



Customer Relationship Management and Innovation Capability Affecting Organizational Performance in Automotive Parts Industry, Eastern Economic Corridor

Natitorn Prasertwong¹ and Jedsada Wongsansukcharoen^{2*}

^{1,2}*Faculty of Management Science, Kasetsart University

(Received: February 19, 2021; Revised: May 6, 2021, Accepted: May 25, 2021)

Abstract

The aim of this research is to empirically test a framework which identifies effect of customer relationship management and innovation capability that affected organizational performance in automotive parts industry in Eastern economic corridor. The research is quantitative research which was done by survey method using self-administered questionnaires. The random samples were collected from 340 peoples who are operating in automotive part industry in EEC. Then all selected data were classified and analyzed by descriptive statistical method such as Frequency, Mean, and Standard Deviation including confirmation factors analysis (CFA) and structural equation modeling (SEM) for hypothesis testing.

The result found that the customer relationship management have directly influenced on the organizational performance with coefficient of 0.77 and have directly influenced on innovation capability with coefficient of 0.71. And have an indirectly influenced on the organizational performance through the mediator variable of innovation capability with coefficient of 0.16. Moreover, the innovation capability has directly influenced on organizational performance with coefficient of 0.23, all testing result significantly influenced is 0.001.

Keywords: 1) Customer relationship management 2) Innovation capability 3) Organizational performance

¹ Master Student, Department of Academy of Management Sciences; E-mail: natitorn.p@ku.th

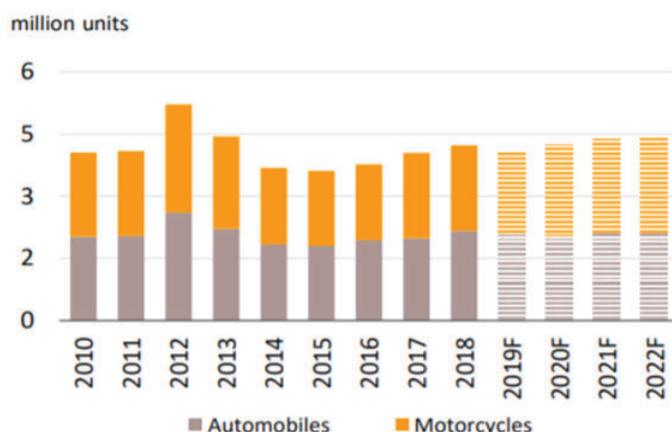
²* Lecturer, Department of Management



Introduction

The automotive parts industry in Thailand is an industry that is important to the country's economic development in terms of production, marketing, employment, technolo-

logy development, and associative with other ongoing industries, causing production and sales of automotive parts are high volume and value.



Picture No. 1 The trend of Automotive parts industry in 2020 - 2022

Reference: The Federation of Thai industries (FTI) (2020)

As shown in Picture No. 1, production and demand for the country's automotive parts 2020-2022 trends to grow only slightly but the market of Replacement Equipment Manufacturing (REM) in the next 3 years is expected to grow in line with the cumulative automotive amount which increases in every year that requires to repair and replace key parts which are high value. Exports tend to grow in line with global car sales as a result of the trade conflict between the United States and China, causing Thailand to have an opportunity to export more to the US market (Research Center Bank of Ayutthaya, 2019, pp. 1-9).

Therefore, causing a concept of the Eastern Economic Corridor (EEC), which is supported by the Thai government, covering 3 provinces, namely Chachoengsao, Chonburi, and Rayong in order to upgrade its area to become Asia's leading economic zone, develop

infrastructure to support regional connectivity, urban and environment development (National science and Technology development Agency, 2017, pp. 8-10).

Customer relationship management has been accepted since the mid-1990s, mainly because many industries were struggling with increasing customer demand, product demand, high-quality services, and poor access to services (Smith, 2006, pp. 87-93).

In today's era where technology is changing rapidly and change in marketing situation is high and unpredictable then manufacturers must improve their innovation capability to meet market demands and create customer satisfaction in order to maintain long-term competitive advantage (Panayides, 2006, pp. 466-483), by specifying that manufacturers who have innovation capability can build double profit greater than manufacturers

without innovation capability. For this reason, it will be able to meet the market demand and create competitive advantages (Shane and Ulrich, 2004, pp. 133-144).

Moreover, Lin, Chen and Chiu, 2010, pp. 111-133) confirm that good customer relationship management between manufacturing companies and customers will help encourage customers of manufacturing companies happy to give advice or suggestions in various fields or give important information for improvement, development, and creation new innovation for products and service as well.

Innovation is essential to economic growth and economic wealth. Companies that have much innovation then will grow faster and create more jobs than companies that have less innovation. Innovation capability will be defined limit as it's a capability for transforming knowledge and ideas to innovative products, processes, and new systems continuously for benefit of the company and stakeholders (Lawson and Samson, 2001, pp. 377-400).

Therefore, researchers have studied customer relationship management and innovation capabilities affecting organizational performance in the automotive parts industry, the Eastern Economic Corridor to adopt the results as a guideline for developing and improving customer relationship management, building innovation capability, and optimizing organizational performance as well as apply to development and management of organization's strategy to be successful, causing the greatest benefit to manufacturers and organization's customers and the nation in the future.

Objective

1. To study the impact of customer relationship management on innovation capability.
2. To study the impact of customer relationship management on organizational performance.
3. To study the impact of innovation capability on organizational performance.

