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Structural Equation Modeling Analysis of Queuing System Performance at Thailand's Provincial Electricity Authority (PEA)

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ABSTRACT

This study is an analysis using Structural Equation Modeling on the queuing performance management of Thailand's Provincial Electricity Authority (PEA) which is a government agency organizing production and distribution of electricity being delivered to the public. Due to the growing numbers of businesses and industries in the provinces, PEA's 73 sales offices are vital to the stability of Thailand. Research methodologies used within this study include both quantitative and qualitative research. Quantitative is further qualified in this research essay from the survey given to 344 PEA executives. The Partial Least Square (PLS) technique, a form of structural equation modeling, is additionally used due to it being component-based rather than covariance-based. Additionally, qualitative research is supported by input from questionnaires from 10 key Thai PEA officials utilizing the purposive sampling approach. The results showed that three factors had an immediate and positive impact on management innovation, including the management performance, organizational factors and management innovation. Furthermore, there was also an immediate and positive impact on queuing performance management of the PEA. A fact recognized by a hypothesis significance $p \leq 0.01$, respectively, with the results of qualitative research being consistent with the results of quantitative research. The findings from this study concluded that if an organization has a good enterprise management system, management innovation and organizational performance increases.

Key words: Performance management, queuing performance, enterprise management, management innovation

INTRODUCTION

In modern society, every service organization needs to be involved in a queuing system or queue in some way. Examples include a retail check-out line, waiting for a bank teller and queuing for healthcare services. You can also easily image the long lines at the motorway toll booths or even in a business, whether it is manufacturing, service or government agency.

Problems occur when customers and consumers queues overwhelm the available staff service members. Therefore, a queuing system becomes very important and is a model widely used. The queuing system is connected with the quality of services of the organization. Management systems assist customers in the form of queue number dispensing machines to faster service and happier consumers. This enhances the quality of life which is extremely important for the organization's customers and most probably leads to customer retention and return (Rompho, 2012). Agencies with

management queue systems help to plan services and help with the ability to manage even with limited resources. This can also significantly shorten the waiting time of the customers or clients as well (Bouzada, 2009).

Thailand's Provincial Electricity Authority (PEA) is a government agency under the Ministry of Interior. The main task is organizing production and distribution of electricity being delivered to businesses and industries in 73 provinces across the country, except Bangkok, Nonthaburi and Samut Prakan.

Currently the PEA has expanded its operations into 67,446 villages, representing 99% of the total villages of 68,162. Only 716 villages in Thailand are not presently serviced by the PEA.

PEA uses a queuing system for customer support, to plan services and helps management deal with their limited resources. This can also significantly shorten the waiting time of the customers or clients as well (Bouzada, 2009).

Organizational Leadership is a key factor in management's decision to bring the resources of the organization to achieve the most effective and efficient service (Sarros *et al.*, 2011). If the management queuing system uses appropriate technology and innovation management, it will effectively achieve the desired goals.

According to the above literature, variables that affect performance are and management and queuing at the PEA offices. Focus on the customer needs requires the use of resources and technology which can be effectively applied in the service process which in turn will increase their potential for increases competitiveness.

Performance is a factor in the increase of organizational competitiveness empowering human resource management. Organizational competitiveness helps improves performance by a factor of personnel to lead to the development of various organizations to try out performance as a factor in the management of the organization in areas such as human resource management. Development services. Or development of management leadership etc.

The conceptual framework on the idea of 'competency' begins with David McClelland who is often cited as the source or founder of the modern competency movement for his 1973 study, Testing for Competence Rather than for Intelligence. In his study, he argues that aptitude and intelligence tests are not all that valid and continue that it is difficult, if not impossible to find a characteristic that cannot be modified by training and/or experience. The study concluded that personnel exhibiting good performance is something called competencies or competency (Akaraboworn, 2006) which is the definition of performance.

Boyatzis (1982) says competency means that there is something inside a person determines a person's behavior to achieve the goals in an organizational environment. And individuals committed to the desired result consistent with McClelland (1973) stated that competency is a personality that is hidden within an individual which can push the individual to make the performance better or comply with the requirements of the job.

Performance Classifications-Several scholars have a different attitude which includes: (1) Core Competency refers to a person's individuality which reflects their knowledge, skills, attitudes, beliefs and habits which supports the organization as a whole helping organizations to achieve their goals. (2) Job Competency refers to a person's personality which reflects their knowledge, skills, attitudes, beliefs and habits that motivates them. This can produce managements result leading to higher standards. (3) Personal Competency refers to a person's individuality which reflects their knowledge, skills, attitudes, beliefs and habits which make them unique from other individuals. as can be accommodated. scorpion or reptile with which we have so often called a personal performance that can be personalized (Santhong, 2004).

