New product development creativity and marketing sustainability: evidence from instant and convenience foods in Thailand

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Keywords

New Product Development Creativity, Valuable Product Innovation, Unique Product Innovation, Customized Product Innovation, Marketing Performance, Marketing Sustainability

Abstract

New product development creativity is important to enhance product innovation leading to marketing performance and marketing sustainability on instant foods and convenience foods business. The purposes of this study are to investigate the relationship between antecedents and consequences of new product development creativity, and to examine the influence of moderating effect on the relationship between antecedents and new product creativity. The results from the survey of 117instant foods and convenience foods business in Thailand highlight that new product development creativity is positively significant to all consequence except new product originality.Furthermore, the findings identified that new product creativity has positive relationship with all antecedents. In addition, the finding reveals that the moderating effects of stakeholder on the relation between all antecedents have positive significant impact. Surprisingly, the moderating effects of stakeholder on the relation between technological learning and new product originality and new product experimentation have negative impact. The summary of this paper not only provides theoretical and managerial contributions but also suggestions and directions of the future research are elaborate.

1. Introduction

The rapidly change in technology and competitive situation in the global market influence the business firms to adapt competitiveness and sustainability in the market place. Therefore, the business firms must have some resources that are valuable, rare, imitable, and non-substitute for creating competitive advantage (Barnney, 1991). Thus, the new product development creativity as the firm's resource enables competitive advantage of the firm. The new product development creativity emphasizes to create new idea and usefulness in the firms. The new product development creativity is the precursor for developing innovation and strategic advantage.

In the past, many scholars have been studied for the marketing creativity strategy such as Amabile (1983) studied organizational factors influencing individual creativity in 120 research and improvement researchers from more than 20 enterprises and found that the creation of novel is valuable thoughts by an individual or little gathering of people cooperating; a model of individual creativity is integrated into a model of organizational innovation. Then, Andrews and Smith (1996) examined determinants of marketing program creativity product managers and found that some output is relative to conventional practice. Marketing creativity is influenced by singular critical thinking info, motivational variables, and circumstance elements. And, Sethi, Smith, and Park, (2001) examined about determinants of new products creativity in new products team context and found that new product creativity is identified with team attributes (e.g. superordinate identity) and contextual influence (e.g. consolation to take hazard and clients' impact).

Moreover, the new product development creativity is discriminating for product differentiation and positioning as meaningful differentiation can influence the profitability of an association by offering something special and valuable to the purchaser (Wadden, 2011). From the current studied, there are a couple of exact investigates on the dimension of new product development creativity. Therefore, this exploration gives illumination of the new dimensions, measurement and conceptual model for new product development creativity. Not just does it propose another experimental examination, however it additionally recommends the relationships among dimensions of new product development creativity, antecedents, consequences, and moderator which are examined. To unmistakably check the previously stated relationships, instant

foods and convenience foods business in Thailand are the sample of the study because instant foods and convenience foods business are one of the fastest growing businesses confronting difficulties relating to new product development creativity.

The first aim of this research is to explore the relationship between antecedents and consequences of new product development creativity. The second aim is to examine the influence of moderating effect on the relationship between antecedents and new product creativity. This research is organized as follows. The first session reviews the relevant literature on new product development creativity, explains the theoretical framework to describe the conceptual model and the relationships among the different variables, and develops the related hypotheses for testing. The second session clarifies exact examination of the research methods, including sample selection and data collection procedure, the variable measurements of each construct, the instrumental verification, the statistics and equations to test the hypotheses. The third session explicitly exhibits the empirical results and discussion. The section thinks about and clarifies between past studies and observationally for this empirical research. Finally, the last session proposes the conclusion, theoretical and practical contributions, limitations, and directions for future research.

2. Literature Review and Hypothesis Development

The resource-based view (RBV) as the theoretical lens explain how new product development creativity has an influence on valuable product innovation, unique product innovation, customized product innovation, marketing performance, and marketing sustainability. The resource-based view associated with tangible and intangible resources such as assets, capabilities, processes, managerial styles, information, and knowledge (Barney, 2001). With regard to the RBV, unique bundle of resources and differential ability of strategic resources is determinant performance.

In this research, RBV is applied to explain that new product development creativity and transformational leadership are strategic resources which enhance marketing performance and marketing sustainability.

The research model of this study is shown in figure 1 and indicates the premise of the effects of four dimensions of new product development creativity. The consequences are valuable product innovation, unique product innovation, customized product innovation, marketing performance, and marketing sustainability. The antecedents are transformational leadership, resource complementarity, and technological learning. Moreover, this study investigates stakeholder expectation as the moderator in the context of instant foods and convenience foods business in Thailand. Linkages of these constructs are indicated in figure1



Figure 1: New Product Development Creativity and Marketing Sustainability: Evidence from Instant and Convenience Foods in Thailand

2.1 New Product Development Creativity

Marketing creativity strategy is defined as an ability of firm to create marketing activity difference from competitors that focuses on novelty and usefulness such as products which must be regarded as unique, unusual and infrequent statistically different from competitors and is appropriate and useful to prospective customers (Amabile, 1983). And, New Product Development

is managed efficiently in most large organizations. Stage-gate procedures have been executed to guarantee that assets are apportioned in order to furnish the organization with focused new products (Floren and Frishammar, 2012).