Benefits

1. To create a guideline to support for development and creation of innovation capability.
2. To use as a guideline for management and management of development and create innovation capability.
3. To apply results to organizational management strategies for maximum innovation and benefits.
4. To use as a guideline for applying the acquired knowledge to increase performance potential and the development of innovation capability to lead to better organizational performance.
5. To build an organization that provides competitiveness with innovation capability.

Literature Review

Customer Relationship Management means the creation and development of good relationships with customers through strategic planning or marketing activities that will make customer's satisfaction as much as possible Chaengjenkit (2005, p. 122) and to create long-term customer's loyalty to an organiza-



tion based on quality information that cause suitable innovation, being an instrument to support work to gain efficient (Reinartz, Krafft and Hoyer, 2004, pp. 293-305; Sin, Alan and Yim, 2005, pp. 1264-1290). The scope of customer relationship management that commonly used consist of 5 aspects, namely, information sharing, customer involvement, long term partnership, joint problem-solving, and technology-based CRM, (Lin, Chen and Chiu, 2010, pp. 111-133), which sub-elements have meaning as follows:

1. Information sharing is exchange of necessary information or knowledge through the system for sharing internal and external data between manufacturers and customers to meet the needs and success with each other. McEvily and Marcus (2005, pp. 1033-1055)

2. Customer involvement is participation in new product development (NPD) activities, technical meetings, annual meeting of supply chain group and meeting to assess marketing trends including taking customer centric which the company will gain knowledge and understanding about better customer needs in the future and cause new innovation processes (Sin, Alan and Yim, 2005, pp. 1264-1290).

3. Long-term partnership is a business relationship with trust and commitment between two companies willing to provide valuable, fair and reliable resources to achieve common goals and for benefits of each other (Mohr and Spekman, 1994, pp. 135-152).

4. Joint problem-solving is collaboration between manufacturers and customers to solve and take responsibility for problems that

arise together which results will make both parties satisfy and increase good relationship with each other (McEvily and Marcus, 2005, pp. 1033-1055).

5. Technology-based CRM is customer relationship management that contains a strategy of using information technology or other strategies for helping, storing data, and providing convenience to customers (Sin, Alan, Yim, 2005, pp. 1264-1290).

Innovation Capability is a framework, practice, or object that is created or viewed as something new for an individual or agency that can be applied to improve and increase the variety of work including efficiency and be generally accepted. The scope of innovation capability has been identified in 5 areas, namely, Product innovation, Process innovation, Marketing innovation, Services innovation, and Administration innovation (Lin, Chen and Chiu, 2010 pp. 111-133; Damanpour, 1991, pp. 555-590 as cited in Valmohammadi, 2017, pp. 374-395). Sub-elements have meanings as follows:

1. Product innovation is the beginning of new product development or change and improve existing products to bring to both old and new markets to create benefits or respond to rapidly changing customer needs (Liao Fei and Chen, 2007, pp. 340-359).

2. Process innovation is innovation that cannot be seen clearly, means new operations, improvements, and changes to existing processes for the better including changing the use of instruments, equipment, or knowledge to reduce costs or develop processes to be beneficial or more efficient (National

Innovation Agency, 2010).

3. Marketing innovation is marketing strategy planning, pricing, market segmentation, advertising promotion, increasing retail channel, and marketing information system that helps businesses to compete and survive under the challenges of today's economy (Vorhies and Harker, 2000, pp. 145-171; Weerawardena, 2003, pp. 407-429).

4. Services innovation is a form of innovation that is not clearly visible, intangible but it will come in the form of a concept, involvement for creating customer satisfaction with new styles of customer service which will affect both directly and indirectly on value creation for both customers and an organization (Keramati, Mehrabi and Mojir, 2010, pp. 1170-1185).

5. Administration innovation is an invention and changing of management policies, work processes, and organizational structure in order to create a guideline for organizational or business performance to be more efficient or economically beneficial (Vorakitphokatorn, 2004, pp. 26-27).

Organizational performance is the organization's capability to deal with inputs, outputs, transformation, and feedback effects (Evan, 1976, pp. 15-25) or existing capability to achieve results, and needs that set. The organizational efficiency is divided into 2 main categories, namely, financial performance and non-financial performance (Kaplan and Norton, 2004, pp. 10-17).

The organizational efficiency based on Balance Score Card (BSC) is divided into 4 areas, namely, financial perspective, customer

perspective, internal process perspective, and learning and growth perspective (Kaplan and Norton, 1996, pp. 53-79).

1. **Financial Perspective** is a measure of the financial status and success of an organization. Moreover, the financial perspective also reflects the way employees operate which is measured by profitability, return on investment, and sales growth.

2. **Customer Perspective** is a measure of organization's success in customer's eyes to evaluate product and quality service of an organization which can be measured by market share, customer satisfaction, number of new customers and the ability to retain old customers.

3. **Internal Process Perspective** is a measure of the efficiency of organization's production or service by internal processes resulting in operational improvements, can be measured by the efficiency of the machine and quality of services.

4. **Learning and Growth Perspective** is a measure of readiness and resource development within an organization, consists of the capability of employees to be consistent within an organization, also helps consider the capability of employees that are essential to an organization and help achieve sustainable goals and can be measured by employee satisfaction, employee efficiency and employee turnover rate

(Huang, et al., 2007, pp. 1112-1127; Kaplan and Norton, 1992, pp. 71-79; Kaplan and Norton, 1996, pp. 53-79; McPhail, Herington and Guilding, 2008, pp. 623-631; Sainaghi, Phillips and Corti, 2013, pp. 150-159; Ulrich,



1998, pp. 303-320; Rompho, 2010, pp. 43-50

Research hypothesis review: researchers have reviewed the research related to 3 variables of this research to formulate the research hypothesis as follows:

A study of customer relationship management and innovation capability affecting organizational performance in Iran manufacturing plants which found that customer relationship management had an impact on organizational performance in terms of profitability and sales growth including the amount of innovation capability development and also found that customer relationship management activities had an effect on strategy planning and management both inside and outside an organization (Valmohammadi, 2017, pp. 374-395).

