

The Study of Organizational Inertia, Business Model Innovation and Organizational Performance in Taiwan Financial Institutions: Organizational Learning Perspective

Jui-Chan Huang^a, Chunwei Lu^{b,*}, Hao-Ming Wen^c, Ching-Tang Hsieh^d, Hui-Wen Wang^e

Abstract

Due to the characteristic of constraints, organizations tend to remain stable and follow the existing routines. It results in their insensitivity to various threats and opportunities caused by external environment. According to empirical result, organizational inertia negatively and significantly influences organizational learning. Numerous studies argued that organizational learning significantly influences innovation and organizational learning significantly influences organizational performance. Empirical outcome shows that organizational learning positively and significantly influences innovation of business model and organizational performance. In an environment of rapid finetech development, organizational learning leads to originality and innovation, which result in synergy to enhance organizational competitiveness and organizational performance. If organizations can properly manage knowledge, upgrade quality, lower cost and immediately respond to customers' needs, it is conducive to the outcome of organizational learning and lead to better organizational performance. Innovation of business model allows enterprises and related financial institutions to construct competitive advantage. Innovation of business model causes new operational model, enhances core competence of enterprises, satisfy customers' needs, improve quality or attribute of current products or lower production cost of products, according to empirical result of this study, innovation of business model positively and significantly influences organizational performance.

Keywords: Financial Institutions, Organizational Inertia, Innovation of Business Model, Organizational Performance, Finetech

1. Introduction

1.1 Research Motives and Purposes

Innovation refers to the implementation of a new concept or behavior. Innovation can be a new product, service, technology, or management method (Damanpour, Szabat, and Evan, 1989; Khan & Manopichetwattana, 1989; Damanpour, 1991; Zammuto & O'Connor, 1992). In the face of fierce

competition and uncertainty, innovation turns increasingly significant for an organization to survive and grow. Recently, business model innovation has been regarded as one of the means for enterprises to create value and gain competitive advantages (Amit & Zott, 2001; Chesbrough & Rosenbloom, 2002; Matthyssens, Vandenbempt, and Berghman, 2006).

In the context of fast technological changes and many environment uncertainties, enterprises must rethink and constantly try to create new business models (Voelpel, Leibold, and Tekie, 2004). Business model innovation is a method for an enterprise to create a new business model completely different from the existing one and re-create customer value and value delivery (Moore, 2004; Matthyssens et al., 2006). In the financial

^aYango University, Fuzhou, 350015, China

^b350202, No.28, Shouzhuan, New Dist. Changle District, Fujian Province, China. Fuzhou University of International Studies and Trade

^cDepartment of International Business, National Yunlin University of Science and Technology, Yunlin, 64002, Taiwan

^dDepartment of International Business, National Kaohsiung University of Science and Technology, Kaohsiung City, 80778, Taiwan

^eNational Sun Yat-Sen University, Department of Business Management, 70 Lien-hai Rd., Kaohsiung 804, Taiwan *Corresponding Author: Chunwei Lu Email: chunweilu@stust.edu.tw

industry, the core impact of financial technology progress lies in reducing transaction costs. The business model innovation, combined with the technological advancement and the financial service industry, has brought about an expansion of financial breadth, integrated more resources, and will provide customers with many new service methods and products, with a greater degree of differentiation. In other words, business model innovation is an approach for many enterprises to seek for competitive edges in the new economy. However, Garcia-Morales, Matias-Reche, and Hurtado-Torres (2008) argued that, although innovation is considered to be helpful for the promotion of organizational performance, many organizations do not know how to innovate. Most organizations have organizational inertia (Hannan & Freeman, 1977). Organizational Inertia Theory points out that, an organization has internal inertia which prevents it from making timely response to external environmental changes and engaging in reform. When it tries to change, due to past successful experience and operation procedures, an organization will have inertial behaviors in organizational structure, strategy, and policy. Many studies asserted that, organizational inertia is not conducive for an organization to innovate, especially in financial industry (Francis & Smith, 1995; Amabile, Conti, Coon, Lazenby, and Herron 1996; Blumentritt & Danis, 2006; Nijssen, Hillebrand, Vermeulen, and Kemp, 2006; Matthysens et al., 2006). Large organizations tend to have more organizational inertia which is more likely to hinder organizational growth and innovation. Inertia is often seen as an obstacle to innovation (Godkin & Allcorn, 2008). Many scholars assumed that, inertia prevents enterprises from breaking through their existing business models and making any changes to such business models (Sull 1999; Matthysens et al., 2006; Chesbrough, 2006, 2007). Therefore, from the perspective of organizational reform, this study explored how an enterprise can change its organizational inertia and what mechanism shall it adopt to promote or improve its innovation.

A mechanism called organizational learning may improve organizational inertia. Organizations can change the behavior of members through organizational learning (Tsang, 1997) so as to enhance their own strengths (Senge, 1990). Stata (1989) assumed that, organizational learning is the main program to generate management innovation and, proposed the idea that, individual and organizational learning speeds will become the only maintainable competitive advantage. Today's

drastic changes in the fintech industry have caused the company to face fewer profits and more challenges. In this case, the financial industry can only enhance its competitive advantage through organizational learning. Fulmer (1994) also believed that, organizational learning has become a necessary survival condition in the ever-changing environment. In response to needs and challenges of reform, organizations need to not only implement the changes, but also, through organizational learning and innovation, transform reform plans to ensure the success of reform (Sergiovanni, 1995). For an organization, it is a most powerful weapon for an organization to propose innovation faster and more effective than competitors so that it can adapt to the rapidly changing economic operation environment and maintain competitive advantage. Organizational learning is a path to achieving competitive advantage and management mechanism to help organizations to increase performance and become more innovative.

