

Effects of Intentional Organizational Forgetting on New Product Performance of Each Stage: The Moderating Effect of Absorptive Capacity

Dujuan Huang, Song Chen, Ruiqian Jia

School of Economics and Management, Tongji University, Shanghai, China

Abstract—Innovation is essential in economic conditions of uncertainty and crisis to guarantee the firm's long term survival. Scholars have done plenty of research in innovation and have found a lot of factors that affect innovation, but ignoring the impact of organizational forgetting on innovation. Accordingly, this research seeks to contribute to the scarce empirical evidence by analyzing the influence of intentional organizational forgetting on new product performance as well as the role of absorptive capacity. Based on the theory-driven conceptual model, using survey data on 320 enterprises in China, the empirical analysis shows that intentional organizational forgetting has significant positive effect on new product development performance while absorptive capacity plays a moderation role between them. The results suggest stronger incorporation of intentional organizational forgetting into theory about product innovation.

I INTRODUCTION

In recent years, new product development plays an increasingly important role in the highly competitive market environment, becoming the key to gain competitive advantage and profit growth [1]. However, the new product development also face many risks and a critical challenge is how to adapt to changes in the environment in order to reduce the risk of project failure [2]. The knowledge-based view of the enterprises believe that knowledge is the source of sustainable competitive advantage of the organization, and only continue to create their own or to absorb external knowledge in order to improve innovation performance of enterprises to maintain a competitive advantage. Knowledge is an important basis of innovation, and innovation is the result of the application of knowledge [3]. Most of the company's innovation needs to absorb external knowledge [4]. However, the absorptive of useful knowledge will help organization improve innovation, the knowledge that will harmful for innovation, such as inertial thinking, bad habits and false information need to be forgotten. Intentional organizational forgetting is a way for enterprise to voluntarily give up its previous practice in order to adapt to various environmental changes [5]. Most scholars ignored or underestimated the significant role of organizational forgetting in organization innovation or organization learning [6]. The complexity of the external environment make business which not good at forgetting into trouble due to too many memories and stick to old rules [7]. Organizational forgetting can eliminate some useless knowledge and behaviors in organizational memory[8], it can change routines and ideas and improve organizational acceptance for changing customer needs and new technologic

knowledge. Therefore, it can improve the response flexibility under the change of technologies and market [9]. In a rapidly changing environment, we can not ignore the important influence of intentional organizational forgetting on development of new products.

Existing literature offers conflicting views regarding how intentional organizational forgetting affects new product development. Several studies posit that intentional organizational forgetting has significant positive influence on new development performance [10]. In contrast, some scholars believe that the intentional organizational forgetting does not lead to successful new product development [11]. Absorptive capacity has been recently postulated as a key determinant for firm's innovation activity. Organizational knowledge-base is adjusted by devaluation of knowledge (forgetting) and adding new knowledge (absorptive) to achieve a new dynamic balance. Absorptive capacity is considered to include identifying, assimilating, and integrating new knowledge; it is a dynamic process capability. Intentional organizational forgetting has an impact on knowledge cognition, conversion and integration approach in the process of innovation, therefore, absorptive capacity may be the important explanatory variables with respect to intentional organizational forgetting and innovation. However, we find that, in general, previous research regarding the impact of the intentional organizational forgetting on new product development lacks both specific comparative studies and a clear explanation of the impacts of the intentional organizational forgetting on different stage of new product performance. In addition, through a careful literature review, we find that study on the intentional organizational forgetting, absorptive capacity and new product development are lacking in domestic and foreign research.

Existing intentional organizational forgetting literature has mainly borrowed from other related theories such as psychology and management. In order to tap the uniqueness of intentional organizational forgetting, scholars have conducted some exploratory research around the pattern, process and various impacts of intentional organizational forgetting. However, much of the work have focused on the description or conceptual model, lacking of empirical research. In addition, scholars mainly uses western companies as unit of analysis, the environment in developing countries still needs further empirical testing because we don't know whether these findings appropriate across cultures.

In view of the above problems, this paper divides the development of new products into the concept development

stage, technology development and market development stage, by using a survey of 320 Chinese companies as the sample base, we conduct an empirical study to demonstrate how intentional organizational forgetting influence new product performance. For this research, we also treat absorptive capacity as a moderator within the analysis framework. This analysis is intended to reveal the potential process mechanism of improving enterprise new product performance by using the intentional organizational forgetting. The paper is organized as follows. The following section describes the theory and hypothesis utilized in our research. Section 3 describes samples and measures. In Section 4, we discuss the empirical results. In the final section, we provide a discussion that summarizes our findings and suggests potential future research directions.