Additionally, Akaraboworn (2006) states that competency consists of three categories: (1) Core competency is a behavior that everyone in the organization must have which reflects the culture and core values of the organization. (2) Professional Competency is the ability of management personnel in the organization to assure worker compliance and understands the company's strategic plan and vision for the organization. (3) Technical Competency is the technical skills needed to accomplish a task which varies by and can be divided into two main parts, including Core Technical Competency and Specific Technical Competency.

Phuvidyaphan (2004) divided Competency into three categories: (1) Core Competency refers to the expression of the personality or behavior of all employees in the organization. This reflects the knowledge, skills, attitudes, beliefs and habits of the organization as a whole. If every employee in the organization has this type of ability it will contribute in supporting the organization to achieve its goals and strategies. (2) Managerial Competency is knowledgeable management which empowers all levels of management and staff to varying degrees depending on the role and responsibilities (Role-Based) of the different administrative positions. It also entails responsibility and which personnel in the organization need to work to get the job done and be consistent with the strategic vision of the mission of the organization. (3) Functional Competency is competency at work which is reflected in knowledge, skills and characteristics of different jobs (Job-Specific) position such as an electrical engineer which should have knowledge of electrical engineering.

Occupations have different "Functional competencies" which are job-specific competencies that drive proven high-performance, quality results for a given position. This is reflected by the individual's knowledge, skills, behaviors and attributes as well as the actual duties or staff responsibilities of the duties assigned. It is not necessary that the people who work in this role must have the ability as well. Contrary to increase the competitiveness of the enterprises to be found. Immediate positive impact on performance, knowledge management and innovation to the organization (Gummesson, 1999; Ichijo *et al.*, 1998; Beckman, 1999; O'Dell and Grayson, 1998) results. Research by Protogerou *et al.* (2008) studied the 'Dynamic Capabilities And Their Indirect Impact on Firm Performance and their empirical findings suggest that dynamic capabilities are antecedents to functional competences which in turn have a significant effect on performance, thus leading to the following hypothesis:

- **H1:** Competency directly affects innovation management

Organizational Management is a system of organizational management. Need to be brought into the system. In the process of providing services. And process management services and Hellriegel *et al.* (2001) have defined. Management is responsible for the management organization in order to structure the relationship between customers and agencies so that the member organizations are able to implement a plan to achieve the objectives that have been defined.

Corporate management tasks include: (1) The organizational structure for both the planning department and jobs, including the details of each position on the organization chart that was created in the layout tree (Tree), the user can determine the employee for each job. In addition to the organizational chart automatically when the data changes in each position. To allow the user to set the budget for each department based on different levels such as the position or the total or (2) To employees or applicants. To match the jobs that are needed. By properties. Including an evaluation of the training. When a job modifying the system will modify the Plan Organization of Human Resource and recruitment process automatically (3) The technology used in the organization. As a tool support the work leading to the ability to investigate the needs of their

clients. Sexton and Barrett (2004) refers to technologies, tools and equipment for routine operations which can transfer the import of raw materials and information to lead to the desired result, is products and services. It also helps in the analysis of how the organization will use to process, however, also be used to identify the customer and prioritize customer.

Technology has a direct effect on growth and is vital to customer service (Kandampully, 2002). The ability to use technology is also a factor affecting the overall success and continued innovation especially (Sexton and Barrett, 2004), where the technology is used as a base of knowledge related to areas such as services and finance. Systems and links. Adding value and ethics, marketing, manufacturing and maintenance of commercial and corporate work. Liyanage and Poon (2003) bringing the technology into the organization to help bring the market to its subscribers by Kay (2007) and from studies of Marcoulides and Heck (1993) on 'Organizational culture and Performance: Proposing and Testing a Model'.

The study found that corporate culture can predict the performance of both direct and indirect variables. The organizational structure is related to the organization and climate of the organization. Corporate values associated with the work of the organization. Atmosphere and attitude of the employees in the organization. Organizational climate in relation to employee attitudes and organizational performance. Atmosphere in relation to the organization of employee attitudes and job performance. Employee attitudes correlated with performance. Thus leading to the following hypotheses:

- **H2:** Organization management directly affects the performance of queue management
- **H3:** Organization management directly affects innovation management

Role of management innovation is to make management services easy to use. The results showed that innovation consists of the ability to market and corporate strategy. Existing resources and networks with strong leadership and organizational cultures (Goyal and Pitt, 2007) contribute to success, growth and increased profitability of the company (Christensen, 1997; Thomke, 2001).

Inauen and Schenker-Wicki (2011) has developed a measure of innovation management which consists of OECD activities in the development of new knowledge and innovation.

A company which has innovation will involve employees in Research and Development and communication technologies projects (OECD, 2002; Eurostat, 2006; Inauen and Schenker-Wicki, 2011).