In terms of business operation, no innovation means death. Today, successful enterprises need continuously innovate and change, maintain flexibility to quickly respond to customer needs, and continuously innovate products and services to avoid being weed out. In this context, from the perspective of organizational reform, this study probed into how organizational learning mechanism can effectively change organizational inertia so as to create organizational innovation and explored the mediating role of organizational learning. The specific research purposes are as follows: 1) It employed second-order factor analysis to develop the methods to measure organizational learning and discussed if organizational learning would reflect in the dimensions of "experimentation", "interaction with the external environment", "mutually communication", and "participative decision making", and served as a basis for future studies and analysis. 2) It explored how a company can change its original organizational inertia through organizational learning so as to improve its innovation ability and performance. That is to say it discussed if organizational learning has the mediating effect. 3) Lastly, it analyzed if business model innovation affects organizational operation performance.

1.2 Research Questions

This study probed into the correlation among organizational inertia, organizational learning, business model innovation, and organizational performance. Based the above research

background and purposes, this study intended to discuss the following questions:

1. Does Organizational inertia have an adverse effect on organizational learning and business model innovation?
2. How does organizational learning mechanism effectively change organizational inertia so as to create business model innovation and organizational performance?
3. Does the business model innovation affect organizational performance?
4. Do enterprises with different backgrounds have significant differences in organizational inertia, organizational learning, business model innovation, and organizational performance?

2. Literature Review

This chapter discusses the literatures on the theoretical basis of this study, including organizational inertia, organizational learning, business model innovation, and organizational performance, and proposes the research hypotheses.

2.1 Organizational Inertia

Organizational inertia refers to an organizational operation phenomenon that an organization sticks to its past practices to seek sustainable and stable development in the face of external environmental changes and continues the past organizational structure, organizational strategies, and internal operation procedures so as to maintain the status quo. Generally, it includes numerous and interwoven factors like organizational strategies, systems, and procedures; leadership styles and management models of leaders; member's team spirit and strain capacity (Amiripour, P., Dossey, J.A., and Shahvarani, A., 2017). Moreover, each factor implies its own value and concept. These concepts may conflict, contradict, and influence each other. Therefore, in the entire operation of the organization, concepts are continuously filtered and integrated to reach consensus and finally become the value system of the entire organization (Shi, X. and Zhang, Q., 2018). In the face of ever-changing and volatile situations and circumstances, if an organization maintains the status quo for a long period of time and fails to respond in a timely manner, we can say that the organization has inertia.

2.2 Organizational Learning

It is generally believed that, the theory on learning can be traced back to Classical Conditioning Theory. The representative study of

this theory is the experiment of "ringtone and amount of saliva" done by Pavlov (1911). Operant Conditioning Theory was later developed. Its representative study of this theory is the experiment of "Skinner Box" done by Skinner (1968). In terms of the two experiments mentioned above, their subjects were not humans (The subjects of the former were dogs, while those of the latter were rats). After the proposal of Social Learning Theory and the "four stages of influence of model on men" proposed by Skinner, theories on learning gradually became human-centered. Later this idea was introduced to organization. And the concept of organizational learning became popular

The concept and theory of organizational learning have been developed for years. As scholars defined organizational learning from various viewpoints, the definitions of organizational learning vary. (It is commonly believed that, it was Skinner but who formally regarded the theory of organizational learning as a research topic, but Cangelosi & Dill who first proposed it in the paper entitled "Organizational Learning: Observation Toward a Theory" (1965). In fact, the meaning of organizational learning already existed in the era of Taylor, the father of scientific management. Taylor thought that the truth of management lies in precision and measurement. In the early era with underdeveloped technologies, accuracy required long-term accumulation of experience. This concept also coincides with the ideas of many scholars. Ulrich, Lick & Glinow (1993) argued that, organizational learning is based on experience and communicated to other organizational members so as to improve organizational performance. Arago'n-Correa, Garcí'a-Morales & Cordo'n-Pozo (2007) also mentioned that, organizational learning is derived from experience or recognizable process

2.2.1 Definition of organizational learning

In a stable competitive environment, a simple and robotistic organization can succeed. However, in an ever-changing and unpredictable environment, success depends on constant changes and updates. In short, the key to success is organizational learning. Learning has become a competitive edge of an organization, bringing about more new challenges. An organization without self-update, speed, flexibility, and innovation cannot flourish (Sydanmaanlakka, 2001). Karen, S.L., Joseph, M. (2017); Senge (1990) deemed that, organizational learning means that, a group of people continuously improve their capabilities create the things they want. Behavior change must be classified into actual behavior

change and potential behavior change. The so-called change of potential behavior change means the influence of a certain lesson of organizational learning on future behavior. Lipshitz et al. (2007), Argote, L. and Hora, M.(2017) stated that, through the new concepts and strategies generated by organizational learning, an organization shall actively rather than passively face the impacts of environment.

Tsang (1997) held that the definition of organizational learning shall generally include cognitive and behavioral changes. The above three conditions of organizational learning (cognitive change, potential behavior change, and actual behavior change) and their relationship are shown in Figure 1

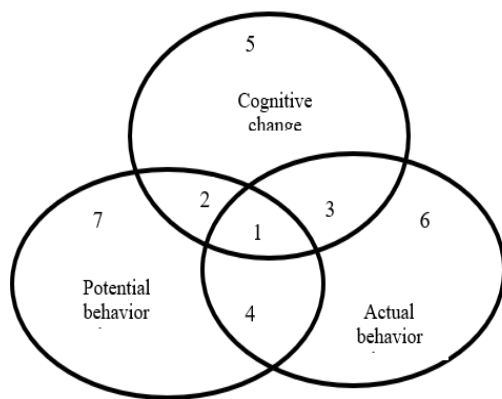


Figure 1 Key conditions of the definition of organizational learning

Source: Tsang, E. W. K., 1997, "Organizational learning and the learning organization: A dichotomy between descriptive and prescriptive research", *Human Relations*, Vol.50, No.1, pp.73-89.

