

## อิทธิพลของนวัตกรรมองค์การต่อการเติบโตทางธุรกิจผ่านการจัดการทรัพยากรมนุษย์และการพัฒนาผลิตภัณฑ์ใหม่

### THE EFFECT OF INNOVATION-BASED ORIENTATION ON BUSINESS GROWTH THROUGH HUMAN RESOURCES MANAGEMENT AND NEW PRODUCT DEVELOPMENT

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#### บทคัดย่อ

องค์การที่มีพื้นฐานการสร้างนวัตกรรมสามารถสร้างนวัตกรรมใหม่และส่งผลให้เกิดการเติบโตทางธุรกิจ การพัฒนาทรัพยากรมนุษย์และผลิตภัณฑ์ใหม่เป็นตัวกลางระหว่างฐานความรู้และการเติบโตทางธุรกิจ กลุ่มตัวอย่างประกอบด้วยอุตสาหกรรมจากหลายกลุ่มในประเทศไทย ใช้การวิเคราะห์ข้อมูลระหว่างตัวแปรในด้วยวิธีการวิเคราะห์สมการโครงสร้าง ผลการวิจัยพบว่า ฐานความรู้มีผลอย่างมีนัยสำคัญต่อการจัดการทรัพยากรมนุษย์และการพัฒนาผลิตภัณฑ์ใหม่ ซึ่งมีผลต่อการเติบโตธุรกิจอย่างมาก

**คำสำคัญ:** การเติบโตของธุรกิจ การจัดการทรัพยากรมนุษย์ ฐานนวัตกรรม การพัฒนาผลิตภัณฑ์

#### Abstract

An organization's innovation-based orientation creates innovation and is important to business growth. Development of human resources and new products are determined in terms of mediation between knowledge base and business growth. The subjects here consist of local firms from various industries operating in Thailand. The Structural Equation Model (SEM) is used to discover the link between variables in the framework and two mediators. The results indicate that knowledge base has a significant effect on both human resources management and new product development. Consequently, these two wield great influence on business growth.

**Keywords:** Business Growth, Human Resources Management, Innovation-Based, Product Development

## **Introduction**

Currently, business success is concerned with the link of opportunities to the business model where the focus is on innovation with a sustainability dimension. It is necessary for firms to have their innovations linked to society's consideration of sustainability issues [1]. For example, society now accepts that new technology must go to some extent in conjunction with protection of the environment. In developing new products, the strategy is to reduce the environmental impact of poor quality materials and thus improve firms' business sustainability [2]. There is a link between the internal factors of an organization and the external social ones required for environmental protection. Therefore, an innovation may not be limited to the firm or business level, but include the national level. Some studies found that employment and a nation's wealth originate from entrepreneurs' capacity to generate resources to create innovation [3, 4]. Furthermore, many researchers have studied the relationship between innovation and firms' growth [5-7]. Innovation policies of particular firms will encourage their management to create new products and/or goods and services. It is widely known that new products and goods and services will create a competitive advantage for those firms in the marketplace [8-10]. Moreover, in the dynamic and competitive market, it is necessary for firms to create innovative products to make their overall performance meaningful [11]. Firms must undertake extensive knowledge creation on their core areas and products [12]. This requires human capability within

a business organization to fulfil the need for firms to create innovation. However, it is only the large firms such as multinationals or conglomerates that may have the human resources management process that can create such innovation function, since their economies of scale are far greater than those of small and medium-sized businesses.

Taking management of innovation into consideration, knowledge has become important for those firms in creating a sustainable operation, in much the same way as multinational corporations. Innovation is not only important to firms, but it is also crucial to a country's economy. Furthermore, management should place a premium on firms' knowledge to generate sustainable company growth. It is important that innovation is tied to firms' employees who must have the capability to create or consider new products. To overcome the problem where this might not exist in businesses, human resources management is required to improve or introduce innovation capability [13]. Human resources management begins with the selection of the right people and continuously developing their skills so that they can create a new invention that will be successfully marketed and sold. Our purpose is to figure out the effect of innovation-based orientation that may have on business growth via new product development and human resource management. The research framework is therefore illustrated as follow:

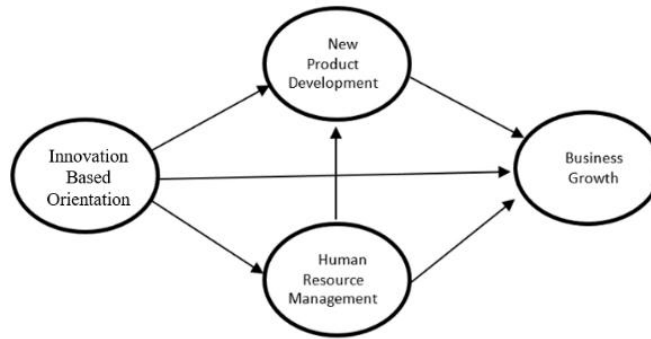


Figure 1. Research Framework

### Objective

To study the effect of innovation-based orientation on business growth via new product development and human resource management.

