



Analysis of the Influence of Radical Product Innovation on Market Orientation, Market Capabilities, and Electronic Integration in Gadget Technology

Yuni Vellina

Faculty of Economics, Batam International University, Indonesia

Email: yunivel16@gmail.com

ARTICLE INFO

Research Paper

Article history:

Received: 23 May 2023

Revised: 5 October 2023

Accepted: 29 April 2024

Keywords: Radical Product Innovation, Proactive Market Orientation, Marketing Capabilities, Electronic Integration, Entrepreneurial Orientation

ABSTRACT

the researcher intends to be able to determine the influence and significant relationship between each of the variables that have been selected to be analyzed including Radical Product Innovation as the dependent variable, Entrepreneurial Orientations, Marketing Capabilities, Electronic Integration as independent variables, and Proactive Market Orientation as mediating. The author prepared 250 questionnaires which were distributed widely. Proactive Market Orientation is not significant. Meanwhile, the relationship between Marketing Capabilities and Proactive Market Orientation is positive and significant. The relationship between Electronic Integration and Proactive Market Orientation is significant. Apart from that, it is known that Electronic Integration has an influence on Radical Product Innovation. Sedamglam Marketing Capabilities is not significant. towards Radical Product Innovation through Proactive Market Orientation. It is known that the relationship between Proactive Market Orientation and Radical Product Innovation is significant. Also the relationship between Entrepreneurial Orientation and Radical Product Innovation is positive and significant.

[This work is licensed under a Creative Commons Attribution-Non-Commercial 4.0 International License.](#)

INTRODUCTION

According to Law No. 18 of 2002 concerning the National System for Research, Development and Application of Science and Technology, Innovation is research, development or engineering activities aimed at developing practical applications of new scientific values and contexts, or ways to apply science. new ones, or production processes. Innovation is a company mechanism for adapting to a dynamic environment. Therefore, companies are required to be able to create new thoughts, new ideas by offering innovative products and improving services that can satisfy customers (Riandi, M, 2020).

Companies that implement Radical Product Innovation generally have a strong innovation capacity. A creative, innovation-friendly climate, Management paved the way for the birth of Radical Product Innovation. Employees must learn to change their previous patterns of thinking and actions. New employees with different professional backgrounds bring fresh drive and interesting perspectives (Team, I, 2020).

Radical Product Innovation depends on the collaboration and creativity of your staff and the willingness to work towards a common goal (Robbins, T, 2020).

Strategic orientation in RPI research is being built, there are still many gaps regarding the impact of various orientations (Kocak et al., 2017), Radical Innovation cannot be applied like a template to organizations in the same way, therefore in order to remain competitive it is important to be able to determine first first, how far the change will reach and what kind of product, service or business model innovation is the company's target (Stefan Mitzkus, 2022). Most focus on responsive market orientation, with only a few adopting a Proactive Market Orientation perspective to explore relationships with Entrepreneurial (Jean et al., 2018). Information technology capabilities between organizations, such as Electronic Integration with customers, can also have an impact on suppliers' Radical Product Innovation (Jean et al., 2018).

Radical Product Innovation in the context of inter-company relationships is still unknown (Jean et al., 2018). From previous research it was created to address the identified research gaps, by presenting the conceptual foundation that led to the hypothesized model and then analyzing survey data, original equipment manufacturer suppliers to search for evidence that supports the hypothesis. Figure 1.1 shows that The country with the most innovation in 2021 in human capital, institutions, technology, creative output, markets and also business sophistication. The innovation states that Switzerland (65.5), Sweden (63.1), US (61.3), UK (59.8), South Korea (59.3), Netherlands (58.6), Finland (58.4) and the last one is Singapore with an achievement of (57.8). The 2022 Global Index Organization (WIPO) states that there is a level of innovation in the criteria, one of which is technology.

Switzerland occupies the top ranking and this is the 12th time it has been named the leading country with the most innovation. One of the rankings that was long ago was South Korea's 6th position, where the country previously occupied 10th position in 2020. China is a country that has innovated 11th, previously occupying 14th position in 2020, and in 2019 it was ranked 17th in 2018.

Since 2018, Indonesia has been in 85th position until 2020 and remains in 85th place even though Indonesia has better performance in innovation outputs than innovation inputs. (Kompas.com, 2020). Based on the Innovation Index by the World Intellectual Property Organization (WIPO), Indonesia's ranking is below Singapore, Malaysia, Thailand, Vietnam and the Philippines. In 2021, Singapore is ranked 8th, Malaysia is ranked 36th, Thailand is ranked 43rd, Vietnam is ranked 44th, the Philippines is ranked 51st, while Indonesia is ranked 87th. namely Indonesia experienced a decline of 2 rankings in the previous year.

Innovation is also expensive and has a high level of risk and therefore companies tend to carry out business activities with lower risk. When market failure occurs, the Government will implement policies to address the problems faced. As Entrepreneurial Orientation (EO), an important element of a company's entrepreneurial strategy because it captures how entrepreneurship can be manifested as a generally stable organizational attribute or characteristic through strengthening patterns of management style, organizational configuration, and new entry initiatives (Wales, WJ, Covin, JG, & Monsen, 2020). Manufacturing companies strive to achieve higher performance in *Radical Product Innovation* (RPI) through Entrepreneurial Orientations (EO), it should also be noted that realized potential and absorptive capacity have a significant role in this relationship (Chih-Wei Lin, Li Keng Cheng, 2020). Confirms that *Proactive Market Orientation* (PMO) It is very important that Entrepreneurial Orientation (EO) and Long-Term can influence Radical Product Innovation (RPI). Additionally, this study finds that supplier-customer Electronic Integration (EI) has a moderate effect on Proactive Market Orientations (PMO) and Radical Product Innovation (RPI) (Sampson Ato Sarsah, Hongyun Tian, Courage Simon Kofi Dogbe, Bylon Abeeku Bamfo & Management, 2020). That supplier-customer Electronic Integration (EI) has a moderate effect on Proactive Market Orientations (PMO) and Radical Product Innovation (RPI). The originality of the value of Radical Product Innovation (RPI) is a topic of great interest to academia and industry, but a comprehensive conceptual framework for its antecedents is still lacking (Sampson Ato Sarsah, Hongyun Tian, Courage Simon Kofi Dogbe, Bylon Abeeku Bamfo & Management, 2020).

