

RELATIONSHIP BETWEEN THE PRODUCT DIFFERENTIATION AND FIRM PERFORMANCE OF JAPANESE INVESTED ENTERPRISES (JIES) IN VIETNAM

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Abstract

The amazing proliferation of product choices as well as remarkable improvements in innovation activities during recent decades have become key driving forces of product differentiation, which is deemed as a sustainable competitive advantage of firms in technological-driven economy. The concept of product differentiation in this paper will be approached from innovation perspective, referring to capabilities of firms to enhance product quality, design, and unique features. In addition, firm performance is measured comprehensively through Balanced ScoreCard (BSC). Utilizing survey data from 158 JIEs operating in Vietnam, this study finds out the positive association between product differentiation and firm performance in both manufacturing and service industry. Unique product feature is examined to be the most important determinant of product differentiation affecting performance of JIEs, which should be prioritized in sustainable development of JIEs.

Keywords: product differentiation, firm performance, product quality, product design, unique product features, Japanese Invested Enterprises (JIEs)

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1. Introduction

Stepping into the 21th century, put under tremendous pressure in fast – changing technology through innovation activities and the accelerating increase of competitors in business, almost all organizations face the challenge how to have a sustainable competitive advantage (Kedera and et al., 2015). According to Rahman (2011), product differentiation is a

competitive business strategy whereby a firm attempts to gain a competitive advantage by increasing the perceived value of its products and services relative to that of other firm's products and services. Besides the driving force of development such as the increase in competitors in market, customer demands and fast – changing technology through innovation activities, the main factor leading almost all of

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corporations in global market to differentiate their own products is the undeniable proliferation of product choices in brand and product categories. “Buying a car in the 1950s meant a choice between a model from GM, Ford, Chrysler, or American Motors. Today, you have your pick of cars, still from GM, Ford, and Chrysler, but also from Acura, Aston Martin, Audi, Bentley, BMW, Honda, Hyundai, Toyota, and so forth” (Jack Trout & Steve Rivkin, 2008). The choice becomes more complicated when each company has many brands, and each brand has the product line, including different categories. Take Toyota Motor Corporation as a telling example, with five main brands, namely Toyota brand, Hino, Lexus, Ranz, and Scion. If only Toyota Brand is mentioned, there are hundreds of models belonging to family cars, economy cars, sport cars, pickup trucks to name but a few, with the variety of color, size, design and other specification details. This acceleration of this trend is forecast to keep rising because “the choices inspire technology; the technologies create complication” (James Gleick, 2000). Thereby, firms have to seek competitive advantage by producing products with more valued features, such as product quality, product flexibility, attractive design and other unique features.

For recent decades, the relationship between the product differentiation and firm performance is one of the central interests in strategic management and international business field, marketing not to mention Intellectual Property. However, there is no consistency in the definition of product differentiation (Haarla, A., 2003; Bain, 1956; Scheuing, 1974; Forsman, 2011; Vuong, 2014) in both of innovational and managerial perspectives. In addition, there is a great

divergence in the way that definitions of firm performance and performance measurement systems are approached (Kaplan & Norton, 1996; Atkinson, Waterhouse & Well, 1997; Bititci, Carrie & Mcdevitt, 1997; Neely, 1998; Ittner, Larcker & Randall, 2003). Only a few number of researches have investigated direct relationship between product differentiation and organizational performance, i.e. Kedera et al. (2015), Joy I. D. and Khaled Mohammad A.A. (2012). Thereby, the results obtained from the different studies are unclear and inconclusive, which have prevented these authors from obtaining widely accepted conclusions. This paper is to tackle these mentioned drawbacks of literature by redefining product differentiation and firm performance, deploying balanced scorecard approach in measuring firm performance, developing a framework for the relationship between product differentiation and firm performance of JIEs in Vietnam via subjective data from 158 firms in Vietnam, in order to answer two research questions as below:

- i. What is the most important dimension of product differentiation affecting firm performance of JIEs in Vietnam?
- ii. How does product differentiation influence firm performance of JIEs in Vietnam?

2. Literature review (Theoretical background)

2.1 Product

Product conception has been mentioned in numerous theories, especially in marketing fields, since the first decades of the 20th century. Back to the history, a product is identified as a kind of physical commodity. In 1923, Copeland views products as merchandise sold in retail stores, divided into three classes: convenience

goods, shopping goods, and specialty goods. Copeland's original conceptualization clearly explains that, firstly, convenience goods are those customarily purchased at easily accessible stores. Secondly, shopping goods are those for which the consumer desires to compare prices, quality, and style at the time of purchase. Finally, specialty goods are those which have some particular attraction for the consumer, other than price, which induces him to put forth special effort to visit the store in which they are sold and to make the purchase without shopping. This definition is received and developed by many researches such as Holton (1958), Luck (1959), Bucklin (1963), Kaish (1967) Mayer, Mason, and Gee (1971), Bucklin (1976) to name a few. Coming to late 1970s, Holbrook & Howard (1977), Enis & Roering (1980) expand this concept with a new category called "preference goods" which are in the consumer package goods industry. iced tea or even beer if the monetary or time effort is too large" (Patric & Ben, 1986). Besides that, according to Gordon (1965), a product is defined "as the sum of the physical and psychological satisfactions the buyer receives when he makes a purchase". Although Gordon consider products associated with customer service, in this period, the service was still not regarded as an independent commodity. However, modern concept of 'product' can be defined as "anything that a firm offers to satisfy the needs or wants of customers" Doyle (1998), in other words, being "anything which can be offered to a market for attention, acquisition, use, or consumption, that might satisfy a want or need." Kotler (1998). Thereby, products are deemed as both tangible goods and services, which a firm offers in order to satisfy the demands or desires of customers.