#### Literature Review

##### Innovation-Based Orientation

For businesses to create competitive advantage, innovation-based orientation (KBO) is employed. For the past 30 years, innovation has played an important role in business operations and has a positive effect on both direct and indirect economic growth of countries where companies focus on innovation [14]. Many entrepreneurial outfits concentrate on driving innovation activities to support their business growth [15]. Businesses require innovation-based orientation to prepare their employees' capabilities for developing new products. These employees need to develop new and updated knowledge, and creative ideas for new products that are appropriate to their target customers. It is evident that customer involvement is crucial to the success of a new product being developed [16]. Not only multinational enterprises, but also local firms including small and medium-sized

enterprises that innovate will benefit from new product development [17].

##### Theoretical Basis and Human Resources Management

The theoretical background basis of this study is the Resource-Based View (RBV) which focuses on firms' internal resources. Since the internal resources of a firm are valuable, rare, difficult to imitate, and cannot be substituted, they do have the potential for a firm to become more successfully competitive [18]. A response to the RBV is that business management approach to human resources will consequently affect other activities. In considering product development for the purposes of business growth, firms have to develop their human resources management in terms of intellectual development, business plan and a sense of ethical engagement [19]. Firms' innovation personnel need external information and knowledge to support their new ideas for product innovation. This is because the decision-making process for developing new products needs to be supported by having the opportunity to access diverse sources of knowledge [20]. In addition, diverse sources of knowledge

are also beneficial to firms to create new products that are different from others already available in the market [21]. The external sources of knowledge also provide firms with market relevance where innovations thrive from being based on more than a few sources [22]. Also, external sources of knowledge that have an impact on innovation through human resources management can promote brainstorming in workplace groups, units or departments. However, to have human resources management practices that support product development, firms should have a system to support employees to create the skills to develop new products. This means having a good selection procedure, training and development, and performance appraisal systems. Based on aforementioned review, we posit that human resources development does impact on new product development and business growth.

#### **Product Development**

The competitive advantage of any firms comes from the difference in their products or services that are sold in the market. It is crucial that reputation, product, technology, and other factors make a difference. Many firms try to develop new products in a context where the product life cycle of specific business units is shorter than it was previously. Furthermore, rapid changes in technology are important for many kinds of industries and this is taking the form of what is called disruptive technology. Therefore, in considering the product development practices, the interface between product life cycle management and technology management

should be determined [23]. Moreover, given the complexity of new product development, designers should recognize the environmental and social impacts their new products have [24]. This implies that firms need to manage their product development processes flexibly, in order for new products to reflect the interests of society and firms' growth.

Flexibility in managing specific business firms does wield a significant impact on the value of new product development and related projects [25]. Also, the success of firms' products development where new markets emerge, can have an impact on the manufacturing process and its performance [26]. Continual development of a new product is essential for long-term success [27, 28]. New products in a competitive environment today require many disciplines of expertise and where information must be exchanged [29]. Then, to optimize the development program, firms should follow up their data or information by seeing what their competitors are doing. Innovation leads to new product development and consequently positively affects business growth [5].

#### **Business Growth**

The business growth of firms depends on various factors ranging from management techniques to the amount of capital that can create an economy of scale. To create a competitive advantage, firms should focus on innovation where there is differentiation in their products and/or services. However, many family owners of businesses do not like to invest their money in complex technology [30, 31]. In contrast, one empirical study

using South Korean participants found that family owners invest more in research and development depending on growth and business opportunities [32]. When firms are growing, business resilience is vital [33]. The resilience and flexibility of a firm can be considered in terms of expanding their markets in such a way as to be congruent with employees' capability. Their capabilities can make firms respond to the dynamic environment engendered by market expansion. Innovative employees in fact are crucial to the growth of firms.

## **Methods**

To explain the empirical results for the link between innovations based orientation and business growth, this study applied a quantitative analysis, using a questionnaire as the instrument for data collection. The instrument was created based on previous literature where certain variables were included in our framework. The validity and reliability were tested to ensure the completeness of the questionnaires. According to the research framework, there are two mediators which are human resources management and new product development. The structural equation model was then used to discover how all the variables were integrated.