LITERATURE REVIEW

The relationship between Entrepreneurial Orientation and Proactive Market Orientation

EO refers to behavior that shows innovation, proactiveness, and a supplier's willingness to pursue opportunities for new business growth despite uncertainty regarding the results of its business.(James L. Anderson, 2015). Suppliers with high levels of EO are accustomed to seeking new opportunities to gain an advantage over their rivals. EO allows suppliers to be more involved in the creation of new markets, which in turn allows them to predict market demand and implement a variety of innovative and proactive marketing tactics for greater profits(Man Yang, 2017)Suppliers with EO show greater proactivity and are more aware of market trends. Consequently, in collaboration with customers, suppliers with high EO focus on technology research and initial prototyping and development(Silvia L. Martin, 2016).

The relationship between Marketing Capabilities and Proactive Market Orientation

A consumer-oriented company that expands its resources allows for Radical's development *Product Innovation*who understand customers who need customer thinking outside the box. Marketing Capabilities depend on the company's strategic Proactive Market Orientations and the availability of resources to implement R&D and market diffusion(S. Davcik & Sharma, 2015).In research(Mateja Bodlaj & Barbara Cater, 2022)shows that market orientation has different effects on product development capabilities, which have a positive relationship with differentiation advantages and with business performance to increase market orientation and marketing capabilities to improve business performance. In research(Mohammad Faisal Ahammad c, 2022)influence on a company's emerging market orientation, a latent construct consisting of four marketing capabilities: proactive market orientation, brand management capabilities, capabilities in new product development, and capabilities for customer relationship management.

The relationship between Electronic Integration and Proactive Market Orientation

Electronic Integration determines the performance of a supplier organization and also represents a means by which it can gain a competitive advantage(Bruce McKeown & Dan B. Thomas, 2014). Electronics improve the quality of communication, thereby increasing mutual trust between buyers and sellers(Samuel Spralls, 2011). Additionally, it allows suppliers to gain greater insight into customer preferences and even their market conditions through data analysis increasing their sensitivity to customer needs.(Andres Castellanos-Gomez1, 2014)

As collaboration between suppliers and buyers is strengthened through Electronic Integration, both parties engage in a wide range of knowledge and strategic information(Roriguez-Escobar & González Benito, 2015)on product design, product planning and market forecasting, all of which help suppliers to think outside the box and adopt innovative operational thinking(Nguyen Van Du & Peter Boyce, 2019). Once suppliers can communicate via an integrated information system, space and time are no longer a limitation. Consequently, miscommunication between organizations becomes rare(Roriguez-Escobar & González Benito, 2015)

(Andres Castellanos-Gomez1, 2014)observed that extranets and Internet Electronic Integration enable suppliers to proactively and attentively serve customers by providing them directly with product information and promotions without the constraints of regional restrictions. Electronic strengthens supplier-customer collaboration and provides suppliers with greater insight into their customers' market trends and market environment.

The relationship between Electronic Integration and Radical Product Innovation

*Radical Product Innovation*is a topic of great interest to academia and industry, but a comprehensive conceptual framework. Research finds that Electronic Integration has a moderating effect

on Radical Product Innovation(Chih-Wei Lin, Li Keng Cheng, 2020). In research(Wendan Yang ab, 2021)that brings dramatic progress from existing technology, this research uses the integration of QFD (Quality Function Deployment) and TRIZ (Theory of Innovation Problem Solving) by providing this framework innovation activities effectively for radical innovation, QFD is expanded into two phases including Product House of Quality (HoQ) and HoQ design in this research to support design decisions for product innovation. Serves to analyze the TRIZ-based performance developed in Hoq products to identify product innovation performance features, the feasibility and effectiveness of this method is proven.

Research on(Kang Wang a, 2021)Innovation activities are necessary for industry to develop competitive products in response to rapid market changes, radical innovation enables long-term product technical superiority and market competitiveness, this method is proposed for systematic effect solving (ESM) for radical product design innovation. ESM includes problem identification, function analysis, main problem determination, effect selection, structure mapping and scheme evaluation, this method is proposed not only to increase the possibility of developing radical innovation products, the feasibility and effectiveness of this method are proven. In research(C. Anthony Di Benedetto, 2008)that applying analysis of variance and negative binomial distribution (NBD) regression techniques to test and technological capabilities is significantly and positively related to radical product innovation.

The relationship between Marketing Capabilities and Radical Product Innovation through Proactive Market Orientation

*Marketing Capabilities*needed for dynamic environmental needs, including potential market developments with different targets, different products and communication strategies with different value propositions(Cake et al., 2020).In research(C. Anthony Di Benedetto, 2008)that marketing capabilities are more significantly and positively related to radical innovation in the United States, Japan and China are the only capabilities that are significantly and positively related to radical innovation. Study(Shu-Pei Tsai, 2015)that market capability is an integral part of the general capability to facilitate radical innovation, it is still necessary to prove specific market capability for radical innovation in international technology-intensive sectors.

The relationship between Proactive Market Orientation and Radical Product Innovation

*Market Orientation*who are used to being responsive listening to customers focuses on needs which can encourage adjustments based on customer suggestions so that this increases innovation for these customers(Chih-Wei Lin, Li Keng Cheng, 2020).On research(Ci-Rong Li, 2008), shows that proactive market orientation has a more radical impact on innovation that can achieve product improvements and extensions more effectively. In research(Liisa-Maija Sainio, 2012)with the title "Constituents of Radical Innovation-Exploring the role of strategic orientations and market uncertainty" that a proactive market orientation allows companies to find a better balance between the types of "customer-led" and "customer-led" innovation activities, and facilitates the emergence will be radical innovation.