II. LITERATURE REVIEW AND THEORY DEVELOPMENT

A. Intentional organizational forgetting

Organizational forgetting was originally proposed based on the concept of organizational learning, Cohen[12] suggested that new knowledge generated in the learning process within organization will be forgotten over time when he studied the two-stage model of organizational learning. Actually, the organizational forgetting proposed is an unconscious forgetting. Hence, scholars are likely to focus on the study of accidental organizational forgetting at the outset, that is passive organizational forgetting, and hold that this kind of forgetting is detrimental to the development of organizations, forcing organizations to re-learn[13]. Hereafter, Martin and Phillips [14] suggested that organization should purposefully forget some useless or outdated knowledge to deal with the crisis presenting in the environment, namely the intentional organizational forgetting. After then, scholars have begun to pay much more attention on the role intentional organizational forgetting plays in organizational transformation or transition. Throughout the literature, many scholars have tried to define intentional organizational forgetting from different perspectives. Nonaka and Takeuchi [15] holds that organizational forgetting is a re-learning process, in which old structure of knowledge is replaced by new knowledge structure. Cegarra [16] suggests that organizational forgetting is a process in which organization should eliminates old logic to make room for new logic. Akguz [9] notes that organizational forgetting is a process to change its old programs and procedures for organizations. Tsang and Zahra [17] defines organizational forgetting as a process to discard old practices and establish new norms for organizations while Gabriel et al. [18] views organizational forgetting as a process to achieve re-position of organizational values, norms and behavior by changing the cognitive structure, mental models, dominant logic and core concept of organization. Drawing on the research results mentioned above, this paper argues that intentional organizational forgetting is a process to abandon outdated or

obsolete knowledge, practices and norms for organization, which can reduce organizational inertia and rigidity and make organization more flexible in a dynamic environment.

B. The influence of intentional organizational forgetting on the new product performance of each stage.

Intentional organizational forgetting (IOF) can be seen as changes of organization values and conventions [11,19]. New product development is a product upgrade or a new generation of products, including a whole process from the idea collection, concepts formation, research development, manufacture and commercialization [1]. This paper divides the development of new products into the concept development stage, technology development and market development stage.

Innovation is a process to constantly update products and services to meet the changing needs. The success of development of new products depends on team's ability to integrate, build and re-allocate resources and environmental adaptability. One of the advantages of the product development team in Japan is that they have the flexible which make develop strategies match with environmental change [20]. Rigid product development process and group consciousness make a pre-determined development tendency throughout the project, and thus it has an inhibitory action on accepting the new market and technical information. What is more, obstinate ideas will lead to cognitive rigidity and inaccurate causal attribution, leading to the development team becomes dull in identification of environmental change [21]. Therefore, the birth of innovative products often requires organizations to change existing beliefs and practices in new product development process[11]. For example, Maylor (2001) found that, in manufacturing company's new product development process, to improve the procedures and routines and lift team up to a higher level of compliance with customer demand and product design capability can result in more new products on the market. Thus, how to escape the constraints of the current beliefs and practices is necessary in the new product development process. Intentional organizational forgetting is an ability for organization to self-renewal and innovate, is also a prerequisite for the development of innovative products [11]. Organization can eliminate the existing cognitive structure, improve the cognitive model to provide space for the introduction of new knowledge learning by intentional forgetting of useless knowledge and practices, which is beneficial to the emergency of more innovative products. Based on the above analysis, we put forth the following hypothesis:

- H1.** Intentional organizational forgetting has a significant, positive influence on concept development stage performance.
- H2.** Intentional organizational forgetting has a significant, positive influence on technology development stage performance.
- H3.** Intentional organizational forgetting has a significant, positive influence on market development stage

performance.

C. *The influence of absorptive capacity on the relationship between the intentional organizational forgetting and the new product performance of each stage*