Wong and Chin (2007) studied 'Organizational Innovation Management' (OIM) and developed measures which include the following: (1) Faith in corporate culture, (2) Dimensional structure of innovative corporate structure is flexible, simple, uncomplicated emphasize decentralization, (3) Human resource competency is a component of organizational commitment and leadership management; attitudes and abilities of employees as well, (4) Strategies for innovation. Development and innovation strategy for the organization, (5) Mechanisms to support innovation. Mechanism for resource management. To accept the opinions of others and achieve continuous improvement, (6) the development of cognitive skills. Development of knowledge in the organization. To develop and exchange knowledge with external organizations and (7) Growth of cumulative knowledge. The organization of learning. Communication skills and knowledge utilization. Accumulation of knowledge in the organization. The queuing system administration effectively to achieve the desired goal.

Organizational System Using appropriate technology and innovation management. Whether it is management innovation rate logging. Managing time in the service and management of the service provider. Cooperation of employees. Relationship to knowledge management and human

resource management in organizations. Associated with knowledge management in organizations (Scarbrough, 2003) to search for individual employee development. Italian exchange knowledge together. Affect knowledge in organizations (Scarbrough, 2003) the exchange of knowledge between employees are driven to new production methods. And has a direct impact on reducing the time of delivery (Kazi and Wolf, 2006) on the basis of learning technology strategy. Environment and organizational context.

The production technology and the creative process knowledge can affect. Competitiveness of the organization (Ahmad and Schroeder, 2011), the key factors to the rapid development of the practice team (Anderson and West, 1998) by Bain *et al.* (2001) said that the gathering of knowledge. Skills and abilities of the individual with the view that the concept of different conditions to achieve innovation.

The study of Amabile (1996), 'Creativity and Innovation in Organizations' has found creativity and innovation in the workplace can lead to the creation of new ideas. Utilization. To the new business and new programs in order to deliver products and services to customers. To discuss the structure of creativity. For innovation. Psychological processes. To promote the organization. Important to study the characteristics of the innovation. As a result, the team and focus on creating the conditions necessary for them as a way of innovation (Panuwatwanich *et al.*, 2008).

Viriyapan (2009) shows that the management team can affect the success or failure of the collaboration will be seen that the success of the business, such as Japan. It uses a system of team. Whether the company Sony, Hitachi, Toyota, Nissan, NEC, Honda, etc. They also have a team and team management efficiency and effectiveness. It can become a world leader in the industry:

- **H4:** Management innovation directly affects the queuing performance management

MATERIALS AND METHODS

The sample group for this research includes 848 managers within the Thai Provincial Electricity Authority (PEA).

Data collection: In this study the samples used in this study were the management of the Provincial Electricity Authority 344 people.

Questionnaires design: Questionnaire was constructed to be a tool to measure Concept definition and practice. The instrument or questionnaire used the 7-Point Likert Scale as the measurement scale and the conceptual framework for determining the internal consistency measured by coefficient alpha. (α -coefficient) of Akron BAC (Cronbach) to calculate the average value of the correlation coefficient was found that alpha coefficients ranged from 0.763 to 0.908 which is considered a highly reliable. All values lower than 0.50 were eliminated from the measurement.

Scale

Dependent variable: Efficient queuing management consists of the service users. Developed a measure of Jedsadapornpun and Somjit (2009) Number of service stations. Developed a measure of Thesarat and Sindhuchao (2008) and the type of queuing. Developed a measure of Kamolsuk (2012). The construction of measurement tools or questionnaires used the 7-Point Likert Scale for measurement (Likert, 1972).

Innovation management includes knowledge management. The development of a measure. (Scarbrough, 2003) creativity. The development of a measure. (Kaufman *et al.*, 2009) and team

innovation. Developed a measure of Inauen and Schenker-Wicki (2011) and Panuwatwanich *et al.* (2008). The construction of measurement tools or questionnaires used the 7-Point Likert Scale for measurement (Likert, 1972).

Independent variables: Core competencies include the duty performance and personal performance. Developed a measure of Smithikrai (2007), Akaraboworn (2006) and Santhong (2004). The construction of measurement tools or questionnaires used the 7-Point Likert Scale for measurement (Likert, 1972).

Organizational management includes the organizational structure, human resource management and technology development, measures of Pongsriroj (2000), Rungtusanatham *et al.* (1999), Khan and Khan (2010), Hongladarom (2006), Sexton and Barrett (2004) and Kandampully (2002).

ANALYSIS

Partial Least Squares has been applied for analysis of quantitative data by the researcher. It is data analysis for Confirmatory Factor Analysis (CFA) relating to the determination of Manifest Variable and Latent Variable and testing of research hypothesis exhibiting in structural model analyzed by using the applications of PLS-Graph (Chin, 2001).

According to the analysis result of scale validity and reliability, scale investigation has been conducted using internal consistency measurement coefficient alpha. (α -coefficient) of Akron BAC (Cronbach) to calculate the average value of the correlation coefficient was found that alpha coefficients ranged from 0.606-0.905 which is considered to have high reliability.

