



The Study of Individual-Level Adaptability and Service Innovation Performance*

การศึกษาความสามารถในการปรับตัวระดับปัจเจกบุคคล และผลดำเนินงานด้านนวัตกรรมบริการ

Jantima Banjongprasert^{1**}

¹*Silpakorn University International College, Silpakorn University
22 Borommarachachonani Road, Talingchan, Bangkok 10170*

บทคัดย่อ

งานวิจัยนี้มุ่งหวังที่จะขยายความรู้เกี่ยวกับความสามารถในการปรับตัวในเรื่องของนวัตกรรมบริการ มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างการปรับตัวในระดับบุคคลและผลดำเนินงานด้านนวัตกรรมบริการ และเพื่อศึกษาความแตกต่างระหว่างความสามารถในการปรับตัวของพนักงานและความสามารถในการปรับตัวของผู้จัดการ โดยได้ทำการเลือกกลุ่มตัวอย่างจากพนักงานโรงแรมจังหวัดกรุงเทพมหานคร ประเทศไทย จำนวน 478 คน ใช้แบบสอบถามในการเก็บรวบรวมข้อมูล ในส่วนการทดสอบสมมติฐานใช้โมเดลสมการโครงสร้าง (Structural Equation Modeling) ด้วยโปรแกรม AMOS 21.0 ผลการวิจัยแสดงให้เห็นถึงความสัมพันธ์ระหว่างความสามารถในการปรับตัวในระดับบุคคลและผลดำเนินงานด้านการขายของนวัตกรรมบริการรวมถึงผลดำเนินงานด้านที่เกี่ยวกับลูกค้าซึ่งเป็นไปตามวัตถุประสงค์ของงานวิจัย อย่างไรก็ตาม ไม่พบความแตกต่างระหว่างความสามารถในการปรับตัวของพนักงานและความสามารถในการปรับตัวของผู้จัดการ ผลจากงานวิจัยนี้จะช่วยให้นักวิชาการและผู้ปฏิบัติงานมีความเข้าใจในความสามารถในการปรับตัวของทั้งผู้จัดการและพนักงานในบริบทของบริการซึ่งจะสามารถนำไปปรับใช้ในกลยุทธ์และการจัดการเพื่อให้วัตกรรมการบริการประสบผลสำเร็จ

คำสำคัญ

นวัตกรรมบริการ ความสามารถในการปรับตัว ผลดำเนินงาน โรงแรม พนักงาน

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** Corresponding author
e-mail: jantima_b@yahoo.com



Abstract

This paper aims to extend the adaptability construct into the study of service innovation. The first objective of this research is to study the relationship between individual-level adaptability and service innovation performance. This study also explores the difference between employees' adaptability and managers' adaptability. The sample group of this study is the employees working in the hotels in Bangkok, Thailand. The survey data were collected from 478 employees by using questionnaires. The hypotheses are tested by the Structural Equation Modelling (SEM) technique using Amos 21.0 programme. The findings indicate that there are relationships between adaptability at the individual level and service innovation sales performance as well as customer-related performance. The results address the research objective. Nonetheless, the difference between managers' adaptability and employees' adaptability is not found. The results should give academics and practitioners a better understanding of managers' adaptability and employees' adaptability in the service context, which can then be applied to their strategies and management to achieve service innovation.

Keywords

Service Innovation, Adaptability, Performance, Hotel, Staff

Introduction

Today's organisations need adaptable workers due to the dynamic environment (Edwards & Morrison, 1994 ; Hollenbeck et al., 1996 ; Ilgen & Pulakos, 1999 ; Smith et al., 1997 cited in Pulakos, Dorsey & White, 2006). The new levels of uncertainty due to globalisation, new technologies and intense competition contribute to a strong need for employees to exhibit adaptability in ideas, values and behaviours (Ployhart & Bliese, 2015). Employees often need to participate in unscripted and challenging interactions with customers (Sony & Mekoth, 2012). Besides adapting to customer interactions, they may also be involved in dynamic work situations. Likewise, an enterprise requires its managers to cope with unexpected events. Calarco & Gurvis (2007) suggest that adaptability is also important for leader effectiveness and success in responding effectively to a complex and shifting business world. This is consistent with the exploratory study of Deeter-Schmelz, Goebel & Kennedy (2008) which showed that managers' adaptability is considered an important attribute for sales manager effectiveness. Therefore, adaptability seems to be a critical skill for employees and managers. Taken together, adaptability is a competency in the new normal for employees and managers.