Although some scholars have affirmed the positive role of the intentional organizational forgetting on new product development, there are some scholars pointed out that changing attitudes and conventions does not always lead to the successful development of new products. For example, in the new product development team, the intentional organizational forgetting process takes up time and consumes limited resources. They also noted that the change in the values or project routines without careful assessment, they may weaken the team's develop ability because the these changes contains the knowledge and information which current members of the project can not use [20]. In fact, the change of values and conventions will not have impact on organizational operation and organizational performance, unless such changes really been applied. If the organization lack of the necessary skills, intentional organizational forgetting is incomplete and will result in ineffective functioning of the team. In this sense, the intentional organizational forgetting does not necessarily lead to successful development, the development team also need the ability to which apply this change actually into the project development process, so that the team can get more opportunities to deal with the technical and market issues. However, existing literature did not give a clear explanation for this ability. Organizational knowledge-base is adjusted by devaluation of knowledge (forgetting) and adding new knowledge (absorptive) to achieve a new dynamic balance. Absorptive capacity is considered to include identifying, assimilating, and integrating new knowledge; it is a dynamic process capability. Intentional organizational forgetting has an impact on knowledge cognition, conversion and

integration approach in the process of innovation, therefore, absorptive capacity may be the important explanatory variables with respect to intentional organizational forgetting and innovation. This paper argues that since intentional organizational forgetting is a process of eliminate organizational memories, so there will be new knowledge and information to fill in when the memories are eliminated. Specifically, it is for members of the organization to absorb and apply the new market and technical knowledge. On this basis, team members can be fully prepared for the changes in ideas and organizational practices, intentional organizational forgetting can be coordinated with product development activities. Some scholars measure the absorptive capacity of the organization from three aspects. There are the ability to identify valuable new knowledge, the degree of commercialization of new knowledge and the degree of organization members to make full use of new knowledge aspect [22]. Some scholars measure the absorptive capacity of the organization from four aspects. There are knowledge acquisition capacity, knowledge assimilative capacity, knowledge utilization capacity and knowledge conversion capabilities[23]. From the description of these scholars, we can see that the absorptive capacity of the organization have a direct impact on new knowledge and information acquisition, transformation and utilization for new product development team members. Based on the above analysis, we put forth the following hypothesis:

- H4. Absorptive capacity provides a positive between intentional organizational forgetting and concept development stage performance.
- H5. Absorptive capacity a positive adjustment between intentional organizational forgetting and technology development stage performance.
- H6. Absorptive capacity provides a positive adjustment between intentional organizational forgetting and market development stage performance.

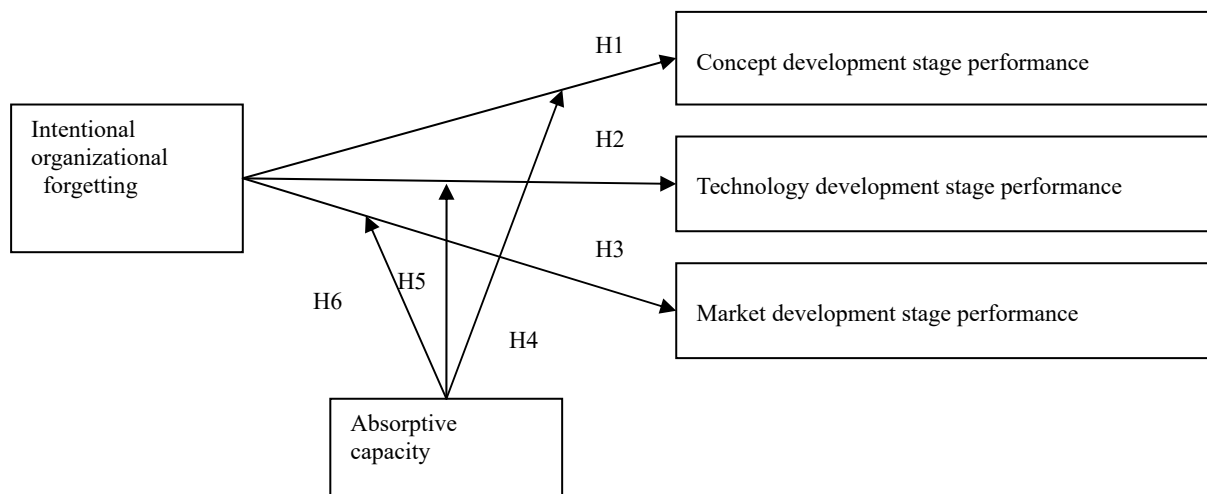


Figure 1 A conceptual model and its research hypothesis

III. METHODS

A. Sample and Data Collection

This study was carried out during the period of July 2014 to December in 2014. To test the aforementioned hypotheses, this study used cross-sectional survey data from 580 firms located in mainland China through WeChat, e-mail, and other, similar means. The sample includes firms in such industries as information and communication, manufacturing, energy, and chemicals. We initially assembled a questionnaire utilizing measurement items from several previous studies mainly reported in Western academic journals. A back translation procedure was performed to ensure translation accuracy [24]. To ensure the intelligibility of our questionnaire items, we undertook informal interviews with three academics and three managers before the implementation of the survey—asking them to point out ambiguous, vague, or unfamiliar terms—and incorporated their feedback to improve the questionnaire’s readability and relevance. A pilot test was conducted with 30 firms, and modifications were made to the questionnaire based on the feedback. We then finalized the survey.