In case of measure variables with reflective analysis, convergent validity has been conducted. Loading is used as consideration criteria and must be positive quantity and indicator loading has been more than 0.707 and all values have been statistically significant ($|t| \geq 1.96$) representing convergent validity of scales (Lauro and Vinzi, 2004; Henseler *et al.*, 2009; Piriyaikul, 2010) and analysis result as shown in Table 1.

Table 1: Convergent validity statistics in latent variable measurements in the reflective model

Construct/Item	Loading	t-stat
CORE: Capacity		
COC: Core competencies	0.927	37.710
COF: Performance of duties	0.938	44.865
COP: Personal performance	0.875	27.648
MGT: Organizational management		
MGS: Organizational structure	0.910	41.736
MGH: Human resource management	0.948	56.792
MGT: Technology	0.929	51.622
INNO: Innovation management		
INK: Knowledge management	0.954	59.081
INC: Creativity	0.933	64.068
INT: Innovation team	0.955	58.463
EFFC: Management performance queuing		
EFQ: No. of people receiving services	0.711	21.100
EFS: No. of stations	0.904	21.996
EFT: Type of queuing	0.896	12.332

Table 2: Confirmatory factor analysis (CFA) of the independent variables of, leadership, management skill, organizational innovation and their affects on the dependent variable, organizational performance. CR: Composite reliability; R²: Square of the correlation; AVE: Average variance extracted

Construct	CR	R ²	AVE	Cross construct correlation			
				CORE	MGT	INO	EFFC
CORE	0.983	-	0.835	0.914			
MGT	0.950	-	0.864	0.831	0.926		
INO	0.963	0.654	0.898	0.752	0.792	0.948	
EFFC	0.874	0.472	0.709	0.638	0.651	0.648	0.842

Statistical significance level is at 0.01 and diagonal figures mean

Performance factor (CORE), the factors underlying the external variable core (COC) performance obligations (COF) and wear personal (COP) values loading from 0.707 and a significant level of confidence percentage 95 (t-. stat>1.96) which considers such factors. Affects innovation management.

Management factors (MGT), the factors underlying the variables of the organizational structure (MGS) Human Resource Management (MGH) Technology (MGT) is loading from 0.707 and a significant level of confidence percentage 95 (t-.stat>1.96) which considers such factors. Affects innovation management.

Management innovation factor (INNO), the factors underlying the variables of knowledge management (INK) creativity (INC) innovation teams (INT) values loading from 0.707 and a significant level of confidence, 95 percent (t-stat>1.96) which considers such factors. Affect management performance queuing. So the researchers took the variable variable core (COC) performance obligations (COF) and wear personal (COP) organizational structure (MGS) Human Resource Management (MGH) Technology (MGT) Knowledge (INK). Creativity (INC) and Innovation team (INT) was used to analyze the structural equation.

The above reflective model shows the discriminant validity of the internal latent variables and the correlation of variables. It also depicts the scale reliability which has been analyzed from Composite Reliability (CR) as well as the Average Variance Extracted (AVE) and R². The CR value should not go below 0.60 and the AVE values should also drop below 0.50 and R² values should not be under 0.20 (Lauro and Vinzi, 2004; Henseler *et al.*, 2009; Boondhavan and Montree, 2010).

Table 2 below shows the results of factor analysis affecting the PEA organizational performance. The data also shows the CR values are higher than 0.60, with all AEV values higher than 0.50 for all values and R2 values higher than 0.20, representing the reliability of the measurement. It found that data sets in the \sqrt{AVE} have higher values than all of the corresponding values in the 'Cross Construct Correlation' in the same column, representing discriminant validity of the measure in each construct and with a greater value than 0.50 of AVE as shown in Table 2.

The model generated below was done using Partial Least Square-Graph software. It mirrors the variables found in Fig. 1 but instead generates 'hypothesis testing results' from all of the research variables. This data is shown on Fig. 1 and in Table 3.

It shows that empirical output supports the four hypotheses (H1, H2, H3 and H4). Figure 1 shows the output plotted to the final model of the PLS-Graph. Additionally, a Hypothesis Test Result affects management with a coefficient of 0.306 and a t-stat of 4.523 and supports the hypothesis. Matrix (Table 3) clearly shows in a more comprehensible format that H1 innovative