2.2 Product differentiation

Take a look back at the past, no single definition exists of what exactly constitutes product differentiation (Haarla, A., 2003). "In fact, it is difficult to define differentiation," said Jernström (2000). **In strategic approaches**, Bain (1956) states that definition of product differentiation was multi-faceted and decidedly qualitative. In case studies of several manufacturing industries, Bain showed numerous product differentiation characteristics including product reputation, established dealer systems, brand allegiances, customer service, and advertising. Scheuing (1974) defines differentiation as "adding variations of one product which will compete with it within the same market." In addition to defining, it is important to consider two other issues, firstly, differentiation with respect to what and secondly, differentiation in whose eyes. Regarding the first question, Scheuing (1974) and Foote (1972) agree that products are differentiated from those of competitors. Regarding the latter question, several writers imply that differentiation is based on customer perceptions. On the other hand, **in innovational perspectives**, product differentiation is also known as a capacity of innovation capacities, called Development capabilities, the ability to improve existing products, innovate and introduce the new products that are differentiated with those of competitors (Forsman, 2011). In addition, in 10 dimensions of i2Metrix paradigm by Vuong (2014), product differentiation, a criterion of differentiation, is defined as a capacity to differentiate firms' products and services through innovation.

Product differentiation is believed to be a useful approach helping a firm gain a

sustainable competitive advantage as against its rivals due to many benefits for not only owners, but also customers and economy as a whole. Firstly, for organizations themselves, because product differentiation is an innovation activity, this helps production process more productive and lower the cost of production. Thereby, the expense undertaken to lower production costs will make the product less expensive for consumers while providing greater profit to the producer. Consequently, in years to come, a few changes in products create major improvements, and old product characteristics fall by the wayside, replaced by new and improved products, generating economic progress (Randall, 2009). In addition, Evans and Berman (1997) view product differentiation as the non-price-based strategy, which helps a firm be able to sell more products than its competitors at the same price, not to mention that consumers will be more willing to pay for the differentiated product more than to compensate the firm for its expenses to differentiate the product” (Randall, 2009). According to Chamberlin (1965), by differentiating its product offer, a firm may establish a quasi-monopoly, which will, to a certain extent, give a firm more freedom of pricing instead of being a mere ‘price taker’. Last but not least, if a company carries out the product differentiation, it will get the trust of customers, position its brand in the market when facing with the substitute commodities and a keen competition. In keen competition, through product differentiation, huge effort of a firm to add more value into its products tends to lead others to conduct certain innovation so that they can compete and maintain market shares. This means that product differentiation becomes a driving force of development of products, technology and economy as a whole.

Product quality, product design, and unique product features are used as main dimensions measuring product differentiation in this research, briefly discussed as below:

Product quality: For tangible goods, based on Kotler et al’s idea (2005), product quality is investigated as a firms’ capability to enhance the performance of products including utility, operability, durability or life expectancy, reliability, and reparability, which “fits patterns of consumer preferences.” (Kuehn and Day, 1962). For services, product quality is deemed the ability of a service company to enhance speed, serving performance of staffs and reliability of service products, which meet customers’ expectation, such as faster delivery, faster payment duration, experience, and etiquettes of staffs.

Product design: Product design of tangible goods is deemed as a firms’ capability to improve appearance of products, including colors, texture and frames design. Particularly for service products, product design is the appearance of visual factors such as communication products, costume, or dress code of staffs, and office decoration.

Unique product features: A feature is usually defined as “a logical unit of behavior specified by a set of functional and non-functional requirements” (Bosch, 2000) or “a distinguishable characteristic of a concept (system, component, etc.) that is relevant to some stakeholder of the concept” (Czarnecki and Eisenecker, 2000). In this research, unique product features is a firms’ capability to create and innovate a set of unique functional and non-functional characteristics of products, which it is difficult for others to emulate (Kedera et al., 2015).

2.3. Firm performance

Firm performance can be described as an umbrella term for all concepts that consider the success of a firm and its activities (Tangen, 2005). Performance can refer to actual results/ outputs of certain activities, how an activity is carried out, or an ability to achieve results (Lönnqvist, 2006). Atkinson (2012) defines performance as the achievement of results ensuring the delivery of desirable outcomes for a firm's stakeholders.

Literature on Firm performance, management researchers in fields such as strategy management, operations management, human resources, organizational behavior, information systems and marketing have contributed to the topic of firm performance and performance measurement (Neely, 2002; Marr and Schiuma, 2003; Franco-Santos and Bourne, 2005). These different approaches towards performance measurement have led to numerous definitions of firm performance and business performance measurement system, and there is little consensus regarding its main components and characteristics of firm performance (Dumond, 1994). Although each author suggests a different definition of business performance measurement, researchers base on concept of firm performance closely to decide whether financial performance or non-financial performance prioritized. However, measuring performance using the accounting profit rate is unstable, as the profit rate may vary in different industries significantly over the business cycle (Globerman, 1979). Using financial measures may fail adequately to reflect the extent to which a firm achieves its short-term and long-term objectives (Geringer & Hebert, 1991). A firm may have a variety of objectives, ranging from profitability, market share and technology transfer to material assets. Traditional accounting measures thus

are unable statistically to detect the excellence of the firm (Chakravathy, 1986). Besides that, financial efficiency-based performance measures are less relevant, while non-financial measures are more relevant for strategies of differentiation (Porter, 1980; Govindarajan, 1988; Abernethy and Lillis, 1995; Perera et al., 1997; Bisbe & Otley, 2004). With a focus on developing products with unique features, researchers argue that financial performance measures are incompatible with the creativity and innovation necessary for a differentiation strategy (Perera et al., 1997; Chenhall & Langfield-Smith, 1998; Hoque, 2004). Based on the work of Abernethy and Lillis (1995) in the absence of process standardization and the need to encourage cross-functional co-operation and innovation, performance measurement systems require a shift from narrowly focused financial measures to measures that capture the critical success factors of product differentiation. These measures are likely to be non-financial and include such measures as customer service satisfaction, delivery performance, and product innovation measures.

To tackle the abovementioned weakness, in this study, balanced scorecard (BSC) approach is employed as a more advanced way to measure firm performance. The BSC system not only incorporates financial and non-financial measures but also translates a company's mission and strategy into tangible objectives and measurements. Firm performance refers to results associating to the Financial Perspective, the customer perspective, the internal business processes perspective and the learning and growth perspective, briefly explained as below:

The financial perspective retains the short-term approach of measuring profitability, sales growth, or generation of cash flow,

mainly because these measurements indicate the company's financial success from a shareholder's point of view. Enterprise revenue growth, enterprise profit growth, ROA index and ROE index are used to measure financial performance of JIEs.