New product development is characterized as the procedure of starting, building up, and presenting new product/service to market for objective accomplishment of firm (Nakata and Sivakumar, 1996). Moreover, Hills and Sarin (2003) demonstrate that the new product development can be the starting of value creation in the firm or organization. New product development creativity is degree of new product is perceived as representing unique differences from competitors' products and programs in ways that are meaningful to target customers. Consistent with Amabile (1983) used output perspective of creativity which identifies two distinct dimensions of creativity such as unique differences that the novelty dimension is defined as the degree of perceiving which represented unique differences from competitors and meaningfulness to target customers that the meaningfulness dimension, defined as the extent to which new product is perceived as appropriate and useful to target customers. This research proposes four dimensions of new product development creativity included new product originality, new product novelty, new product meaningfulness, and new product experimentation. The detailed discussion of these dimensions is mentioned as below.

New Product Originality

New Product Originality is defined as creative product development of a unique product using advanced technology and product improvement continuously prevent imitation from competitors. The success of new products is the indicators of firm performance, which is an important source of competitive advantage (Schaefer, 1999). Therefore, the effectiveness of original product development by marketing and design activities will encourage product an effect marketing innovation. New product originality is significant related to product quality and uniqueness leading to marketing sustainability (Zirger and Maidique, 1990). Based on literature, new product originality has the potential possibility to enhance valuable product innovation, unique product innovation, customized product innovation, marketing performance and marketing sustainability. Thereby, the hypothesis is proposed as follows:

Hypothesis 1: New product originality is positively related to (a) valuable product innovation, (b) unique product innovation, (c) customized product innovation, (d) marketing performance, and (e) marketing sustainability.

New Product Novelty

New Product Novelty refers to new product which deviates from traditional product and brings about a contemporary concept such as outsourcing, collaboration, joint venture, acquisition and accumulates information to use for product or service development. Conceptualization of new marketing idea is a critical source of competitive advantage and associated with performance as well as an effect on market performance (Kandemir, Yaprak and Cavusgil, 2006). Furthermore, collaborative process, which can help guarantee fruitful results, learn from specialists' design experience, reuse knowledge, and improve efficiency of product development (Gunasekaran and Ngai, 2007). Hence, the hypothesis is proposed as follows:

Hypothesis 2: New product novelty is positively related to (a) valuable product innovation, (b) unique product innovation, (c) customized product innovation, (d) marketing performance, and (e) marketing sustainability.

New Product Meaningfulness

New Product Meaningfulness refers to the appropriateness and the usefulness of newproduct creativity inputs to consumers who adopt creative new products. Al-alak (2010) described creative offerings should be appropriate that meets needs, satisfaction, and trust for increasing long term customer relationship which implies that products should be appropriate and be discriminated from inappropriate products. And, products should be useful, meet customer needs, and solve consumer problems. Thus, the hypothesis is proposed as follows:

Hypothesis 3: New product meaningfulness is positively related to (a) valuable product innovation, (b) unique product innovation, (c) customized product innovation, (d) marketing performance, and (e) marketing sustainability.

New Product Experimentation

New Product Experimentation refers to a type of problem-solving, is a basic innovation process activity and accounts for a significant part of total innovation cost and time. Exploration has demonstrated that it comprises of trial and error, directed by insight as to the direction in which an answer might lie (Menon, Chakrabarti, and Nerella, 2002). Then, the hypothesis is proposed as follows:

Hypothesis 4: New product experimentation is positively related to (a) valuable product innovation, (b) unique product innovation, (c) customized product innovation, (d) marketing performance, and (e) marketing sustainability.

2.2 Product Innovation

Product innovation refers to the discovery or development of novel products that compete with counterpart products or previous versions (Akgün, Keskin, Byrne, and Aren, 2007). Product innovation is complex and involves high risks of failure and may need significant support from company resources such as finance, technology, and human capital leading to firm performance (Damanpour, 2010).

Valuable Product Innovation

Valuable product innovation refers to product innovation that creates value product to meet customer requirement, develops and creates useful product, and send product value for customer.Then, the hypothesis is proposed as follows:

Hypothesis 5: Valuable product innovation has a positive influence on marketing performance.

Unique Product Innovation

Unique product innovation refers to creative unique product with different style, good quality and attractive. Hence, the hypothesis is proposed as follows:

Hypothesis 6: Unique product innovation has a positive influence on marketing performance.

Customized Product Innovation

Customized product innovation refers to product development to meet customer requirement, customer satisfaction, and product adjustment for dynamic consumption. Hence, the hypothesis is proposed as follows:

Hypothesis 7: Customized Product Innovation has a positive influence on marketing performance.