2.3 Business Model Innovation

Business model is a business term that has been widely discussed in recent years and means by which many organizations seek competitive advantages in the new economy. Wikipedia simply defines business model as, "a means and method for a business to create revenue and profit." In the age of globalization, rapid technological changes, and extremely uncertain business environment, the important factor that determines the success of an organization is not technology but business model. Business model innovation introduces a new business model into the production system, creates value for customers and the organization, and obtains profit in a new and effective way. Business model innovation is a new type of

innovation that is as important as technology innovation. Most technology innovation outcomes may bring about value to some extent. However, the biggest challenge facing an organization is how to convert the value into commercial profit. Therefore, business model innovation fundamentally urges the organization to rethink its way of obtaining profit. Hence, the business and academic circles turn more and more concerned about business model. And there are increasing researches on business model innovation, making it a core topic widely discussed by the business and academic circles in the 21st century. This study first explored the implications and elements of business model, and then business model innovation.

2.3.1 Definition of business model

The term "business model" first appeared in literature on management in the mid-1970s. When they probed into the correlation between and structure of data and procedures, Konczal (1975) used the term, business model. It has not been widely explored and concerned until the 1990s. As scholars have unique insights in the concept of business model, there is no widely accepted definition on business model. Slywotzky (1996) argued that, business model is a behavior of an organization related to how to choose customers, how to define and differentiate products, if tasks are completed by itself or outsourced, how to allocate resources, how to enter the market, how to generate benefits to customers, and how to gain profit. Timmers (1998) defined business model as a structure that includes products, services, and information flow, describes sources of profit, and emphasizes the relationship among and structures of value chains of business roles. Frezza (1998) asserted that, is a flow chart that links the elements of value chain, including producers, deliverers and consumers, and showing the direction of flows of goods and services, and cash flow in the opposite direction. Mahadevan (2000) regarded business model as the combination of value stream, revenue stream, and logistic stream between companies and their business partners and buyers. Stewart & Zhao (2000), Massa, L., Tucci, C., and Afuah, A., (2017) assumed that, business model is a statement on how an enterprise earns and maintains profit flow over time.

2.3.2 Meaning of business model

Hamel (2000) illustrated the four elements of business model in *Leading the Revolution*, namely, core strategy, strategic resources, customer interface, and value network. The purpose is to

create a brand-new business model to meet the needs of the new economic era(Aversa, P., Haefliger, S., Rossi, A., and Baden-Fuller, C., 2015.).

The only way to get rid of the fierce competition is to establish a business model different from the traditional ones. In other words, business model innovation is required, as shown in Figure 2:

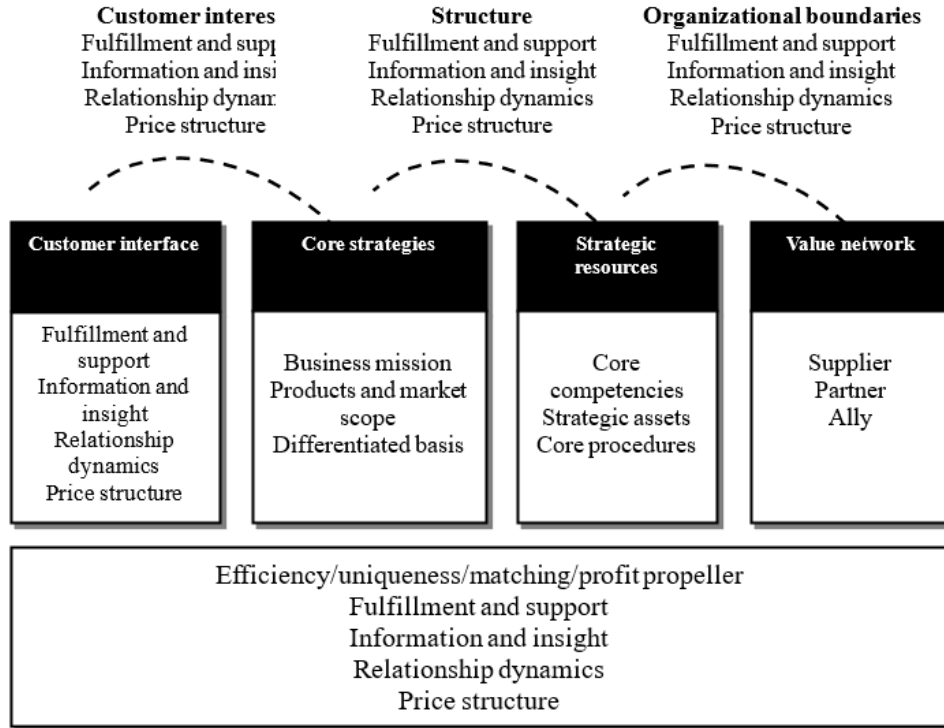


Figure 2. **Decomposition of business model**
Source: Hamel (2000)

Betz (2001) developed six widely used strategic business model structures based on inputs and outputs of an organization in an open system, as shown in Figure 3. A strategy refers to the contents guiding the operation of the organization. The current challenges and future opportunities of the

organization shall be considered. The purposes of strategic business model are to effectively guide the current operation of managers, and effectively guide them how to respond in the future (Nicolai, J. and Foss ,T., 2018).

