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# Business model in marketplace industry using business model canvas approach: An e-commerce case study

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**Abstract.** The advancement of technology has huge impact on commerce world, especially in the marketplace that has shifted from brick-and-mortar to digital/online marketplace. Grasping the opportunity, ABC joined venture with DEF to create a new online venture namely XYZ Online Shop – an e-commerce website that has large segmentations. The objective of this research is to analyze the business model conducted by XYZ Online Shop by utilizing Business Model Canvas Framework and SWOT analysis. The results obtained from the research are that the business model conducted by XYZ Online Shop excels in customer relationship block and still needs to improve key partner and key activities blocks. Business Model Canvas along with SWOT analysis describes how XYZ Online Shop creates, delivers, and captures value based on its internal and external environments.

**Keywords:** business model canvas, swot, e-commerce

## 1. Introduction

E-commerce is not a foreign word in the business world nowadays. E-commerce is a new system or paradigm in the business world, which shifts the paradigm of traditional commerce into electronic commerce by utilizing ICT (Information and Communication Technology), or in other words internet technology. The survey conducted by Mars Indonesia-a research company-revealed that 90.5 million Indonesians are connected to Internet. Therefore Indonesia has the highest e-commerce potential growth in the world.

In recent years, more and more business doers, both large companies and retailers, have shifted or expanded into digital business. The number of e-commerce players continues to grow, reinforced by the surveys conducted by domestic and foreign information technology research institutes.

Electronic commerce is a powerful concept and process that has fundamentally changed the current of human life. Electronic commerce is one of the main criteria of revolution of Information Technology and communication in the field of economy [1]. E-Commerce is emerging as a new way of helping business enterprises to compete in the market and thus contributing to economic success. Basically e-commerce is the buying and selling of goods and services on the Internet and on different online networks especially World Wide Web. The development of e-commerce has led to companies moving much of their business efforts to online environments [5]. E-commerce has been noted as a strong tool for sustainable organizational growth.

Aulia E. Marinto, the Chairman of the Indonesian E-Commerce Association (idEA), through a recent press release quoted from Economic Census 2016 data released by the Central Bureau of Statistics (BPS) that e-Commerce industry in the last ten years grew about seventeen percent with the total number of e-commerce business reached 26.2 million units [7].

Meanwhile, global research from Bloomberg stated that in 2020 more than half of Indonesia's population would be involved in e-Commerce activities. McKinsey also stated in a report titled



'Unlocking Indonesia's Digital Opportunity' that the switch to the digital realm would boost economic growth to \$ 150 billion by 2025. The report also added that 73 percent of internet users in Indonesia access the internet via mobile devices [4]. This figure is expected to continue to grow in the next five years.

Aulia also supported this by stating "The massive use of smart phones is also one of the supporting factors for the growth of e-Commerce industry in Indonesia."

This phenomenon is what makes one of the big mobile service provider companies in Indonesia, PT ABC to join venture with foreign company PT DEY to form an open marketplace. In this research hereinafter referred to as XYZ online store. XYZ website is an e-commerce website that presents a virtual online shop to potential buyers as well as sellers in one place exactly like the concept in a shopping mall. The prospective sellers can advertise as many products as they can and they can expand their market share while the potential buyers can freely purchase any product of rich variety and enjoy the benefits such as discounts provided by the sellers. Therefore, XYZ Online shop has the concept of C2C and B2C marketplaces.

The development of XYZ Online shop continues to grow well from year to year. Based on the data recorded by XYZ Online shop until June 2017, XYZ Online shop already has more than 63,000 sellers and more than 8 million products that divided into 8 categories: gadgets/computers, electronics, fashion, beauty & health, children and infants, home/garden, hobby, and service/food. Additionally, in 2016, XYZ Online Shop was the only e-commerce company from Indonesia that participated in the Korean program Sale FESTA; Korea's largest shopping festival held in cooperation with the Ministry of Commerce, Industry and Energy, with the Ministry of Culture, Sports and Tourism of South Korea. In order to run the business successfully in the middle of intense business competitions, XYZ Online shop determines to have the right business model in accordance with the goals and objectives set by the XYZ Online shop management. The business model will describe the rationale of how an organization creates, delivers and captures value [3][8][9].

In reference to the issues faced by XYZ Online shop, the objectives of this study are to identify the business model applied using Business Model Canvas approach and to formulate business development strategy alternatives from the study of SWOT.

SWOT method is utilized to analyze the internal and external factors affecting the company and results of the SWOT matrix are used to formulate an alternative strategy of business development [13] [6][11]. While Business Model Canvas approach is used to obtain the right business model as a refinement and improvement of the current business model aiming to achieve the company's business development objectives [2] [3] [10] [14].