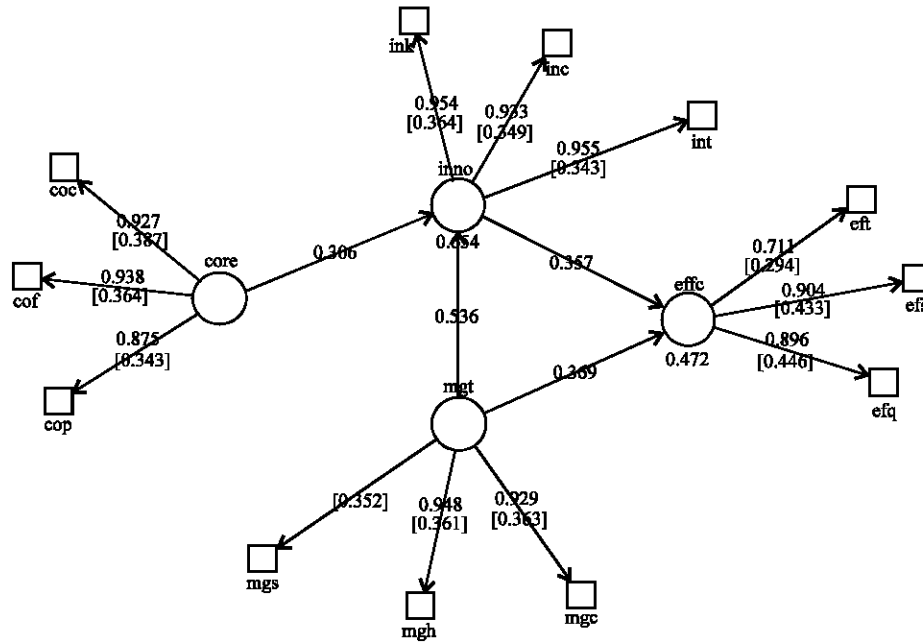


Fig. 1: Results for the structural model of the independent variables of; leadership, management skill, organizational Innovation and their affects on the dependent variable, organizational performance. CR = composite reliability; R² = square of the correlation; AVE = average variance extracted. Test results hypothesis by hypothesis in Table 3., core: Capacity, inno: Organizational management, mgt: Organizational management, effc: Management performance queuing

Table 3: Hypothesis testing result of hypothetical research

Hypothesis	Coef.	t-stat	Results
H1: Innovative performance affects management.	0.306	4.523**	Supportive
H2: Management affects organizational innovation management.	0.536	8.655**	Supportive
H3: Management, organization management and queuing affects performance.	0.369	5.018**	Supportive
H4: Management innovation affects the queuing performance.	0.357	5.019**	Supportive

** Indicates p = 0.01, * indicates p = 0.05., Coefficient refers to the beta (β). t-stat is the t-value

performance H2 also shows management affects organizational innovation management with a 0.536 coefficient and a t-stat of 8.655 supporting the hypothesis. H3 results state that management, organization management and queuing directly and positively influence performance with a coefficient of 0.369 and a t-stat of 5.018. This supports the hypothesis also. Last, H4 results depict that management innovation positively influences the queuing performance with a coefficient of 0.357 and a t-stat of 5.019. This confirms the hypotheses.

Figure 1 shows the research framework and the structural model of variables that influence the Queuing System Performance at Thailand’s Provincial Electricity Authority. Variables included Capacity, Organizational Management and Innovation Management of 344 surveyed the management of the Provincial Electricity Authority. The samples were analyzed to answer the research hypothesis criteria of the following four assumptions (Table 3).

Furthermore, the structural analysis model framework was used to research the t-test coefficients and their relationship of each path of the t-test hypothesis with significance greater than 1.96 **. This explains the results obtained from analysis as shown in Table 1 and 2 as well as the test results presented in Table 3:

- **Hypothesis 1 (H1):** Innovative performance affects management. The test result found that Innovative performance affects the management with a coefficient of 0.306, a fact validated by the hypothesis significance $p \leq 0.01$
- **Hypothesis 2 (H2):** Management affects organizational innovation management. The test result found that management affects the organizational innovation management with a coefficient of 0.536, a fact validated by the hypothesis significance $p \leq 0.01$
- **Hypothesis 3 (H3):** Management, Organization Management and Queuing affects performance. The hypothesis tested results found that Management, Organization Management and Queuing influenced on performance which showed a coefficient of 0.369, a fact validated by the hypothesis significance $p \leq 0.01$
- **Hypothesis 4 (H4):** Management innovation affects the queuing performance. The hypothesis tested results shows that management innovation influenced on the queuing performance which showed a coefficient of 0.357, a fact validated by the hypothesis significance $p \leq 0.01$

RESULTS AND DISCUSSION

Based on the research subject, Structural Equation Modeling analysis of queuing system performance at Thailand's Provincial Electricity Authority (PEA), issues to be discussed are as follows.

An individuals' competency is hidden within each person's character which can motivate the individual to make their performance better. Criteria in their job competency includes: (1) Core Competency refers to a person's individuality which reflects their knowledge, skills, attitudes, beliefs and habits which supports the organization as a whole helping organizations to achieve their goals, (2) Job Competency refers to a person's personality which reflects their knowledge, skills, attitudes, beliefs and habits that motivates them. This can produce management results leading to higher standards, (3) Personal Competency refers to a person's individuality which reflects their knowledge, skills, attitudes, beliefs and habits which make them unique from other individuals. Scorpion or reptile with which we have so often called a personal performance that can be personalized (Santhong, 2004).