The relationship between Entrepreneurial Orientation and Radical Product Innovation

In research (Sampson Ato Sarsah, Hongyun Tian and Courage Simon Kofi Dogbe) show that the results presented support the relationship between Entrepreneurial and Radical Product Innovation by showing that Entrepreneurial has a significant positive effect on Radical Product Innovation in manufacturing SMEs. Activities that positively affect its ability to introduce new products to the market. In R&D and leadership in technology, which are key factors in improving RIP(Shih, 2018). Firms' ability to effectively combine external knowledge with internal knowledge capabilities gives them superior knowledge resources to engage in

METHOD

Classification is carried out in terms of expanding the theory. Research is used to obtain a reference in expanding knowledge insight. The dependent variables chosen were Radical Product Innovation, Proactive Market Orientation, Entrepreneurial Orientations, and Electronic Integration. This method is used to determine the value of one or more independent variables with the condition of the variable itself without any influence from other variables (Sugiyono, 2018: 86). Taken by researchers, namely the adoption of research that knows more about these problems in carrying out Radical Product Innovation. Where samples are taken from the respondents, the variables to be analyzed. This research comes from secondary data which is taken from various print or online media. The data collection technique is by giving a set of written questions or statements to respondents (Sugiyono, 2019:194). In variables, tests are carried out which contain various kinds of variables which consist of independent ones. Mediating and also Dependent. There is a dependent variable in the research, namely Radical Product Innovation, the mediating variable used is Proactive Market Orientations, and the independent variables are Marketing Capabilities, Electronic Integration and Entrepreneurial Orientations. The company has an Entrepreneurial Orientation that supports and is able to realize Entrepreneurial behavior into sufficient regularity in determining organizational characteristics (Covin & Wales, 2019). Companies carrying out Radical Product Innovation can change the industry for the better because they can respond to problems in new ways because it takes a lot of time to implement (Accept Mission, 2021). and the availability of resources to implement R&D and market diffusion (Davicik et al., 2021).

This method states the number and percentage of questionnaires regarding the respondent's demographics. The analysis technique used is so that it can be better understood and consists of types gender, age, occupation and education. Experiments were carried out in analyzing data measurements using the Common Method Biases (CMB) Test. Common Method Biases (CMB) is used to measure the independent and dependent variables obtained from using the same item context and similar item characteristics (INN Analysis, 2020). An evaluation was carried out using a measurement model through analysis. As an Entrepreneurial Orientation, an important element of a company's entrepreneurial strategy because it captures how entrepreneurship can be realized as a generally stable attribute or characteristic of an organization through a pattern of strengthening the management style of organizational configuration and new entry initiatives (Wales, W, J., Covin, JG, & Monsen, E, 2020)

Outer Loadings there are 2 methods for validation and reliability testing, namely Cronbach's Alpha and Composite Reliability (Ghozali & Latan, 2015). (Hair, Risher, Sarstedt & Ringle 2018) states that AVE (Average Variance Extracted) is tested to obtain valid and invalid test results with an AVE value > 0.050. A test of reliability is carried out by proving accuracy and consistency in construct measurement. Cronbach's Alpha has a reliable level and assumes an indicator for assessment above 0.708. Hair et al., (2019) and composite reliability. According to (Hair et al., 2018). The validity test obtains valid data and is said to be valid for the research with the abilities, knowledge, experience or background being tested (dosenpendidikan.com)

RESULTS AND DISCUSSION

This research involved 234 respondents, where the data obtained from the respondents would first be analyzed based on gender, age, education, occupation, income and brands of gadgets that were widely used by the respondents. Collecting data for population studies in terms of size (number, structure or composition (Liputan6.com)).

Table 1. Characteristics of Respondents

Gender	Amount	Percentage
Man	112	47.9%
Woman	122	52.1%
Age		
<18 Years	4	1.7%
18-25 Years	209	89.3%
26-35 Years	21	9%
>36 Years	17	9%
Education		
elementary school	0	0%
JUNIOR HIGH SCHOOL	0	0%
SMA/SMK/Equivalent	157	67.1%
Diploma	3	1.3%
S1	73	31.2%
S2	1	0.4%
S3	0	0%
Work		
Student / Students	67	28.6%
Entrepreneur / Business	42	17.9%
Government employees	2	0.9%
Private employees	122	52.1%
Other	1	0.4%
Income		
< 4,000,000	73	31.2%
4,000,000 - 6,000,000	140	59.8%
6,000,000 - 8,000,000	16	6.8%
>8,000,000	5	2.1%
Brand		
Apple	99	42.3%
Samsung	47	20.1%
Xiaomi	53	22.6%
ROG	5	2.1%
Oppo	24	10.3%
Vivo	4	1.8%
Huawei	1	0.4%
Realme	1	0.4%

Based on the research results above that the total number of males is 112 and females are 122, so that analysis can be carried out further. There were 4 people who purchased gadgets between the ages of <18 years, 209 people purchased gadgets aged 18 - 25 years, 21 purchased gadgets aged 26 - 35 years, and 17 people purchased gadgets aged <36 years. , 0 have junior high school education, 157 have SMA/SMK/equivalent education, 3 have diploma education, 73 have bachelor degree education, 1 have master degree education while 0 have doctorate education. Purchasing gadgets has various types of work consisting of 67 students. people, 42 entrepreneurs/business people, 2 civil servants, 122 private employees, and 1 person who answered others. The results of the respondents' income stated that 73 people had an income <4,000,000, 140 people had an income of <4,000,000, 140 people had an income of <4,000,000, 16 people had an income of >8,000,000, and 5 people had an income of >8,000,000. The results of the data obtained by the respondents stated that the Gadget Brands owned by the respondents were Apple with 99

people, Samsung 47 people, Xiao Mi 53 people, ROG 5 people, Oppo 24 people, Vivo 4 people, Huawei 1 person and finally Realme 1 person .

Data Analysis Results

AVE (Average Variance Extracted)

The results of the Validity Test are carried out in order to determine the validity of each indicator. A value of 0.50 is declared valid. This value describes adequate convergent validity and means that a latent variable is able to explain more than half of the variance of the indicators in the average (Ghozali, 2016). If the AVE value is tested to obtain valid and invalid values with an AVE value > 0.50 (Hair, Risher Sarstedt & Ringle, 2018).