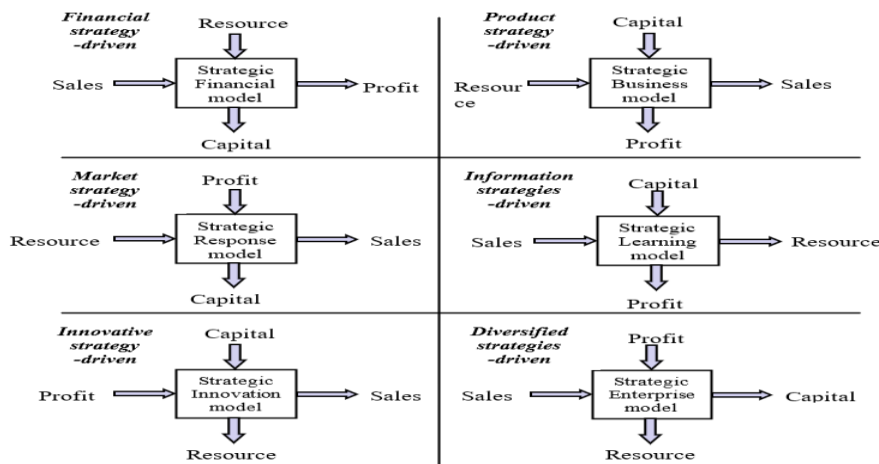


Figure 3. **Types of strategic business models**
Source: Betz (2001)

2.4 Organizational performance

Organizational performance is a significant topic of management. Its importance is widely concerned, because, on the one hand, organizational performance is related to the sustainable operation and development of an organization, and on the other hand, it involves the topics like the formulation of strategic decisions and the efficacy of strategy implementation of an organization. Thus, when it comes to if an organization performs well, or if it has future development, organizational performance will be considered as an important factor (Benjamin, S., Allison, B. Y., Andrea, K. and Cory, K. and Holly, L., 2017).

3. Research Method and Design

3.1 Conceptual Structure and Sample

From the viewpoint of organizational change, this study probed into the correlation among

organizational inertia, organizational learning, and business model innovation, and organizational performance. Therefore, in the theoretical model, this study adopted the views of Chiva & Alegre (2009) and combined the opinions of many scholars of organizational learning, including Garvin, Edmondson & Gino (2008), Brown & Duguid (1991), Argyris & Schön (1996), and Tsang (1997). This study considered organizational learning as a second-order latent variable, including four first-order latent variables, namely "experimentation", "interaction with the external environment", "mutually communication", and "participative decision making". The conceptual structure is shown in Figure 4.

In this study, Taiwan financial institutions were used as the research sample. A total of 500 questionnaires were distributed, 16 incomplete or invalid questionnaires were deducted, and 484 valid questionnaires were recovered.

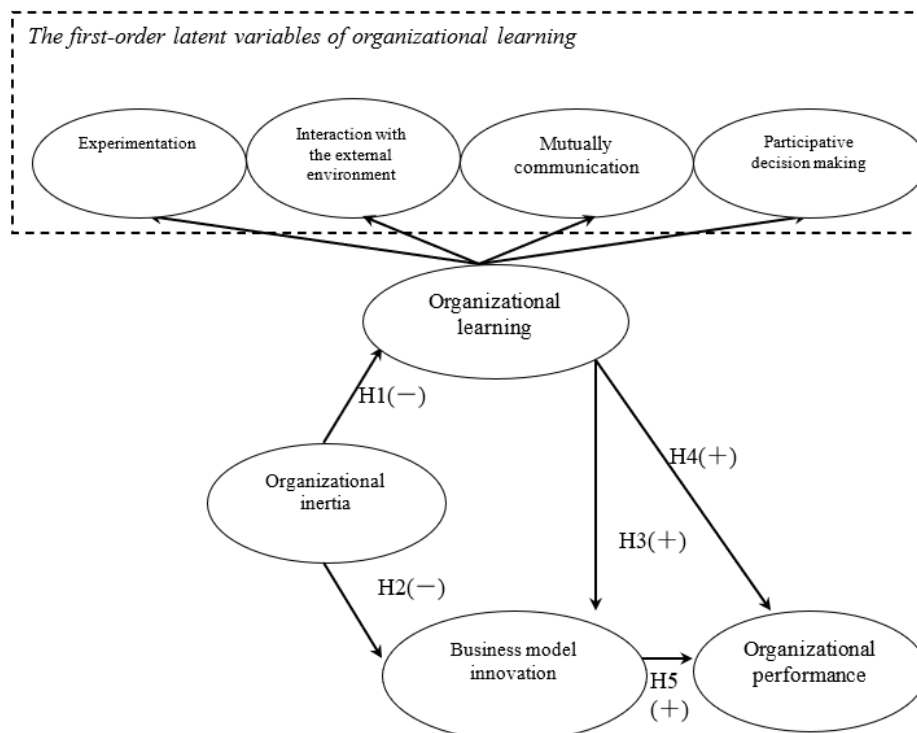


Figure 4. The conceptual structure

3.2 Research Hypotheses

This study explored the correlation among organizational inertia, organizational learning, business model innovation, and organizational performance. It established five research hypotheses as follows:

H1: Organizational inertia has a negative effect on organizational learning.

H2: Organizational inertia has a negative effect on business model innovation.

H3: Organizational learning has a positive effect on business model innovation.

H4: Organizational learning has a positive effect on organizational performance.

H5: Business model innovation has a positive effect on organizational performance.

4. Empirical Analysis Results

This study employed descriptive statistical analysis, correlation analysis, ranking analysis, CFA, and

linear equation model for test and estimation, causal path analysis of theoretical model, variance analysis, data validation, and hypothesis validation. In order to verify the relationship among the variables, Pearson correlation analysis was used to

obtain the correlation degrees and significance levels among different variables. According to the statistics of Table 1, most of the variables have significant correlation.