The customer perspective includes not only market share and new customer acquisition but also measures relating to the value propositions that the company will deliver to its customers, such as customer intimacy, operational excellence or product leadership (Arroyo, 2010). In this research, customer perspective mentioned includes improvement in customers' satisfaction, increase in number of new customers, reasonability of the price of product/service, assessment of customers to product/service, and access of customers to product/service.

The internal business processes perspective identifies critical internal processes in which the company must excel in order to deliver the value propositions that will attract and retain customers (Arroyo, 2010). The purpose of the internal business perspective is to determine the key business processes that create and deliver the goods and services of the company to the customers whilst developing measures to ensure that these processes are working well. Measures in the internal business perspective could be innovation rates, service measures, lead-time, quality measures, efficiency measures, costs reductions.

The learning and growth perspective identifies the capabilities required to deal with the competitive environment to create long-term growth and continuous improvement (Arroyo, 2010). The purpose of the innovation and learning perspective is to determine the

ability of the company to continually improve and innovate. Theoretically, through increased improvement, businesses are able to improve their internal processes, leading to greater customer satisfaction, corporate growth, and increased profits (Scott et al. 2012). The possible measures used in this perspective are illness rates, employee turnover, education, and development.

2.4 Relationship between product differentiation and firm performance

There is a consensus that there is a positive relationship between product differentiation and firm performance among a sizable number of previous findings. Allen and Helms (2002) as well as Mosakowski (1993) study's results generally supported the hypotheses that positive and significant direct relationship between product differentiation and firm performance, when the focus and product differentiation are established, performance is higher than for other firms. Other similar conclusion is confirmed in the finding of Arasa, Robert (2014), Sara et al (2009), and Forsman (2011). The research of Mosakowski (1993), in a resource – based perspective, show that both Customer Service and R&D Differentiation have positive effects enhancing firm performance. Customer Service Differentiation is only positive and statistically significant for Net Income Performance while R&D Differentiation associates positively with and is statistically significant for both Net Income Performance and Revenue. On the other hand, according to Sara et al (2009), she stated that it is necessary to use appropriate performance measurement systems as a mediated model due to indirect effects of differentiation on firm performance. In other words, the positive association between product differentiation and firm performance

must be examined through the mediating role of non-financial and financial performance measures. However, by contrast, the result of multiple regression analysis indicated that the differentiation strategy has not significant effect on organizational performance of companies in the study of Khaled Mohammad A.A. (2012), which was designed to examine the impact of differentiation strategy on the organizational performance of Jordanian industrial companies with High quality products, Fast deliveries, Design & new products, and Unique product features as 4 main dimension of product differentiation; while firm performance is measured by financial and non-financial factors. **In spite of that**, the research of Joy I. Dirisuet et al (2013) is cited as an affirmation of previous researches, which indicated that product differentiation as a tool of competitive advantage has a positive and significant influence organizational performance of manufacturing companies in Nigeria. In detail, there is an existence of positive significant relationship between higher product quality and the sales growth of an organization; between product design and sales growth of an organization, as well as a significant positive relationship between unique product features and customer satisfaction of an organization.

3. Research methodology

3.1 Theoretical framework

Based on the fundamental knowledge of preceding literature review, the theoretical model in the research uses three independent variables including the product quality, product design, and unique product features. On the other hand, the dependent variable is firm performance including the financial perspective, the customer perspective, the internal business perspective, the innovation

and learning perspective under BSC approach. Both of independent variables and dependent variable are influenced by the control variables (size of firms, industries that firms are working in). In this way, the effects of product differentiation on firm performance are measured accurately and comprehensively, in line with the business environment in Vietnam. The firm size (Logarithmic form) in this research is decided by the number of employees working for organizations annually according Clause No.1, Article 3 of Decree No. 56/2009 / ND-CP dated 30/6/2009 issued by Vietnamese Government.

Figure 1 presents an overview of the relationship between the variables together.

The functions of linear regression are show as below:

$$1) \text{ Firm performance} = \beta_0 + \beta_1 * \text{Product quality} + \beta_2 * \text{Firm size} + \beta_3 * \text{Industry} + e$$

$$2) \text{ Firm performance} = \beta_0 + \beta_1 * \text{Product design} + \beta_2 * \text{Firm size} + \beta_3 * \text{Industry} + e$$

$$3) \text{ Firm performance} = \beta_0 + \beta_1 * \text{Unique features} + \beta_2 * \text{Firm size} + \beta_3 * \text{Industry} + e$$

$$4) \text{ Firm performance} = \beta_0 + \beta_1 * \text{Product quality} + \beta_2 * \text{Product design} + \beta_3 * \text{Unique features} + \beta_4 * \text{Firm size} + \beta_5 * \text{Industry} + e$$

The research is going to test the following hypotheses:

