9. ICIMTech-2021, Adapt_Business_Challenges_in_ The_4.0_Industrial_Revolution_ Through_a_Marketing_Strategy _Case_Study_at_PT.XYZ.pdf

by

Submission date: 31-Mar-2023 09:54AM (UTC+0700)

Submission ID: 2051631712

File name: 9. ICIMTech-2021, Adapt_Business_Challenges_in_The_4.0_Industrial_Revolution_Through_a_Marketing_Strategy_Case_Study_at_PT.XYZ.pdf (607.08K)

Word count: 232

Character count: 26643

Adapt Business Challenges in The 4.0 Industrial Revolution Through a Marketing Strategy
(*Case Study at PT.XYZ*)

Wahyu Sardjono
Information Systems Management Department,
BINUS Graduate Program – Master of Information Systems Management
Bina Nusantara University
Jakarta, Indonesia 11480
wahyu.s@binus.ac.id

Enina Putri
Information Systems Management Department,
BINUS Graduate Program – Master of Information Systems Management
Bina Nusantara University
Jakarta, Indonesia 11480
enina.putri@binus.ac.id

Erna Selviyanti
Health Department
Politeknik Negeri Jember
East Java, Indonesia 68124
ernaselviyanti@polije.ac.id

Aninda Rahmasari
International Relations Department, Faculty of Humanities
Bina Nusantara University
Jakarta, Indonesia 11480
aninda.rahmasari@binus.edu

Abstract - In line with the development of systems and technology in the current industrial revolution 4.0 era, where the platform is implemented in the business sector, the role of the customer becomes the focus of the company's morning business, so it is necessary to look for factors, indicators that influence competitive advantage, so that models can be built evaluation to implement an effective Customer Relationship Management system to solve problems that arise in the company in terms of increasing customer loyalty and satisfaction. The method used is the method of data collection by conducting interviews and distributing questionnaires to various parties involved by using the Customer Relationship Management Value Chain theory as a conceptual framework and the method of data analysis of the results of the questionnaire using the factor analysis method. The results of data processing obtained several new factors and also constituent indicators of these factors and an ideal evaluation model can be built. It can be concluded that the factors associated with evaluating the implementation of Customer Relationship Management are Customer Service Experience, Customer Experience Value, Business Value Proposition, Product Development and Communication Core, and Lack of Services and Supply, so that through these factors models can be built for implementation the right and relevant industrial revolution 4.0 platform for customers.

Keywords—adaption, business challenge, 4.0 industrial revolution, business value, marketing strategy

I. INTRODUCTION

The development of the all-digital information technology world is currently being experienced by Indonesia. The development of technology in the field of information in Indonesia which is now growing and developing affects the activities of human life. Human activities that are quite felt the effects of this development are business activities. Organizations that are still using manual information systems and have not yet implemented information systems planning will be left behind by other organizations that have used information systems as support for the organization's business activities. Therefore, companies need various information systems-based solutions that can support entrepreneurs in running their business wheels. PT. XYZ is one of the distributors of various information systems-based IT products that also serves as a system integrator to meet the needs of its customers for IT-based information system solutions [1].

PT. XYZ has a variety of product categories, one of which is Digital Signage products with the LG brand. This Digital Signage product consists of several product line ups, including: Videowall, Monitor Signage, and TV Signage. The product is one of the products from PT. XYZ which is much needed by customers. Evident from the graph below that is fig. 1 graph in the form of total Digital Signage product sales at PT. XYZ in the past three years [1].

Target and Realization of Sales for Digital Signature

Fig. 1   Chart of Digital Signage Product Sales at PT XYZ Period of : 2014-2017

PT XYZ moves as one of the distributors of the Digital Signage device, to then sell it both directly to partners and also to end users. PT XYZ generally consists of several groups namely: Private, Private Companies, and State Institutions. But from some of these customer groups, PT XYZ runs more

of its business to support partners who need Digital Signage products in the projects they are working on [3].