Table 1. Ranking of the averages of dimensions of PE

	1	2	3	4	5	6	7
1.Organizational inertia	1						
2.Experimentation	.084	1					
3.Interaction with the external environment	-.261**	.268**	1				
4.Mutually communication	-.183**	.342**	.534**	1			
5.Participative decision making	-.166**	.373**	.460**	.693**	1		
6.Business model innovation	-.169**	.228**	.460**	.603**	.496**	1	
7.Organizational performance	-.166**	.188**	.401**	.628**	.377**	.596**	1

** When the significant level is 0.01 (two-tailed), it indicates significant correlation.

* When the significant level is 0.05 (two-tailed), it indicates significant correlation.

4.4 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) is quite important for the development of a scale, because CFA can make a strong assessment of theory. This study adopted maximum likelihood model (MLM) to estimate and test the parameters of each model. In terms of the assessment of a measurement model, Bagozzi & Yi (1988) suggested that, individual item reliability can be used to estimate the significant level of parameters. Composite reliability (CR) and average variance extracted (AVE) can be used to estimate a measurement model so as to estimate the inner quality of the model. Each indicator is described as follows:

- (1) Individual item reliability of observable variable: It means the factor loading of an observable variable to its latent variable. The individual item reliability of an observable variable must be greater than 0.20 (Bentler & Wu, 1993).
- (2) Significance level of estimated parameter of observable variable: It refers to the test if the factor loading of observable variable to its latent variable reaches a significant level.
- (3) CR of latent variable: It is composed of the reliability of all observable variables. The higher the CR of latent variable, the observable variable can better predict the latent variable, indicating that the internal consistency of the latent variable is higher. The suggested value is above 0.6. CR is the abbreviation of "construct reliability". Its formula is as follows: $CR = (\text{sum of standardized factor loadings})^2 / (\text{sum of}$

standardized factor loading)² + sum of measuring errors)

Measurement error = $1 - (\text{standardized loadings})^2$
 (4) AVE of latent variable: It calculates the explanatory power of each observable variable to the average variation of the dimension. The higher AVE is, the higher convergence validity and discriminant validity the dimension has. The suggested value is above 0.5. Its formula is as follows: $AVE = \text{sum of the squares of standardized factor loadings} / (\text{sum of the squares of standardized factor loadings} + \text{sum of measuring errors})$

This study utilized CFA to test the measurement models. In Table 4-11, the t-test value of loading of each measurement item is higher than the significant level of 1.96. All the factor loadings (λ) of observable variables to their latent variables are between 0.55 and 0.88. The λ value of organizational inertia is between 0.60 and 0.80. That of experimentation inertia is between 0.70 and 0.88. That of interaction with the external environment is between 0.68 and 0.85. That of mutually communication is between 0.61 and 0.84. That of participative decision making is between 0.55 and 0.78. That of business model innovation is between 0.62 and 0.84. That of organizational performance is between 0.66 and 0.81. These values reach the threshold value proposed by Bentler & Wu (1993) of over 0.45, implying that, all the observable variable can reflect their

dimensions and the scale of this study has a considerable degree of convergence.

According to Table 2, the individual item reliability of observable variables is between 0.30 and 0.77. The λ^2 value of organizational inertia is between 0.36 and 0.64; that of interaction with the external environment is between 0.49 and 0.77; that of mutually communication is between 0.37

and 0.71; that of participative decision making is between 0.30 and 0.61; that of business model innovation is between 0.38 and 0.71; that of organizational performance is between 0.44 to 0.66. All these values reach the threshold value of over 0.20 proposed by Bentler & Wu (1993). The results meet the requirements of univariate reliability and indicate that all observable variable have reliability.

Table 2. Analysis results of the inner quality of each dimension of the measurement mode

Dimension	Number of Questions	Factor Loading (λ)	Individual Reliability (λ^2)	Item T-value
Organizational inertia	8	0.60-0.80	0.36-0.64	14.12-15.38
Experimentation	4	0.70-0.88	0.49-0.77	11.49-15.21
Interaction with the external environment	4	0.68-0.85	0.46-0.72	13.55-21.75
Mutually communication	4	0.61-0.84	0.37-0.71	10.46-18.31
Participative decision making	4	0.55-0.78	0.30-0.61	14.52-17.38
Business model innovation	5	0.62-0.84	0.38-0.71	14.07-20.08
Organizational performance	8	0.66-0.81	0.44-0.66	12.85-18.95

As shown in Table 3, the CRs of the seven dimensions is between 0.84 and 0.90. All the CRs of organizational inertia (CR = 0.89), experimentation (CR = 0.87), interaction with the external environment (CR = 0.85), mutually communication (CR = 0.84), participative decision making (CR = 0.80), business model innovation (CR = 0.85), and organizational performance (CR = 0.90) are above 0.6, implying that the dimensions have reliability.

In terms of AVE, the AVE value of seven

dimensions are above 0.5: organizational inertia (AVE = 0.50), experimentation (AVE = 0.63), interaction with the external environment (AVE = 0.59), mutually communication (AVE = 0.56), participative decision making (AVE = 0.50), business model innovation (AVE = 0.53), and organizational performance (AVE = 0.52), indicating that the contributions of the observable variables constructed by the seven dimensions are greater than those of errors.