Business Model is a hypothesis about how a company makes money in the long run: what the company will sell, and to whom, how the company will collect revenue, what technology will be used, when the company will rely on its business partners and about the cost management [3].

There are nine basic building blocks on a business model that shows how to think about how a company makes money- the combined ninth block is called Business Model Canvas (BMC). The nine blocks cover four key areas of business: customers, supply, infrastructure, and financial viability. The division consists of 9 interlinked business blocks, namely: (1) Customer segment; (2) Value Proposition; (3) Channel; (4) Customer Relationship; (5) Revenue Stream; (6) Key Partners; (7) Key Activities; (8) Key Resource; and (9) Cost Structure [9].

## 2. Methods

The study was conducted at XYZ Online Shop Company located in Jakarta from May 2017 to June 2017. XYZ Online shop was selected intentionally (purposive) on the basis that the company is currently developing its business in e-commerce. The data utilized in this study were primary and secondary data. The primary data were the main sources of information required to reveal the research objectives that were obtained from observations, focused-group discussions, and direct interviews with both internal and external respondents. The information of secondary data was obtained from the company documents related to the issues along with the supporting data from the literature, Internet,

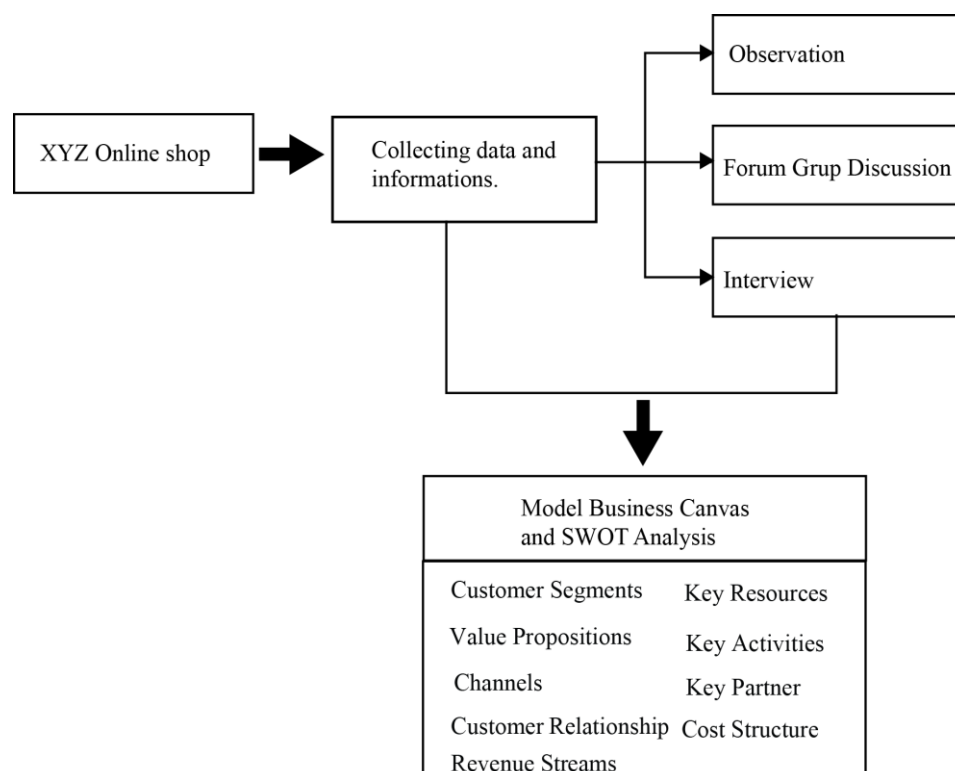
scientific journals and results of previous studies.

This research is a descriptive case study. A case study aims to make a more detailed, in-depth and thorough study of a specific object, which is usually relatively small in a certain period of time [14]. A descriptive research method is used to obtain the overview of the information, explanations and conditions related to the object of study in a factual, accurate and systematic sense.

This study utilized a Business Model Canvas approach. SWOT analysis and pairwise comparison were also utilized on the nine elements of Business Model Canvas to formulate and determine strategy priorities on each business development of XYZ Online shop [12].

Some interviews were also conducted to collect the data. The respondents in this study were classified into internal and external respondents. Internal respondents were selected based on the respondents' knowledge on the condition XYZ Online shop specifically and their full authority in determining policies in XYZ Online shop.