However, it can be seen in fig. 1 of total Digital Signage product sales at PT XYZ, illustrated by the graph that sales increased from 2014 to 2015. However, visible changes in the movement of charts that can be listened to in 2016 to 2017, the graph shows a stagnant movement, unlike the movement in 2014 to 2015. After the authors searched for related facts stagnant sales chart movements in 2016, the authors get the fact that the implementation of a manual system that has been applied by PT XYZ, namely in terms of handling customers, from the process of sales orders to the delivery of units to customers experiencing problems due to irregular management systems between work units tasked with serving the entire process. Evident from fig. 2 the problems that occur in handling customers that occur at PT XYZ from 2013 to 2017 [4].
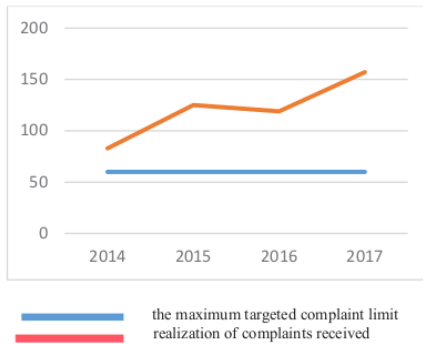

Fig. 2   Complaint Graph received in Customer Handling for the 2014-2017 Period

It can be seen in fig. 2 related to the complaint graph that occurred in handling customers for the period of 2014 to 2017 tends to rise, especially from 2016 to 2017. The increase in complaints that occur in the process of handling these customers has an impact on reducing customer interest in continuing business cooperation or buying products from PT. XYZ. Responding to this incident, the directors and management of PT XYZ. At the end of 2017, PT XYZ took the decision initiative to develop a system to replace the manual system that was previously used and considered to be no longer effective in handling all transaction processes that occur in the company. To be able to control the entire movement of service activities and transaction processes from upstream to downstream, management takes the concept of Customer Relationship Management to be embedded in the system. Customer Relationship Management is a strategy and business pattern that focuses on service and customer satisfaction levels [5]. Customer Relationship Management has four basic components, including: Information, Process, Customer Data, and technology [6]. In concept, the component which is an important component in the concept of Customer Relationship Management is Technology.

II. LITERATURE REVIEW

A. Customer Relationship Management

Clear terminology is the main requirement in the successful implementation of the concept of Customer Relationship Management [7],[8]. Customer Relationship Management has three main forms, including the following:

1) *Strategy,* The strategy referred to in this CRM concept is a business strategy that has a focus on a group of customers to be able to maintain and retain these customers to achieve the company's goals, namely to benefit from the business side of the company.

2) *Operational,* The operational concept of Customer Relationship Management focuses on the automation system of all processes that will be faced by customers directly such as marketing, purchasing, and other customer services.

3) *Analytic,* Analytic in Customer Relationship Management is a process of processing company data related to the activities of the company with its customers.

B. Components of Customer Relationship Management

Customer Relationship Management has four main components [9], including:

1) *People* is a component that describes a person's ability or attitude in managing the Customer Relationship Management system.

2) *Process* is a component that describes the process or method used by companies in accessing and interacting with customers in generating new value.

3) *Technology* is a component that explains the technological concepts that support the Customer Relationship Management system.

4) *Knowledge & Insight* is a component that describes the company's strategy in adding data value to customer data, so the company can find out the actual needs desired by the customer.

C. Value Chain of Customer Relationship Management

According to [10], there are five steps to produce a profit in business relationship management. The steps are contained in the diagram as follows:

Fig. 3   Customer Relationship Management Value Chain

The main focus of the Customer Relationship Management Value Chain is as follows [11]:

1) *Customer Portfolio Analysis* is the first step in the Customer Relationship Management value chain which indicates that not all customers have the same value as the company. So with these indications the company can segment its customers to make a different approach in each segment that has been formed.

2) Customer Intimacy, Customer intimacy is a step in the Customer Relationship Management value chain for companies in getting to know their customers better through customer data that has been collected. The challenge in this step is how companies can use customer data to better understand in more detail who their customers are, what, why, where, when to read customer behavior.