Table 3 Analysis results of CR and AVE of each dimension

Dimension	Number of Questions	CR	AVE
Organizational inertia	8	0.89	0.50
Experimentation	4	0.87	0.63
Interaction with the external environment	4	0.85	0.59
Mutually communication	4	0.84	0.56
Participative decision making	4	0.80	0.50
Business model innovation	5	0.85	0.53
Organizational performance	8	0.90	0.52

4.5 Test and Estimation of Linear Equation Model

In respect to the overall fit of model, this study adopted absolute fit, incremental fit, and simple fit. If the fit of the statistical model is closer to the ideal value, the usability of the model is higher. And the

parameter estimation is more strategic. Most of fits of this model are in line with the suggested values. As shown in Table 4, $\chi^2/d.f.$ = 2.83, GFI = 0.840, AGFI = 0.818, PNFI = 0.711, PGFI = 0.738, RMSEA = 0.062, RMR = 0.060, SRMR = 0.067. Therefore, the

overall fit of this study is acceptable and reasonable.

Table 4 Analysis of differences in use behavior of Alipay users of different genders1

Fit Indicator	Ideal Value	Analysis Result
χ^2	-	1653.70
d.f.	-	585
$\chi^2 / d.f.$	< 3	2.83
NFI	> 0.90	0.765
NNFI	> 0.90	0.847
CFI	> 0.90	0.858
IFI	> 0.90	0.859
GFI	> 0.80	0.840
AGFI	> 0.80	0.818
PNFI	> 0.50	0.711
PGFI	> 0.50	0.738
RMSEA	< 0.08	0.062
RMR	The smaller, the better	0.060
SRMR	< 0.10	0.067

4.6 Analysis of the Causal Paths of Theoretical Model

The theoretical model of this study has five

Table 5. Analysis of differences in behavioral intention of Alipay users at different ages

Theoretical Model	Parameter estimates	T-value	Results
Path			
Organizational inertia ξ_1 -> Organizational learning η_1 (γ_{11})	-0.24	-3.59	Significant
Organizational inertia ξ_1 -> Business model innovation η_6 (γ_{61})	-0.03	-0.50	Not significant
Organizational learning η_1 -> Business model innovation η_6 (β_{61})	0.76	6.57	Significant
Organizational learning η_1 -> Organizational performance η_7 (β_{71})	0.30	2.98	Significant
Business model innovation η_6 -> Organizational performance η_7 (β_{76})	0.45	3.69	Significant

"*" $p < 0.05$, "***" $p < 0.01$

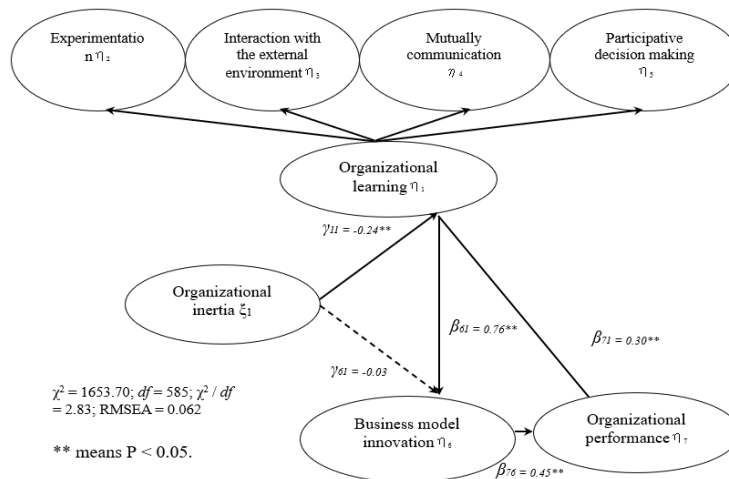


Figure 5. Road results of theoretical model

paths, including: Organizational inertia has a negative influence on organizational learning. Organizational inertia negatively affects business model innovation. Organizational learning has a positive effect on business model innovation. Organizational learning has positive effect on organizational performance. Business model innovation has a positive impact on organizational performance. This study validated the causal paths of the theoretical model. The analysis results are shown in Table 5. The results of the paths of theoretical model are shown in Figure 5. The results of parameter estimation of theoretical model are as follows: Organizational inertia (ξ_1) has a negative and significant effect on organizational learning (η_1) ($\gamma_{11} = -0.24$, t-value = -3.59). Organizational inertia (ξ_1) does not have a significant impact on business model innovation (η_6) ($\gamma_{61} = -0.03$, t-value = -0.50). Organization learning (η_1) has a positive and significant influence on business model innovation (η_6) ($\beta_{61} = 0.76$, t-value = 6.57). Organizational learning (η_1) generates a significant and positive influence on organizational performance (η_7) ($\beta_{71} = 0.30$, t-value = 2.98). Business model innovation (η_6) generates a positive and significant effect on organizational performance (η_7) ($\beta_{76} = 0.45$, t-value = 3.69).

The results of hypothesis validation with SEM are shown in Table 6. Based on the results of linear structural equation analysis above, the hypotheses of this study which are valid include: "H1: Organizational inertia has a negative effect on organizational learning.", "H3: Organizational

learning has a positive effect on business model innovation.", "H4: Organizational learning has a positive effect on organizational performance.", and "H5: Business model innovation has a positive effect on organizational performance." "H2: Organizational inertia has a negative effect on business model innovation." is not supported.

Table 6. Results of hypothesis validation with SEM

Hypotheses	Statement	Empirical Results
H1	Organizational inertia has a negative effect on organizational learning	Supported
H2	Organizational inertia has a negative effect on business model innovation	Not supported
H3	Organizational learning has a positive effect on business model innovation	Supported
H4	Organizational learning has a positive effect on organizational performance	Supported
H5	Business model innovation has a positive effect on organizational performance	Supported

5. Research Conclusion

5.1 Research Conclusion

5.1.1 Impact of organizational inertia on organizational learning

The great impacts of various forces in the external environment on organizations will make it difficult for the organizations to change the various commitments and inputs formed in the industrial relations in the past. Hence, due to their constraints, organizations often remain stable and prefer to maintain their old habits, resulting in slow response to the various threats and opportunities in the external environment. Past studies showed that, an organization with stronger organizational inertia is more difficult to conduct organizational reforms (Tsang, 1997). The empirical result of this study shows that organizational inertia has a significant and negative impact on organizational learning. This result is consistent with past studies.