When the data collection was completed, a total of 320 responses were returned. The respondents were promised complete confidentiality, were assured that there were no correct or incorrect answers, and were asked to answer the questions as honestly as possible. In the surveyed enterprises, by the enterprise nature, the state-owned enterprises, foreign-funded enterprises and private enterprises are distributed, by the scale of the enterprise, the samples are less than 200 small enterprises, some 500 people, but with 500-2000 enterprises are relatively more, they accounted for 67.8 %. For each selected company, it had to have been established and running for at least three years. In addition, senior management officials being investigated accounted for 5.93 %, middle managers and department managers together accounted for 94.52%, which are largely the results of this study to ensure objectivity and comprehensiveness.

To examine non-response bias, we compared responding and non-responding enterprises in terms of attributes such as enterprise industry and enterprise size using the t-test. All t-statistics were found insignificant. In addition, the likelihood of non-response bias was tested further by splitting the total sample into two groups, based on the times that the

enterprises responded [25]. The responses of late respondents, who were those that responded after more than two weeks, were compared to the responses of early respondents, who were those for which we received responses within two weeks. A comparison of the two groups revealed no significant differences. Therefore, non-response bias was not expected to be a serious problem, and we saw the respondents as representative of the general enterprises.

B. Measures

The independent, mediator, and dependent variables were all measured with multi-item scales, and all items were randomly ordered to minimize any bias from the survey method. Each of the scale items used a Likert-type response format ranging from 1, “strongly disagree,” to 5, “strongly agree.”

Intentional organizational forgetting. The intentional organizational forgetting scale was adopted from Akguz et al. [9]. we measure it from two aspects, one is the change of organizational concept, the other is the change of Change of organizational practice.

New product performance of each stage. Referring to the scales of Zhu yexin[26], the measuring items include three part. From the present current study, many scholars divided the new product development into six stages, there are creative collection stage, conceptual stage, technology development stage, design and production stage, product testing phase and market stage[27]. Based on the existing model of new product development and more convenient for the analysis, the new product development process is divided into three stages in this paper which are concept development stage, technology development stage and market development stage

Absorptive capacity. Absorptive capacity was measured from scale of Zhu binyu[28] and Hu and Zhang[29], the measuring items include two parts which are Identification ability and digestion and application ability.

Control variables. Previous studies have indicated that an enterprise’s age, size, property, and industry can affect enterprise innovation performance [30,31,32]. Therefore, this study uses the enterprise attributes of age, size, as control variables.

TABLE I. SAMPLE DESCRIPTION

	N=320	Percentage		N=320	Percentage
Industry		%	Number of employees		%
High and new technology industry	88	27.5%	≤200	26	8.1%
Manufacturing industry	128	40%	200-500	52	16.2%
Service industry	104	32.5%	500-2000	207	67.8%
Firm age		%	More than 2000	35	10.9%
≤3	32	10%	Position of respondents		%
3-10	220	68.7%	Senior manager	19	5.93%
More than 10	68	21.2%	Middle manager	301	94.52%

IV. DATA ANALYSIS AND RESULTS

A. Assessing measurement reliability and validity

The reliability and validity tests for our measurement items and scales are shown in Table II. We conducted an exploratory factor analysis (EFA) for the three variables. The results indicate all the standardized factor loadings in the model are above the commonly accepted value of 0.6 and significantly loaded on their respective factors. Cronbach's alpha (α) range from 0.713 to 0.928, exceeding the benchmark value of 0.7. The values of composite reliability (CR) range from 0.856 to 0.960, and are above the benchmark value of 0.6. The scores of average variance extracted (AVE) range from 0.600 to 0.828, all exceeding the benchmark value of 0.5. These results indicate that the measurement model has satisfactory convergent validity and reliability.

We employed confirmatory factor analysis (CFA) to examine the discriminant validity of the key variables. We first examined a three-factor model, which included new product performance of each stage, Intentional organizational forgetting, and Absorptive capacity. The overall model's Chi-square (χ^2), the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA) were applied to assess the model fit. As shown in Table II, the proposed three-factor model fits the data well ($\chi^2 = 120.09$, Df = 87; $p < 0.01$; CFI = 0.984; TLI = 0.987; RMSEA = 0.038). We then contrasted the three-factor model against alternative models. Model comparison results reveal that the proposed three-factor model is considerably better than any of the alternative models. Thus, the distinctiveness of the key constructs in the study is supported. Given these results, all three proposed constructs are applied in further analyses (Table III).