2.3 Marketing Performance

Hooley et al. (2005) argued that superior marketing performance likely results in superior financial performance. Moreover, N. Morgan (2012) argued that marketing performance is the capability of firm to increase sales volume and firm activities which are the ultimate organizational goals in terms of financial performance. Marketing performance can be measured in terms of accounting indicators such as cash flows and profitability. In addition, O'Sullivan and Abela (2007) suggested that marketing performance is measured by returning on assets (ROA), and returning on investment (ROI). However, the marketing performance can be measured by sales volume, sales growth, and market share, whereas financial performance can be measured by profitability, a percentage of sales, returning on investment (ROI), profit margin, and profit growth (Hultman et al., 2011). Thus, hypothesis is proposed as follow:

Hypothesis 8: Marketing performance has a positive influence on Marketing Sustainability.

2.4 Transformational Leadership

Transformational leadership is a pattern of leader style that supports organization to achieve their target successfully through connecting functional performance with rewards that have esteem, through leader's use of dynamic and static administration by special case (Avolio, Zhu, Koh and Bhatia, 2004). Moreover, Bass, (1985, p33) referred that transactional as a leadership style light of idea that leader's relationship with subordinates is taking into account a chain of exchanges or an understood character. Gumusluoğlu and Ilsev (2009) concluded that transformational leadership influences on marketing creativity and innovation. Based on literature, transformational leadership has the potential possibility to enhance new product development creativity. Thereby, the hypothesis is proposed as follows:

Hypothesis 9: Transformational leadership has a positive influence on (a) new product originality, (b) new product novelty, (c) new product meaningfulness, and (d) new product experimentation.

2.5 Resource Complementarity

Adegbesan (2009) stated that a firm illustrates complementarity of a resource when their blend prompts the formation of a surplus far beyond the total of the measures of quality they could create independently (Dyer & Singh, 1998; Lippman & Rumelt, 2003; Mahoney & Pandian, 1992). Thereby, the hypothesis is proposed as follows:

Hypothesis 10: *Resource complementarity has a positive influence on (a) new product originality, (b) new product novelty, (c) new product meaningfulness, and (d) new product experimentation.*

2.6 Technological Learning

Technological learning is defined as capacities of firms to find out about and adjust to new technologies (Teece, Pisano and Shuen, 1997). At the firm level of examination, technological learning can be seen as a part of operational the knowledge-based view (Griffin, 1997). It is normal that technological learning in innovative organizations ought to make solid position for the firm and produce resources (tangible and intangible) that are rare, inimitable and non-substitution (Barney, 1991; Prahalad and Hamel, 1990). The common agreement is that such criteria must be accomplished through human capital. Tangible resources are effortlessly possible and can conceivably be figured out by competitors. Intangible resources, in contrast, make an abundance of aggregate learning that is installed in the culture, skills and interactions between the actors of the firm. The tacitness of such resources does not allow its technology to be totally classified and transferred in totality. Then, the hypothesis is proposed as follows:

Hypothesis 11: Technological learning has a positive influence on (a) new product originality, (b) new product novelty, (c) new product meaningfulness, and (d) new product experimentation.

2.7 Moderating Effects of Stakeholder Expectation

Freeman (1984) defined stakeholders as any gathering or people that can influence or be influenced by organization. Each stakeholder associates with value classes that satisfy their respective expectations. Although he defines only four stakeholder groups: employees, customers, suppliers, community. Stakeholder influences on corporation decisions, financial performance or outcomes is mostly examined in accordance with the stakeholder theory (Mutti et al., 2012). Then, the hypothesis is proposed as follows:

Hypothesis 12: Stakeholder expectation will moderate the relationships between: transformational leadership and (a) new product originality, (b) new product novelty, (c) new product meaningfulness, and (d) new product experimentation.

Hypothesis 13: Stakeholder expectation will moderate the relationships between: resource complementarity and (a) new product originality, (b) new product novelty, (c) new product meaningfulness, and (d) new product experimentation.

Hypothesis 14: Stakeholder expectation will moderate the relationships between: technological learning and (a) new product originality, (b) new product novelty, (c) new product meaningfulness, and (d) new product experimentation.

3. Research Methods

3.1 Sample Selection and Data Collection Procedure

Instant foods and convenience foods business were selected for this study in order to investigate how this business enhances marketing performance and marketing sustainability under unstable environment and higher competition. The data base of sample was taken from the Department of Industrial Promotion, Ministry of Industry Thailand (<u>www.dip.go.th</u>). A mail survey

procedure via the questionnaire was used for data collection. The key participants in this study were marketing directors or marketing manager of instant foods and convenience foods business in Thailand. Concerning the questionnaire mailing, 31 surveys were undeliverable because some firms were no longer in business or had moved to obscure areas. Deducting the undeliverable from the first 641 mailed, the valid mailing was 610 surveys, from which 123 responses were gotten. Of the surveys finished and returned, just 117 were usable.

To verify the non-response bias that suggested by Armstrong and Overton (1977), the t-test statistic was assessed to compare between two groups by using the demographics of the firm. The result indicates that there is no significant relation between early and rate responses. Therefore, the non-response bias is not a problem in this study.