5.1.2 Influence of organizational learning

This study classified organizational learning into four parts, "experimentation", "Interaction with the external environment", "mutually communication", and "participative decision making". Many studies in the past considered that organizational learning has a significant effect on innovation and organizational performance (Bastos, 2001; Park, 2010; Senge, 1990). The empirical result of this study shows that organizational learning has a significant and positive impact on business model innovation and organizational performance. This result is consistent with past studies. Organizational learning can generate creativity and innovation which then produce synergies to improve organizational competitiveness and organizational performance. If it can make good use of knowledge management, quality improvement, cost reduction, and prompt response to customer

demands, an organization can facilitate organizational learning to give full play to its effect and obtain the optimal organizational performance.

5.1.3 Influence of business model innovation on organizational performance

Business model innovation helps companies establish competitive advantages. Unique capabilities derived from business model innovation is the most important source of competitive advantage, because business model innovation can generate new business models, enhance a company's core capabilities, better satisfy customers' demands, improve the quality or attributes of existing products, or reduce the production costs of products (Johnson et al. 2008; Moore, 2004). The empirical result of this study shows that business model innovation has a significant and positive impact on organizational performance. This result is consistent with past studies. Business model innovation has evolved into a crucial factor affecting organizational performance, because innovative business models can make organizations more competitive in the market and better improve organizational performance.

5.1.4 Influence of corporate characteristics on organizational inertia

The empirical analysis of this study implies that, the companies with different numbers of employees have no significant difference in organizational inertia. The companies in different industries have no significant difference in organizational inertia. The companies with or without an overseas factory (site) have no significant difference in organizational inertia. The companies headquartered in different regions have no significant difference in organizational inertia. In

other words, corporate characteristics have no significant difference in organizational inertia.

References

- [1] Amabile, T.M., R. Conti, H. Coon, J. Lazenby, and N. Herron. 1996. Assessing the work environment for creativity. *Academy of Management Journal* 39(5): 1154-1184.
- [2] Amiripour, P., Dossey, J.A., and Shahvarani, A. 2017. Impact of Organizational Inertia and Dynamic Capabilities on Educational Performance of the Charitable Societies and Its Impact on Mathematical Performance of Elementary At-Risk Students, *Journal of New Approaches In Educational Research*, 6(1), pp. 37-49
- [3] Amit, R., and C. Zott. 2001. Value creation in e-business. *Strategic Management Journal*, 22(6-7): 493-520.
- [4] Arago'n-Correa, J. Alberto, Vi'ctor J. Garc'ia-Morales & Eulogio Cordo'n-Pozo. 2007. "Leadership and Organizational Learning's Role on Innovation and Performance: Lessons from Spain," *Industrial Marketing Management*, 36(3), 349-359.
- [5] Argote, L. and Hora, M. 2017. Organisational learning and management of technology, *Production and Operations Management*, Vol. 26 No. 4, pp. 579-590.
- [6] Argyris, C.; Sch'on, D.A. 1996. *Organisational learning II: Theory, method and practice*. Reading: Addison-Wesley.
- [7] Aversa, P., Haeffliger, S., Rossi, A., Baden-Fuller, C. 2015. From business model to business modelling: modularity and manipulation. *Adv. Strat. Manag.* 151-185
- [8] Bagozzi, R.P., and Y. Yi. 1988. On the evaluation of structural equation models. *Journal of the Academy of Marketing Science* 16(1): 74-94.
- [9] Benjamin, S., Allison, B. Y., Andrea, K. and Cory, K. and Holly, L. 2017. Workforce engagement: What it is, what drives it, and why it matters for organizational performance. *Journal of Organizational Behavior*, 19, p1-19
- [10] Bentler, P.M., and E.J.C. Wu. 1993. *EQS/Windows use's guide*, Los Angeles: BMDP Statistical Software.
- [11] Betz, F., 2001, Strategic business models", *Engineering Management Journal*, 14(1) 21-27.
- [12] Brown, J.S., & Duguid, P., 1991, Organizational learning and communities of-practice: Toward a unified view of working, learning, and innovation, *Organization Science*, 2(1), 40-57.
- [13] Chesbrough, H. 2006. Open business models: How to thrive in the new innovation landscape. Harvard Business School Press, Boston, MA.
- [14] Chesbrough, H. 2007. Business model innovation: It's not just about technology anymore. *Strategy & Leadership* 35(6): 12-17.
- [15] Chesbrough, H., and R.S. Rosenbloom. 2002. The role of the business model in capturing value from innovation: evidence from Xerox corporation's technology spin-off companies. *Industrial and Corporate Change* 11(3): 529-555.
- [16] Chiva, R. and Alegre, J. (2009), Organizational learning capability and job satisfaction: An empirical assessment in the ceramic tile industry, *British Journal of Management*, 20(3), 323-340.
- [17] Damanpour, F, K.A. Szabat, and W.M. Evan. 1989. The relationship between types of innovation and organizational performance. *The Journal of Management Studies* 26(6):587-601.
- [18] Damanpour, F. 1991. Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal* 34(3): 555-590.
- [19] Davenport, T.H., & Prusak, L., 1998. *Working knowledge: How organizations manage what they know*, Boston, MA: Harvard Business School.
- [20] Francis, J., and A. Smith. 1995. Agency costs and innovation-some empirical evidence. *Journal of Accounting and Economics* 19(2-3): 383-409.
- [21] Frezza, B., 1998, "It's time to examine your company's e-business model", *Internetweek*, Iss.720, 42.
- [22] Fulmer, R.M. 1994. A model for changing the way organizations learn. *Planning Review* 22(3): 20-24.
- [23] Garvin, D.A., Edmondson, A.C., & Gino, F., 2008, Is yours a learning organization?, *Harvard Business Review*, 86(3), 109-116.
- [24] Genck, F.H., 1983, *Improve School Performance*, N. Y.: Praeger.
- [25] Godkin, A., and S. Allcorn. 2008. Overcoming organizational inertia: A tripartite model for achieving strategic organizational change. *The Journal of Applied Business and Economics* 8(1): 82-95.
- [26] Hamel, G., 2000, *Leading the Revolution*, Harvard Business School Press, Boston.
- [27] Hannan, M.T., and J. Freeman. 1977. The population ecology of organizations. *American Journal of Sociology* 82(5): 929-964.
- [28] Johnson, M.W., C.M. Christensen, and H. Kagermann. 2008. Reinventing your business model. *Harvard Business Review* 86(12): 50-59.