Adaptability can be very important in determining whether a new product/service will be sustained over time. Indeed, service prototype design techniques demand significant adaptation to address service innovation challenges (Bitner, Ostrom & Morgan, 2008). Adaptability reflects an ability to identify and capitalise on emerging market opportunities (Chakravarthy, 1982 ; Miles & Snow, 1978 cited in Wang & Ahmed, 2007). It is also the ability to sense the environment (Pavlou & Sawy, 2006 ; Menon & Mohanty, 2008). Hence, adaptability can be defined as the ability to continuously monitor any environmental changes, in order to detect opportunities and threats.

The research on service innovation has grown considerably. Innovation in services is different from innovation in manufacturing because of four characteristics of service: intangibility, inseparability, heterogeneity and perishability (Kotler & Keller, 2007 ; Wolak, Kalafatis, & Harris, 1998 ; Zeithaml, Parasuraman & Berry, 1985). Service innovation is defined as offering not previously available to the firm's (Ordanini & Parasuraman, 2011). According to Kowalkowski, Kindström, Brashear, Brege & Biggemann (2012), successful service strategy involves continuous improvements, adaptability and innovation demonstrating the relationship between service innovation and adaptability. Moreover, changes in the external environment, multiple stakeholder demands and increased competition among service providers require effective adaptability to tackle those new conditions. Adaptability allows the organisation to introduce new services since it requires seeking out new trends, technologies, ideas and information for use in creating new products and services (Basadur & Gelade, 2006). Therefore, adaptability should be applied in the service innovation context, which has been largely neglected.

Innovation and adaptability are the keys to the future of service (Tobin, 2015). Adaptability is considered as sustainable competitive advantage (Reeves & Deimler, 2011). Organizational members with adaptability should bring about superior performance. Thus, the paper investigates the relationship between adaptability and performance in service innovation perspective. In addition, employees and managers have different roles in the organization. Managers and employees do not always view their business world in the same fashion. Examining their different kinds of adaptability should provide valuable insights for employee selection, career development and organisational performance. Hence, this research explores whether there are differences between managers' adaptability and employees' adaptability in service innovation activities. The study combines literatures from both adaptability and service innovation to gain better insight into both concepts.

Research Objectives

The importance of adaptability has been recognised in the innovation literature (e.g. Tuominen, Rajala & Moller, 2004 ; Dodgson, 2009). In recent years, an increasing number of studies have broadened the investigation into the employees' and managers' adaptability impacts on service innovation (e.g. Sony & Mekoth, 2012 ; Robbins & Coulter, 2016). Building on preceding research, this paper develops individual level adaptability, activities in service innovation requiring adaptability and innovation performance to gain insights into service context by examining the relationship between employees' and managers' adaptability and service innovation performance. This study also aims to explore whether there are any differences between employees' adaptability and managers' adaptability in the service innovation context. Ultimately, this research will broaden the array of service innovation through the understanding of individual level adaptability. To achieve the research objectives, the following research questions are posed: 1) does adaptability at the individual level relate to service innovation performance? , and 2) are employees' adaptability and managers' adaptability different?