Table 2. AVE Test Results

Variables	Average Variance Extracted (AVE)	Information
<i>Radical Product Innovation (RPI)</i>	0.572	Reliable
<i>Entrepreneurial Orientation (EO)</i>	0.343	Not Reliable
<i>Electronic Integration (EI)</i>	0.619	Reliable
<i>Proactive Market Orientation (PMO)</i>	0.726	Reliable
<i>Marketing Capabilities (MC)</i>	0.641	Reliable

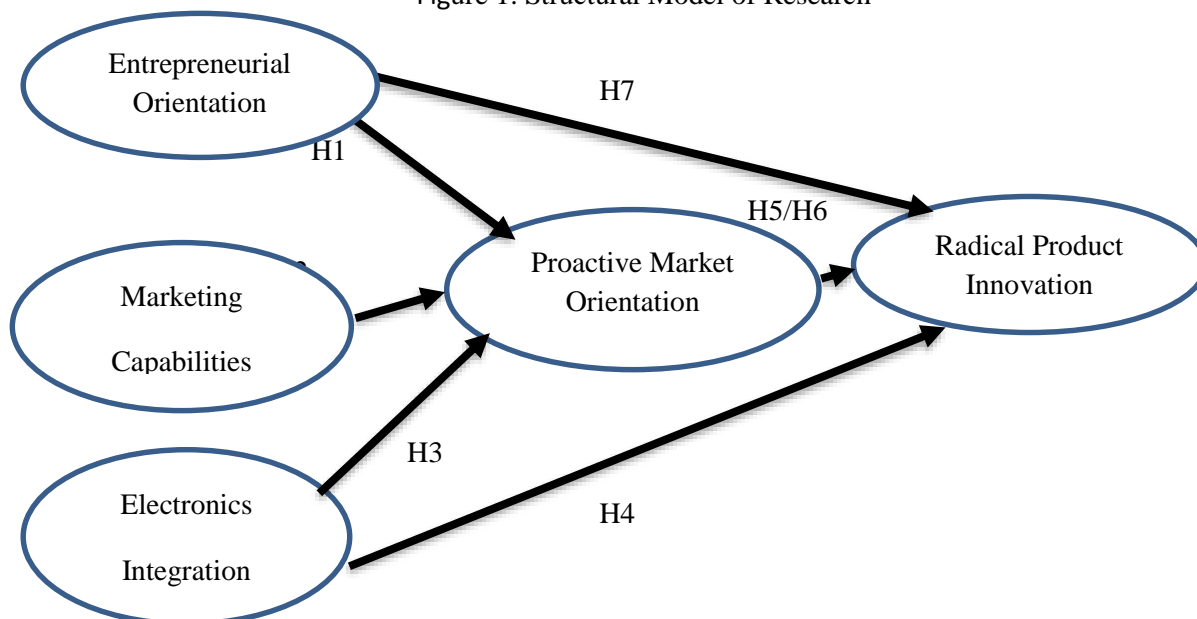
Reliability Test

A Reliability Test was carried out to determine whether respondents responded to the questionnaire and whether they were consistent or inconsistent. Composite reliability score > 0.6, based on table 4.10, RPI 0.916, EO score 0.046, EI 0.828, PMO 0.915 and MC 0.945. Where Cronbach's alpha is an assessment of internal consistency which assumes all indicators have the same level of reliability (Marko Sarstedt, 2014) and composite reliability. According to (Joe F Hair et al., 2018), the reliability test can be seen from the composite reliability score above 0.708. The conclusion is that there is one variable that is not reliable, namely Entrepreneurial Orientation.

Table 3. Reliability Test Results

Variable		Information
<i>Radical Product Innovation (RPI)</i>	0.916	Valid
<i>Entrepreneurial Orientation (EO)</i>	0.046	Invalid
<i>Electronic Integration (EI)</i>	0.828	Valid
<i>Proactive Market Orientation (PMO)</i>	0.915	Valid
<i>Marketing Capabilities (MC)</i>	0.945	Valid

Figure 1. Structural Model of Research



Cronbach's Alpha

The technique used to determine the reliability of the questionnaire is by means of the Cronbach's Alpha statistical test. According to (Ghozali, 2018) states that if the value is more than 0.6 it is declared reliable. Carried out to be able to prove accuracy and consistency in construct measurements, Cronbach's alpha has a reliable level and assumes an indicator for assessment (Hair et al., 2019).

Table 4. Cronbach's Alpha Test Results

Variable	Composite Reliability Information	
<i>Radical Product Innovation (RPI)</i>	0.752	Reliable
<i>Entrepreneurial Orientation (EO)</i>	0.248	Not Reliable
<i>Electronic Integration (EI)</i>	0.702	Reliable
<i>Proactive Market Orientation (PMO)</i>	0.811	Reliable
<i>Marketing Capabilities (MC)</i>	0.721	Reliable

Test R2

The R2 test was carried out to see several percentages of the variable relationships. The relationship between Entrepreneurial Orientation and Marketing Capabilities is equal to. The R2 value is used to measure how far the ability of the independent variable is towards the dependent variable (Ghozali, 2016: 95).

Table 5. R2 Test Results

Variable	R2	Percentage
<i>Radical Product Innovation</i>	0.005	0.05%
<i>Proactive Market Orientation</i>	0.402	46.2%

Quality Index Test

A test is carried out in order to find out the overall model value. Based on Table 5.

Table 6 Quality Index Test Results

Communality	GoF	Description
0.483	0.308	Big

VAF (Variance Average For) Test

The VAF (Variance Average For) Test was carried out in order to determine the nature of Radical Product Innovation, Proactive Market Orientation, Entrepreneurial Orientation, Electronic Integration and Market Capabilities.

Table 7 VAF Test Results

Direct Effects	VAF
E.O→PMO	0.924
MC→PMO	6,906
EI→PMO	2,743
EI→RPI	0.500
MC→PMO→RPI	7,218
PMO→RPI	2,554
<i>Indirect Effects</i>	
E.O→RPI	2,327

Y /Direct Effect →

RPI	32%	1
-----	-----	---

DISCUSSION

This research was carried out to conduct an analysis of Proactive Market Orientation, Marketing Capabilities, Entrepreneurial Orientation and Electronic Integration towards Radical Product Innovation. Research relates to variables that show significant results and the research hypothesis is accepted and supported. There are several conclusions that have been summarized by the author as follows:

Hypothesis 1 is not accepted because the value is not significant for Entrepreneurial Orientation and Proactive Market Orientation. The test results are consistent with the research. Gordon Lui, Wai Wai Joyce Ko, Isaac Ngugi, Sachiko Takeda (2017). The research results show that Entrepreneurial Orientations has a significant and positive relationship with Proactive Market Orientations(Chih-Wei Lin, Li Keng Cheng, 2020).According to(Narver et al, 2014)Proactive Market Orientation seeks to understand and satisfy latent customer needs. Meeting latent customer needs requires a focus on exploring market knowledge and generative learning styles(William E Baker & James M Sinkula, 2002).