A study of Middle East customer relationship management showed empirical results that customer relationship management in terms of contacting, giving information, mediation, and sharing technologies resulting in organizational performance and innovation capability in terms of production processes and services better (Akroush, et al., 2011, pp. 158-190).

A study by (Battor and Battor, 2010, pp. 842-857) found that innovation capability helps the stability of organizational performance and better performance and has competitiveness better than organization's competitors and still have research that presented knowledge, feedback, or suggestions of customers that gained customer relationship management deemed as a valuable resource that will result in the creation of new innova-

tions that will bring benefits both inside and outside an organization including increasing the organization's competitiveness (Timothy, et al., 2006, pp. 184-194).

In addition, developed domestic research said that customer relationship management has influenced on innovation capability and helps an organization to create new innovation and enhance the potential of organizational performance (Lin, Chen and Chiu, 2010, pp. 111-133).

Research Hypothesis

Framework can write hypotheses as follows:

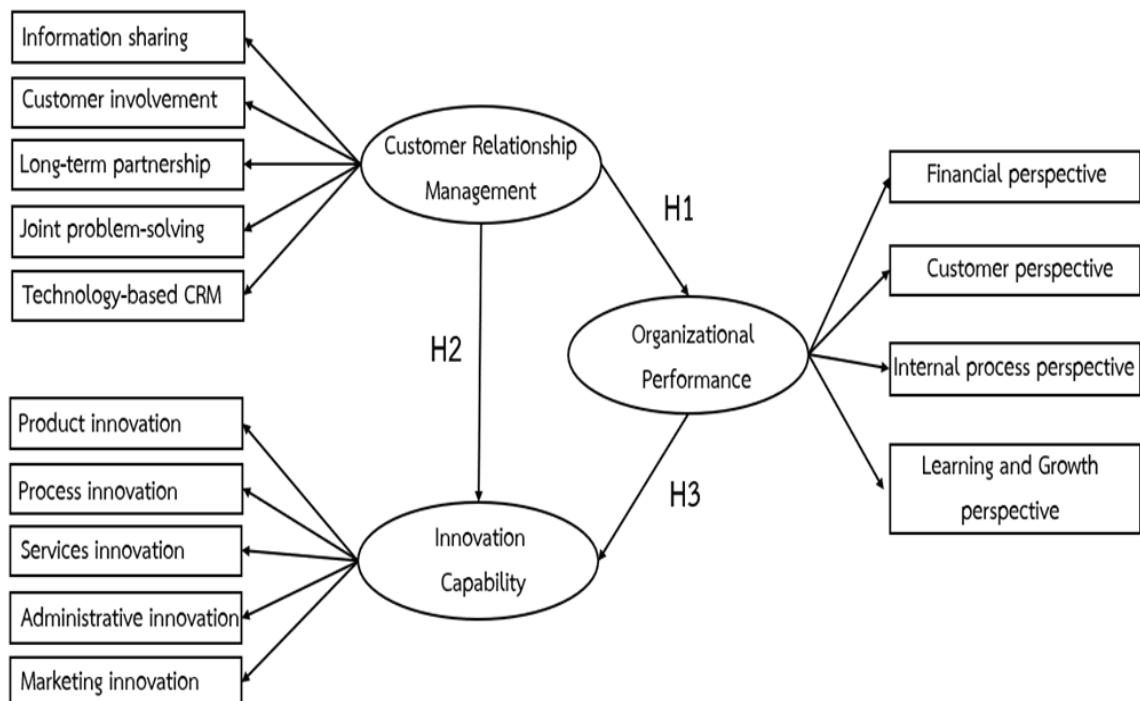
Hypothesis 1 (H_1): Customer relationship management affects organizational performance.

Hypothesis 2 (H_2): Customer relationship management affects innovation capability.

Hypothesis 3 (H_3): Innovation capability affects organizational performance.

Framework

Researchers had brought the above literature reviews to create a framework as follow.



Picture No. 2 Framework

Research Methodology

This research is quantitative research by using a survey research model from a questionnaire to collect data. A questionnaire was created from studies, concepts, theories, and related research then analyzed according to framework and hypothesis testing. Details are as follows:

1. The target population in this study were executives, engineers, technician, marketing officer and salesperson who work in the automotive parts industry in the Eastern Economic Corridor. Researchers have defined a suitable sample group at least 20 samples per 1 observed variable for analyzing (Hair, et al., 2010, pp. 627-702) and should have sample not lower than 300 samples for better accuracy based on the analysis of variables, which researchers collected an additional 20% of the samples, a total of 340 people.

The selected sampling group was probability sampling and simple random sampling by selecting representatives of top 3 industrial parks with the highest investment value in each province. For the automotive parts industry used stratified sampling of sample factories in each industrial park by surveying at least 5 factories as shown in Table No. 1.

**Table No. 1** Automotive parts factory in Eastern Economic corridor

Province	Industrial Estate	Investment (MB.)	Ratio (%)	quantity	Sampling
Chonburi	Amata City	340,395	36	25	125
	Leamchabang	110,100	11	7	35
	Hemaraj Bo-win	25,188	5	3	15
Rayong	Amata City	154,286	15	10	50
	Eastern Sea-board	317,638	13	9	45
	Hemaraj Eastern	84,985	6	4	20
Chachoengsao	Well Grow	137,265	7	5	25
	Gateway City	37,978	6	4	20
	TFD	5,485	1	1	5
Total		1,213,320	100	68	340

Researchers distributed the questionnaires according to the stratification proportion with a random list of factories in each industrial park with a computer program and distributed questionnaires to all samples and received the required number of complete questionnaires to complete the research.