Hypotheses

1. Adaptability and Service Innovation

Academics and business managers generally agree that the employee is the heart of the innovation process (e.g. Melton & Hartline, 2010 ; Schneider & Bowen, 198, 4 ; van de Ven, 1986, cited in de Jong & Vermeulen, 2003) because they are a valuable source of new service ideas and turn these into successful innovations (Scheider & Bowen, 1984). When the two ends are the customers with the demand for attention and service quality and the organisation demanding efficiency and productivity, employees are under tension of satisfying both management and customers (Singh, 2000). Due to the fact that they cannot anticipate an unpredictable customer's behaviour and organisational changes, employees need to be able to respond successfully to those changes. Their adaptability should increase the likelihood of a successful implementation of their tasks. In the service innovation process, employees are often involved in idea generation of the new service (Schneider & Bowen, 1984 cited in Melton & Hartline, 2010). Their adaptability when it comes to exploiting new opportunities and dealing with threats is essential in order to react quickly to opportunities and risks and convert them to business advantage (Macmillan & Tampoe, 2000). While employees are a critical success factor in service innovation, Marcoulides & Heck (1993) suggested that adaptability has an empirically direct relationship with achieving success,



especially in a changing environment. This is in agreement with Wood's (2005) work that adaptability is critical to business success. Besides, service employees are increasingly required to understand complex ideas and process large volumes of information in generating novel solutions to customer priorities (Mills & Snyder, 2010). Employees with adaptability should serve the customers better so that they should bring about benefits such as new customers attraction and increased customer satisfaction (Storey & Easingwood, 1999 cited in Ottenbacher, 2007). Thus, this leads to the following hypotheses:

H1: Employees' adaptability in service innovation tasks has a positive influence on service innovation sales performance

H2: Employees' adaptability in service innovation tasks has a positive influence on customer-related performance

Leaders must constantly deal with change; thus, a manager without adaptability is likely to be fired, demoted, or held on a career plateau (Calarco & Gurvis, 2007). Even anticipated or welcomed change can cause difficulty so that effective managers' adaptability allows a transition process to take place (Calarco, 2006). One of the major challenges faced by managers is the ability to adapt to service innovation. During the service innovation process, managers involve an array of tasks such as problem identification, idea generation and business analysis. Service managers are increasingly required to detect market opportunities/threats so that they can turn this information or the trends into the greatest potential profit service. Thus, managers with adaptability should turn information on competitive markets into successful innovation. Studies have found that adaptability influences firm performance (e.g. Gordon & DiTomaso, 1992 ; Kotter & Heskett, 1992 cited in Strempek, 1997), customer satisfaction (e.g. Bitner, Bernard & Mohr, 1994 cited in Chebat & Kollias, 2000 ; Hartline & Ferrell, 1996 ; Weitz, Sujan & Sujan, 1986 cited in Ahearne Mathieu & Rapp, 2005), and customer-related performance such as new customer attraction and repeated orders from existing customers (Hughes & Morgan, 2007 cited in Korbangyang & Ussahawanitchakit, 2010). Hence, it is reasonable to expect managers with adaptability to be more likely to fulfil the changing needs and requests of markets and customers, and thereby achieve superior financial and customer performance. The following hypotheses are suggested:

H3: Managers' adaptability in service innovation tasks has a positive impact on service innovation sales performance

H4: Managers' adaptability in service innovation tasks has a positive impact on customer-related performance

2. Employees and Managers

An organisation's prosperity relies on the quality of management and administration. Managers usually manage employees, budgets, operational performance and customer services. "Service marketing managers are being required to develop new services that succeed in the market and are valuable for customers" (Larbig-Wüst, 2010, 11). The management team need to constantly keep themselves updated and exploit organisational strengths and opportunities to develop new offerings. Their job is difficult due to the complex nature of service products, which are mostly intangible (Oke & Goffin, 2001). On the other hand, employees deliver a real-time service to the customers. They are the sources of new service ideas (Tatikonda & Zeithaml, 2001). The employees also play an important role in the evaluation and development of a new service since they can describe whether the new service is a good fit with the service process or satisfies customers' needs. Therefore, both managers and employees are involved in service innovation tasks; yet their roles are likely to be different. Studies have reported fundamental differences between managers and their subordinates (e.g. Parand, Burnett, Benn, Pinto, Iskander & Vincent, 2011 ; Wieseke, Ullrich, Christ & van Dick, 2007 ; Wieseke, Ahearne, Lam & van Dick, 2009). Taken together, this study proposes that

H5: There is significant difference in managers' adaptability and employees' adaptability in service innovation tasks