To identify the XYZ Online shop business model that currently applied, the business model was identified through the nine elements of the Business Model Canvas i.e. customer segments, value proposition, channels, customer relationship, revenue streams, key resources, key activities, key partners, and cost structure. Therefore, the next stage is to perform a SWOT analysis on the nine elements of the Business Model Canvas, in which they were a mixture of XYZ Online shop company's internal and external conditions. The research framework can be seen in figure 1.



**Figure 1.** Research framework

### 3. Results And Discussion

#### 3.1 Business Model and Business Type of E-Commerce XYZ Online Shop

In June 2017, XYZ Online shop has successfully added sellers to more than 63,000 sellers and a live listing of 8 million products. Within a year, XYZ Online shop also managed to reach 2 Million users and send over 400,000 thousand products. In addition, they are also able to achieve revenue of 360 billion rupiah in 2016.

XYZ Online shop is one of the sites that use marketplace business model. Marketplace is a business model where the website not only helps to promote merchandise, but also facilitate online transactions.

### *3.2 Identification on Elements of XYZ Online Shop Business Model Canvas*

Result of identification on the nine elements of the XYZ Online shop Business Model Canvas were obtained by conducting observations and Focus-Group Discussion on the internal respondents. The nine elements are interrelated and provide an overview of the state of XYZ Online shop.

1. Value Proposition: XYZ Online shop offers value propositions as a facilitator site that offers different concepts from other sites. The other sites only facilitate advertising space and then submit a deal agreement on the parties' sellers and buyers, in contrast to the concept offered by XYZ. XYZ Online shop facilitates the transaction processes between sellers and buyers. Sellers and buyers do not need to deal directly or conduct a COD (Cash on Delivery), but the security and product purchase warranty will be facilitated by XYZ. XYZ Online shop site takes the open marketplace platform, bringing together sellers and buyers to transact online.
2. Customer Segments: The customers segment served by XYZ Online shop are people who live in big city (urban community) with an active lifestyle. With age ranging from young age category (infants, toddlers and children), adolescents to adults with age group of 17 - 45 years with an estimated monthly income of 500,000 IDR to 10,000,000 IDR. Products categories are available for each age group. The customers profiles of XYZ Online Shop are from middle to upper class segments.
3. Channel: Since XYZ Online shop is a business with a major electronic business base, the XYZ Online shop only has an online channel using: website as the media, mobile websites and mobile/smartphone apps.
4. Customer Relationship: There are two main activities conducted by XYZ Online shop to establish and build relationships with its customers, namely activities to establish a relationship with seller and activities to establish a relationship with buyer.  
In establishing a relationship with seller, the activities undertaken are as follows: XYZ presents Seller Zone service, a physical facility service dedicated to the sellers who want to learn about e-commerce; procurement of workshops to assist sellers in optimizing the use of XYZ website on a regular basis; and award for seller with a good performance within the period of time specified by XYZ.  
In establishing a relationship with buyer, the activities undertaken are as follows: XYZ regularly organize events/promotional activities for consumers or potential customers; provide customer service for 24 hours; and provide warranty in the payment system.
5. Key Partners: In conducting business activities, XYZ currently has several partners that include sellers as suppliers. There are two types of sellers in XYZ Online shop: individuals and businesses. This site has also opened registration for sellers located outside of Indonesia. The seller at XYZ Online shop must scan and upload some official documents such as ID cards and passbooks to register. Another key partners are the payment gateway (FAST PAY), freight forwarders (JNE, TIKI, RPX, FL and GOJEK), and media partners as services provision of advertisements, and buzzers, as well as public figures as ambassadors.
6. Key Activities: Key activities or activities undertaken by XYZ Online shop include several main points, first is the development, fixing and maintenance of the website by the platform department in XYZ company. Second is the marketing activity of the site itself and the planning of promotional strategies undertaken by the marketing department. Third is the activity of maintaining the relationship directly between the XYZ as a provider of facility service for sellers and buyers made by the customer service.
7. Key Resources: The key resources of XYZ Online Shop to run the business model or everyday business activities include the capabilities and expertise possessed by the partners, capabilities and

- expertise of XYZ Online shop employees, the number of human resources and physical assets in the form of buildings and office equipment.
8. Cost Structure: Costs incurred by XYZ Online Shop in creating the value proposition on the product through several series of key activities include employee salary, marketing costs, operational costs, and building rental fees. Among the costs incurred by XYZ Online shop every month, the cost of employee salaries takes the highest percentage up to 40%, followed by 30% for marketing cost, 20% for operational cost, and 10% for building rental fee.
  9. Revenue Streams: XYZ Online shop's revenue stream comes from a seller sales commission.