2. Research instrument was a questionnaire prepared from a literature review and related research by questionnaire consists of 4 parts, respectively, 1) a questionnaire on general information of the respondents, amount of 8 clauses, 2) a testing form to assess customer relationship management level in each aspect, amount of 25 clauses, 3) a questionnaire to assess innovation capability in each aspect, amount of 25 clauses and 4) a testing form to assess organizational performance in each aspect, amount of 15 clauses.

3. Questionnaires passed IOC from 3 experts with index of congruence greater than

0.50 that met the requirements and tested confidence of questionnaires on 30 samples group using Cronbach's Alpha Coefficient was 0.801 that mean questionnaires have high level of confidence, can be used as research instrument.

4. The statistics used in data analysis are divided into 2 parts are;

4.1 Descriptive statistics; used for demographic analysis on general information of the respondents using the frequency distribution and percentage, also used for data analysis of opinion level on each aspect with using mean and the standard deviation to analyze opinion level.

4.2 Inferential statistics; used to analyze the relationship of variables and to test hypothesis. The research relationship was confirmatory factor analysis (CFA) and structural equation modeling (SEM).

Results

Researchers have taken data from data collection of sample group to process and

analyzed by using statistical program SPSS and AMOS which can be summarized as follows:

Part 1: General information analysis results

Table No. 2 Frequency Distribution and Percentage of General information

General information		Quantity	Percentage
Gender	Female	174	51.18
Age	31 – 40 Years old	167	49.12
Highest Qualification	Bachelor's degree	281	82.65
Position	Engineer	157	46.18
Experience	10 - 15 Years	131	38.53
Salary per month	30,001 - 45,000 Baht	137	40.29
Product group	Interior Part	130	38.24
Employees	500 - 1,000	174	51.18

The general information analysis results of total sample group were 340 people, found that most of them were female, amount of 174 people, representing 51.18%, most of them aged between 31-40 years, amount of 167 people, representing 49.12%. Most of them obtained the highest education with a bachelor's degree, amount of 281 people, representing 82.65 percent, and the most work as engineer positions, amount of 157 people, representing 46.18%. Most of the sample groups have 10-15 years of work experience, amount

of 131 people, representing 38.53%, the highest average monthly income is 30,001-45,000 baht, amount of 137 people, representing 40.29 percent by most of them work in a group of automotive interior parts producing, amount of 130 people, representing 38.24%, and having the highest number of employees in an organization, amount of 500-1,000 people, representing 51.18% according to Table No. 2.

Part 2: Descriptive analysis results of opinion levels in each variable.

Table No. 3 Show mean, Standard Deviation and Level of opinion in each variable

Variable and Scope	Mean	SD	Level
Customer relationship management	3.77	0.692	High
CRM1 (Information sharing)	3.55	0.678	High
CRM2 (Customer involvement)	3.83	0.655	High
CRM3 (Long-term partnership)	3.94	0.669	Highest
CRM4 (Joint problem-solving)	3.74	0.698	High
CRM5 (Technology-based CRM)	3.77	0.758	High



Variable and Scope	Mean	SD	Level
Innovation capability	3.72	0.757	High
INV1 (Product innovation)	3.65	0.810	High
INV2 (Process innovation)	3.87	0.682	High
INV3 (Services innovation)	3.70	0.755	High
INV4 (Administrative innovation)	3.65	0.804	High
INV5 (Marketing innovation)	3.71	0.735	High
Organizational performance	3.97	0.641	Highest
PER1 (Financial perspective)	4.06	0.605	Highest
PER2 (Customer perspective)	4.00	0.626	Highest
PER3 (Internal process perspective)	3.86	0.662	High
PER4 (Learning and Growth perspective)	3.97	0.671	Highest

From Table No. 3 was found that opinions about organizational performance obtained the highest average equal 3.97 at the highest level. In sub-variables was found that the financial obtained the highest average equal 4.06 at the highest level, followed by the customer obtained an average equal 4.00 at the highest level, followed by the main variable is customer relationship management obtained an average equal 3.77 at high level. In sub-variables was found that long-term partnership obtained the highest average equal

3.94 at the highest level, followed by customer involvement obtained an average equal 3.83 at high level, and the main variable with the least opinion level was innovation capability obtained an average equal 3.72 at high level. In sub-variables was found that process innovation capability obtained an average equal 3.87 at high level, followed by marketing innovation capability obtained an average equal 3.71 at high level.

Part 3: The hypothesis testing results based on framework

Table No. 4 Show Analysis result of Measurement

Variable	λ	SE.	t-value	R^2	AVE	CR.
Customer relationship management					0.504	0.763
CRM1 (Information sharing)	0.44	-	-	19.0%		
CRM2 (Customer involvement)	0.66	0.20	7.327**	44.0%		
CRM3 (Long-term partnership)	0.86	0.25	7.826**	74.0%		
CRM4 (Joint problem-solving)	0.58	0.16	8.351**	34.0%		
CRM5 (Technology-based CRM)	0.56	0.20	7.285**	32.0%		