Research Methodology

1. Measurements

This research extracted three constructs including adaptability, service innovation sales performance and customer-related performance based on previous studies. The measurement items for each construct were constructed on a seven-point Likert scale anchored at strongly agree (7) and strongly disagree (1). Each construct is conceptualised as a concept at the individual



level. All constructs consist of variables that have been well-established in the literature. Thus, the researcher used existing scales as the basis for developing measures that fit the context of this study. The measure of “adaptability” coming from Menon & Mohanty (2008) and Pavlou & Sawy (2006) consisted of five items that gauge managers’ and employees’ adaptability in the organisation. The items cover a broad range of issues that are indicative of adaptability, such as to what extent managers/employees are responsive to market trends, to what extent manager/employees can initiate plans to capitalize on market intelligence, and to what extent managers/employees be able to interpret and disseminate market intelligence.

Service innovation sales performance and customer-related performance scales are adapted from de Brentani (1989), Voss (1992 cited in Johne & Storey, 1998) and Ottenbacher (2007) to provide a six-item measure of service innovation sales performance and a five-item measure of customer-related performance. The measure asked respondents to assess financial performance of new services such as sales performance and average occupancy rate. The scale also required the respondents to rate aspects of customer-related performance such as new customer attraction, customer satisfaction, customer use of other services, and new market expansion.

2. Sampling and Data Collection

Despite the crucial importance of service innovation, knowledge about successful innovation seems to be limited, especially in the hospitality sector (Ottenbacher & Gnoth, 2005). According to Victorino, Verma, Plaschka, & Dev (2005), hospitality firms, such as hotels, are an ideal example of a market which could benefit from the implementation of service innovation. Based on information from the Thai Hotel Association (2016), there are 50 certified hotels out of 213 in Bangkok, the capital city of Thailand, which accounts for 23.5 percent. Therefore, this study conducted a survey of the hotel business sector in Bangkok. The survey was conducted by mail questionnaire. The mail pack consisted of the questionnaires, a cover letter and stamped addressed envelopes. 18 hotels agreed to participate in the study. This returned a total of 496 employee questionnaires to the researcher. Of these, eighteen were incomplete. A total of 478 questionnaires (191 managers and 287 employees) comprised the final analysis. According to Weisberg & Bowen (1977), a sample size of 400 observations yields an error level of 5% so that this is a satisfactory data set.

3. Reliability and Validity

Confirmatory Factor Analysis (CFA) is a way to test how well theoretical specification of the factors represents latent constructs (Hair, Black, Babin & Anderson, 2010). The measurement properties were assessed by CFA in order to examine their uni-dimensionality. Then, the maximum

likelihood estimation was used to test the structural model using the AMOS 21.0 programme. The overall model fit was assessed using seven goodness-of-fit indices (Bryman, 2001 ; Gatignon, 2010), namely chi-square / degree of freedom (χ^2/df) ratio, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the Normed Fit Index (NFI), the goodness of fit index (GFI), the root mean square error of approximation (RMSEA) and the expected cross validation index (ECVI). The fit indices that the model resulted in a moderate fit to the data (Chi-Square/df = 11.245, Goodness of Fit Index (GFI) = 0.877, Normed Fit Index (NFI) = 0.862, Comparative Fit Index (CFI) = 0.872, Adjusted Goodness-of-Fit (AGFI) = 0.836, and Root mean square error of approximation (RMSEA) = 0.095). The RMSEA was slightly above its cut off criterion at .08 (Browne & Cudeck, 1992). However, RMSEA values below 0.05 would suggest a good fit, and those larger than 0.1 would suggest a poor fit (MacCallum, Browne & Sugawara, 1996 ; Browne & Cudeck, 1992) Thus, the result of RMSEA is considered an indication of fair fit. This study applies AVE to measure the convergent validity and discriminant validity of a given construct (Fornell & Larcker, 1981 ; Bagozzi, 1981). The square root of the AVE of every construct exceeds the correlations between the construct and the other ones. This indicates that the discriminative validity is acceptable. The AVEs of the three constructs are 0.718, 0.789, 0.822, and 0.82, which a surpass 0.5. Hence, the convergent validity of the measurement is acceptable. All measures were also examined for internal consistency as reflected by construct reliability assessed through the calculation of the Cronbach's coefficient. The coefficient's values were substantial (0.774, 0.870 and 0.904 respectively) for all multi-item scales, which indicates a high level of internal consistency proving that all of them can be considered reliable.