The results of the study showed that the core competency affects organizational innovation. If management performance in competent with the ability for strategic vision and planning and implement organizational goals effectively. Performance will be a factor that enhances the capabilities of the organization according to Gummesson (1999), Ichijo *et al.* (1998), Beckman (1999) and O'Dell and Grayson (1998) which found that competency directly affects the organizational performance, knowledge management and innovation in the enterprise. It also helps to increase the performance of the organization (Protogerou *et al.*, 2008).

Patanapongse (2004) found that attitudes, behaviors, knowledge and skills contribute to high quality, efficiency and effectiveness in the performance of the personnel in the organization. All staff members should be able to complete basic functions are the same and equal. Have developed their own distinct special abilities beyond the capabilities of the duties. Depending on the potential. Emotional quotient: EQ and Intelligence quotient: IQ and Knowledge and Skills and the Attributes which he will express a way of thinking and work habits that will affect the performance of the individual. And continuous self-development.

Organizational management factors. Enterprise management systems. Need to be brought into the system. In the process of providing services and process management services. Technology systems in enterprises. As factors that promote and support enterprise management and planning process. Organization. Command-and-control study found that corporate management affect innovation in organizations. This is consistent with Sexton and Barrett (2004) said that technology helps in the analysis of how the organization will use to process, however, also be used to identify the customer and prioritize customer.

Kandampully (2002) found that the introduction of technology in organizational management had a direct effect on growth and is vital to providing the Sexton and Barrett (2004) studied the organizational form of learning in the process that led to the success of information technology (An Empirical Study of the Learning Organization Model in Information. Technology Enabled Process Improvement).

The results showed that the model of organizational learning is a tool for successful process in information technology. The analysis of the response data illustrates the relationship between the results of the development process to the sum of the observations. The pressure caused by the changes in technology is in line with the study showing patterns of the organizational learning case study 'Mapping the learning organization: Exploring a model of organizational learning' with the experimental variables of organizational learning to create a driving force in the organization. Variables used in the study are leadership, culture, mission and strategy. Operations management. Organizational structure. Atmosphere in the organization, motivation, learning, innovation and the extent of learning outside.

This study tested the role of learning, innovation and the extent of external learning. This is driven by the organization's operational results which are demonstrated by the influence of culture, leadership, strategy, mission and corporate structure. This also includes operations management, working environment and motivation. Less influential hypothesis. But there are variables that are not in anticipation of the assumptions is that the system has no influence on the organization learning.

Innovation management role of innovation management in service management is a tool that has facilitated the study found that management innovation affecting the performance management, queuing in line with Goyal and Pitt (2007) innovation that results are caused by the process. It depends on the ability to market and corporate strategy as well as existing resources and networks with strong leadership and organizational cultures in which these factors have driven success. This also contributes to growth and increased profitability of the company (Christensen, 1997; Thomke, 2001).

Dr. Amabile is the author of "Creativity in Context" and "Growing Up Creative," as well as more than 150 scholarly studys, chapters, case studies and presentations. She serves on the editorial boards of Creativity Research Journal, Creativity and Innovation Management and the Journal of Creative Behavior. Industry and Background Note. Creativity and Innovation in Organizations. by Teresa M. Amabile. 15 pages. Publication Date: Jan 05, 1996. Prod.

This is consistent with the study of Amabile (1996), 'Creativity and Innovation in Organizations' has found that creativity and innovation implementation is the establishment of new ideas. Utilization. To the new business and new programs in order to deliver products and services to customers. To discuss the structure of the creative part of Wong and Chin (2007) studied 'Organizational Innovation Management' (OIM) and developed measures which include the following: (1) Corporate culture and beliefs (2) Dimensional structure of innovative corporate structure is flexible, simple, uncomplicated emphasize decentralization (3) Human resource

competency is a component of organizational commitment and leadership management; attitudes and abilities of employees as well. (4) Strategies for innovation. Development and innovation strategy for the organization. (5) Mechanisms to support innovation. Mechanism for resource management. To accept the opinions of others and achieve continuous improvement. (6) The development of cognitive skills. Development of knowledge in the organization. To develop and exchange knowledge with external organizations and (7) Growth of cumulative knowledge. The organization of learning. Communication skills and knowledge utilization. Accumulation of knowledge in the organization. The queuing system administration effectively to achieve the desired goal.

System of the organization. Using appropriate technology and innovation management. Whether it is management innovation rate logging. Managing time in the service and management of the service provider.

CONCLUSION

Queuing management must take into account various factors. For corporate management to achieve a practical way in developing the capacity of the organization it is important to have Management Innovation as a starting point in the development of the organization so that the organization can adapt to changing circumstances in accordance with the requirements of the client. Organizational Leadership needs to have the ability to think strategically along with the ability of the relationship.