3.2 Questionnaire Development

This research employs a mailed questionnaire as the instrument for collecting data and questionnaire has seven parts. Part one asks for personal information of the key informants such as gender, age, marital status, education level, work experience, average revenues per month, and current position. Part two asks for characteristics of firm such as type of business, product type, locations, period of time in proceeding business, authorized capital of the firm, number of employees, and average revenues per year. Part three through part six requests to measure each of constructs in the conceptual model, which are composed 45 items in total. These items are Five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Finally, part seven includes an open-ended question for the informant's suggestions and opinions.

3.3 Variable

To measure each construct in the conceptual model, all variables gained from survey are measured by a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The variable measurements of this research are developed as a new scale and are modified from prior research. Then, the variable measurements of dependent variables, independent variables, mediating variables, moderating variables, and control variables of this research are explained as follows

3.3.1 Dependent Variable

Marketing Sustainability

Sustainability is not a single-valued function; rather, marketing sustainability is an allencompassing property of a system. A system, similar to the monetary or environmental system, exhibits sustainability when it creates alluring qualities, such as prospering or security, over long periods (Ehrenfeld, 2010).In this study, marketing sustainability is measured and related with customer satisfaction, reputation, trust, and reliability. This construct is developed as a new scale with four items.

3.3.2 Independent Variable

This study is composing eight independent variables: new product development creativity, value product innovation, unique product innovation, customized product innovation, marketing performance, transformational leadership, resource complementarity, and technological learning. Thus, all independent variables are elaborated as following.

New product development creativity is a main construct of this study. It can be defined as the degree of new product development that is perceived in unique differences from competitor's product and in way meaningful of new product (Amabile, 1983, Wadden, 2011). In this study, new product development creativity is developed in four dimensions as below.

New product originality

New product originality (NPO) is measured by three items including the creative idea in new product development, the presentation of new issue in new product development, and the original creative in new product development. This construct is developed as a new scale with three items.

New product novelty

New product novelty (NPN) is evaluated via three items related to presentation and supported for research and development of different new product from competitors. This construct is developed as a new scale with three items.

New product meaningfulness

New product meaningfulness (NPM) is measured by three items of the product utility for customer, the greater customer meaning, and realized utility in daily. This construct is developed as a new scale with three items.

New product experimentation

New product experimentation (NPE) is evaluated by three items relevant with new product experimentation, and investment and support in R&D. This construct is developed as a new scale with three items.

Valuable product innovation

Valuable product innovation (VPI) is measured by three items related to develop and create value product to meet customer requirement, develops and creates useful product, and sends product value for customer. This construct is developed as a new scale with three items.

Unique product innovation

Unique product innovation (UPI) is evaluated by three items relevant to creative unique product, different style with quality, and attractive. This construct is developed as a new scale with three items.

Customized product innovation

Customized product innovation (CPI) is measured by three items related to product development to meet customer requirement, customer satisfaction, and product adjustment for dynamic consumption. This construct is developed as a new scale with three items.

Marketing performance

Marketing performance (MKP) is measured by four-item scale, and it is assessed by firm's perception about the marketing outcomes that firm can achieve the goal in terms of customer satisfaction, sales growth, market share, return on investment etc. This construct is adapted from (Kanchanda and Ussahawanitchkit, 2012).

Transformational leadership

Transformational leadership (TRL) is evaluated by five items relating to idealized or charismatic, refer to the study of Bass (1985) TRL consist of inspirational motivation, intellectual stimulation, creative learning sphere, and individual consideration. This construct is developed new scale with five items.

Resource complementarity

Resource complementarity (REC) is measured by three items related to available resource, useful resource application, and resource complementary preparation. This construct is developed new scale with three items.

Technological learning

Technological learning (TEL) is evaluated by four items relevant to technological supporting, technological understanding, technological training, and technological investment. This construct is developed new scale with four items.

3.3.3 Moderating Variable

Stakeholder Expectation (STE) is measured by four items related to customer need, marketing competition, competitor's development, and role of government. This construct is developed new scale with four items.

3.3.4 Control Variable

Firm capital (FIC) is a control variable that may influence the firm's capacity to accomplish competitive advantage and firm performance (Phokha and Ussahawanitchakit, 2011). Firm capital is measured by the measure of cash a firm has enrolled to their business. Firm capital is represented by a dummy variable including 0 (total assets of the firm that are less than 150,000,000 baht), and 1 (total assets of the firm that are equal to or more than 150,000,000 baht). Moreover, firm age (FIA) was utilized as a control variable as a part of the study, since studies in the past reported its positive association with organization innovation (Hitt, Hoskisson, and Kim, 1997). Therefore, firm age may influence the marketing innovation. Firm age is measured by stretch of time in operating business,

which represented by dummy variable including 0 (less than 15 years) and 1 (equal to or more than 15 years).

3.4 Methods

The estimation of scale reliability was evaluated by using Cronbach's alpha coefficient that would be more prominent than 0.70 (Nunnally and Bernstein, 1994) which shows satisfactory reliability. Moreover, a confirmatory factor analysis (CFA) was used to test the construct validity by examining the relationships of the large number of items and determining whether they can be diminished to a small set of elements. Because of constrained perception, factor analyses were executed independently on every arrangement of the items representing a specific scale. Likewise, factor loading tested of each construct should be statistically significant and greater than the 0.40 cutoff which is the acceptable criterion (Nunnally and Bernstein, 1994). Acceptable reliability and validity found in this study are appropriate for further analysis. The results of testing reliability and validity are shown in Table 1 as below.