H1: Product quality positively associates with firm performance

H2: Product design positively associates with firm performance

H3: Unique product features positively associates with firm performance

H0: Product differentiation positively associates with firm performance

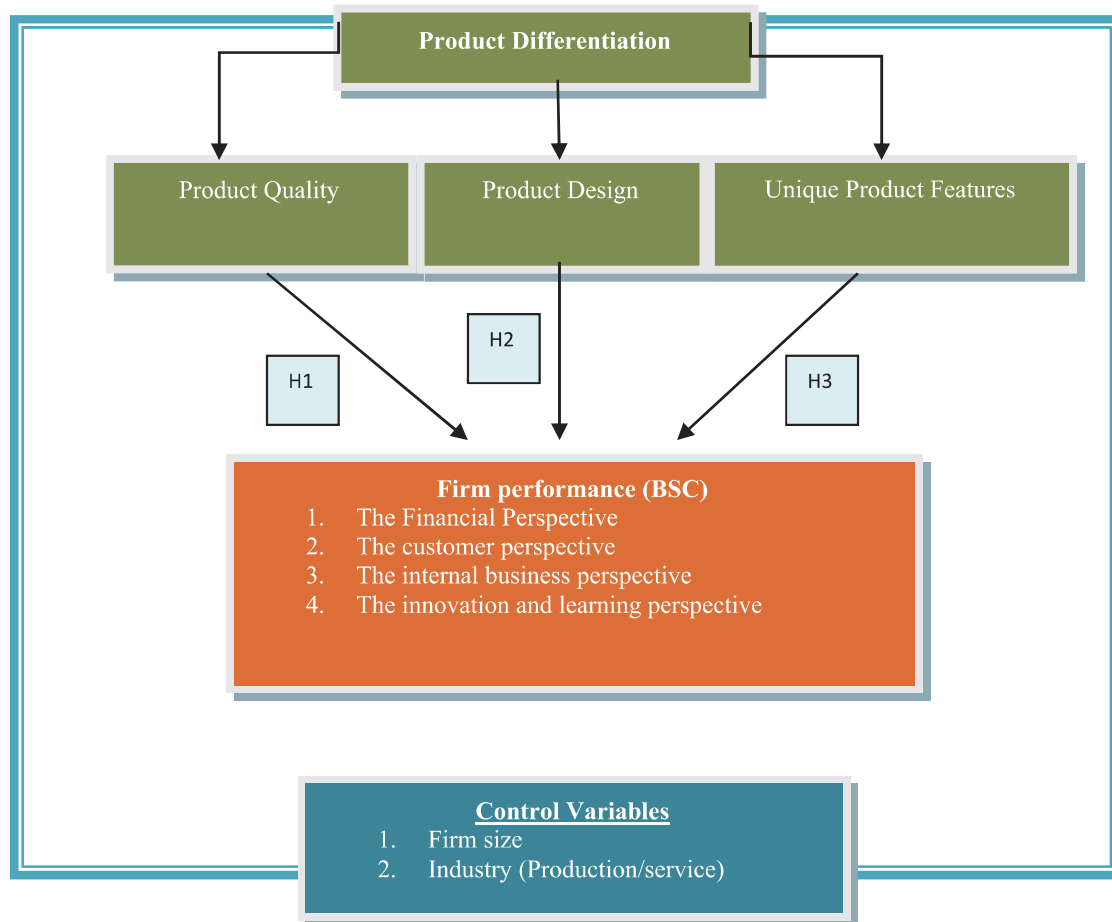


Figure 1: The theoretical framework

3.2 Data

A massive survey was conducted from June 20, 2015 to July 31, 2015. The list of companies surveyed (including 670 companies) was collected from various sources, mainly the website of the Vietnam's Chamber of Commerce and Industry, and Directory of Japanese enterprises in Vietnam. The questionnaire is written in both Vietnamese and English, was measured by a five-point Likert scale ranging from 1 to 5 to identify JIEs' capability in creating product differentiation as against rivals. We conducted three pilot tests before the questionnaires were sent to 670 JIEs representatives via emails, postal letters, social groups in social networks and face-to-face interview. Consequently,

there are 158 usable responses used in this study, and coded before being processed by SPSS. Data for independent variables (product quality, product design, and unique product features) belong to the Part 2: "Innovation capabilities" with questions No.13.1, 13.2 and 13.3 respectively from the questionnaire. While the numbers for dependent variables are from the Part 3: "Firm performance" with question groups No. 16 (16.1, 16.2, 16.3, 16.4), No.17 (17.1, 17.2, 17.3, 17.4, 17.5), No. 18 (18.1, 18.2), and 19 (19.1, 19.2, 19.3, 19.4, 19.5, 19.6). (Appendix 1)

3.3 Sample

Sample based on area sampling method is Japanese invested enterprises in various

geographical areas in Vietnam, especially in the Red River Delta, North Central and South Central Coast, the Southeast areas. Among 158 firms, 92 firms are in service sector (banking, finance, consulting, trading, insurance, exporting and so forth), and the remaining 66 firms are in manufacturing sector (mechanical engineering, auto-spare part, and so forth). Besides that, 81 firms from the North, 32 firms from the Centre, and 45 firms from the South. Speaking of firm size, there are 42 small firms, 57 medium firms and 59 large firms. Thereby, it is deemed that the survey sample is representative for an entire population.

3.4. Methodology

Both the qualitative and quantitative methods are used to examine the relationship between product differentiation and firm performance of Japanese invested enterprises. Firstly, the author reviewed the previous researches, and investigated the situation of Japanese in Vietnam, their innovation capabilities and product differentiation in recent couple of years. By the quantitative method, the author conducted the official survey in wide scope after doing three pilot tests. The data collected

from the questionnaires have been processed by SPSS to find out how product quality, product design, and unique product features affect firm performance, then concluding the relationship between product differentiation and firm performance of JIEs in Vietnam. The author conducted, step – by – step, three steps as below:

- Step 1: Checking the reliability of the responses from survey.
- Step 2: Conducting Exploratory Factor Analysis (EFA).
- Step 3: Conducting OLS Regression.

4. Research finding and discussion

4.1 Situation of JIEs in Vietnam

Vietnam has been a trusted destination for Japanese enterprises. The relationship between Vietnam and Japan has developed in various fields. In December 2008, the two countries signed a comprehensive bilateral agreement called Japan–Vietnam Economic Partnership Agreement (JVEPA), that officially took effect on 1 October 2009, which has promoted trade liberalization of goods and services, economic cooperation, and investment (VIETRADE,

Table 1: Japanese investment situation in Vietnam

Year	No. Valid projects	Total registered capital
12/2010	1,397	USD 20.8 billion
5/2011	1,532	USD 21.2 billion
12/2012	1,758	USD 28.6 billion
10/2013	2,136	USD 34.3 billion
12/2014	2,477	USD 36.9 billion
10/2015	2,661	USD 38.3 billion

Source: *Annually Report of Foreign Investment Agency*
<http://fia.mpi.gov.vn/>

Table 2: The statistic in the number of JIEs in Vietnam 2010-2014

Year	The number of JIEs	Grow rate
2010	981	3.5%
2011	1,081	10.2%
2012	1,211	12%
2013	1,309	8.1%
2014	1,452	10.9%

Source: Ministry of Foreign Affairs in 10/2014

<http://thongtin-nhatban.com/news/detail.php?nid=150626054557>

2015). According to the Annually Report of Foreign Investment Agency, belonging to Ministry of Planning and Investment, from 2010 to the first 10 – month period of 2015, there was an steadily upward trend in the FDI inflow invested by Japanese enterprises into Vietnam. Table 1 illustrates a significant increase in the number of valid projects of JIEs by 90.5% during the 5-year period from 2010. Similarly, the total new registered and addition capital soared considerable by 65% from 2010 to 2013, before rising at lower pace to approximately USD 38 billion in 10/2015.