### **Measurement**

A structural equation model was developed to study the relationship among human resources management, new product development and business growth is the structural equation model. The measurement instrument consisted of 17 items based on

questions with a 5-point Likert scale until a composite measurement was derived. The Likert scale was measured as follow strongly disagree, disagree, don't know, agree, and strongly agree, respectively. For the purposes of reliability testing, the Cronbach's alpha was applied to all the items, and the results illustrate a high level of reliability with the values being between .971 and .973. In considering validity, construct validity and discriminant validity were tested to confirm the completion of the questionnaire. We determined the convergent validity in terms of confirmatory factor analysis (CFA) until the results of their factor loading were greater than 0.6. In addition, the average variance extracted (AVE) of all variables resulted over 0.5. In considering the discriminant validity, this study examined the correlation between the construct and observed variables whereas the latent variables are not associated with any other. The definition of each variable and results for convergent validity are shown in Table 1.

**Table 1.** Factor Loading and Average Variance Extracted

Variable	FL	R <sup>2</sup>	CR	AVE
<b>Innovation-based Orientation</b>			.864	.678
IBO1: Concentrate on human resources concerning product development.	.78	.61		
IBO2: Have a policy of sending employees to seminars to obtain new knowledge.	.87	.76		
IBO3: Employees' performance evaluation based on their ability to create new products.	.82	.67		
<b>New Product Development</b>			.894	.629
NPD1: Have a goal to create different products based on previous product.	.83	.69		
NPD2: Have launched new products or services in the past 3 years.	.76	.58		
NPD3: In the process of developing new products.	.84	.71		
NPD4: Management is interested in innovation and new technology.	.77	.60		
NPD5: Always follow up new products for customers.	.76	.57		
<b>Human Resources Management</b>			.893	.626
HRM1: Have a system of recruiting new employees.	.84	.71		
HRM2: Use any test for recruiting new employees.	.76	.58		
HRM3: Use interviews to recruit employees.	.71	.51		
HRM4: Continuously sending staff to external seminars.	.81	.66		
HRM5: Having performance appraisal system linked to creativity.	.83	.69		
<b>Business Growth</b>			.881	.650
BG1: Employees have better skills.	.76	.58		
BG2: Good market growth.	.79	.62		
BG3: Expanding new products.	.87	.70		
BG4: Expanding new market.	.80	.64		

FL: Factor Loading

R<sup>2</sup>: Mean Coefficient of Determination

CR : Construct Reliability

AVE : Average Variance Extracted

### Subject and Data Collection

The sample consisted of 400 firms from a wide range of industries. The majority of respondents was included 242 (60.5%) companies whose firms' assets amounted to 50 million baht or less, 84 (21%) with assets worth more than 200 million baht, and 74 (18.5%) with assets of between 50 to 200 million baht. Furthermore the characteristics of the responding firms varied greatly in terms of services they offered, and the number of employees ranged from 51 to 200.

### Results

#### Statistical Modelling

The results indicate that innovation-based orientation has a significant effect on new product development and human resources management ( $\beta=.26$  with p-value  $<.01$  and  $\beta=.83$  with p-value  $<.001$ ), but no significant impact on business growth. The analysis on innovation-based orientation and new product development indicates that the value of knowledge should concentrate on human resources by sending employees to seminar

to learn new skills and concepts. Employees' performance evaluation based on their creativity will affect new product development and human resources management.

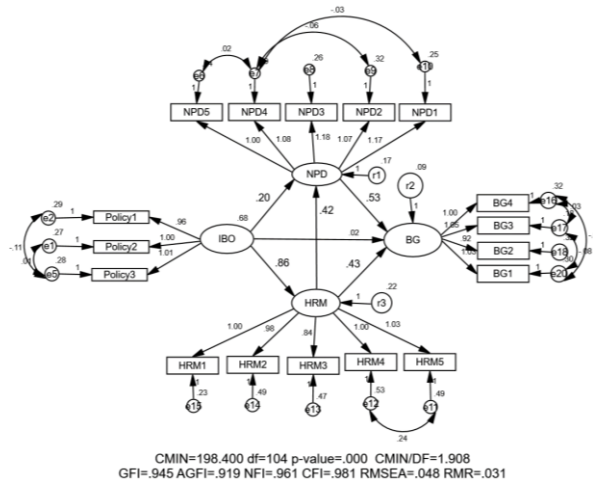


Figure 2. Statistical Model

Table 2. Assessing the model fit indicators

Chi-square/Degree of freedom (CMIN/df)	1.908
Goodness of Fit Index (GFI)	.945
Adjusted Goodness of Fit Index (AGFI)	.919
The Root Means Square Error of Approximation (RMSEA)	.048
Normed fit index (NFI)	.961
Comparative Fit Index (CFI)	.981