Results

1. Descriptive Statistics

In Table 1.1, the data shows that approximately 52% of the respondents with management positions were female, the remainder (43.5%) being male. Among the employees, 42% were male and approximately 52% were female. The majority of both groups of respondents were aged between 26 and 35. Over 60% of the respondents were in possession of a Bachelor's degree. Of the 478 respondents, nearly 33% of respondents with management positions and 30% of employees have been working in the hotel for 4 to 6 years. The data shows that 97 managers are single, and 66 managers are married. There are 130 employees who are single, while 114 of them are married. Of the total, 34 and 23 of the manager are working in the food and beverage department and in the sales department respectively. There are 22 of the managers working in personnel department,



and 22 of them are working in the room service department. Of 191 managers, 20 are working in the marketing department, and 13 of them are working finance/accounting department. There are 72 employees working in the food and beverage department. Of the total, 49, 29, and 25 of the employee are working in the room service, the personnel and the sales departments respectively. While there are 19 employees working in the marketing department, there are 12 of them working in the finance/accounting department.

Table 1.1

Demographic Data

	Male	Female	Age	Education	Tenure (years)	Single	Married
Managers (191)	83	100	26-30 (30%) 31-35 (24%)	University (63%)	4-6 (33%)	97	66
Frontline employees (287)	121	148	26-30 (27%) 31-35 (22%)	University (61%)	4-6 (30%)	130	114
	Food & Beverage	Sales	Marketing	Personnel	Room	Finance/Accounting	
Managers (191)	34	23	20	22	22	13	
Frontline employees (287)	72	25	19	29	49	12	

2. Hypotheses Testing

Testing of the hypothesized model was accomplished through structural equation model via the use of Amos 21.0. Hypothesis1 proposes that employees' adaptability in service innovation tasks has a positive influence on service innovation sales. The results show that the value of the standardised parameter estimates was .485. The standard error was .046, and the t-value was significant ($p < .01$). Hence, this hypothesis is supported. For hypothesis 2, the value of the standardised parameter estimates was .577. The standard error was .052, and the t-value was significant ($p < .01$). Therefore, hypothesis 2 is supported so that employees' adaptability in service innovation tasks has a positive influence on customer-related performance. The proposition of hypothesis 3 suggests that managers' adaptability in service innovation tasks has a positive impact on service innovation sales. The results illustrate that the value of the standardised parameter estimates was .791. The standard error was .065, and the t-value was significant ($p < .01$). Thus, hypothesis 3 is supported. For hypothesis 4, the value of the standardised parameter estimates

was .704. The standard error was .060, and the t-value was significant ($p < .01$). Therefore, the finding supports hypothesis 4 indicating that managers' adaptability in service innovation tasks has a positive impact on customer-related performance (see Tables 2 and 3).

Table 2

Employees' Adaptability and Performance

	Estimate	S.E.	C.R.	P
SI performance <--- Adaptability	.485	.046	10.612	***
Customer performance <--- Adaptability	.577	.052	11.046	***

Table 3

Managers' Adaptability and Performance

	Estimate	S.E.	C.R.	P
SI performance <--- Adaptability	.791	.065	12.226	***
Customer performance <--- Adaptability	.704	.060	11.736	***

Hypothesis 5 proposes that the adaptability is not significantly different between managers and employees in service innovation tasks. An independent sample t-test was conducted to compare the adaptability of managers and employees. As shown in Table 5, according to Levene's Test for Equality of Variance, the value for both groups is more than 0.05. Therefore, there is no significant difference between managers' adaptability and employees' adaptability in service innovation tasks.