3) Network Development (SCOPE) is a step of identifying, explaining, and managing relationships with network members in a company. The intended network includes: Company partners, suppliers, owners / investors, as well as company internal parties, namely company employees.

4) Manage The Relationship, Relations with customers is a customer's journey from the status of "suspect" to "support". Management of this cycle requires attention to the process and structure.

III. METHODOLOGY

TABLE I. SEARCH INSTRUMENT DEVELOPMENT

Factor	Indicator	Statement	Ref.#
Customer Portfolio	Customer Relations	The relationship between customers and business owners can be improved through service and complaint management.	[12]
	Customer Loyalty	The level of customer loyalty is strongly influenced by customer satisfaction as assessed by the service of the business owner of his customers.	[13]
	Customer Service	The level of service provided to customers has a direct relationship with employee performance and the environmental situation and conditions when the service is provided.	[14]
	Customer Acquisition	Through a growing database and approach to customers through long-term assessment, it can increase the level of customer acquisition.	[15]
	Customer Experiences	Customer experience in the online environment is very influential to the activity of customers in the long run in that environment.	[16]
Customer Intimacy	Customer Value	Customer assessment is one of the keys to the existence of a company.	[17]
	Service Quality	The level of existence of a brand can influence organizational creations in influencing and maintaining consumers.	[18]
	Relationship Building	The level of existence of a brand can influence organizational creations in influencing and maintaining consumers.	[19]
	Professional Services	Serving customers professionally can improve customer satisfaction and relationships with customers become stronger.	[20]
	Social Marketing	The effectiveness of social marketing is very dependent on marketing patterns that use the principles of social marketing.	[21]
	Value Chain	Value chains have become global values and have evolved from their	[22]
Network Development		academic origins to become the main paradigm used by various international organizations.	
	Interaction System Use	Multiplication interaction models can enhance empirical analysis. There is no evidence of increased stock returns or profitability for companies that have invested in CRM	[23, 24]
	Supply Network	Current business trends that increase the complexity of products/services, out- sourcing, globalization, and businesses that have led to more complex and dynamic supply networks, have resulted in the risk of shifting around the supply network.	[25]
	Social Media	The application of social media in a CRM system can improve the relationship bet- ween a company and its customers.	[26]
Value Proposition	Service Ecosistem	The service ecosystem in a CRM system is the basis of the success of the system.	[27]
	Business Process	CRM is a system for improving rela-tionships and business processes between a company and its customers.	[28]
	Customer Equity	The equity level of a brand is one of the positive drivers of the CRM system.	[29]
	Customer Integration	The equity level of a brand is one of the positive drivers of the CRM system.	[30]
	Competitive Advantage	A company's competitive advantage can be achieved by increasing the effective value of customer relationship management.	[31]

1) Observations were made based on the purposive-sampling method with 1 (one) dependent variable and 19 (nineteen) independent variables. Questionnaires were distributed using a Likert scale. Furthermore, the results of this questionnaire are processed into primary data.

2) Research Instrument Development based on teory and concept construction as follow Table I.

3) Next, it is followed by a process to test the validity and reliability test. Then the Exploratory Factor Analysis process for the 19 observed variables to build latent variables using Principal Component Analysis.

4) To produce an equation model, it is carried out using the Linear Regression Analysis method of the dependent variable and the existing independent variables to produce a model in the form of mathematical equations. After the model is formed, the next step is to simulate with 4 (four) scenarios, namely estimating the minimum, maximum, ideal, and extreme conditions. In the ideal scenario, it is expected to provide optimal solutions at the level of the existing problems.