Hypothesis 2 is accepted because it is significant and meets the requirements for the Marketing Capabilities and Proactive Market Orientation variables. The test results from previously carried out by(Chih-Wei Lin, Li Keng Cheng, 2020). In research(Mateja Bodlaj & Barbara Cater, 2022)shows that market orientation has different effects on product development capabilities, which have a positive relationship with differentiation advantages and with business performance to increase market orientation and marketing capabilities to improve business performance. In research(Mohammad Faisal Ahammad c, 2022)influence

on a company's emerging market orientation, a latent construct consisting of four marketing capabilities: proactive market orientation, brand management capabilities, capabilities in new product development, and capabilities for customer relationship management.

Hypothesis 3 is accepted because it is significant in the Electronic Integration and Proactive Market Orientation variables. Electronic Integration determines the performance of a supplier organization and also represents a means by which it can gain a competitive advantage (Bruce McKeown & Dan B. Thomas, 2014). Electronics improve the quality of communication, thereby increasing mutual trust between buyers and sellers (Samuel Spralls, 2011). Additionally, it allows suppliers to gain greater insight into customer preferences and even their market conditions through data analysis increasing their sensitivity to customer needs. (Andres Castellanos-Gomez1, 2014)

Hypothesis 4 Cannot be accepted because this variable does not meet the requirements for the Electronic Integration and Radical Product Innovation variables previously stated by (Chih-Wei Lin, Li Keng Cheng, 2020). In research (Wendan Yang ab, 2021) that brings dramatic progress from existing technology, this research uses the integration of QFD (Quality Function Deployment) and TRIZ (Theory of Innovation Problem Solving) by providing this framework innovation activities effectively for radical innovation. In research (C. Anthony Di Benedetto, 2008) that applying analysis of variance and negative binomial distribution (NBD) regression techniques to test and technological capabilities is significantly and positively related to radical product innovation.

Hypothesis 5 is accepted because it is significant and meets the requirements for the Marketing Capabilities and Proactive Market Orientation variables through Radical Product Innovation. Marketing Capabilities are needed for dynamic environmental needs, including potential market developments with different targets, different products and communication strategies with different value propositions (Coke et al., 2020). In research (C. Anthony Di Benedetto, 2008) that marketing capabilities are more significantly and positively related to radical innovation in the United States, Japan and China are the only capabilities that are significantly and positively related to radical innovation. Study (Shu-Pei Tsai, 2015) that market capability is an integral part of the general capability to facilitate radical innovation, it is still necessary to prove specific market capability for radical innovation in international technology-intensive sectors.

Hypothesis 6 is accepted because it is significant in the Proactive Market Orientation and Radical Product Innovation variables. The test results are consistent with previous research, namely stated by (Chih-Wei Lin, Li Keng Cheng, 2020). On research (Ci-Rong Li, 2008), shows that proactive market orientation has a more radical impact on innovation that can achieve product improvements and extensions more effectively. In research (Liisa-Maija Sainio, 2012) with the title "Constituents of Radical Innovation-Exploring the role of strategic orientations and market uncertainty" that a proactive market orientation allows companies to find a better balance between the types of "customer-led" and "customer-led" innovation activities, and facilitates the emergence will be radical innovation.

Hypothesis 7 is accepted because it is significant in the Entrepreneurial Orientation and Radical Product Innovation variables. In research (Sampson Ato Sarsah, Hongyun Tian and Courage Simon Kofi Dogbe) show that the results presented support the relationship between Entrepreneurial and Radical Product Innovation by showing that Entrepreneurial has a significant positive effect on Radical Product Innovation in manufacturing SMEs. Activities that positively affect its ability to introduce new products to the market. In R&D and leadership in technology, which are key factors in improving RIP (Shih, 2018). Firms' ability

to effectively combine external knowledge with internal knowledge capabilities gives them superior knowledge resources to engage in radical innovation. Therefore, RAC helps SME manufacturers to take advantage of the EO effect on RIP (Sciascia, 2014)

CONCLUSION

Proactive Market Orientation is not significant. Meanwhile, the relationship between Marketing Capabilities and Proactive Market Orientation is positive and significant. The relationship between Electronic Integration and Proactive Market Orientation is significant. Apart from that, it is known that Electronic Integration has an influence on Radical Product Innovation. Sedang Marketing Capabilities is not significant towards Radical Product Innovation through Proactive Market Orientation. It is known that the relationship between Proactive Market Orientation and Radical Product Innovation is significant. Also the relationship between Entrepreneurial Orientation and Radical Product Innovation is positive and significant.