Table 4

Group Statistics

Current position		N	Mean	Std. Deviation	Std. Error Mean
Adaptability	Managers	191	5.9389	.51159	.03702
	Employees	287	5.8752	.50647	.02990

Table 5

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig.(2-tailed)
Adaptability	Equal variances assumed	0.16	.899	1.341	476	.181
	Equal variances not assumed			1.338	404.390	.182

Discussion

This research sought to investigate the adaptability at the individual level of managers and employees. Specifically, the research goal was to identify the relationship between adaptability and service innovation performance, and explore whether there is a difference between managers' adaptability and employees' adaptability in the service innovation context. Studies have empirically demonstrated the existence of an important relationship between firm performance and adaptability (e.g. Gordon & DiTomaso 1992, cited in Shahzad, Zia, Aslam, Syed & Bajwa 2013 ; Marcoulides & Heck, 1993). This research expects to see positive service innovation sales and customer-related performance when managers and employees apply adaptability to service innovation tasks. The results of testing hypotheses 1, 2, 3 and 4, show support for the propositions. The result is in agreement with Barth (1997) and Kotter & Heskett (1992) that adaptability influences the achievement of firms mainly in the innovation aspect. However, the result of hypothesis 5 found no evidence of a statistically significant difference between managers' adaptability and employees' adaptability. The possible explanation for the lack of significance of this hypothesis may be the service innovation context. According to Pulakos, Dorsey, & White (2006 cited in Parent & Levitt, 2009), adaptive workers have become increasingly important due to the fact that many organizations are facing major changes in order to respond to dynamic environments. Both managers and employees need to respond to new market opportunities and threats. They also need to capitalise on environmental change information. While the manager may deal with strategies and plan to be responsive to the



changes, the employees are likely to handle changes caused by the customers. In addition, a dynamic environment demands adaptability within the organization; and requires the commitment of organizations' staff (Lee, 2008). Especially, staff working in the hospitality industry, which is considered as the labour-intensive industry, need to respond to seasonality of the business (Lee, 2008). Besides, successful service strategy involves adaptability (Kowalkowski, et al., 2012 cited in Kindström & Kowalkowski, 2014). Managers and employees equally require their effective adaptability, which will allow them to respond to needs of the external or internal environment and create the new services to respond more rapidly to changing demographics (Cohen, 1999 ; Damanpour, 1996 cited in Jaskyte & Dressler, 2005). Therefore, this may provide an explanation for the non-significant results of hypothesis 5.

Conclusion

One of the major contributions of this study is the attempt to apply adaptability at the individual level in the context of service innovation. Although several previous studies have tried to apply adaptability for managing service innovation, few studies have investigated how the individual-level adaptability applied in the service innovation tasks relates to service innovation performance. The research provides empirical evidence regarding a link between a micro-level of adaptability's roles and the service innovation context. Furthermore, the survey results support the claims of past research on the relationship between adaptability and firm performance, particularly service innovation sales performance and customer-related performance. "Any organization who desires to get the competitive advantage may achieve this through or within the employee" (Tariq, Anwar & Aslam, 2011, 14). Therefore, this study highlights the importance of staff's adaptability in order to act under change environment for superior performance.

Moreover, the findings demonstrate that the adaptability can bring about better financial and non-financial performances of service innovation. This addresses the first research question regarding the relationship between individual-level adaptability and service innovation performance. Therefore, a better understanding of the staff' adaptability should allow hotel executives to employ staff's adaptability effectively, which could be a means to achieving a competitive edge. The research results have both theoretical and practical applications that make a valuable contribution to the service innovation and adaptability literature. Moreover, the findings show that there is no statistically significant difference between management and employees in their adaptability. The result provides the answer to the second research question focusing on the difference between employee employees' adaptability and managers' adaptability. Hence, the management team should be aware that



employees also play important roles in service innovation. Based on this, it is essential to provide appropriate support for employees when taking part in service innovation tasks. This should help them work on service innovation tasks more effectively and efficiently. It should be noted that the present study's limitations include the fact that it was conducted in a single service industry (the hotel industry) and in Bangkok, Thailand. The generalisability of these study results, therefore, is limited by industry and area. The findings may have different results when applied to other industry and country contexts, so that further research is suggested.

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