As announced by the Ministry of Foreign Affairs in 10/2014, the number of Japanese enterprises in Vietnam increased gradually throughout six years from 2010. In 2014, there were about 1450 JIEs operating in Vietnam, rising by 10.9% as opposed to the figure in 2013, and nearly 1.5 times higher than that in 2010 (Table 2).

In early 2016, Vietnam has approximately 2000 JIEs (including representative office). According to Atsusuke Kawada, Chief Representative of JETRO Vietnam, Japanese companies tend to express concern about investment environment in Vietnam and consider as an attractive market where is

appropriate for long-term investment, thereby promoting the business expansion in Vietnam.

Major Japanese enterprises tend to carry out FDI projects with 100% direct foreign capital, with 213 new projects and total capital of newly registered and additional capital of \$ 1.05 billion in 10/2015 (representing 71% total investment flow). The other projects were distributed in forms like BOT, BT, BTO, joint ventures, and business cooperation contracts (Report 2015 of Foreign Investment Agency). On the other hand, Japanese firms try to penetrate the Vietnamese market through different ways as Greenfield Investments, merger and acquisition (M&A). However, JIEs in Vietnam prefer doing M&A projects to investing directly in various fields. For example, in Foods & Drinks and consumer goods industry, in fact, Fund DIAIF bought 25% stock of Nutifood while Unicharm accounted for 95% shares of Diana. In securities field, SBI securities acquired 20% shares of FPT Securities Co., Nikko Cordial acquired 15% shares of the Petroleum Securities Company. In banks, Mizuho Bank acquired 15% shares of Foreign Trade Bank of Vietnam (Vietcombank). Last but not least, Sumitomo is also a shareholder of Bao Viet Insurance in Vietnam (Statistics of Vietnam

Business Registration and the Ministry of Planning and Investment).

The main investment fields of JIEs in Vietnam fairly are fairly often manufacturing and processing industry, consumer goods production, real estate, construction, and other sectors as Information and communications technology (ICT), retailing, banking, insurance, consultant and so forth. The difference among JIEs and other investors, i.e. China and the USA, is that almost all of JIEs are technological companies, which focus on the long-term projects with huge investment in R&D, technology and machines, human resources. They accept net loss in the beginning of business operation in Vietnam for sustainable developments in years to come. By contrast, Chinese and the USA investors prefer the field of retailing or franchising/licensing when entering a new market, due

to the far lower expenditure for fix cost and shorter duration of capital turnover. Under the Annually Report of Foreign Investment Agency Vietnam from 2010 to 2015, the manufacturing and processing industries were the most preferred sector by Japanese firms throughout the period, accounting for well over 80%, followed by the construction sector, business of real estate, ICT with the figures of hovering 4% and other. (Figure 2).

The culture and values possessed by Japanese enterprises are considerably influenced by Confucianism, in which collectivism and hierarchy are key factors, which impact directly and indirectly on management and innovative approaches of JIEs in Vietnam. Firstly, the Japanese people are driven by collectivism. The key difference among the culture of American organizations and Japanese firms is that

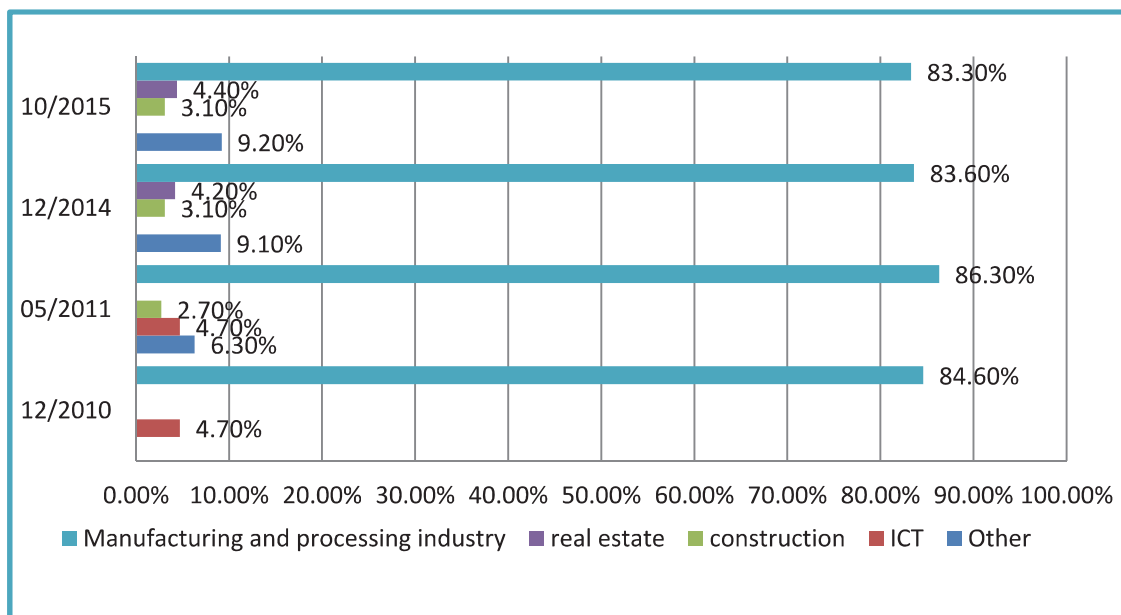


Figure 2: Percentage of total registered investment capital in various fields accounting for total FDI inflow from Japan to Vietnam 2010-2015.