REFERENCES

- A. George Assaf, FK a, AB (2021). Understanding and managing the threat of common method bias: Detection, prevention and control. *Tourism Management*. <https://doi.org/10.1016/j.tourman.2021.104330>
- Alexander Newman a, MO b, SS c, MC a, IN a. (2019). Entrepreneurial self-efficacy: A systematic review of the literature on its theoretical foundations, measurement, antecedents, and outcomes, and an agenda for future research. *110(Part B)*, 403–419. <https://doi.org/10.1016/j.jvb.2018.05.012>
- Anandi Bharadwaj, OAESPAP and NV (2013). Digital Business Strategy: Toward a Next Generation of Insights. *37(2)*, 471–482. <https://doi.org/10.25300/MISQ/2013/37:2.3>
- Andres Castellanos-Gomez¹, LVEPJOIKLN-ASIBDJGMBGASJVAHWZJJ P. and HSJ van der Z. (2014). Isolation and characterization of few-layer black phosphorus. <https://doi.org/10.1088/2053-1583/1/2/025001>
- Aydin, Hakan. (2020). Market orientation and product innovation: the mediating role of technological capability. <https://doi.org/10.1108/ejim-10-2019-0274>
- Azlin Shafinaz Arshad, ARAAAZMZ (2014). The Impact of Entrepreneurial Orientation on Business Performance: A Study of Technology-based SMEs in Malaysia. *130*, 46–53. <https://doi.org/10.1016/j.sbspro.2014.04.006>
- Bruce McKeown & Dan B. Thomas. (2014). Quantitative Applications in the Social Sciences. <https://doi.org/10.4135/9781483384412>
- C. Anthony Di Benedetto, WSDMS (2008). Strategic Capabilities and Radical Innovation: An Empirical Study in Three Countries. *55(3)*, 420–433. <https://doi.org/10.1109/TEM.2008.922645>
- Cake, D.A., Agrawal, V., Gresham, G., Johansen, D., & di Benedetto, A. (2020). Strategic orientations, marketing capabilities and radical innovation launch success. *Journal of Business & Industrial Marketing*, ahead-of-p(ahead-of-print). <https://doi.org/10.1108/jbim-02-2019-0068>
- Christine Moorman and George S. Day. (2016). Organizing for Marketing Excellence. *80(6)*. <https://doi.org/10.1509/jm.15.0423>
- Ci-Rong Li, C.-JLC-PC (2008). The nature of market orientation and the ambidexterity of innovations. *46(7)*, 1002–1026. <https://doi.org/10.1108/00251740810890186>
- Covin, J. G., & WWJ (2019). Crafting High-Impact Entrepreneurial Orientations Research: Some Suggested Guidelines. *Entrepreneurial Theory and Practice*. *43*, 3–18. <https://doi.org/10.1177/1042258718773181>
- Droge, C., VSK, and JMA (2012). Does Supply Chain Integration Mediate the Relationships between Product/Process Strategy and Service Performance? An Empirical Study. *International Journal of Production Economics*, *137*, 250–262. <https://doi.org/10.1016/j.ijpe.2012.02.005>

- El Manzani, Younces. Sidmou. Mohamed. Larby. Jean Jack. (2019). "Does ISO 9001 quality management system support product innovation? An analysis from the sociotechnical systems theory."<https://doi.org/10.1108/IJORM-09-2017-0174>
- Ghozali. (2018). Descriptive Analysis.https://scholar.google.com/citations?hl=en&user=kbmkiQQAAAAJ&view_op=list_works&sortby=pubdate
- Ghozali; Latan. (2015). Partial Least Squares: Concepts, Techniques and Applications using SmartPLS 3.https://www.researchgate.net/publication/283619375_Partial_Least_Squares_Concepts_Techniques_and_Applications_using_SmartPLS_3
- Hair, JF, Risher. JJ, Sarstedt. M., & Ringle. CM (2019). Factors Influencing Subscribers' Use and Adoption of the NHIS Mobile Renewal Service.<https://doi.org/10.1108/EBR-11-2018-0203>
- Han et.al in Sukarmen. (2013). PRODUCT INNOVATION.<https://bbs.binus.ac.id/gbm/2019/02/26/inovasi-produk/>
- Imam Ghozali & Hengky Latan. (2012). Partial least squares: Concepts, techniques and applications of SmartPLS 2.0 M3. Semarang: Diponegoro University Publishing Agency.https://scholar.google.com/citations?view_op=view_citation&hl=en&user=kbmkiQQAAAAJ&cstart=400&pagesize=100&sortby=pubdate&citation_for_view=kbmkiQQAAAAJ:7BrZ7Jt4UNcC
- Indu Ramachandran, CAL-H., and VB (2019). Enabling and leveraging ambidexterity: influence of strategic orientations and knowledge stock. Journal of Knowledge Management.<https://doi.org/10.1108/JKM-11-2018-0688>
- INN. Analysis. (2020, April 29). Common Method Bias: Simplifies definition, sources and cure.<https://www.analysisinn.com/post/common-method-bias-simplified-definition-sources-and-cure/>
- Irina V. Kozlenkova, SAS & RWP (2014). Resource-based theory in marketing. Journal of the Academy of Marketing Science, 42, 1–21.<https://link.springer.com/article/10.1007/s11747-013-0336-7>
- James L. Anderson, CMA (2015). The Fishery Performance Indicators: A Management Tool for Triple Bottom Line Outcomes.
- Jeffrey S. Conant, MPMPRV (1990). Strategic types, distinctive marketing competencies and organizational performance: A multiple measures-based study.<https://doi.org/10.1002/smj.4250110504>
- Joe F Hair, JJRMSCR (2018). The results of PLS-SEM article information. 31, 2–24.https://scholar.google.com/citations?view_op=view_citation&hl=en&user=jMVuQpsAAAAJ&cstart=100&pagesize=100&sortby=pubdate&citation_for_view=jMVuQpsAAAAJ:Lo8V22OuN40C
- Johan Wiklund, DS (2005). Entrepreneurial orientation and small business performance: A configurational approach. Journal of Business Venturing, 20(1), 71–91.<https://doi.org/10.1016/j.jbusvent.2004.01.001>
- John C Narver. (2004). Responsive and Proactive Market Orientation and New-Product Success*. 21(5), 334–347.<https://doi.org/10.1111/j.0737-6782.2004.00086.x>
- Kang Wang a, RT a, QP b, YS a, HL a, JS a. (2021). Radical innovation of product design using an effect solving method. 151.<https://doi.org/10.1016/j.cie.2020.106970>
- Kehinde Medase & Laura Barasa. (2019). Absorptive capacity, marketing capabilities, and innovation commercialization in Nigeria. European Journal of Innovation Management, 22(5), 790–820.<https://doi.org/10.1108/ejim-09-2018-0194>
- Kocak, A.; CA; OS (2017). Market, Entrepreneurial, And Technology Orientations: Impact on Innovation And Firm Performance.<https://doi.org/10.1108/MD-04-2015-0146>
- Kohli, AK and JBJ (1990). Market Orientation: The Construct, Research Propositions, and Managerial Implications. Journal of Marketing, 54, 1–18.<https://doi.org/10.2307/1251866>
- Krishna. (2020). Determination Coefficient Test (R-square Test) (thesis and thesis).<https://konsultasiskri.com/2020/04/25/uji-koefficient-determination-uji-r-square-skrip-dan-tesis/>