- [29] Karen, S.L., Joseph, M. 2017 Trust, caring and organizational learning: the leader's role, *Journal of Educational Administration*, Vol. 55 Issue: 1, pp.103-126, <https://doi.org/10.1108/>
- [30] Khan, A.M. and V. Manopichetwattana. 1989. Innovative and noninnovative small firms: Types and characteristics. *Management Science* 35(5): 597-606.
- [31] Konczal, E.F., 1975, Models are for managers, not mathematicians, *Journal of Systems Management*, 26(1), 12-14.
- [32] Mahadevan, B., 2000, "Business models for internet-based E-commerce: An anatomy", *California Management Review*, 42(4), 55-69.
- [33] Massa, L., Tucci, C., Afuah, A. 2017. A critical assessment of business model research. *Academy of Management Annals*. forthcoming
- [34] Matthysens, P., K. Vandenbempt, and L. Berghman. 2006. Value innovation in business markets: Breaking the industry recipe. *Industrial Marketing Management* 35(6): 751-761.
- [35] Moore, G.A. 2004. Darwin and the demon: Innovating within established enterprises. *Harvard Business Review* 82(7-8): 86-92.
- [36] Nedzinskas, Š. 2013. Dynamic capabilities and organizational inertia interaction in volatile environment (Doctoral Dissertation). University of Management and Economics, Vilnius, Lithuania. Retrieved from http://archive.ism.lt/bitstream/handle/1/301/ETD2013-44_%C5%A0ar%C5%ABnas%20Nedzinskas.pdf?sequence=1.
- [37] Nicolai, J. and Foss, T. 2018. Business models and business model innovation: Between wicked and paradigmatic problems, *Long Range Planning*, 51(1), P 9-21
- [38] Nijssen, E.J., B. Hillebrand, P.A.M. Vermeulen, and R.G.M. Kemp. 2006. Exploring product and service innovation similarities and differences. *International Journal of Research in Marketing* 23(3): 241-251.
- [39] Park, B.I. 2010. What matters to managerial knowledge acquisition in international joint ventures? High knowledge acquirers versus low knowledge acquirers. *Asia Pacific Journal of Management* 27(1): 55-79.
- [40] Senge, P.M. 1990. *The Fifth Discipline: The Art and Practice of the Learning Organization*, N.Y.: Doubleday.
- [41] Sergiovanni, T.J. 1995. *The principalship: A reflective practice perspective*. Needham, MA: Allyn and Bacon.
- [42] Shi, X. and Zhang, Q. 2018 Inbound open innovation and radical innovation capability: The moderating role of organizational inertia, *Journal of Organizational Change Management*, Vol.31 Issue:3, pp.581-597.
- [43] Skinner, B. (1968), *The Technology of Teaching*, N.Y.:Appleton-Century-Crofts.
- [44] Slywotzky, A.J., 1996, *Value migration: how to think several moves ahead of the competition*, Harvard Business Review Press, Boston.
- [45] Stata, R. 1989. Organizational learning: The key to management innovation. *MIT Sloan Management Review* 30(3): 63-74.
- [46] Stewart, D.W. & Zhao, Q., 2000, Internet marketing, business models, and public policy, *Journal of Public Policy & Marketing*, 19(2), 287-296.
- [47] Sull, D.N. 1999. Why good companies go bad. *Harvard Business Review* 77(4): 42-52.
- [48] Sydanmaanlakka, P., 2001, *An Intelligent Organization*, Capstone Publishing Limited, Oxford.
- [49] Timmers, P., 1998, Business models for electronic markets, *Electronic Markets*, 8(2), 3-8.
- [50] Tsang, E.W.K. 1997. Organizational learning and the learning organization: A dichotomy between descriptive and prescriptive research. *Human Relations* 50(1): 73-89.
- [51] Ulrich, D., Lick, T., & Von-Glinow, M. A., 1993, "High impact learning: building and diffusing learning capability", *Organizational Dynamics*, 22(2), 52-66.
- [52] Voelpel, S.C., M. Leibold, and E.B. Tekie. 2004. The wheel of business model reinvention: How to reshape your business model to leapfrog competitors. *Journal of Change Management* 4(3): 259-276.
- [53] Zammuto, R., and E. O'Connor. 1992. Gaining advanced manufacturing technologies benefits: The role of organizational design and culture. *The Academy Management Review* 17(4): 701-728.