IV. RESULT AND DISCUSSION

The concept of Customer Relationship Management also has a specific purpose, namely as a forum for company leaders to see the performance of all its employees, as well as a medium of analysis related to the development and movement of the resulting business quality, as well as a medium to

19-20 August 2021

2021 International Conference on Information Management and Technology (ICIMTech)

measure the level of satisfaction and loyalty of all customers of organization. The concept of Customer Relationship Management also helps stakeholders related to managing customer relationships with the company. So that all transactions can be monitored properly. The Analysis of the Questionnaire by the Factor Analysis Method In the process of processing questionnaire data in this study, the distiller uses software from IBM namely SPSS Statistics 23 series. Related to the stages in processing this data, the writer follows the procedure in the exploratory data analysis process. The stages are as follows:

A. Reliability Test

In this study, testing was conducted on 153 respondents from the questionnaire. Listening to the opinion of [34], a decision can be accepted and processed in research if the value of Cronbach's Alpha > 0.70. If the value of Cronbach Alpha> 0.80 then the data can be said to be good, and if the value of Cronbach Alpha > 0.90 can be categorized as very reliable and very good data. After carrying out the reliability test, that the value of the test results based on Cronbach Alpha from a total of 19 indicators is worth 0.795. If you listen to the opinion of [35] as described above, then this questionnaire data is reliable enough to be processed in this study.

B. KMO & Bartlett's Test

In analyzing the factors, variables that were analyzed is feasible to be factored if the value of KMO-MSA > 0.5 and significant value (sig) or probability (p) < 0.05 [36]. After going through the testing and processing of the questionnaire data using the Kaiser Meyer Olkin (KMO) & Barlett's test techniques. The result is that the test number obtained is 0.691.

C. Total Explained Variance

To be able to measure the variance of all variables in the factor can be assessed from the eigen values. The value of the Eigen Values ratio illustrates how important a factor is to the variable. After processing data using software from IBM namely SPSS Statistics 23 series, it can produce data that is used is an eigen value greater than 1 (one), and formed 2 (two) new factors of the total components ranging from 1 (one) up to 2 (two) representing the number of dependent variables. Calculation of cumulative results from the extraction of variants of all components is 32.209%.

D. Result of Factor Analysis

Factors Affecting the Evaluation of Customer Relationship Management Systems, Through the process of factor analysis, the writer obtained a number of new factors. The new factors that the authors get are as many as 4 (four) factors, named as:

1) Customer Service Experience as (X_1)
2) Customer Experience Value as (X_2)
3) Business Value Proposition as (X_3)
4) Core of Product Development as (X_4)
5) Lack of Service & Supply (X_5)

Models Used in Evaluating The Customer Relationship Management System, through these five new factors, the researcher will evaluate the model implementation of PT XYZ's Customer Relationship Management system. Fig. 4.
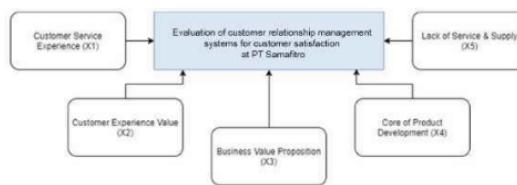

Fig. 4   Models Diagram in Evaluating CRM System

By utilizing and using an assessment of the value of the current level of understanding the systems as the results of the analysis. The equation has been found that can be used as a formula that can describe the evaluation of PT XYZ's Customer Relationship Management system.

$$Y = 7.459 + 0.194\,X_1 + 0.155\,X_2 + 0.208\,X_3 + 0.110\,X_4 + 0.180\,X_5 \qquad (1)$$

Through the equation (1), the Customer Relationship Management system evaluation model at PT XYZ can be described as follows fig. 5.
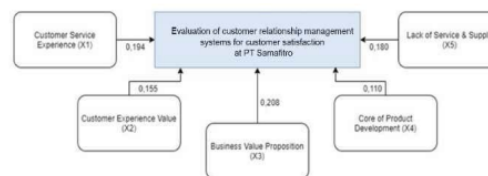