Source: Annually Report of Foreign Investment Agency
<http://fia.mpi.gov.vn/>

American firms focus on individuality and competition, whereas Japanese firms concentrate on relationships in a group. Japanese people prefer working as a team and cooperating with other partners. In all of these cases, cooperation is driven by the need to improve the performance of the group” (Hill, 2011). Thereby, accomplishments of Japanese companies in global economy involve in the contributions from the group of people, and are deemed to be the successes of a collective. The second characteristic of Confucianism is hierarchy. In essence, the collective relationship-oriented culture is the root of hierarchy, in which people are ordered in vertical and have hierarchical relationships. In business, the relationship between customer and vendor is one of the many hierarchical relationships in Japanese business culture. Others are parent company and subsidiary, head office and branch office, manager and subordinate, senior (a person who joined the company earlier) and junior (JETRO, 1999). In addition, the enterprises also value long-term oriented factors. Their values encourage themselves to adopt long-term effective strategies and policies.

However, in recent couple of years, innovation performance of Japanese enterprises, to some extents, tend to decline as against other competitors in all innovation aspects in global market. There are some Japanese corporations and SMEs becoming one of failures in M&A list of other groups in global market. For example, Sharp corporation was bought by Foxconn (2016). Some possible causes of this problem are the risk-averse culture when hesitating of a radical innovation, conservative strategies when only focusing on product quality. While the faster customers’ taste is changing, which tends to prefer products with fashionable design, multifunction and unique features, the shorter product life cycle is. According to OECD, SMEs, Entrepreneurship and Innovation, 2010, the problem was not lack of policy options to stimulate innovation at SMEs, Japan’s innovative programs “suffer from a lack of applications and have been found to be administratively difficult to implement. In particular, the methods of application are too complex.” Consequently, Innovation performance of Japanese SMEs lagged in comparison with other nations in all aspects of innovation Figure 3).

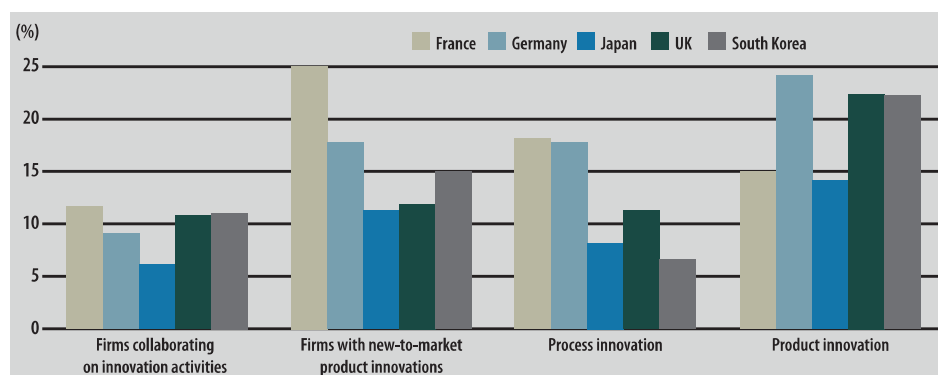


Figure 3: Innovation performance of SMEs in nations

Note: Data are percentages of respondents in national SME survey: France 2005-06; Germany 2004-2006; Japan 2002-2005; South Korea 2002-04; UK 2007

Source: Derived from OECD. SMEs, Entrepreneurship and Innovation, 2010

When it comes to product differentiation, a merely number of radical changes is carried out in the global subsidiaries network of Japanese multinational companies, including in Vietnam. JIEs in Vietnam are often representative offices or branches of the parent companies in home country, where supporting for the main goals and strategies designed at the Head office in Japan by joint venture agreements and outsourcing contracts, and controlled by downstream management. “The implications of the apparent decline in Japanese innovative capacity are quite serious for Japan’s long-run economic prospects. If Japan’s innovative capacities growing at a slower rate than in past decades, this could limit Japan’s future prospects” (Lee Branstetter and Yoshiaki Nakamura, 2003). However, in order to compete and survive in global market, JIEs, recently, have paid more attention to product differentiation, and have tried to take advantages of this differentiation for financial and non-financial achievements.

4.2. Results

• Reliability

In accordance with the suggestion of Werts, Linn and Jöreskog (1974), the reliability of the responses from the survey was checked by

using Cronbach alpha. Nunnally and Bernstein (1994) also showed that composite reliability, in other words is Cronbach alpha, should be at least 0.50 for any dimension of the conceptual model and in this research, the level at 0.70 is applied as the minimum acceptance criterion. Research team has checked convergent validity of the indicators by examining the ‘average variance extracted (AVE)’. Götz, Liehr-Gobbers and Krafft (2009) reported that an AVE value of at least 0.5 indicates sufficient convergent validity, which means that a latent variable is able to explain more than half of the variance of its indicators on an average, and this figure is maintained in this research.

The result from reliability statistics (table 3) shows that Cronbach’s Alpha for the independent variable – Product differentiation is $0.982 > 0.5$, and that for all the dimensions of firm performance range from 0.861 to 0.888, showing the reliability of the questionnaire. This means that the responses from questions in the questionnaire are correlated with each other tightly.

• Exploratory Factor Analysis (EFA)

The sample is adequate if the value of KMO is greater than 0.5 and less than or equal one ($0.5 \leq KMO \leq 1$). Furthermore, SPSS can

Table 3: Reliability statistics for dependent variable

Dependent variable (Firm performance)	Question number	N	Cronbach’s alpha
Product differentiation	13.1 – 13.3	3	0.982
Financial performance of firm	16.1 – 16.4	4	0.864
Customer performance of firm	17.1 – 17.5	5	0.888
Internal business processes of firm	18.1 – 18.2	2	0.861
Learning and growth of firm	19.1 – 19.6	6	0.883

Source: Designed by the author, 2016.