- Lechner, C. and G.S.V. (2014). Entrepreneurial Orientation, Firm Strategy and Small Firm Performance. *International Small Business Journal*, 32(1), 36–60. <https://doi.org/10.1177/0266242612455034>
- lecturerpendidikan.co.id. (2023, February 22). Validity Test is. <https://www.dosenpendidikan.co.id/uji-validitas/>
- Lei, Hui. Ha. Anh. Thy. Lan. Le. Phong. Ba. (2019). How ethical leadership cultivates radical and incremental innovation: the mediating role of tacit and explicit knowledge sharing. <https://doi.org/10.11/jbim-05-2019-0180>
- Lie Wang, XFJHXSTCPCBWP (2019). Application Challenges in Fiber and Textile Electronics. <https://doi.org/10.1002/adma.201901971>
- Liisa-Maija Sainio, PR & PH-L. (2012). Constituents of radical innovation—exploring the role of strategic orientations and market uncertainty. 32(11), 591–599. <https://doi.org/10.1016/j.technovation.2012.06.006>
- Lin, C.-W., Cheng, L. Kand Wu, L.-Y. (2021), "Roles of strategic orientations in radical product innovation", *Marketing Intelligence & Planning*, Vol. 39 No. 1, pp. 33–47. <https://doi.org/10.1108/MIP-04-2020-0159>
- Liputan6.com. (2022, February 8). Understanding Demography is the Science of Population, This is the Explanation of Experts. Jakarta. <https://www.liputan6.com/hot/read/4880895/pengertian-demografi-hadap-ilmu-tangan-kependungan-begini-pengjauhan-para-ahli>
- Man Yang, P. G. (2017). Entrepreneurial marketing of international high-tech business-to-business new ventures: A decision-making process perspective. *Industrial Marketing Management*, 64, 147–160. <https://doi.org/10.1016/j.indmarman.2017.01.007>
- Marko Sarstedt, CMRJHJFH (2014). On the emancipation of PLS-SEM: A commentary on Rigdon (2012). *Long Range Planning*, 47(3), 154–160. https://scholar.google.com/citations?view_op=view_citation&hl=en&user=jMVuQpsAAAAJ&csstart=100&pagesize=100&sortby=pubdate&citation_for_view=jMVuQpsAAAAJ:RYcK_YIVT_xYC
- Mateja Bodlaj & Barbara Cater. (2022). Responsive and proactive market orientation in relation to SMEs' export venture performance: The mediating role of marketing capabilities. 138, 256–265. <https://doi.org/10.1016/j.jbusres.2021.09.034>
- Mission Accept. (2021, September 1). Radical Innovation: Definition, Differences, and Examples. <https://www.acceptmission.com/blog/example-radical-innovation/>
- Mix et al in Sutrasmawati. (2019, February 26). PRODUCT INNOVATION. <https://bbs.binus.ac.id/gbm/2019/02/26/inovasi-produk/>
- Mohammad Faisal Ahammad c, NT d, NY e. (2022). Constituents of dynamic marketing capability: Strategic fit and heterogeneity in export performance. 144, 1007–1023. <https://doi.org/10.1016/j.jbusres.2022.02.011>
- Moreau et al. (2020). The past, present, and future of innovation research. <https://doi.org/10.1007/s11002-020-09528-6>
- Moses Hubeis. (2012). Creativity and innovation management in business. Jakarta: PT. Hecca Mitra Utama, 75. https://scholar.google.com/citations?hl=en&user=3adh0vwAAAAJ&view_op=list_works&sortby=pubdate
- Narver et al. (2014). Nonlinear and complementary effects of responsive and proactive market orientation on firms' competitive advantage. <https://doi.org/10.1108/APJML-01-2019-0058>
- Neil A. Morgan namorgan, HF huifeng and KAW (2018). Marketing Capabilities in International Marketing. 26(1). <https://doi.org/10.1509/jim.17.0056>
- Neil A. Morgan, CSK & DWV (2012). Export marketing strategy implementation, export marketing capabilities, and export venture performance. *Journal of the Academy of Marketing Science*, 40, 271–289. <https://link.springer.com/article/10.1007/s11747-011-0275-0>
- Nguyen Van Du & Peter Boyce. (2019). Anadendrum chlorospathum Vietnam. *Blumea Journal of Plant Taxonomy and Plant Geography*, 64, 190–193. <https://doi.org/10.1108/JEA-02-2018-0023>
- Nikos Bozionelos & Marcia J. Simmering. (2021). Methodological threat or myth? Evaluating the current state of evidence on common method variance in human resource management research. 32(1), 194–215. <https://doi.org/10.1111/1748-8583.12398>

