3.225	5	3.225
4C- I think IPSC is an obvious shopping centre for innovations.	3.072	15	9.217	4.872	15	14.617
4D- IPSC offers good opportunities to socialize with my friends.	3.442	5	3.442	3.442	5	3.442
4E- Which problems do you solve with IPSC?	1.109	15	3.326	4.109	15	12.326
5) Customer Relationships (40)						
5A- I am satisfied with the communication and relationships with the customers of IPSC.	3.312	10	6.623	4.512	10	9.023
5B- I am satisfied with the after sales service of IPSC	3.384	10	6.768	4.584	10	9.168
5C- I like the lighting, decoration and design of IPSC.	3.181	5	3.181	4.581	5	4.581
5D- I am having a nice time at IPSC	3.514	5	3.514	4.514	5	4.514
5E- I think IPSC employees are good-humoured	3.413	10	6.826	4.413	10	8.826
6) Customer Segments (40)						
6A- Age: 10-24() 25-35() 36-45() 46-55() 56-65() 65+()	4.043	10	8.087	4.165	10	8.329
6B- Gender: Female () Male()	3.913	10	7.826	3.913	10	7.826
6C- Education level: Primary Education () High School () Associate degrees () Bachelor's Degrees () Master's Degrees () Doctorates ()	4.043	10	8.087	4.043	10	8.087
6D- Income (TL): 0-1000 () 1000-3000 () 3000-5000 () 5000+()	3.529	10	7.058	3.529	10	7.058
7) Channels (10)						
7A- IPSC is easily accessible.	3.072	10	6.145	3.072	10	6.145
8) Revenue Streams (20)						
8A- What kind of expenses do you make from IPSC? Clothes () Accessories () Electronics () Fast Food () Cosmetics () Other ()	3.182	10	6.364	3.182	10	6.364
8B- How do you spend your expenses at IPSC? Cash () Credit Card () Bank Card () Other ()	1.479	10	2.959	1.681	10	3.362
9) Cost Structure (5)						
9A- I like the lighting, decoration and design of IPSC.	3.181	1	0.636	4.881	1	0.976
9B- IPSC's cultural activities are sufficient	2.812	1	0.562	2.812	1	0.562
9C- IPSC's special day decorations are sufficient.	2.920	1	0.584	4.920	1	0.984
9D- Which service offered by IPSC is more successful? Shopping () Cinema () Fast Food () Special day activity () Other ()	3.963	2	1.585	3.963	2	1.585
		200	126.865		200	153.590
		%	63.4		%	76.8

5. CONCLUSION

The Business Model Canvas (BMC) analysis method is the main research topic of this study and it is a method that has been successful in many international companies that have proven their leadership as a financial value in the global world. Also, for providing the sustainable financial growth of an enterprise with economic entities and expected profit, the demand is the one of the most important factors in order to satisfy the customer requirements. At this time, BMC approach helps to detect the success level in the intensity and rate of outgoing and incoming cash flows considering the all possible activities in future for determining the effective budget.

In this study, the case study performed in a major shopping center, which is visited by 20,000 people in a day, is rationally and scientifically assessed and digitized. In this way, weaknesses and deficiencies are easily identified, and with the help of improvements, they have become an advantage in terms of business and country economic. At the same time, the value-creating elements for the customers were identified and the target group was selected within the cause-effect relationship. This has led to a customer-focused business model that provides a competitive advantage over traditional situations. Finally, it has been observed that customer expectations are met and satisfaction level is increased.

As further research, BMC applications can be studied in different sectors. This helps us to ensure that the model can work in various areas. Also, applications can vary. Future work includes more applications and long-term customer satisfaction surveys because there are plenty of practical applications for the results of this study. Then, the same problem can be re-analyzed with models such as Lean Canvas. BMC can be used many fields such as data applications, supply chain management, process modeling, etc. for budgeting in various areas and branches of real economics. Organizations need to choose methods or plans for their future, so this model can help them for defining strategy.

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