Fig. 5   Value in Models Diagram on Evaluating CRM System

V. CONCLUSION

Based on the results of research on evaluating the Customer Relationship Management system on customer loyalty and satisfaction at PT XYZ by utilizing a factor analysis process, which involved as many as one hundred fifty-three (153) total respondents. The five new factors represent several indicators, including the following: First Factor: represented by Customer Service Experience, including: Customer Journey, Service Ecosystem, and Service Quality. Second Factor: represented by Business Value Propositions, including: represented by Business Process and Professional Services. Third Factor: represented by Customer Experience Value, including: Customer Integration, Customer Service, Customer Loyalty, and Customer Relations. Fourth Factor: represented by Lack of Service & Supply, including: Supply Network and Sustainable. Fifth Factor: represented by Core of Product Development, including: Product Innovation and Customer Retention.

REFERENCES

[1] B. G. James G., "Secrets Of Customer Relationships Management", Andi. Yogyakarta, 2003

[2] V. Kumar and R. Werner Reinartz, "Customer relationship management: Concept, strategy, and tools". Springer, 2018

[3] V. Bach and O. Hubert Österle , "Customer Relationship Management in der Praxis: Erfolgreiche Wege zu kundenzentrierten Lösungen" Springer-Verlag, 2013

[4] W. H. DeLone and R. M. Ephraim, "The DeLone and McLane Model of Information System Success: A Ten – Year Update", Journal of Management Information System. Volume 19. No 4. Pages 9–30, 2013

[5] B, Sutedjoi and J. Philip, "I-CRM: Build Relationships With Dot Com Customers". Andi, Yogyakarta. 2013

[6] H. M. Jogiyanto. "Information System Design Analysis", Yogyakarta: Andi Offset, 2001

[7] A. B. Çavdar and N Ferhatosmanoğlu, "Airline customer lifetime value estimation using data analytics supported by social network information". Journal of Air Transport Management. Volume 67. Pages 19- 33, 2018

[8] P. J. Süsser "Company-customer interaction in mass customization". International Journal of Production Economics. Volume 220. Article 107454, 2020

[9] L.Witell, C. Kowalkowski, H. Perks, C.Raddats and J. Burton, "Characterizing customer experience management in business markets", Journal of Business Research In press, corrected proof, 2019

[10] F. Buttle, "Customer Relationship Management", 1'st edition. Bayumedia Publishing Jakarta, 2007

[11] J. Hu, Y.L. Liu, TWW. Yuen, MK Lim and J Hu, Jialun Hu. "Do green practices really attract customers? The sharing economy from the sustainable supply chain management perspective", Resources, Conservation and Recycling. Volume 14. Pages 177-187, 2019

[12] Mount, Daniel J., and Anna Mattila, "The final opportunity: The effectiveness of a customer relations call center in recovering hotel guests", Journal of Hospitality & Tourism Research. Volume 24. No. 4. Pages 514-525, 2000

[13] J. Kandampullyy, and D. Suhartanto. "Customer loyalty in the hotel industry: the role of customer satisfaction and image", International journal of contemporary hospitality management. Volume 12. No. 6. Pages 346-351, 2013

[14] M. K. Brady and J. J. Joseph Cronin"Customer orientation: Effects on customer service perceptions and outcome behaviors", Journal of service Research. Volume 3. No 3. Pages 241-251, 2001

[15] K. Pauwels, Z. Aksehirli, and A. Lackman."Like the ad or the brand? *Marketing* stimulates different electronic *word-of-mouth* content to drive online and offline performance", International Journal of Research in Marketing. Volume 33, Issue 3, Pages 639-655, 2016

[16] P. N. Thomas, H. L Donna, and Y. Yiu-Fai, "Measuring the customer experience in online environments: A structural modeling approach", Marketing science. Volume 19. No 1. Pages 22-42, 2001

[17] F. S. Slater, "Developing a customer value-based theory of the firm", Journal of the Academy of marketing Science. Volume 25. No. 2. Page 162, 1997

[18] F. P. Leyland, W.T. Richard, and K. C. Bruce, "Service quality: a measure of information systems effectiveness". MIS quarterly. Pages 173-187, 1997