Table 3. Standardized direct and indirect effect

	R <sup>2</sup>	Direct Effect			Indirect Effect			Total Effect		
		IBO	NPD	HRM	IBO	NPD	HRM	IBO	NPD	HRM
NPD	.61	.26		.55	.46			.72		.55
HRM	.69	.83						.83		
BG	.84	.02	.47	.49	.74		.26	.76	.47	.49

R<sup>2</sup> = Coefficient of Determinant

New product development has a significant effect on business growth ( $\beta=.47$  with  $p\text{-value} <.001$ ), and it indicated that different products based on former products have been launched over the past 3 years. Management is interested in innovation and new technology, and always follows up new products with customers' opinions, in order to consolidate new product development

and business growth ( $\beta=.55$  with  $p\text{-value} <.001$ ,  $\beta=.49$  with  $p\text{-value} <.001$ ). Human resources management must utilize a system of recruiting new employees, with tests and interviews backed up with a good performance appraisal system. However, there is no real relationship between innovation-based management and business growth. The overall results are illustrated in Figure 3.

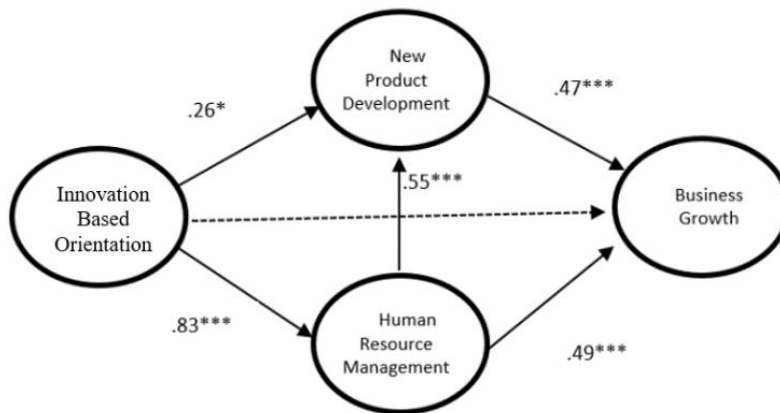


Figure 3. Research Results

### Conclusions and Discussion

The results from the previous section present empirical findings regarding the relationships between innovation-based orientation, human resources management, new product development, and business growth. The findings indicate that innovation-based firms enjoy effective human resources management practices. They focus on developing their employees to implement innovative activities and create new types of products or goods and services. The human resources practices are consistently subjected to an evaluation process. They applied all kinds of tests in recruiting new employees

including interviews. Moreover, those firms have a continuous support training program for their employees. For the process of performance appraisal, both innovation-based orientation and human resources management do have a positive effect on new product development. However, the indirect effect of innovation-based orientation through human resources management to new product development have stronger effect than direct effect from knowledge based oriented to new product development. The concept of new product development was indicated as having new products every three years. Furthermore, innovative businesses are always



in the process of developing new products to defeat their competitors in the marketplace. Consequently, business growth occurred due to all the variables documented in the framework. Business growth emerges due to good market growth, and knowing when and how to expand new products into new markets. In terms of the resources-based view, employees will learn how to develop and enact new skills and capabilities.

Our results raise an important area of interest regarding innovation and business growth. Firms have to concentrate on innovation on account of the resource-based view in terms of developing employees so they know how to innovate. The managements of local Thai firms should be aware of innovation-based orientation and its link to the policy of training and performance appraisal as it relates to creativity. The recruitment process and evaluation process must be followed up. In choosing the right person or people for innovation, appropriate tests and interviews must be applied. It is evident that training is also necessary to create business growth. However, only a few local firms concentrate on training and development programs for their employees. Thus, firms have to provide external training programs to their workers. The training will encourage

inspiration, creation, and knowledge sharing by employees, and lead to new product development and business growth. In addition, the human resources management team has to base the performance appraisal process base on the creation of new products. This process will support employees to do their daily work that enhances innovative creativity. In considering new product development, management should focus on new innovation and creating different products or goods and services. Moreover, workplace teams have to follow up new product development so that they stay ahead of their competitors.

However, the dependent variables in terms of business growth of participating firms were based on the opinions of the subjects who participated in the study. The measurement of business growth should be conducted in terms of financial evaluation. In contrast, this study determined business growth with reference to non-financial measurement, namely employees' capability, market growth, trends in new markets and new products. Future researchers should rely on financial performance instead. Moreover, firms' innovation processes should be investigated to explain in more detail their impact on business growth.

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