TABLE II. CONSTRUCT MEASUREMENT, RELIABILITY AND VALIDITY

	Construct (source)/indicator	loading	Reliability and validity
<i>New product performance of each stage (NPP)</i>			
Concept development stage performance (COP)	Enterprises fully understand the target market and customer needs	0.796	$\chi^2 = 21.281$; Df = 9; $p < 0.05$; CFI = 0.985; TLI = 0.975; IFI = 0.985; RMSEA = 0.072; $\alpha = 0.898$; CR = 0.922; AVE = 0.663
	Enterprises conducted a detailed market assessment and business analysis for new product development	0.831	
	Enterprise use the scientific method to generate new product concepts	0.821	
	Enterprises use the scientific methods to collect concept	0.826	
	Enterprise new product concepts are creative and innovative	0.798	
Technology development stage performance (TEP)	Enterprise analyze the technical feasibility to reduce the technical uncertainty	0.829	
	New product technology to improve the ability of enterprises	0.713	
	Enterprise technology development activities completed before the stipulated time target	0.692	
Market development stage performance (MAP)	Ratio of enterprise technology development activities higher than the industry average	0.783	
	Enterprises can very well understand the timing of new product launch	0.825	
	After the sales of new products listed companies exceeds expectations	0.818	
	After the listing of the new product is expected to exceed the market share target	0.878	
	Compared with industry competitors, new products can achieve higher customer satisfaction	0.837	
	New product has a higher ROI	0.887	
<i>Intentional organizational forgetting (IOF)</i>			
Change of organizational concept	Concept of customer demand characteristics has changed	0.841	$\chi^2 = 5.735$; Df = 2; $p < 0.05$; CFI = 0.987; TLI = 0.960; IFI = 0.960; RMSEA = 0.085; $\alpha = 0.763$; CR = 0.856; AVE = 0.600
	Ideas about technology trends has changed	0.821	
Change of organizational practice	Project development process has changed	0.769	
	Project development tools has changed	0.753	
	The way of team decision-making has changed	0.827	
<i>Absorptive capacity (AC)</i>			
Identification ability	Enterprises can understand the new technical information obtained from outside	0.928	$\chi^2 = 11.118$; Df = 5; $p < 0.05$; CFI = 0.995; TLI = 0.99; IFI = 0.995; RMSEA = 0.043; $\alpha = 0.948$; CR = 0.960; AVE = 0.828
	Enterprises can understand the new market information obtained from outside	0.879	
	Technical information obtained from outside can be identified for improvement	0.865	
Digestion and application ability	Market information obtained from outside can be identified for improvement	0.883	
	Enterprises can use the digested technical information to develop new products	0.869	
	Enterprises can use the digested technical information to develop new products	0.859	
	Enterprises can use the digested market information to develop new products.	0.853	

2016 Proceedings of PICMET '16: Technology Management for Social Innovation

TABLE III. RESULTS OF CONFIRMATORY FACTOR ANALYSIS FOR THE MEASURES OF THE VARIABLES STUDIED

Model	χ^2	f	TLI	CFI	RMSEA
Baseline model: NPP, AC, IOF	120.09	87	0.984	0.987	0.038
Model 1: IOF and AC combined	397.18	89	0.852	0.875	0.115
Model 2: all three factors are combined into one factor	1064.6	90	0.539	0.604	0.204

TABLE IV. BASIC DESCRIPTIVE STATISTICS

Variable	1	2	3	4	5	6	7
1.Enterprise age	1						
2.Enterprise size	0.33**	1					
3.IOF	0.13	0.17**	1				
4.AC	0.09	0.06	0.43**	1			
5.COP	-0.02	-0.08	0.42**	0.43**	1		
6.TEP	-0.02	-0.10	0.45**	0.46**	0.53**	1	
7.MAP	-0.04	-0.12	0.53**	0.52**	0.59**	0.62**	1

Notes: n=320. Standardized coefficients are reported. *p<0.05; **p<0.01 (two-tailed tests)

Table IV summarizes the mean, variance, and correlation coefficient of the variables. From Table III, we can see that Intentional organizational forgetting has significant positive correlations with the new product performance of each stage ($p<0.01$). Absorptive capacity also has significant positive correlations with the new product performance of each stage ($p<0.01$).