And skills needed in the organization. Skills of employees in the primary line. The structure is simple. If it was a quick decision. And supervise employees fairly. As well as the need to adopt a customer relationship management technology. To benefit and support the employees in the organization. As an additional tool for customers to contact the organization. Able to help in the planning of the service. Ability to manage. With the limited resources available. And can shorten the waiting time of customers or clients as well. Aims to respond to the needs of the service and facilities. Quick to use. Those factors led to the excellent quality of service to the public.

REFERENCES

- Ahmad, S. and R.G. Schroeder, 2011. Dimensions of competitive priorities: Are they clear, communicated and consistent? *J. Applied Bus. Res.*, 18: 77-86.
- Akaraboworn, C., 2006. *Human Resource Development Role in Thailand*. Kpon Printing, Bangkok.
- Amabile, T.M., 1996. *Creativity in Context*. West View Press, Boulder, CO., USA.
- Anderson, N.R. and M.A. West, 1998. Measuring climate for work group innovation: Development and validation of the team climate inventory. *J. Organ. Behav.*, 19: 235-258.
- Bain, P.G., L. Mann and A. Pirola-Merlo, 2001. The innovation imperative: The relationships between team climate, innovation and performance in research and development teams. *Small Group Res.*, 32: 55-73.
- Beckman, T., 1999. The Current State of Knowledge Management. In: *Knowledge Management Handbook*, Liebowitz, J. (Ed.). CRC Press, Boca Raton, FL.
- Boondhavan, V. and P. Montri, 2010. PLS path modeling of social responsibility, quality product and service perception, good customer behavior and performance perception for original retail stores. *J. Manage. Sci. Khon Kaen Univ.*, 9: 50-62.
- Bouzada, M.A.C., 2009. Dimensioning a call center: Simulation or queue theory? *J. Operat. Supply Chain Manage.*, 2: 34-46.

- Boyatzis, R.E., 1982. *The Competent Manager: A Model for Effective Performance*. John Wiley and Sons, New York.
- Chin, W.W., 2001. *PLS-Graph User's Guide*. Version 3.0, Soft Modeling Inc., Houston, TX., USA.
- Christensen, C.M., 1997. *The Innovators Dilemma: When New Technologies Cause Great Firms to Fail*. Harvard Business School Press, Boston, Massachusetts, USA., ISBN: 9780875845852.
- Eurostat, 2006. *Revisions analysis*. Internal Report Submitted to the October 2006 Meeting of the FROCH Group.
- Goyal, S. and M. Pitt, 2007. Determining the role of innovation management in facilities management. *Facilities*, 25: 48-60.
- Gummesson, E., 1999. *Total Relationship Marketing: Rethinking Marketing Management from 4ps to 30Rs*. Butterworth-Heinemann, Oxford.
- Hellriegel, D., S.E. Jackson and J.W. Slocum, 2001. *Management: A Competency-Based Approach*. 9th Edn., South-Western College Publishing, USA., ISBN: 9780324055580, Pages: 561.
- Henseler, J., C.M. Ringle and R.R. Sinkovics, 2009. The Use of Partial Least Squares Path Modeling in International Marketing. In: *New Challenges to International Marketing*, Sinkovics, R.R. and P.N. Ghauri (Ed.). Vol. 20, Emerald Group Publishing Ltd., Bingley, UK., ISBN: 978-1-84855-469-6, pp: 277-319.
- Hongladarom, C., 2006. *HR Champions: Conversations with Human Resource Development, Thinkers and Practitioners of the Period*. 4th Edn., Chira Academy Publishing, Bangkok.
- Ichijo, K., G. Krough and I. Nonaka, 1998. Knowledge Enablers. In: *Knowing in Firms*, Krough, G. and J. Roos (Eds.). Sage Publication, Thousand Oaks, CA., pp: 173-203.
- Inauen, M. and A. Schenker-Wicki, 2011. The impact of outside-in open innovation on innovation performance. *Eur. J. Innovat. Manage.*, 14: 496-520.
- Jedsadapornpun, A. and A. Somjit, 2009. Internal logistics management for tapioca starch manufactory using RFID case study. *Proceedings of the 9th Academic Conference Management, Logistics and Supply Chain*, November 19-21, 2009, Sanguan Wongse Co. Ltd., Bangkok.
- Kamolsuk, N., 2012. Queuing system analysis: The study of 7-eleven at Muangthai-Pathhara Branch. *J. Manage. Inform. Sci.*, 7: 66-78.
- Kandampully, J., 2002. Innovation as the core competency of a service organisation: The role of technology, knowledge and networks. *Eur. J. Innovat. Manage.*, 5: 18-26.
- Kaufman, J.C., J.C. Cole and J. Baer, 2009. The construct of creativity: Structural model for self-reported creativity ratings. *J. Creative Behav.*, 43: 119-134.
- Kay, M.J., 2007. Healthcare marketing: What is salient? *Int. J. Pharma. Healthcare Market.*, 1: 247-263.
- Kazi, A.S. and P. Wolf, 2006. *Real Life Knowledge Management: Lessons from the Field*. Knowledge Board, London, UK., ISBN: 9789525004724, Pages: 333.
- Khan, M.H.U.Z. and M.R. Khan, 2010. Human capital disclosure practices of top Bangladeshi companies. *J. Hum. Resour. Costing Account.*, 14: 329-349.
- Lauro, C. and V.E. Vinzi, 2004. Some contribution of PLS path modeling and a system for the European customer satisfaction. Dipartimento di Matematica e Statistica Universita Federico II di Napoli. <http://www.sis-statistica.org/old/htdocs/files/pdf/atti/RSMi0602p201-210.pdf>.
- Likert, R., 1972. Likert Technique for Attitude Measurement. In: *Social Psychology: Experimentation, Theory, Research*, Sahakian, W.S. (Ed.). Intext Educational Publishers, Scranton, USA., pp: 101-119.