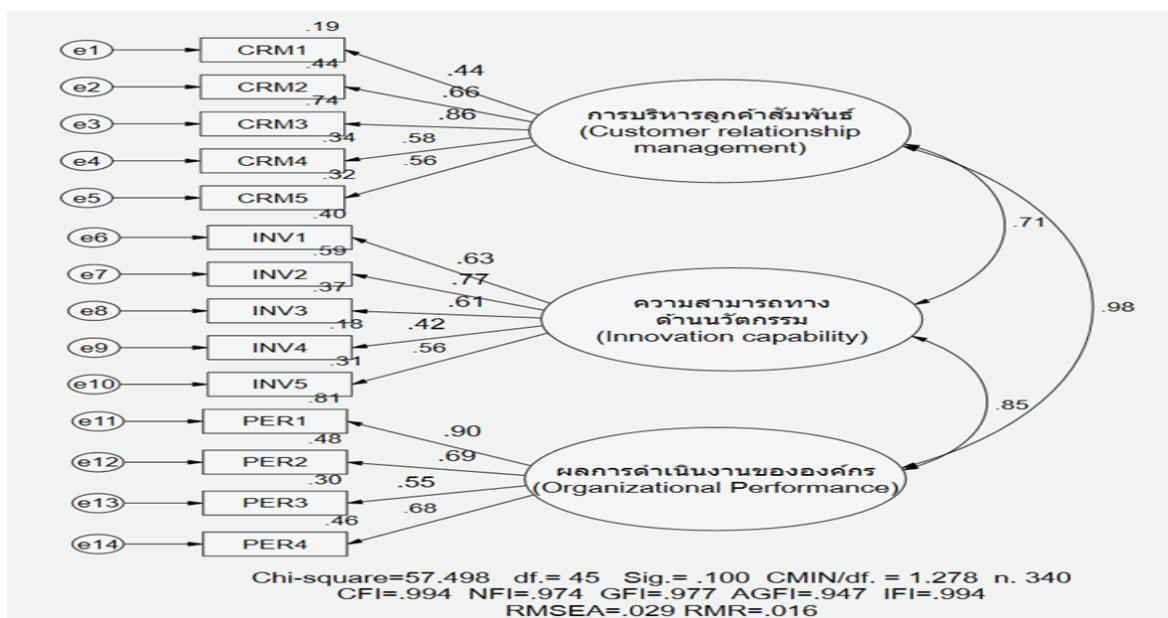
Variable	λ	SE.	t-value	R^2	AVE	CR.
Innovation capability						0.571 0.740
INV1 (Product innovation)	0.63	-	-	40.0%		
INV2 (Process innovation)	0.77	0.10	10.185**	59.0%		
INV3 (Services innovation)	0.61	0.09	9.849**	37.0%		
INV4 (Administrative innovation)	0.42	0.10	6.810**	18.0%		
INV5 (Marketing innovation)	0.56	0.10	8.457**	31.0%		
Organizational performance						0.513 0.803
PER1 (Financial perspective)	0.90	-	-	81.0%		
PER2 (Customer perspective)	0.69	0.05	16.368**	48.0%		
PER3 (Internal process perspective)	0.55	0.06	10.856**	30.0%		
PER4 (Learning and Growth perspective)	0.68	0.06	14.475**	46.0%		

The analysis results in Table No. 4 were found that the coefficient weight (λ) of observed variable greater than 0.40 and total construct reliability (CR) greater than 0.60, with average variance extracted (AVE), was between 0.504–0.571 which is greater than cut-off limit at 0.50 that shows all observed and latent variables have high precision and can be adopted to

analyze in the structural equation modeling.

Part 4: Confirmatory Factor Analysis (CFA)

The checking of model goodness of fit is variables adoption for confirmatory factor analysis which can be summarized of the overall model analysis results is as follows:



Picture No. 3 Confirmatory Factor Analysis, CFA



Picture No. 3 was found that confirmatory factor was consistent with the empirical data in a good level, Chi – Square = 57.498 df = 45.0 Sig. = 0.100 > 0.05 and CMIN/df. = 1.278, less than 2.0 was in a good level and GFI = 0.977, AGFI = 0.947, NFI = 0.974, IFI = 0.994, CFI =

0.994 greater than 0.90, RMSEA = 0.09 and RMR = 0.016 less than 0.05, which indexes passed all criterions.

Part 5: Structural Equation Modeling (SEM)

Table No. 5 Show Statistical consistent of Structural Equation Modeling (SEM)