Items	Factor Loading	Cronbach's Alpha
New product originality (NPO)	0.694-0.865	0.704
New product novelty (NPN)	0.816-0.852	0.784
New product meaningfulness (NPM)	0.808-0.854	0.767
New product experimentation (NPE)	0.855-0.925	0.903
Valuable product innovation (VPI)	0.892-0.917	0.882
Unique product innovation (UPI)	0.918-0.946	0.921
Customized product innovation (CPI)	0.918-0.948	0.926
Marketing performance (MKP)	0.859-0.942	0.926
Marketing sustainability (MKS)	0.891-0.934	0.929
Transformational leadership (TRL)	0.832-0.919	0.925
Resource complementarity (REC)	0.847-0.880	0.826
Technological learning (TEL)	0.724-0.855	0.802
Stakeholder expectation (STE)	0.854-0.935	0.903

Table 1: Results of Measure Validation

3.5 Statistical Techniques

The ordinary least squares (OLS) regression analysis is used to test all postulated hypotheses following the conceptual model. OLS is appropriate to examine the relationship between dependent and independent variable of which all variables are categorical and interval data (Hair et al., 2010). Moreover, the researchers check for outlier, normality, linearity, and homoscedasticity to satisfy the underlining assumption of multivariate data (Hair et al. 1998). With the need to understand the relationships in this study, the research models of aforementioned relationships are depicted as shown below

Equation 1:	VPI	=	$\beta_{01} + \beta_1 NPO + \beta_2 NPN + \beta_3 NPM + \beta_4 NPE + \beta_5 FIC + \beta_6 FIA + \varepsilon_1$
Equation 2:	UPI	=	$\beta_{02} + \beta_7 NPO + \beta_8 NPN + \beta_9 NPM + \beta_{10} NPE + \beta_{11} FIC + \beta_{12} FIA + \varepsilon_2$
Equation 3:	CPI	=	$\beta_{03} + \beta_{13}NPO + \beta_{14}NPN + \beta_{15}NPM + \beta_{16}NPE + \beta_{17}FIC + \beta_{18}FIA + \varepsilon_3$
Equation 4:	MKP	=	$\beta_{04} + \beta_{19}NPO + \beta_{20}NPN + \beta_{21}NPM + \beta_{22}NPE + \beta_{23}FIA + \beta_{24}FIA + \epsilon_4$
Equation 5:	MKS	=	$\beta_{05} + \beta_{25}NPO + \beta_{26}NPN + \beta_{27}NPM + \beta_{28}NPE + \beta_{29}FIC + \beta_{30}FIA + \varepsilon_5$
Equation 6:	MKP	=	$\beta_{06} + \beta_{31}VPI + \beta_{32}UPI + \beta_{33}CPI + \beta_{34}FIC + \beta_{35}FIA + \varepsilon_6$
Equation 7:	MKS	=	$\beta_{07} + \beta_{36}MKP + \beta_{37}FIC + \beta_{38}FIA + \varepsilon_7$
Equation 8:	NPO	=	$\beta_{08} + \beta_{39}TRL + \beta_{40}REC + \beta_{41}TEL + \beta_{42}FIC + \beta_{43}FIA + \varepsilon_8$
Equation 9:	NPN	=	$\beta_{09} + \beta_{44}TRL + \beta_{45}REC + \beta_{46}TEL + \beta_{47}FIC + \beta_{48}FIA + \varepsilon_9$
Equation 10:	NPM	=	$\beta_{10} + \beta_{49}TRL + \beta_{50}REC + \beta_{51}TEL + \beta_{52}FIC + \beta_{53}FIA + \varepsilon_{10}$
Equation 11:	NPE	=	$\beta_{11} + \beta_{54}TRL + \beta_{55}REC + \beta_{56}TEL + \beta_{57}FIC + \beta_{58}FIA + \varepsilon_{11}$
Equation 12:	NPO	=	$\beta_{12} + \beta_{59}TRL + \beta_{60}REC + \beta_{61}TEL + \beta_{62}STE + \beta_{63}(STE^*TRL) + \beta_{64}(STE^*REC)$
-			+ $\beta_{65}(STE^*TEL)$ + $\beta_{66}FIC$ + $\beta_{67}FIA$ + ε_{12}
Equation 13:	NPN	=	$\beta_{13} + \beta_{68}TRL + \beta_{69}REC + \beta_{70}TEL + \beta_{71}STE + \beta_{72}(STE^*TRL) + \beta_{73}(STE^*REC)$
			+ $\beta_{74}(STE^*TEL)$ + $\beta_{75}FIC$ + $\beta_{76}FIA$ + ε_{13}
Equation 14:	NPM	=	$\beta_{14} + \beta_{77}TRL + \beta_{78}REC + \beta_{79}TEL + \beta_{80}STE + \beta_{81}(STE^*TRL) + \beta_{82}(STE^*REC)$
-			+ $\beta_{83}(STE^*TEL)$ + $\beta_{84}FIC$ + $\beta_{85}FIA$ + ε_{14}
Equation 15:	NPE	=	$\beta_{15} + \beta_{86}TRL + \beta_{87}REC + \beta_{88}TEL + \beta_{89}STE + \beta_{90}(STE^*TRL) + \beta_{91}(STE^*REC)$
•			+ $\beta_{92}(STE^*TEL)$ + $\beta_{93}FIC$ + $\beta_{94}FIA$ + ε_{15}