B. Analysis and results

To verify the hypotheses, this study takes the concept development stage performance, technology development stage performance and market development stage performance as respective outcome variables; it also takes the intentional organizational forgetting, the absorptive capacity, and the product term of the absorptive capacity with the intentional organizational forgetting, respectively, as the antecedent variables; meanwhile, it takes the industry age and size as control variables.

Referencing Katila and Ahuja's study [33], this paper primarily uses the SPSS 18.0 statistical software to carry out the hierarchical regression analysis for the research variables

and to verify proposed models and the relevant hypotheses. The results of the study are presented in Table IV. To minimize possible colinearity between the main and interaction effects, this study removed the mean-centers of all the pertinent antecedent variables as a preconditioning requirement, and then created the interaction terms by multiplying them together after preconditioning [34].

In order to demonstrate the relationship between the intentional organizational forgetting and the new product performance of each stage, we established six models. Results from Models 1, Models 3 and Models 5 indicate that intentional organizational forgetting has a significant, positive influence on the new product performance of each stage of the enterprise. From this, H1, H2 and H3 are verified as true.

From Models 2, Models 4 and Models 6, we see that absorptive capacity has a positive, significant impact on the new product performance of each stage. In addition, The interaction effect of absorptive capacity and the intentional organizational forgetting demonstrates a strong, positive significance on the new product performance of each stage. From this, H4, H5 and H6 are verified as true.

Table V. REGRESSION RESULTS

Variable	COP		TEP		MAP	
	M1	M2	M3	M4	M5	M6
Control variables						
Enterprise's age	-0.07	-0.05	-0.06	-0.04	-0.09	-0.04
enterprise's size	0.02	0.01	0.10	0.01	0.06	0.11
Antecedent variables						
IOF	0.45**	0.23**	0.34***	0.27***	0.41***	0.32***
Regulated variable						
Absorptive capacity		0.21**		0.23**	0.21***	0.26***
Interaction terms						
Absorptive capacity \times IOF		0.20**		0.21**		0.23**
Change in R2	0.35	0.01	0.53	0.02	0.21	0.04
Change in F	46.73***	1.74	57.85***	2.65	30.44***	5.07*

Notes: n=320. Standardized coefficients are reported. *p<0.05; **p<0.01; ***p<0.001 (two-tailed tests)

V. DISCUSSION

A. Theoretical implications

Building on extant literature, this study develops a research model linking intentional organizational forgetting, and the new product performance of each stage. Particularly, it takes absorptive capacity into the analysis framework and examines its regulatory role in the relationship between the intentional organizational forgetting and the new product performance of each stage. The model was empirically investigated by questionnaire responses from 320 Chinese enterprises as samples. This study contributes to existing literature in several ways.

Firstly, we find that the theory of intentional organizational forgetting is still worked in the background of China. The results of multiple regression analysis show that intentional organizational forgetting has a linear effect on innovation performance in China. The finding indicates that intentional organizational forgetting is positively related to new product development, which is in line with the arguments reported by previous study [10]. Intentional organizational forgetting provides a firm with an updated knowledge base, thus increasing opportunities for product improvements.

Secondly, we find that the intentional organizational forgetting has a significant impact on the different stage of the development of new products, which is ignored by previous scholars. The empirical results show that the intentional organizational forgetting has the highest impact on concept development stage performance of new products while has a lowest impact on technical development stage performance. One possible reason is that the intentional organizational forgetting is a process to break the inertia of thinking, of which the most direct manifestation is to help enterprises stimulate new business ideas spark. Therefore, it has the most significant impact on the development of new product strategy, the formation of new product ideas, the creativity screening and the plan of final products. Second, the intentional organizational forgetting replaces the original useless information by requiring companies to continue to absorb new information, and the process of absorptive of external information is also conducive to the market development of new products. Finally, given that the development of new products technologies is a relatively long process, and there are some other factors may have more important impact on the technology development, so the intentional organizational forgetting has a lowest impact on technical development stage performance of new products.

Thirdly, we find that absorptive capacity is an important moderator between intentional organizational forgetting and new product performance. Previous studies argued that intentional organizational forgetting does not necessarily lead to successful development, the development team also need the ability to which apply this change actually into the project development process but did not give a clear explanation for this ability. In our study, we find that the stronger absorptive

capacity of enterprise, the more effect between intentional organizational forgetting and new product performance. An enterprise should exert great effort to excavate, use, and control absorptive capacity in order to enhance its new product performance. The stronger absorptive capacity of enterprise, the more effect between intentional organizational forgetting and new product performance. An enterprise should exert great effort to excavate, use, and control absorptive capacity in order to enhance its new product performance.