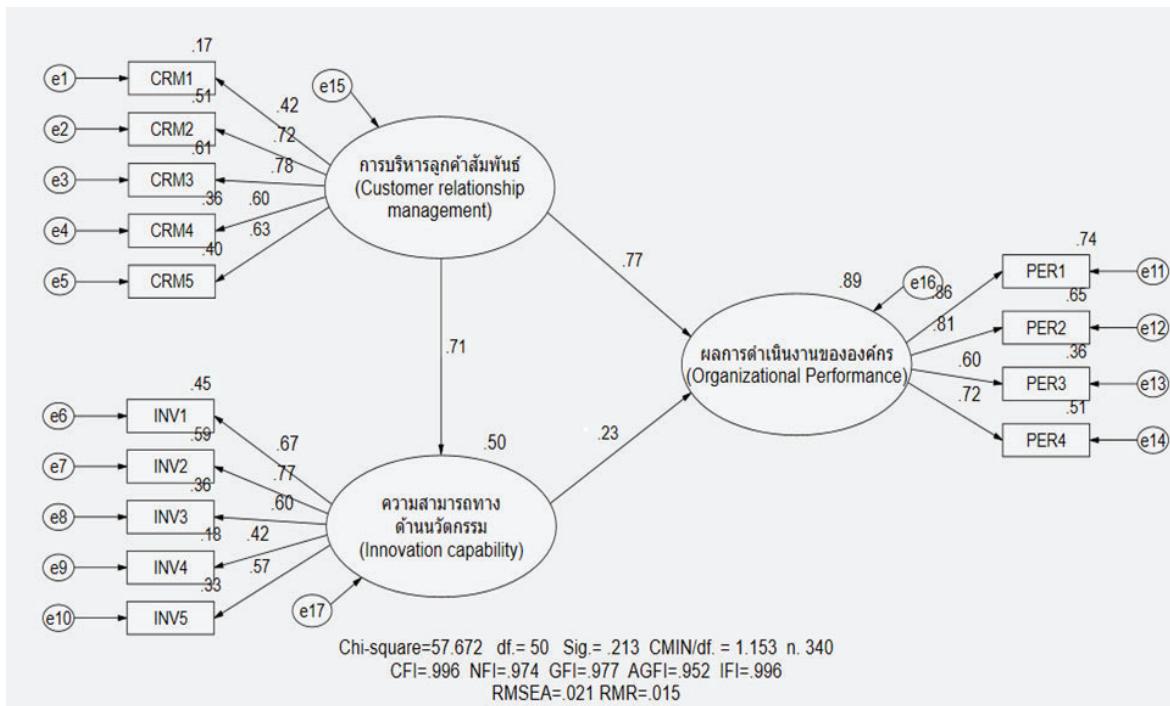
Index number	Measure	Result	Summary
Chi-Square	-	57.672	-
Sig.	> 0.05	0.213	Meet Crite-ria
Relative Chi-square (CMIN/df.)	< 2.0	1.153	Meet Crite-ria
Goodness of Fit Index (GFI)	> 0.90	0.977	Meet Crite-ria
Adjusted Goodness of Fit Index (AGFI)	> 0.90	0.952	Meet Crite-ria
Normed Fit Index (NFI)	> 0.90	0.974	Meet Crite-ria
Incremental Fit Index (IFI)	> 0.90	0.996	Meet Crite-ria
Comparative Fit Index (CFI)	> 0.90	0.996	Meet Crite-ria
Root Mean square Residuals (RMR)	< 0.05	0.021	Meet Crite-ria
Root Mean Square Error of Approximation (RMSEA)	< 0.08	0.015	Meet Crite-ria

The analysis results in Table No. 5 were found that the index used to measure suitability of structural equation modeling on this research was consistent with the empirical data and meets all criterion standards. Chi-Square = 57.672, df = 10.0, Sig. = 0.213 > 0.05, CMIN/df. = 1.153 < 2.0, which is consistent with the concept of Hair, et al. (2010, pp. 627-702) and Sorbon (1996) and GFI = 0.977, AGFI = 0.952, NFI = 0.974, IFI = 0.996, CFI = 0.996.

The index used to measure suitability should be greater than or equal to 0.90 which met the criteria and RMR = 0.021, RMSEA = 0.015 should be between 0.05 – 0.08. Hair, et al. (2010, pp. 627-702) can be concluded that the structural equation modeling is suitable and the index is

consistent with the empirical data.

Additionally, this section will analyze the structural equation modeling to check suitability and accuracy of the structural equation modeling by considering the variable weight value and squared multiple correlations (R²) to examine joint variance of indicators which can be summarized as shown in Picture No. 4.



Picture No. 4 Structural Equation Modeling analysis

The analysis results of structural equation modeling test by considering the regression coefficient of variables and the influence of variables that can be summarized as follows:

1. Customer relationship management consists of a model with 5 observable variables (CRM1-CRM5) have standardized regression weights between 0.42–0.78, squared multiple correlations (R²) of 17.0% - 61.0%. The testing results showed directly influenced 2 paths, namely customer relationship management that has directly influenced on innovation capability by standardized regression was 0.71, tolerance was 0.20 and explained influence of 50.0%. And customer relationship management has directly influenced organizational performance, by standardized regression was 0.77, tolerance was 0.22 and explained influence of 89.0% also found that has indirectly influenced 1 path, namely customer

relationship that has indirectly influenced on organizational performance through variables to innovation capability which has influence line at 0.16.

2. Innovation capability consists of models with 5 observable variables (INV1- INV5) that have standardized regression weights between 0.42–0.77 and squared multiple correlations (R²) of 18.0%-59.0%. The testing results showed directly influenced one path that is innovation capability which has directly influenced organizational performance with standardized regression weights was 0.23, tolerance was 0.07, and explained influence of 89% with statistical significance at 0.001.

3. Organizational performance is the model's effect variable, consisting of a model with 4 observable variables (PER1- PER4) that have standardized regression weights between 0.60–0.86, squared multiple correlations (R²) of 36.0 %-74.0 %.

**Table No. 6** Show Hypothesis Testing result

Hypothesis and Pathway	β	SE.	Sig.	R^2	Result
Hypothesis 1 (H_1)					
Customer Relationship Management --> Organizational Performance	0.77	0.22	0.000**	89.0%	Accept
Hypothesis 2 (H_2)					
Customer Relationship Management --> Innovation Capability	0.71	0.20	0.000**	50.0%	Accept
Hypothesis 3 (H_3)					
Innovation Capability --> Organizational Performance	0.23	0.07	0.000**	89.0%	Accept

Hypothesis 1 (H_1) the testing results accepted H_1 , which means customer relationship management has directly influenced organizational performance with a path coefficient at 0.77, explained influence of 89% with statistical significance at 0.001.

Hypothesis 2 (H_2) the testing results accepted H_2 , which means customer relationship management has directly influenced on innovation capability with a path coefficient at 0.71, explained influence of 50% with statistical significance at 0.001.