4. Results and Discussion

Table 2 presents the descriptive statistic and correlation matrix for all variables. As indicated by the concern of multicollinearity among independent variables, Variance Inflation Factors (VIF's) was used to prove this problem. The range of VIFs is from 1.04 to 5.28, which was below the cut-off value of 10 as recommended (Hair, Black, Babin, Anderson, and Tatham, 2006). Therefore, it can be concluded that the multicollinearity varies may affect the weights of the explanatory variables in the model that is not a serious problem in this study.

Variables	NPO	NPN	NPM	NPE	VPI	UPI	CPI	MKP	MKS	TRL	REC	TEL	STE	FIC	FIA
Mean	4.11	3.95	4.31	3.93	3.98	3.89	4.00	3.94	4.10	4.07	4.15	4.08	4.13		
S.D.	0.52	0.64	0.50	0.74	0.70	0.72	0.78	0.82	0.71	0.61	0.51	0.57	0.64		
NFO															
NPN	.623**														
NPM	.620**	.610**													
NPE	.699**	.695**	.564**												
VPI	.669**	.602**	.642**	.791**											
UPI	.675**	.818**	.698**	.703**	.796**										
CPI	.475**	.760**	.542**	.598**	.716**	.682**									
MKP	.444**	.598**	.548**	.457**	.552**	.666**	.657**								
MKS	.475**	.606**	.692**	.474**	.639**	.590**	.763**	.743**							
TRL	.623**	.791**	.797**	.662**	.615**	.701**	.693**	.654**	.758**						
REC	.556**	.530**	.679**	.601**	.563**	.606**	.561**	.523**	.639**	.679**					
TEL	.462**	.638**	.668**	.601**	.637**	.677**	.614**	.540**	.680**	.669**	.695**				
STE	.519**	.649**	.729**	.575**	.584**	.592**	.573**	.526**	.660**	.723**	.652**	.842**			
FIC	.255**	.331**	.146	.191*	.163	.210*	.309**	.141	.242**	.179	.192*	.332**	.348**		
FIA	.110	112	171	- .0 69	030	049	093	0 65	124	119	051	156	053	.423**	
*p<0.1, **p	o<0.05														

Table 2: Descriptive Statistic and Correlation Matrix

Table 3 presents the results of OLS regression analysis of relationships among the four dimensions of new product development creativity and value product innovation, unique product innovation, customized product innovation, marketing performance, and marketing sustainability. New product development creativity includes new product originality, new product novelty, new product meaningfulness, and new product experimentation. Firstly, the relationships between new product originality have no significant with value product innovation, unique product innovation, customized product innovation, marketing performance, and marketing sustainability. **Hence, hypotheses 1a, b, c, d, and e are not supported.**

Secondly, the relationships between new product novelty are positive significant with unique product innovation ($\beta_8 = 0.555$, p<0.01), customized product innovation ($\beta_{14} = 0.602$, p<0.01), marketing performance ($\beta_{20} = 0.460$, p<0.01), and marketing sustainability ($\beta_{26} = 0.275$, p<0.01) but they are not significant for value product innovation. Consistent with prior study of Gunasekaran and Ngai (2007) which suggests that collaborative process in novel marketing idea, which can help ensure successful outcomes and improve efficiency of product development. Moreover, conceptualization of new marketing idea as a critical source of competitive advantage and associated with performance as well as an effect on market performance (Kandemir, Yaprak and Cavusgil, 2006). Thus, hypothesis 2b, 2c, 2d, and 2e are supported, but 2a is not supported.

Thirdly, the relationships between new product meaningfulness are positive significant with value product innovation ($\beta_3 = 0.275$, p<0.01), unique product innovation ($\beta_9 = 0.261$, p<0.01), customized product innovation ($\beta_{15} = 0.143$, p<0.1), marketing performance ($\beta_{21} = 0.304$, p<0.01), and marketing sustainability ($\beta_{27} = 0.534$, p<0.01).Consistent with prior research reveals that product development creativity is necessary for the business firms due to creativity and innovation capabilities (Iqball, 2011).**Therefore, hypotheses 3a-e are supported.**

Finally, the relationships between new product experimentation do not significant influence marketing performance, and marketing sustainability, but has positive significant impact on value product innovation (β 4 = 0.529, p<0.01), unique product innovation (β 10 = 0.134, p<0.1), and customized product innovation (β 16 = 0.172, p<0.1).Consistent with prior study that proposed the importance of innovation in new product developments for developing and bringing to market innovative products ahead of competitors that can generate various benefits in economic (Zheng