- Nugroho J Setiadi. (2016). CONSUMER BEHAVIOR. 16(2), 398.<https://play.google.com/books/reader?id=HdxDDwAAQBAJ&pg=GBS.PP1&hl=en>
- Nurul Ulya, F. (2020, September 3). This is Indonesia's ranking in the 2020 Global Innovation Index. Jakarta, Kompas.Com.<https://money.kompas.com/read/2020/09/03/190000126/ini-peringkat-indonesia-di-index-inovasi-global-2020>
- Philip Kotler and Kevin Lane Keller. (2016). Marketing Management. 454.https://www.pearson.com/nl/en_NL/higher-education/subject-catalogue/marketing/Kotler-Keller-Marketing-Management-Global-Edition-16e.html
- Phyra Sok, LSWJ (Thomas) LKMS (2017). Linking entrepreneurial orientation and small service firm performance through marketing resources and marketing capability: A moderated mediation model. Journal of Service Theory and Practice.<https://doi.org/10.1108/JSTP-01-2016-0001>
- R.-JB Jean, et al. (2018). Strategic orientations, joint learning, and innovation generation in international customer-supplier relationships.<https://doi.org/10.1016/j.ibusrev.2018.01.007>
- Reza Kachouie, FM, and SS (2016). Dynamic marketing capabilities view on creating market change. Department of Marketing, Monash Business School, Melbourne, Australia.<https://doi.org/10.1108/EJM-10-2016-0588>
- Riadi, M. (2020). Innovation (Definition, Characteristics, Types, Components and Processes). Jakarta.<https://www.kajianpustaka.com/2020/07/inovasi-pengertian-ciri-jen-kompon-dan-besar.html>
- Robbins, T. (2020). TRANSFORMATIVE RADICAL INNOVATION. San Diego, California.<https://test-web.tonyrobbins.com/business/radical-innovation/>
- Roriguez-Escobar & González Benito. (2015). The role of information technology in purchasing function. Journal of Business & Industrial Marketing, 30(5), 498–510.<https://doi.org/10.1108/JBIM-06-2012-0106>
- S. Davcik, N., & Sharma, P. (2015). Impact of Product Differentiation, Marketing Investments and Brand Equity on Pricing Strategies: A Brand Level Investigation.<https://doi.org/10.1108/EJM-03-2014-0150>
- Salman Nazir & Alain Pinsonneault. (2012). IT and Firm Agility: An Electronic Integration Perspective. Journal of the Association for Information Systems, 13(3).<https://doi.org/10.17705/1jais.00288>
- Sampson Ato Sarsah, Hongyun Tian, Courage Simon Kofi Dogbe, Bylon Abeeku Bamfo, WWKP, & Management, J. of S. and. (2020). Effect of entrepreneurial orientation on radical innovation performance among manufacturing SMEs: the mediating role of absorptive capacity. Emerald Insight.<https://doi.org/10.1108/JSMA-03-2020-0053>
- Sampson Ato Sarsah, HT, and CSKD (2020). Effect of entrepreneurial orientation on radical innovation performance among manufacturing SMEs: the mediating role of absorptive capacity. Journal of Strategy and Management.<https://doi.org/10.1108/JSMA-03-2020-0053>
- Samuel Spralls, SH & JW (2011). Extranet Use and Building Relationship Capital in Interfirm Distribution Networks: The Role of Extranet Capability. Journal of Retailing, 87(1), 59–74.<https://doi.org/10.1016/j.jretai.2010.09.001>
- Scholastic. (2022). Product Innovation: Definition, Goals, Benefits, Examples and How to Do It.<https://www.gramedia.com/best-seller/inovasi-produk/>
- Scholastic. (nd). Integration: Definition, Types and Formation Factors. Retrieved March 14, 2023, from<https://www.gramedia.com/literasi/integration/>
- Sciascia, S., D.L., B.M., and L.B. (2014). Entrepreneurial Orientation in low- and medium-tech industries: the need for Absorptive Capacity to increase performance. European Management Journal, 32(5), 761–769.
- Shampy Kamboj, Z.R. (2017). Market orientation, marketing capabilities and sustainable innovation: the mediating role of sustainable consumption and competitive advantage. Management Research Review, 40(6).<https://doi.org/10.1108/MRR-09-2014-0225>
- Shih, T.Y. (2018). Determinants of enterprise radical innovation and performance: insights into strategic orientation of cultural and creative enterprises. Sustainability, 10(6), 1871.

- Shu-Pei Tsai. (2015). Dynamic marketing capabilities and radical innovation commercialisation. 174–195. <https://doi.org/10.1504/IJTM.2015.068223>
- Silvia L Martin & Rajshekhar (Raj) G Javalgi. (2016). Entrepreneurial orientation, marketing capabilities and performance: The Moderating role of Competitive Intensity on Latin American International New Ventures. 69(6), 2040–2051. <https://doi.org/10.1016/j.jbusres.2015.10.149>
- Silvia L. Martin, R. (Raj) G.J. (2016). Entrepreneurial orientation, marketing capabilities and performance: The Moderating role of Competitive Intensity on Latin American International New Ventures. *Journal of Business Research*, 69(6), 2040–2051. <https://doi.org/10.1016/j.jbusres.2015.10.149>
- Sismanto. (2016). PRODUCT INNOVATION. <https://bbs.binus.ac.id/gbm/2019/02/26/inovasi-produk/>
- Stefan Mitzkus. (2022, March 22). Radical Innovation Definitions & Examples. <https://digitalleadership.com/blog/radical-innovation/>
- Sugiyono, D. (2018). Quantitative, qualitative and R & D/Sugiyono research methods. https://scholar.google.com/citations?view_op=view_citation&hl=en&user=uUIIujUAAA&AJ&sortby=pubdate&citation_for_view=uUIIujUAAA&AJ:hMod-77fHWUC
- Sugiyono. (2019). Educational Research Methods (Quantitative, Qualitative, Combination, R&D and Educational Research). <https://scholar.google.com/citations?user=uUIIujUAAA&AJ>
- Voola, ROA (2010). Implementing competitive strategies: the role of responsive and proactive market orientations. *European Journal of Marketing*, 44(1/2), 245–266. <https://doi.org/10.1108/03090561011008691>
- Wales, W. J., Covin, J. G., & Monsen, E. (2020). Entrepreneurial Orientation: The Necessity of a Multi-Level Conceptualization. *Strategic Entrepreneurship Journal*. <https://doi.org/10.1002/sej.1344>
- Wang, YZHS (2020). Pure or ambidextrous strategy? A study of responsive and proactive market orientations in industrial firms. *Journal of Business & Industrial Marketing*, 35(6), 1001–1010. <https://doi.org/10.1108/jbim-04-2019-0152>
- Wantao Yu & Ramakrishnan Ramanathan. (2016). Environmental management practices and environmental performance. *Industrial Management & Data Systems*, 116(6), 1201–1222. <https://doi.org/10.1108/IMDS-09-2015-0380>
- Wendan Yang ab, GC ab, QP c, YS a b. (2021). Effective radical innovations using integrated QFD and TRIZ. 162. <https://doi.org/10.1016/j.cie.2021.107716>
- Wiklund J Shepherd D. (2011). Where to from here? EO-as-experimentation, failure, and distribution of outcomes. *Entrepreneurship: Theory and Practice*. *Entrepreneurship: Theory and Practice*, 35(5), 925–946. <https://doi.org/10.1111/j.1540-6520.2011.00454.x>
- William E Baker & James M Sinkula. (2002). Market Orientation, Learning Orientation and Product Innovation: Delving into the Organization's Black Box. 5, 5–23. <https://doi.org/10.1023/A:1012543911149>
- Yi Xie & Xiaoying Zheng. (2019). How does corporate learning orientation enhance industrial brand equity? The roles of firm capabilities and size. *Journal of Business & Industrial Marketing*, 35(2), 231–243. <https://doi.org/10.1108/jbim-10-2018-0320>