Hypothesis 3 (H_3) the testing results accepted H_3 , which means innovation capability has directly influenced organizational performance with a path coefficient at 0.23, explained influence of 89% with statistical significance at 0.001.

Conclusion and Discussion

The study revealed that the results of this research gave empirical results according to the framework and all hypotheses are accepted as true and consistent with the information previously published which can be

summarized and discussed as follows:

Testing results of customer relationship management are a factor that has directly influenced on innovation capability with a coefficient was 0.71 and statistical significance of 0.001. In addition, customer relationship management has indirectly influenced on organizational performance through variables to innovation capability that has a coefficient of 0.16, that is to say when an organization has customer relationship management will enhance an organization to provide innovation capability in various fields and help encourage the creation of new innovations to meet the needs of both customers and producers, resulting an organization has the competitiveness and be able to respond to customer's needs which is consistent with developed domestic research that customer relationship management has directly influenced on innovation capability and helps an organization to create new innovation and enhance the potential of organizational performance (Lin, Chen and Chiu, 2010, pp. 111-133).

Testing results of customer relationship management are the most important factor that has directly influenced on organizational performance with a coefficient was 0.77 and statistical significance of 0.001, that is to say, when an organization has customer relationship management will help increase organizational performance efficiency both in monetary and non-monetary. In addition, an organization can also be aware of information, problems, and suggestions from customers in order to use them for an organization's benefit in the future which is consistent with one of the Middle East's customer relationship management studies with empirical results that customer relationship management in terms of contacting, giving information, mediation, and technology sharing resulted in organizational performance and innovation capability in terms of production to be better (Akroush, et al., 2011, pp. 158-190).

Testing results of innovation capability are another factor that has directly influenced on organizational performance with a coefficient was 0.23 by statistical significance of 0.001, that is to say, when an organization has innovation capability in various fields will affect benefit on organizational performance to increase both in monetary and non-monetary. In addition, innovation capability also motivates an organization to continuously develop both inside and outside, consistent with the study of (Battor and Battor, 2010, pp. 842-857) that says innovation capability helps organizational performance secure, more performance and contains competitiveness prevail over organization's

competitors and as (Timothy, et al., 2006, pp. 184-194) proposed knowledge, feedback or suggestions of customers from customer relationship management is considered as a valuable resource result in the creation of new innovations that will bring benefits both inside and outside an organization including increasing the competitiveness of an organization.

In addition, the test results found that all research hypotheses were consistent with the studies in the same hypothesis with an organization that is Iranian manufacturing plants contained empirical results that customer relationship management affects organizational performance in terms of its operating results and sales growth including the amount of innovation capability development. Moreover, it was also found that customer relationship management activities affect strategy planning and management both inside and outside an organization (Valmohammadi, 2017, pp. 374-395).

From said conclusion and discussion have helped to confirm that this framework was in line with the research objective to study the impact of customer relationship management and innovation capability that affects organizational performance and can be used as a guideline in customer relationship management and innovation capabilities to create a better organizational performance.

Recommendation from research

1. Recommendation for customer relationship management affects organizational performance is an organization should



place importance on activities related to encouraging for sharing information on marketing, promotion, new product demand, and inventory storage with customers, moreover, should place importance on encouraging customers to participate in new products development and production planning including listening to customer's opinions and designing satisfaction and need surveys, as well as should place importance on promoting relationships between organizations and customers cause communication on both sides, be able to interact with customers effectively and maximum benefit.

2. Recommendation for customer relationship management affects innovation capability is an organization should place importance on promoting and developing customer relationship management along with innovation capability development within an organization and should promote to apply innovation in sales process, analysis of customer purchase information, problem-solving including adopt innovation as assistant in preparation and modifying plans, applying an effective customer service center with modern systems to deal with customer complaints as well as use for searching and collecting customer information to identify or find customers who potential on an organization.

3. Recommendation for innovation capability affects organizational performance is an organization should place importance on participating in new product development with customers and import new technology for production process including patenting when product is launched or services developed

according to market demand. In addition, an organization can adopt innovation for before and after-sales service including the warranty and maintenance system to increase customer satisfaction, also for damage liability procedures and after-sales service. Finally, innovation capability also assists in policy development or restructure an organization for better organizational performance.

4. Additional recommendations from the results in term of sub-variables are an organizations should place importance on customer relationship management as first that is customer involvement in product development activities or service and being long-term partnership together that will make customers to be willing to disclose important information and should place importance on the top two innovation capability are process innovation that ensures maximum efficiency in each process, both internally and externally, and product innovation that effectively respond to market demands. If an organization has continued to manage and support such factors, will help an organization have better performance in the top two, namely higher financial performance such as profits, return on investment, etc., and customers such as increasing customer satisfaction and loyalty, etc.

Recommendation for Future Research

1. For the next study, should study larger sample size and covering the whole country or may study in other industries that are important to the country's economy, such as tourism industry, etc.



2. For the next study, should develop framework and additional variables in other aspects affecting organizational performance, such as relationship marketing orientation (RMO), etc., in order to provide comprehensive study results in all dimensions and more accurate in order to use the results for benefit and expand the results to bring more benefits to an organization

Bibliography

Akroush., M. N., Dahiyat Samer, E., Gharaibeh H. S., and Abu-Lail B. N. (2011). Customer relationship management implementation: An investigation of a scale's generalizability and its relationship with business performance in a developing country context. *International Journal of Commerce and Management*, 21(2), 158-191.

Battor, M., and Battor, M. (2010). The impact of customer relationship management capability on innovation and performance advantages: testing a mediated model. *Journal of Marketing Management Science*, 26(9-10), 842-857.