Table 4: KMO and Bartlett's Test for dependent variable(Firm performance) and independent variable (Product differentiation)

		Dependent variable	Independent variable
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.863	.783
Bartlett's Test of Sphericity	Approx. Chi-Square	1833.272	764.243
	df	136	3
	Sig.	.000	.000

Source: Designed by the author, 2016.

calculate an anti-image matrix of covariance and correlations. All elements on the diagonal of this matrix should be greater than 0.5 if the sample is adequate (Field, 2000). In SPSS the inter-correlation can be checked by using Bartlett's test which "tests the null hypothesis that the original correlation matrix is an identity matrix" (Field, 2000), with significance <0.05 . Multicollinearity, then, can be detected via the determinant of the correlation matrix: if the determinant is greater than 0.00001, then there is no multicollinearity (Field, 2000).

First and foremost, table 4 presents the adequateness of factor analysis for both of the dependent variable (Firm performance), which is proved by KMO (0.863 >0.7), and the independent variable (Product differentiation), with KMO of 0.783 >0.7 and significant Bartlett's test at 1 percent level. In other words, data from the survey results used to conduct EFA are entirely appropriate for inclusion in the regression model and criteria observed are correlated with each other in general.

In extraction process, this research used Principal Components analysis and fixed number of factor at one factor only for the dependent variable, called FAC1_1 - Firm performance, before moving to regression, with

the cumulative variance values of 45.050% (45.050% of the change in the representative factor is explained by the criteria measured independent variable) and only one factor for the independent variable, called FAC1_2 - Product differentiation, with the cumulative variance values of 96.528%.

• Correlation analysis

Before conducting OLS regression, the author investigated the correlation between independent variables: product quality (13.1), product design (13.2), unique product features (13.3), product differentiation (FAC1_2) and the dependent variable (FAC_1_1) through the standard deviation, the reliability, bivariate correlations, and Pearson correlation coefficient. The results is summarized at the table 5 and table 6:

Results from correlation matrix show that there are considerable relationships between the independent variables and dependent variable, as well as among each dimension of product differentiation with each other. Pearson correlation coefficients showing the correlation among them are at a high level, ranging from + 0.69 to +0.94. Specifically, correlations are significant at the 0.01 level (2-tailed).

Table 5: Correlations for hypothesis H1, H2, H3.

		Q13.1	Q13.2	Q13.3	REGR factor score 1 for analysis 1
Q13.1	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	158			
Q13.2	Pearson Correlation	.940**	1		
	Sig. (2-tailed)	.000			
	N	158	158		
Q13.3	Pearson Correlation	.942**	.962**	1	
	Sig. (2-tailed)	.000	.000		
	N	158	158	158	
REGR factor score 1 for analysis 1	Pearson Correlation	.694**	.698**	.693**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	158	158	158	158

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Designed by the author, 2016.

Table 6: Correlations for hypothesis H0

		REGR factor score 1 for analysis 1	REGR factor score 1 for analysis 2
REGR factor score 1 for analysis 1 (FAC1_1)	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	158	
REGR factor score 1 for analysis 2 (FAC1_2)	Pearson Correlation	.707**	1
	Sig. (2-tailed)	.000	
	N	158	158

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Designed by the author, 2016.

➤ **Comparison among the impacts of product quality, product design, and unique product features on firm performance.**

Results of the ordinary least square (OLS) regression analyses of the primary data with

the participation of the control variables show that product quality, product design, and unique product features have a significant positive relationship with firm performance of JIEs in Vietnam (Table 7). For hypothesis 1 (H1), when firms enhance capability to improve product

quality 1 point, firm performance increases 0.840 point. For hypothesis 2 (H2), when product design is upgraded 1 point, firm performance of JIEs firm improves 0.878 point. Finally, for hypothesis 3 (H3), when firms boost capability to create unique product features 1 point, firm performance rise 0.892 point. All regression models are statistically significant at 1 per cent level, and have no multicollinearity with VIF < 2. Besides that, Table 7 reveals relatively small differences in the impacts of product quality, product design, and unique product features on firm performance. These results answer the first research question, in detail, unique product features is the most important determinant of product differentiation affecting firm performance of JIEs, which suggest for firms to capitalize on existed outstanding features and create new unique characteristics for organizational development. However, this

does not means that firms ignore the similarly important role of product design and product quality.

➤ **The impact of product differentiation on firm performance.**

Table 8 shows the results of the entire regression model for Hypothesis 0 (H0), which investigates whether Product differentiation positively associates with firm performance or not, as the answer for the second research question: How does product differentiation influence firm performance? The positive relationship between the independent variable and the dependent variable with the influence of control variables is confirmed with coefficients of +0.719, which means that if firms enhance product differentiation 1 point, firm performance will be improve 0.719 points, The model also has considerably statistical significance with p-value of 0.00 < 0.05. R2

Table 7: Impacts of of product quality, product design, and unique product features on firm performance

Hypothesis	Coefficients (Std. Error)	Sig.	R Square	VIF
H1 Product quality → firm performance	0.840*** (0.068)	.000	.502	1.011
H2 Product design → firm performance	0.878*** (0.071)	.000	.502	1.010
H3 Unique product features → firm performance	0.892*** (0.072)	.000	.503	1.020

Source: Designed by the author, 2016.

Table 8: Impacts of of product differentiation on firm performance

Hypothesis	Coefficients (Std. Error)	Sig.	R Square	VIF
H0 Product differentiation → firm performance	.719*** (.056)	.000	.52	1.014

Source: Designed by the author, 2016.

is 0.52, in other words, 52% of the response variables variation is explained by the linear model. In addition, there is no autocorrelation in the sample with Durbin-Watson value of 2.089 and no multicollinearity phenomenon with the tolerance and variable inflation factor (VIF) values in the acceptable range.