<p><b>Key Partners:</b></p> <ol style="list-style-type: none"> <li>1. Seller as Supplier</li> <li>2. Payment Gateway Company (FAST PAY)</li> <li>3. Shipping Company (JNE, TIKI, RPX, FL, GOJEK)</li> <li>4. Media Partner and Public Figure</li> </ol>	<p><b>Key Activities:</b></p> <ol style="list-style-type: none"> <li>1. Development, Fixing and Maintenance Platform</li> <li>2. Marketing and Promotion Strategy</li> <li>3. Customer Service</li> </ol>	<p><b>Value Proposition:</b></p> <ol style="list-style-type: none"> <li>1. Open marketplace that facilitate the transaction process between seller and buyer</li> <li>2. Sellers and buyers do not need to deal directly or conduct a COD (Cash on Delivery)</li> <li>3. All security and product purchase warranty will be facilitated by XYZ</li> </ol>	<p><b>Customer Relationship:</b></p> <ol style="list-style-type: none"> <li>1. Maintaining seller relationship with seller zone service, workshop and reward</li> <li>2. Maintaining buyer relationship with promotion event, 24 hours customer service, warranty of payment system.</li> </ol>	<p><b>Customer Segments:</b></p> <ol style="list-style-type: none"> <li>1. All range (baby, toddler, teenage, adult, elderly) category product</li> <li>2. 17 - 45 years as primary age segmentation</li> <li>3. Middle to upper class</li> <li>4. Income 500.000 IDR - 10.000.000 IDR</li> </ol>
<p><b>Cost Structure:</b></p> <ol style="list-style-type: none"> <li>1. Employee Cost</li> <li>2. Marketing Cost</li> <li>3. Operational Cost</li> <li>4. Investment and Development Cost</li> </ol>		<p><b>Revenue Streams:</b></p> <ol style="list-style-type: none"> <li>1. Revenue from Seller Commission</li> </ol>		

**Figure 2.** Business Model of XYZ Online shop

3.3 SWOT Analysis

The following stage after identifying XYZ Online shop business model was to conduct a SWOT analysis on the nine elements of Business Model Canvas obtained from the observations, focus-group discussions with the internal respondents, and interviews with the external respondents. SWOT analysis on the nine elements of XYZ Online shop Business Model Canvas can be seen in Figure 3.

Element	Strength (S)	Weakness (W)	Opportunity (O)	Threat (T)
<b>Customer Segments</b>	Product variations Customer network	Buyers often complain about shipping costs	No scale of segmentation	Competitor with same segmentation
<b>Value Propositions</b>	Topten market leader No COD (Cash On Delivery) Security warranty Payment process warranty	Some menu on site is confusing	Platform innovation New technology	Inovation from another marketplace site New government rules
<b>Channels</b>	Three different media (website, mobile web, smartphone apps)	Online service only	Worldwide	Hackers Virus
<b>Customer Relationship</b>	Seller Zone Service Workshop for seller Award for seller Promotion event for buyer 24 hr customer service payment waranty	Customer Relationship budgets	New business opportunity and access to stakeholders	Unhealthy competition Unsynchronized government policies
<b>Revenue Streams</b>	Marketing works Strong shareholders	Limited working capital Inaccurate administration	Large capital foreign investors with large capital	Payment system is not in accordance with the schedule and commitment
<b>Key Resources</b>	Have lot of seller as supplier Partnership with third party for payment system Experienced human resources	Limitation of MOU	Foreign Supplier MEA Projects in Indonesia	High interest of loan Fluctuation of foreign currency values
<b>Key Activities</b>	Stable platform Three main department business (IT, Marketing, Customer service)	Limitation of employees with appropriate expertise or knowledge required	Supply of manpower from the high education institutions	Low responses from new supplier
<b>Key Partner</b>	Strategic partner network (suppliers, payment gateway, shipping company, media partner, public figure)	Selection and assessment on suppliers are not maximal	New seller in local home indutry	Consultants and customers have direct access to the suppliers Decrease customer trust level
<b>Cost Structure</b>	Funding sources from banks	Payment policy to ABC and DEF group	Funding from international finance agency	Increase of regional minimum wages

**Figure 3** SWOT Analysis On The Nine Elements Of Business Model Canvas Of XYZ Online Shop

#### 4. Conclusion

The research resulted a clear and detailed description of a picture of the business model used by XYZ Online shop, mapped in nine blocks of business model canvas. The proposition value offered by XYZ Online shop is a marketplace that becomes facilitator between seller and buyer that comes with a guaranteed payment system. The next block discusses the customer segments that are divided by products categories and it can be concluded that the customers' segmentation of XYZ Online shop based on age and income are 17-45 years old with middle to upper class segmentation. On channel block XYZ Online shop only has one type of channel that is online. However XYZ Online shop offers

several media that are user friendly ie website, mobile web and smart phone apps. XYZ Online shop has several ways in terms of building a good relationship with its customers that includes sellers and buyers such as activities to provide seller zone service and workshop that enrich the knowledge of seller to e-commerce as well as to hold many promotional programs to increase interest in buying products for buyers.