[19] M. A. Elbedweihy, "Customer relationship building: The role of brand attractiveness and consumer–brand identification", Journal of Business Research. Volume 69. No. 8. Pages 2901-2910, 2016

[20] J. Ojasalo, "Managing customer expectations in professional services", Managing Service Quality: An International Journal. Volume 11. No 3. Pages 200-212, 2018

[21] M. Stead, "A sistematic review of social marketing effectiveness", Health education. Volume 107. No. 2. Pages 126-191, 2007

[22] G. Gereffi and K. Fernandez-Stark. "Global value chain analysis: a primer Center on Globalization, Governance & Competitiveness (CGGC)", Duke University North Carolina, USA, 20`11, 2011

[23] T. Brambor, C. R. William, and M. Golder, "Understanding interaction models: Improving empirical analyses", Political analysis. Volume 14. No 1. Pages 63-82, 2006

[24] B. K. Hendricks, S. R. Vinod, and J. Stratman, "The impact of enterprise sistems on corporate performance: A study of ERP, SCM, and CRM sistem implementations". Journal of operations management. Volume 25, Issue 1, Pages 65-82. 2007

[25] C. Harland, B. Richard, and W. Helen, " Risk in supply networks", Journal of Purchasing and Supply management. Volume 9. No 2. Pages 51-62, 2007

[26] C.E. Malthouse, "Managing customer relationships in the social media era: Introducing the social CRM house". Journal of Interactive Marketing. Volume 27. No 4. Pages 270-280, 2013

[27] C. Hong-Mei and V. L. Stephen, "Rethinking social CRM design: A service-dominant logic perspective", Handbook of Strategic e-Business Management. Springer, Berlin, Heidelberg, Pages 767-784, 2014

[28] M. D. Lambert, "Customer relationship management as a business process". Journal of Business & Industrial Marketing. Volume 25. No 1. Pages 4-17, 2009

[29] W. Yonggui, "The roles of brand equity and corporate reputation in CRM: a Chinese study", Corporate Reputation Review. Volume 9. Pages 179-197, 2006

[30] W. Sardjono, E. Selviyanti, W. G. Perdana and Maryani, "Modeling of development of performance evaluation on health information systems implementation". Journal of Physics: Conference Series Volume 1465. 012025, 2020

[31] M. Alipour and M. M. Hallaj, "The effect of Customer Relationship Management (CRM) on achieving competitive advantage of manufacturing tractor", Global Journal of Management and Business Research. Volume 11. No 5, 2011

[32] H. Li, X. Chen, Y. Zhang, and M. Hai, "Empirical Analysis of Factors on Crowd funding with Trust Theory". Procedia Computer Science. Volume 139. Pages 120-126, 2018

[33] H. Zhang, T. Wang, Z. Ding, X. Zhang, and L. Han, "Uncertainty analysis of impact factors of eco-environmental vulnerability based on cloud theory", Ecological Indicators. Volume 110 , 2020

[34] L. C. Kenneth and J. P. Laudon, "Management information systems. Prentice Hall. Volume 8, 2015

[35] W. Sardjono, S. Erna and W. Gia Perdana. (2020). "The application of the factor analysis method to determine the performance of IT implementation in companies based on the IT balanced scorecard measurement method". Journal of Physics: Conference Series. Volume 1538 , 2020

[36] W. Sardjono, B. S. Laksmono and E. Yuniastuti. "The social welfare factors of public transportation", ICIC Express Letters. Volume 14. No. 4. Pages 361-368, 2020

19-20 August 2021

2021 International Conference on Information Management and Technology (ICIMTech)

9. ICIMTech-2021, Adapt_Business_Challenges_in_The_4.0_Industrial_Revolutio...

ORIGINALITY REPORT

15%
SIMILARITY INDEX

15%
INTERNET SOURCES

0%
PUBLICATIONS

0%
STUDENT PAPERS

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

15%

★ **pure.tudelft.nl**
Internet Source

Exclude quotes   On

Exclude bibliography   On

Exclude matches   Off