- Liyanage, S. and P.S. Poon, 2003. Technology and innovation management learning in the knowledge economy: A techno-managerial approach. *J. Manage. Dev.*, 22: 579-602.
- Marcoulides, G.A. and R.H. Heck, 1993. Organizational culture and performance: Proposing and testing a model. *Org. Sci.*, 4: 209-225.
- McClelland, D.C., 1973. Testing for competence rather than for intelligence. *Am. Psychol.*, 17: 1-14.
- O'Dell, C. and C.J. Grayson, 1998. If only we knew what we know: Identification and transfer of internal best practices. *California Manage. Rev.*, 40: 154-174.
- OECD, 2002. *Babies and Bosses-Reconciling Work and Family Life: Australia, Denmark and the Netherlands*. Vol. 1, OECD, Paris, France.
- Panuwatwanich, K., R.A. Stewart and S. Mohamed, 2008. The role of climate for innovation in enhancing business performance: The case of design firms. *Eng., Constr. Architect. Manage.*, 15: 407-422.
- Patanapongse, W., 2004. *Balanced Scorecard (BSC) Key Performance Indicators (KPI) for Sustainable growth of the Organization*. Pacific Publishing, Bangkok, Thailand.
- Phuvidyaphan, A., 2004. *Career Development in Practice*. HR Center, Bangkok.
- Piriyakul, M., 2010. Partial least square path modeling (PLS path modeling) Proceedings of the 11th Academic Conference of Applied Statistics, November 19, 2010, Bucharest.
- Pongsriroj, S., 2000. *Organization and Management*. 2nd Edn., Chulalongkorn University Printing House, Bangkok, Thailand.
- Protogerou, A., Y. Caloghirou and S. Lioukas, 2008. Dynamic capabilities and their indirect impact on firm performance. Proceedings of the 25th Celebration Conference 2008 on Entrepreneurship and Innovation-Organizations, Institutions, Systems and Regions Copenhagen, June 17-20, 2008, CBS, Denmark, pp: 1-46.
- Rungtusanatham, M., J.C. Anderson and K.J. Dooley, 1999. Towards measuring the SPC implementation/practice construct: Some evidence of measurement quality. *Int. J. Qual. Reliabil. Manage.*, 16: 301-329.
- Santhong, N., 2004. *Competency is Known Today*. 3rd Edn., HR. Center, Bangkok, Thailand.
- Sarros, J.C., B.K. Cooper and J.C. Santora, 2011. Leadership vision, organizational culture and support for innovation in not-for-profit and for-profit organizations. *Leadership Organ. Dev. J.*, 32: 291-309.
- Scarbrough, H., 2003. Knowledge management, HRM and the innovation process. *Int. J. Manpower*, 24: 501-516.
- Sexton, M. and P. Barrett, 2004. The role of technology transfer in innovation within small construction firms. *Eng. Constr. Architect. Manage.*, 11: 342-348.
- Smithikrai, C.C., 2007. *Recruitment, Selection and Evaluation of the Performance of Personnel*. 2nd Edn., Chulalongkorn University Press, Bangkok.
- Thesarat, S. and S. Sindhuchao, 2008. Simulation of a queueing system for reducing customer waiting time case study: Trakarn Phuethphon hospital, Ubonratchathani. http://app.eng.ubu.ac.th/~resproject/upload/p1/23.papaer_1_sombat.pdf.
- Thomke, S., 2001. Enlightened experimentation: The new imperative for innovation. *Harv. Bus. Rev.*, 79: 66-75.
- Viriyapan, T., 2009. *Team management under crisis*. School of Business University of the Thai Chamber of Commerce, pp: 446-462.
- Wong, S.Y. and K.S. Chin, 2007. Organizational innovation management: An organization-wide perspective. *Ind. Manage. Data Syst.*, 107: 1290-1315.