4.3 Discussion

➤ For Hypothesis H1, H2, H3

Generally, these results about impacts of product quality, product design, and unique product features on firm performance support the finding obtained from the study of Joy et al (2013), as the preceding mention, and other researchers namely Dhar, R., & Sherman, S. J. (1996), and Kevin Zheng Zhou & Kent Nakamoto (2007). According to Tholke, Hultink, & Robben (2001), companies often introduce or reintroduce their products with improved performance along existing attributers and appearance of products (called enhanced features, including the product quality and product design in this thesis) or new, unique features (called unique features in this thesis) to compete with dominant brands in the market. Although both the enhanced and unique features are able to help firms differentiate their products in various ways, adding unique features is the key factor because consumers tend to give more attention to something novel and thus hold a favorable attitude towards it (Carpenter, Glazer, & Nakamoto, 1994). In other words, unique features are more differentiated in various ways (Kevin Zheng Zhou & Kent Nakamoto, 2007). On the grounds that new and unexpected features help a new product arouse attention, especially in today's information-overload market (Kardes & Kalyanaram, 1992). It is obvious that unique features are unexpected

and are likely to attract more attention and elicit arousal (Meyers-Levy & Tybout, 1989). In addition, new information is interesting and consumers tend to elaborate on it, it is likely to be more salient for interbrand comparison and be coded into long-term memory (Dhar & Sherman, 1996). The uniqueness of these novel features also makes them receive greater weight in preference judgments (Carpenter et al., 1994). Therefore, a product with unique features is likely to receive a more favorable evaluation in a decision-making process. And Kevin Zheng Zhou & Kent Nakamoto (2007) refined this view by showing that a product with unique features is perceived more favorably for experienced consumers, who got certain experiences and knowledge of products' utility.

➤ For Hypothesis H0

For hypothesis H0, this research conclusion is in line with the finding of Joy et al (2013). In addition, Erik and Smith (2008) have also demonstrated that the ability to differentiate product/service of a firm is an independent variable that is statistically significant and has positive impact on the business efficiency, and other studies support for this a positive relationship, namely Damanpour & Evan (1984), Mosakowski (1993), Allen and Helms (2002), Bayus, Erickson and Jacobson (2003), Mzoughi et al.,(2008). As mentioned above, it was investigated that product differentiation is an indispensable part of innovation capabilities, which positively impacts on firm performance of JIEs in Vietnam. Since the ability to innovate and introduce the new products, which are differentiated with those of competitors, is an advantage of the firm when entering a new market, their sales and profit would be higher than their competitors (Hurley and Hult, 1998; Song and Parry, 1997).

On the other hand, according to Joy et al (2013), in response to the dynamic nature of business environment and the fast-changing needs of customers, executive management needs to make sure that they provide adequate satisfaction to their customers. In addition, executive management should put additional emphasis, pay more attention, and invest on product differentiation, as it is an important instrument against competitors in the industry to achieve competitive advantage, which leads to greater firm performance and guarantee the long-term survival of the organization. In addition, Kim B. Clark & Takahiro Fujimoto (1991) mentioned the conception of “Product development,” which implies the development of new products (having any improvement and innovation) in industrial competition. “Product development makes a difference in the long-term competitiveness of a firm and its products. The promises associated with the developing a successful new product – increased market share, new customers, lower cost, a higher quality – are exciting, but the reality of managing product development is sobering.

5. Conclusion

Two research questions are examined through quantitative approach. To investigate the relationship between product differentiation and firm performance of JIEs in Vietnam, the massive survey was conducted and received 158 usable responses from JIEs in various geographical areas in Vietnam, especially in the Northern and Southeast regions of Vietnam, operating in both manufacturing and service sectors. Products quality, product design, unique product features, and product differentiation are used as independent variables, while firm performance (measured by Balanced Scorecard) is employed as only dependent variable in the

theoretical framework with four hypotheses. This research finds out and discusses the positive association between product differentiation and firm performance of JIEs operating in Vietnam, as a tool of competitive advantage exploited in both manufacturing industry and services. Besides that, the comparison among their impacts of products quality, product design, and unique product features on firm performance, which dimensions are examined as statistically significant results, illustrates that unique product feature is the most important determinant of product differentiation affecting firm performance of JIEs.

This study also provides an overview of situation and product differentiation in JIEs operating in Vietnam. There is a steady increase in FDI inflow invested into Vietnam and the number of JIEs in Vietnam annually, which enters into the domestic market through different ways in the fields of manufacturing and processing industry, real estate, construction, ITC, and services. JIEs tend to maintain Confucianism in business culture with collectivism and hierarchy as key characteristics, which affect directly and indirectly the management, investment, innovation approaches. For JIEs in Vietnam, product differentiation has raised escalating public concern in international market, when there are many large corporations that have faced financial problems such as Sharp, Suzuki (Vietnam) and Hitachi. Therefore, besides the advantage of foreign elements, product differentiation is deemed as an efficient approach help JIEs to create a big gap as against the competitors and gain the outstanding competitive advantages in domestic market. This will get the trust of customers, lead to less volatility in prices, as well as the increase in profit, thus avoiding planning the low price strategy (Nguyen Van Tam, 2013).

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Appendix 1: Coded data for the independent variables and the dependent variable

Question No.	Content	Coded No.
13	Product differentiation	
	Capability to enhance product quality (performance and durability of products)	13.1
	Capability to improve product design	13.2
	Capability to innovate unique product features (unique function and other non-functional factors)	13.3
16	Finance	
	Enterprise revenue growth	16.1
	Enterprise profit growth	16.2
	ROA index increase	16.3
	ROE index increase	16.4
17	Customer	
	Improvement in customers' satisfaction	17.1
	Increase in number of new customers	17.2
	Reasonability of the price of product/service	17.3
	Assessment of customers to product/service	17.4
	Access of customers to product/service	17.5
18	Internal processes	
	Product development process is visible, transparent and clear?	18.1
	Enterprise has reward and punishment regime	18.2
19	Learning and growth	
	The recognition and compensation for employee's contribution.	19.1
	Enterprise encourages out-of-job training	19.2
	Enterprise invites guest speaker to training	19.3
	Enterprise actively build innovative culture	19.4
	Leader encourage innovation	19.5
		19.6

Source: Designed by the author, 2016.