Independent	Dependent Variable								
Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7		
	VPI	UPI	CPI	MKP	MKP	MKS	MKS		
NPO	0.102	0.088	-0.132	-0.017		-0.039			
	(0.085)	(0.075)	(0.097)	(0.118)		(0.104)			
NPN	-0.024	0.555***	0.602***	0.460***		0.275***			
	(0.085)	(0.075)	(0.096)	(0.117)		(0.104)			
NPM	0.275***	0.261***	0.143*	0.304***		0.534***			
	(0.075)	(0.065)	(0.085)	(103)		(0.091)			
NPE	0.529***	0.134*	0.172*	-0.001		-0.013			
	(0.084)	(0.074)	(0.095)	(0.116)		(0.103)			
VPI					-0.163				
					(0.118)				
UPI					0.499***				
					(0.112)				
CPI					0.467***				
					(0.103)				
MKP							0.702***		
							(0.061)		
FIC	-0.070	-0.222*	0.207	-0.177	-0.210	0.223	0.460***		
	(0.138)	(0.121)	(0.156)	(0.190)	(0.168)	(0.169)	(0.144)		
FIA	0.125	0.219*	-0.034	0.162	0.085	-0.092	-0.363***		
	(0.139)	(0.121)	(0.157)	(0.191)	(0.161)	(0.470)	(0.144)		
Adjusted R ²	0.675	0.752	0.585	0.385	0.512	0.517	0.584		

Zhou, 2006).Thus, hypotheses 4a, 4b, and 4c are supported, but hypotheses 4d and 4e are not supported.

*p<0.1, **p<0.05, ***p<0.01 *Beta coefficients with standard errors in parenthesis Table 3: Results of OLS Regression Analysisª

In addition, unique product innovation and customized product innovation have strongly significant positive impact on marketing performance ($\beta_{32} = 0.499$, p<0.01 and $\beta_{33} = 0.467$, p<0.01). And, marketing performance has strongly significant positive impact on marketing sustainability ($\beta_{36} = 0.702$, p<0.01). Consistent with prior study suggested that product innovation is the strong indicator of financial performance under the modern production and value creation (Goedhuys and Veugelers, 2011). Moreover, Brown and Eisenhardt (1995) also reveal that new product development is main driver of firm performance and firm survival. Then, business firm should develop new product development creativity, product innovation that will have greater marketing performance and marketing sustainability. Then, hypotheses 6, 7, and 8 are supported, but hypothesis 5 is not supported.

As shown in table 4, transformational leadership has strongly positive significant impact on all four dimensions of new product development creativity includes new product originality ($\beta_{39} = 0.482$, p<0.01), new product novelty ($\beta_{44} = 0.712$, p<0.01), new product meaningfulness ($\beta_{49} = 0.557$, p<0.01), and new product experimentation ($\beta_{54} = 0.399$, p<0.01). Thus, it indicates that transformational leadership enhances to new product development creativity. Consistent with Chen and Chang (2012) reveal that transformational leadership positive related to both creativity and product development performance. **Hence, hypotheses 9a-9d are strongly supported.**

Moreover, resource complementarity has positive significant relationship with new product originality ($\beta_{40} = 0.244$, p<0.05), new product meaningfulness ($\beta_{50} = 0.191$, p<0.05), and new product experimentation ($\beta_{55} = 0.188$, p<0.1). Consistent with Adegbesan (2009) suggested that resource complementarity can independently support amounts of value creative product. **Then, hypotheses 10a, 10c, and 10d are supported, but hypothesis 10b is not supported.**

In the same way, technological learning has significant impact on new product novelty ($\beta_{46} = 0.141$, p<0.1), new product meaningfulness ($\beta_{51} = 0.159$, p<0.1), and new product experimentation ($\beta_{56} = 0.203$, p<0.1).Consistent with prior research reveals that technological learning facilitate for R&D and creative product generation (Ray, 2001) In addition, Dodgson (1991) suggested that technology learning is mechanism for stimulating and supported creativity of firms. Thus, hypotheses 11b, 11c, and 11d are supported, but hypothesis 11a is not supported.

Furthermore, the moderating role of stakeholder expectation on relationship among transformational leadership, resource complementarity, and technological learning and new product development creativity i.e. new product originality, new product novelty, new product meaningfulness, and new product experimentation found that following. Firstly, the moderating role of stakeholder expectation on relationship between transformational leadership and new product novelty has positive significant impact ($\beta_{68} = 0.170$, p<0.05), but all three dimensions of new product