B. Managerial implications

This study also offers some important implications for better utilizing the intentional organization forgetting to increase new product development performance for enterprises, particularly for enterprises in China.

Firstly, pay attention to the effect of intentional organization forgetting in the new product development, and having grasp of the knowledge management processes overall. In the process of knowledge management, enterprises tend to focus on how to search and obtain the external knowledge, keep adding to their knowledge base, but they ignore the reassessment of existing knowledge structure and behavior habits. Conservative thoughts and information which rooted in the enterprise will produce organizational inertia and hinder innovation. Due to changes in the environment, the organization should continue to test the validity of old knowledge, assess whether the existing knowledge of the enterprise remain valuable, whether they associated with the enterprise's strategy, and how to use these knowledge in the course of business development. According to the feedback of the operation flow, some of the old knowledge should be forgotten if they contrary to the enterprises development goals. Managers should also create a good intentional organizational forgetting atmosphere in the organizational culture to ensure that the organization can continue to reform and innovation. In addition, the intentional organization forgetting requires constant feedback. If the eliminate the existing knowledge or bad habits suddenly, it will cause members' dissatisfaction and it is not conducive to absorb and apply new knowledge. Therefore, The enterprises should pay attention to the ways and methods when they pursue and manage the organization forgetting.

Secondly, pay attention to the moderating effect of absorptive capacity. Enterprises must have a absorptive certain ability to transform the information, knowledge which they absorbed into output. Absorptive capacity is formed and trained gradually, the stronger of absorptive capacity, the more possible to identify a useful knowledge, the more able to integrate external knowledge to improve product development.

C. Limitations and future research directions

There are some research limitations should be noted. Firstly, subjective measures of the constructs and single respondent data may bias the findings. Although procedural

and statistical remedies have been employed, future research needs to employ multisource data to get more rigorous findings.

Secondly, in the course of the investigation and empirical test, we did not consider the degree of complexity of the new products development, which may affect the role of intentional organizational forgetting.

Thirdly, future studies may utilize a more systematic machine-learning approach, instead of the traditional statistical method, to reveal even more detailed relationships among the variables, and possibly to explore the dynamic evolutionary path of intentional organizational forgetting, influencing the new product performance.

VI. CONCLUSIONS

The research presented here investigates the relationship between intentional organizational forgetting and the new product performance of each stage, including absorptive capacity as moderator. Future studies may utilize a more systematic machine-learning approach, instead of the traditional statistical method, to reveal even more detailed relationships among the variables, and possibly to explore the dynamic evolutionary path of intentional organizational forgetting, influencing the new product performance.