Key activities conducted by XYZ Online shop include three main steps: first is the development, fixing and maintenance of the website by the platform department in XYZ company; second is the marketing activity of the site itself and the planning of promotional strategies undertaken by the marketing department, and the last is the activity of maintaining the relationship between XYZ as a provider of facility service for sellers and buyers made by the customer service. XYZ Online shop also cooperates with various parties to improve its services such as cooperation with payment Gateway Company and shipping company. Every partner also becomes one of XYZ Online shop's main resource. The other major resources of XYZ Online shop also include the amount of human resources they own and also the company's assets, such as buildings, and office equipment. The addition of employees, suppliers, and marketing management improvements can increase XYZ Online shop revenue.

Based on the results of the conclusions described above, researchers can provide some suggestions that would be useful for the XYZ Online shop as follows:

1. Increase the number of consumers on the segmentation outside the main segmentation by adding local or non-local seller.
2. Continue to innovate in its platform both in the system information and interface design to improve the user experience.
3. Doing more innovative promotional events from competitors to avoid consumers or prospective customers moving to other marketplaces.
4. Increase the number of experienced human resources in the marketing department to improve targeted promotional strategies.
5. The expansion of cooperation with some parties, especially the shipping parties to yield more beneficial services for both parties.

## 5. References

- [1] Niranjnamurthy M, Kavyashree N, Jagannath S and Chahar D 2013 Analysis of e-commerce and m-commerce: advantages, limitations and security issues *Int. J. of Advanced Research in Computer and Communication Engineering* **2(6)** pp 2360-2370
- [2] Bonazzi F L Z and Zilber M A 2014 Innovation and business model: a case study about integration of innovation funnel and business model canvas *Revista Brasileira de Gestao de Negocios* **16(53)** pp 616-637
- [3] Eisenmann T 2001 *Internet Business Models: Text and Cases* (New York: McGraw-Hill/Irwin)
- [4] Das K, Gryseels M, Sudhir P and Tan K T 2016 *Unlocking Indonesia's digital opportunity* (Jakarta: McKinsey Indonesia Office)
- [5] Ahmed A A, Dalbir S and Ibrahim M 2011 Potential e-commerce adoption strategies for libyan organization *Int. J. of Information and Communication Technology Research* **1(7)** pp 321-328
- [6] Awais M and Samin T 2012 Advanced swot analysis of e-commerce *Int. J. of Computer Science* **9(2)** pp 569-574
- [7] Abdurrahman M S 2017 Pertumbuhan e-commerce indonesia tertinggi di dunia *Liputan6* Retrieved from <https://kepulauanserbukab.bps.go.id/backend/fileMenu/Kliping-Berita-Online-Edisi-17-21-Mei-2017.pdf>
- [8] Odeniyi, Ayodeji O, Lawal, Tunde N, Kareem, and Adebowale A E 2015 An appraisal of groupon e-business model *Int. J. of Scientific & Technology Research* **4(1)** pp 291-297
- [9] Osterwalder A and Pigneur Y 2012 *Business model generation* (Jakarta: Elex Media Komputindo)

- [10] Permadi B, Nurmalina R and Kirbrandoko 2015 Analisis pengembangan model bisnis kanvas cv kandura keramik bandung *J. Aplikasi Manajemen* **14(1)** pp 88–97
- [11] Rochman N, Sa'id E G, Daryanto A and Nuryantono N 2011 Analysis of indonesian agroindustry competitiveness in nanotechnology development perspective using SWOT-AHP Method *Int. J. of Business and Management* **6(8)** pp 235–244
- [12] Zikmund W G, Babin B J, Carr J C and Griffin M 2013 *Business research methods 9th edition* (USA: Cengage Learning)
- [13] Kahraman C, Nihan C D and Taufan D 2007 Prioritization of e-government strategies using swot-ahp analysis: the case of turkey *European J. of Information System* **16(8)** pp 284–298
- [14] Mazhaly N, Umar D D, and Moengin P 2014 Penerapan blue ocean strategy di pt. x dalam menghadapi persaingan penjualan automatic tank gauging di indonesia *J. Teknik Industri* **3(2)** pp 241– 254