Independent	Dependent Variable								
Variable	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	
	NPO	NPN	NPM	NPE	NPO	NPN	NPM	NPE	
TRL	0.482***	0.712***	0.557***	0.399***	0.584***	0.715***	0.514***	0.466***	
	(0.103)	(0.078)	(0.078)	(0.099)	(0.092)	(0.079)	(0.084)	(0.014)	
REC	0.244**	-0.098	0.191**	0.188*	0.082	-0.059	0.183**	0.091	
	(0.107)	(0.082)	(0.081)	(0.103)	(0.088)	(0.076)	(0.081)	(0.100)	
TEL	-0.013	0.141*	0.159*	0.203*	-0.217*	-0.080	-0.020	0.111	
	(0.115)	(0.081)	(0.087)	(0.110)	(0.128)	(0.111)	(0.117)	(0.144)	
STE					0.273**	0.128	0.283**	0.108	
					(0.123)	(0.106)	(0.113)	(0.139)	
TRL*STE					-0.012	0.170**	0.133	-0.074	
					(0.089)	(0.770)	(0.082)	(0.100)	
REC*STE					0.760***	-0.007	0.015	0.489***	
					(0.104)	(0.090)	(0.095)	(0.117)	
TEL*STE					-0.581***	0.183**	-0.132	-0.278***	
					(0.094)	(0.081)	(0.086)	(0.106)	
FIC	0.152	0.470***	-0.035	0.019	0.353**	0.601***	-0.100	0.193	
	(0.186)	(0.141)	(0.141)	(0.178)	(0.156)	(0.135)	(0.143)	(0.176)	
FIA	0.134*	-0.222	0.136	0.035	0.078	-0.187	-0.056	-0.177	
	(0.179)	(0.136)	(0.136)	(0.172)	(0.169)	(0.147)	(0.156)	(0.192)	
Adjusted R ²	0.431	0.671	0.674	0.477	0.641	0.731	0.697	0.541	
*ac 10 ** ac 05 *** ac 01 & Pata coefficients with standard errors in percenthesis									

development creativity have no significant impact. Then, hypothesis 12b is supported, but hypotheses 12a, 12c, and 12d are not supported.

*p<.10, ** p<.05, *** p<.01, * Beta coefficients with standard errors in parenthesis Table 4: Results of OLS Regression Analysis*

Secondly, the moderating role of stakeholder expectation on relationship between resource complementarity and new product originality and new product experimentation have positive significant impact ($\beta_{64} = 0.760$, p<0.01 and B₉₁ = 0.489, p<0.01). Consistent with Aschehoug (2012) revealed that the expectation and collaboration of stakeholder exploitation are relevant to environmental information enhancing product development achievement. **Hence, hypotheses 13a**

and 13d are supported, but hypotheses 13b and 13c are not supported. Finally, the moderating role of stakeholder expectation on relationship between technological learning and new product novelty has positive significant impact ($\beta_{74} = 0.183$, p<0.05).

Likely, Kim (1997) suggested that technology was adapted, used and changed by stakeholder enables to create new technology and to develop creative new product. Then, hypothesis 14b is supported.

Surprisingly, for moderating role of stakeholder expectation on relationship between technological learning and new product originality and new product experimentation have negative significant impact. Then, the authors suggested that the researcher should investigate in other context on future research. **Thus, hypotheses 14a, 14c, and 14d are not supported.**

5. Contributions and Directions for Future Research

5.1 Theoretical Contribution and Directions for Future Research

This study provides a clearer understanding of the relationship among new product development creativity and value product innovation, unique product innovation, customized product innovation, marketing performance, and marketing sustainability. Moreover, researchers also investigate the relationship between transformational leadership, resource complementarity, and technological learning and new product development creativity. Finally, we examine the moderating effect of stakeholder expectation. This study is intended to expand the theoretical contribution on previous knowledge and literature of new product development creativity. Especially, this study provides the new dimension of new product development creativity base on the context of instant foods and convenience foods business in Thailand.

5.2 Managerial contributions

This study reveals crucial information that is useful for practitioner to manage the resource of the business firms. These will lead to achieve for marketing performance and marketing sustainability. Then, executive should be concerned with new product novelty, new product meaningfulness, and new product experimentation that positive relate to value product innovation, unique product innovation, customized product innovation, marketing performance, and marketing sustainability. Moreover, executive also should regard to transformational leadership, resource complementarity, and technological learning when stakeholder expectation is treated as moderator. **6. Conclusion**

This study investigates the impact of new product development creativity, namely, new product originality, new product novelty, new product meaningfulness, and new product experimentation on valuable product innovation, unique product innovation, customized product innovation, marketing performance, and marketing sustainability in context of instant foods and convenience foods business in Thailand. Obviously, those associations have positive significant impact and are partially supported. Moreover, unique product innovation and customized product innovation have positive significant impact and strongly supported on marketing performance. And, marketing performance is positive significant and strongly supported on marketing sustainability.

Moreover, we examine the impact of transformational leadership, resource complementarity, and technological learning on new product development creativity. Obviously, those associations have positive significant impact and partially supported. Furthermore, the moderating effect of stakeholder has positive significant impact and is partially supported on relationship between transformational leadership, resource complementarity, and technological learning on new product development creativity. Surprisingly, the moderating effect of stakeholder expectation has negative significant impact on the relationship between technological learning and two dimensions of new product development creativity (new product originality and new product experimentation). Then, the authors suggest for the future research. Moreover, this study is base on the context of instant foods and convenience foods business in Thailand. Then, future research should investigate in other context.

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6th International Trade and Academic Research Conference (ITARC), 9-10 November 2015, UK 2

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