Damanpour., F. (1991). Organizational innovation: a meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3), 555-590.

Evan, W. M. (1976). Organization Theory and Organizational Effectiveness: An Exploratory Analysis. *Organization and Administrative Sciences*, 7(1), 15-28.

Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2010). *Multivariate Data Analysis* (7th ed.). Upper Saddle River, New Jersey: Prentice Hall.

Huang, H. C., Chu, W., and Wang, W. K. (2007). Strategic performance measurement and value drivers: Evidence from international tourist hotels in an emerging economy. *The Service Industries Journal*, 27(8), 1112-1127.

Kaplan, R. S., and Norton., D. P. (1992). **The balanced scorecard - measures that drive performance.** Harvard business review, 70, 71-79

Kaplan, R. S., and Norton., D. P. (1996). **Linking the balanced scorecard to strategy.** In California management review, 39, 53-79.

Kaplan, R. S., and Norton., D. P. (2004). The strategy map: guide to aligning intangible assets. *Strategy & Leadership*, 32(5), 10-17.

Keramati, A., Mehrabi, H., and Mojir, N. (2010). A process-oriented perspective on customer relationship management and organizational performance: an empirical investigation. *Industrial Marketing Management*, 39(7), 1170-1185.

Lawson, B., and Samson, D. (2001). Developing innovation capability in organisations: a dynamic capabilities approach. *International Journal of Innovation Management*, 5(3), 377-400.

3. The study of variables affecting innovation capability is also a factor in other aspects or theories such as enterprise resource planning (ERP) that affects innovation capability to create framework and compare the results to know the factors affecting innovation capability and organizational performance even more.



Liao, S. H., Fei, W. C., and Chen, C. C. (2007). Knowledge sharing, absorptive capacity, and innovation capability: an empirical study of Taiwan's knowledge-intensive industries. *Journal of Information Science*, 33(3), 340-359.

Lin R.J., Chen, R. H., and Chiu, K. K. S. (2010). Customer relationship management and innovation capability: an empirical study. *Industrial Management & Data Systems*, 110 (1), 111-133.

McEvily, B., and Marcus, A. (2005). Embedded ties and the acquisition of competitive capabilities. *Strategic Management Journal*, 26(11), 1033-1055.

McPhail, R., Herington, C., and Guilding, C. (2008). Human resource managers' perceptions of the applications and merit of the balanced scorecard hotels. *Journal Hospitality Management*, 27(4), 623-631.

Mohr, J., and Spekman, R. (1994). Characteristics of partnership success: partnership attributes, communication behavior, and conflict resolution techniques. *Strategic Management Journal*, 15(2), 135-152.

Panayides, P. (2006). Enhancing innovation capability through relationship management and implications for performance. *European Journal of Innovation Management*, 9(4), 466-483.

Reinartz., W., Krafft, M., and Hoyer, W. D. (2004). The customer relationship management processes: its measurement and impact on performance. *Journal of Marketing Research*, 41(3), 293-305.

Sainaghi, R., Phillips, P., and Corti, V. (2013). Measuring hotel performance: Using a balanced scorecard perspectives' approach. *International Journal of Hospitality Management*, 34, 150-159.

Shane, S. A., and Ulrich, K. T. (2004). Technological innovation, product development, and entrepreneurship in management science. *Management Science*, 50(2), 133-144.

Sin, L. Y. M., Alan, C. B., and Yim F. H. (2005). CRM: conceptualization and scale development. *European Journal of Marketing*, 39(11/12), 1264-1290.

Smith, A. (2006). CRM and customer service: strategic asset or corporate overhead?. *Handbook of Business Strategy*, 7(1), 87-93.

Sorbon, D. (1996). *LISREL 8 : User's Reference Guide*: Scientific Software International.

Bohling, T., Bowman, D., LaValle, S., Mittal, V., Narayandas, D., Ramani, G., and Varadarajan, R. (2006). CRM Implementation: Effectiveness Issues and Insights. *Journal of Service Research*, 9(2), 184-194.

Ulrich, D. (1998). Measuring human resources: An overview of practice and a prescription for results. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management*, 36(3), 303-320.



Valmohammadi, C. (2017). Customer relationship management: Innovation and performance. **International Journal of Innovation Science**, 9(4), 374-395.

Vorhies, D. W., and Harker, M. (2000). The capabilities and performance advantages of market-driven firms: an empirical investigation. **Australian Journal of Management**, 25(2), 145-171.

Weerawardena, J. (2003). Exploring the role of market learning capability in competitive strategy. **European Journal of Marketing**, 37(3/4), 407-429.

Chaengjenkit, C. (2005). **Customer Relationship Management in IMC & CRM for Real Estate Business**, Bangkok: Home Buyers Guide.

Rompho, N. (2010). A study of the relationship between the success of the organizational Performance measurement system and financial success. **Journal of Accounting Professions**, 6(16), 43-50

Vorakitphokatorn, R. (2004). **Innovation management for manager** (Vol.2) Bangkok: National Innovation Agency.

Research Center Bank of Ayutthaya. (August 2019). **Auto Parts Industry Business Industry trend for 2019-21**. Retrieved April 10, 2020, from <https://www.krungsri.com/th/research/industry/industry-outlook/Hi-tech-Industries/Auto-Parts/IO/Industry-Outlook-Auto-Parts-19>

National Innovation Agency. (2010). **Innovation management for executives** (Vol. 3)

National science and Technology development Agency. (2017). **Feasibility Study for development Eastern Economic Corridor innovation area** (pp. 8-10). Ministry of Science and Technology