REFERENCES

- [1] Bendoly,E., Bharadwaj,A. and Bharadwaj,S, *Complementary drivers of new product development Performance: cross-functional coordination, information system capability, and intelligence quality*. Production and Operations Management, 2012. 21(4): p. 653-667.
- [2] Cooper,L.P., *A research agenda to reduce risk in new product development through knowledge management: a practitioner perspective*. Journal of Engineering and Technology Management, 2003. 20: p117-140.
- [3] Drucker,P.F.(1993), *Post-capitalist society*. 1993, London: Ox-ford, Butterworth Heinemann, Haxper Business.
- [4] Leonard-Barton D, *Core capabilities and core rigidities: a paradox in managing new product development*. Strategic Management Journal, 1992. 13: p. 111-125.
- [5] Anand, V. , Manz, C. C. and Glick, W. H , *An organizational memory approach to information management*, Academy of Management Review, 1992. 23: p.796-809.
- [6] Shafer,S.M. and Nembhard,D.A and Uzumeri,M.V., *The effects of worker learning , forgetting , and heterogeneity on assembly line productivity* , Management Science, 2001. 47(12): p.1639-1653.
- [7] Weick,K.E, *The collapse of sense making in organizations : the Mann Gluch disaster*, Administrative Science Quarterly, 1993. 38: p. 628-652.
- [8] Pan Ancheng, *Study on formation and mechanics of firm's dynamic capabilities Basing on organizational unlearning*(In Chinese). Chinese Journal of Management, 2009. 5: p. 648-657.
- [9] Akguz,A.E., Lying,S. and Byme,J.C, *Organizational unlearning as changes in beliefs and routines in organizations*. Journal of Organizational Change Management, 2007. 20(6): p. 794-812.
- [10] Lu Yanqiu, Zhao Yingxin, Cui Yuehui, Wang Xiangyang. *Organizational unlearning and innovative performance: the mediating role of strategic flexibility*(In Chinese). *Science Research Management*, 2014(3): 58-65.
- [11] Akguz,A.E., Lying,S. and Byme,J.C, *Antecedents and consequences of unlearning in new product development teams*. Journal of Product Innovation management, 2006.23: p. 73-88.
- [12] Cohen W.M., Levinthal.D.A. *Absorptive capacity: a new perspective on learning and innovation*. Administrative Science Quarterly,1990.35:p.128-152.
- [13] Darr, E., Argote, L., Epple, D. *The Acquisition, Transfer and Depreciation of Knowledge in Service Organizations: Productivity in Franchises*. Management Science, 1995, 41 (11): p.1750-1762.
- [14] Pablo Martin de Holan, Nelson Phillips. *Remembrance of Things Past? The Dynamics of Organizational Forgetting*. Management Science.2004.50(11):p.1603-1613.
- [15] Nonaka, Takeuchi, The Knowledge-Creating Company. How Japanese Companies Create the Dynamics of Innovation, 1995,New York: Oxford University Press.
- [16] Cegarra-Navarro J.G., Dewhurst F.W.. *Linking shared organizational context and relational capital through unlearning*. The learning Organization,2006.13(1): p.49-62.
- [17] Tsang E.W., Zahra S.A.. *Organizational unlearning*. Human Relations,2008,61(10): p.1435-1462.
- [18] Gabriel Cepeda-Carrion, Juan-Gabriel Cegarra-Navarro and Daniel Jimenez -Jimenez. *Linking Unlearning with Innovation through Organizational Memory and Technology*. Electronic Journal of Knowledge Management,2010.8(1): p.1-10.
- [19] Sinkula,J.M (2002), *Market based success, organizational routines and unlearning*. Journal of Business and Industrial Marketing, 2002.17: p.253-269.
- [20] Akguz,A.E., Lying,S. and Byme,J.C, *Organizational learning: a socio-cognitive framework*. Human Relations, 2003.56(7): p.2839-868.
- [21] Starbuck WH. *Unlearning Ineffective or Obsolete Technologies*. International Journal of Technology Management,1996,11(7/8): p.725-737.
- [22] Fang Shijie and Lin Lijuan, *Research on organizational learning and performance (In Chinese)*, Journal of management science, 2005.(3): p.105-103.
- [23] Zahra SA, George G, *Absorptive capacity: a review, reconceptualization and extension*. Academy of Management Review, 2002. 27(2): p.185-203.
- [24] R.W Brislin, *Back-translation for cross-cultural research*. Cross-Cult. Psychol., 1970.1(3):p.185-216.
- [25] Armstrong, S.J. and Overton, T., *Estimating non-response bias in mail surveys*. Journal of Marketing Research, 1997.14(3):p. 396-402.
- [26] Zhu Yexin, *Effects of technology management capability on new product performance of each stage*[D] (In Chinese). Harbin Institute of Technology,2014(7).
- [27] Wang Jingya, Chen Song. *Research on the organization framework and the intermediate organization of technical activities (In Chinese)*. Studies in science of science.2008.2:82-89.
- [28] Zhu Binyu, *Cluster enterprise resource acquisition, absorptive capacity and technology innovation performance (In Chinese)*. Science &Technology Progress and Policy, 2009,26(10): p.85-89.
- [29] Hu Longji and Zhang Yi, *The impact of absorptive capacity and technology gap on international technology spillover: Evidence from Chinese electronics and information industry survey (In Chinese)*. Science Research Management, 2010,31(5): p.87-95.
- [30] Ahuja, G., *Collaboration networks, structural holes, and innovation: a longitudinal study*. Administrative Science Quarterly, 2000.45(3):p. 425-455.
- [31] Sorensen, J.B. and Stuart, T.E., *Aging, obsolescence, and organizational innovation*. Administrative Science Quarterly, 2000.45(1):p.81-112.
- [32] Taylor, A. and Greve, H.R., *Superman or the fantastic four? Knowledge combination and experience in innovative teams*. Academy of Management Journal, 2006.49(4):p.723-740.
- [33] Katila, R. and Ahuja, G., *Something old, something new: a longitudinal study of search behavior and new product introduction*. Academy of Management Journal, 2002.45(6):p.1183-1194.
- [34] Aiken, L.S. and West, S.G., *Multiple Regression: Testing and Interpreting Interactions*. Sage Publications, 1991,Newbury Park, CA.