

Business Case Study: The Significance of Absorbed and Unabsorbed Slack to Innovation at MMI Company

Harvey T. Ong
Decision Sciences and Innovation Department, De La Salle
University, Manila

— *Review of* —
**Integrative
Business &
Economics**
— *Research* —

ABSTRACT

Companies typically prefer to remove slack. This study investigates the contribution of organizational slack to innovative performance because slack can lead to innovation. It tested the presence of organizational slack using MMI Company as a case study and by looking at the company's absorbed and unabsorbed slack. It then measured the extent to which various types of innovation were adopted by the company. A correlational analysis between slack and innovation was performed to test the hypothesis. The result shows that both absorbed and unabsorbed slack may influence various types of innovation; some types of innovation are not influenced by slack, and; absorbed slack has a stronger effect on a company's innovation.

Keywords: Management Information Systems, Innovation, Organizational Slack, Absorbed and Unabsorbed Slack.

Received 28 March 2023 | Revised 26 June 2023 | Accepted 12 August 2023.

1. INTRODUCTION

Upon assessing the strengths and weaknesses of using MIS, organizational slack proved to be one of the weaknesses. Most companies aim to reduce organizational slack as much as possible. It is defined by Zinn and Flood (2009) as resources that are over the minimum necessary to produce a certain level of organizational output. Slack is something that has been avoided, especially by the companies that practice total quality management, six sigma, and the just-in-time method because they aim to keep the "excess" to a minimum so that costs are reduced, and profits maximized.

Despite its negative connotations, organizational slack can have a positive effect on companies. Some researchers have shown that slack in organizations has proven to be beneficial. Tan and Peng (2003) have pointed out that an inverse-U relationship exists between slack and innovation performance. Google and 3 M are also some of the few companies that promote the use of slack in the workplace by encouraging their employees to take 20% of their workweek off to be creative and do what they want as projects. This unconventional strategy boosted their number of ideas as well as their company's overall morale and thus began the slow but sure popularity of using slack as a beneficial tool. Tan and Peng (2003) also mentioned that even though slack is generally viewed as a negative factor, it may be used as something to be relied upon in cases of emergencies, such as the need for repairing equipment, sudden changes in supply and demand, or changes in the economic environment. Improving the creativity of employees and other positive effects of organizational slack can lead to more ways to innovate the organization. Different innovation models have been provided. When firms develop a selection of innovations to

maintain their competitiveness, this would require a strategic management approach rather than just operational, marketing, and technological views.

This study examined whether organizational slack is indeed beneficial to companies, particularly those in the home improvement industry in the Philippines. The proponent chose MMI as the company to be studied, because MMI is known to be the number one distributor out of the top four distributors in the country, and besides, this is one and only company in Binondo which its all business processes are now fully automated, and they are using MIS. Unsurprisingly, slack has a negative implication on industry practitioners and business owners in the Philippines, but it is possible to use it as an opportunity to innovate can greatly improve the performance of organizations.

Despite its negative connotations, organizational slack can have a positive effect on companies. Some researchers have shown that slack in organizations is beneficial. Tan and Peng (2003) have pointed out that an inverse-U relationship exists between slack and innovation performance. Google and 3M are also some of the few companies that promote the use of slack in the workplace by encouraging their employees to take 20% of their workweek off to be creative and do what they want as projects. This unconventional strategy boosted their number of ideas as well as their company's overall morale and thus began the slow but sure popularity of using slack as a beneficial tool. Tan and Peng (2003) also mentioned that even though slack is generally viewed as a negative factor, it may be used as something to be relied upon in cases of emergencies, such as the need for repairing equipment, sudden changes in supply and demand, or changes in the economic environment. Improving the creativity of employees and other positive effects of organizational slack can lead to more ways to innovate the organization.

The research question of this study is: "How does organizational slack of management information systems (MISs) contribute to a company?" The main objective of this research is to examine the contribution of organizational slack of MIS for a company using MMI as a case study. The study provides information concerning how MIS affects organizational innovation leading to strategic planning.

2. FRAMEWORK

Bae and Rhee (2014) also proposed a framework of their own consisting of control and moderating variables, aside from the standard dependent and independent variables; their results show two major findings. When firm size and firm age are controlled, both absorbed and unabsorbed slack have positive effects on technological innovation. *Environmental uncertainty negatively moderates the relationship between absorbed slack and technological innovation, while it has no moderating effect on the relationship between unabsorbed slack and technological innovation.* (Bae& Rhee, 2014). This means that the degree of impact of organizational slack on technological innovation may vary depending on the control or moderating variables and that in business, moderate levels of organizational slack can aid in technological innovation and may contribute to better performance.

In addition, slack resources play a significant role in firm technological innovation, as Ujari (2002) mentioned. He examined the impact of technology strategy, firm-level absorptive capacity, and slack resources on technological innovation with industry type as a moderating variable. Technology strategy, firm-level absorptive capacity, and slack resources all have positive relationships with innovation; however, technology strategy and firm-level absorptive capacity on their own were not very strong predictors of

innovation. Only the slack resources variable was a very strong predictor of innovation on its own, regardless of the other variables.

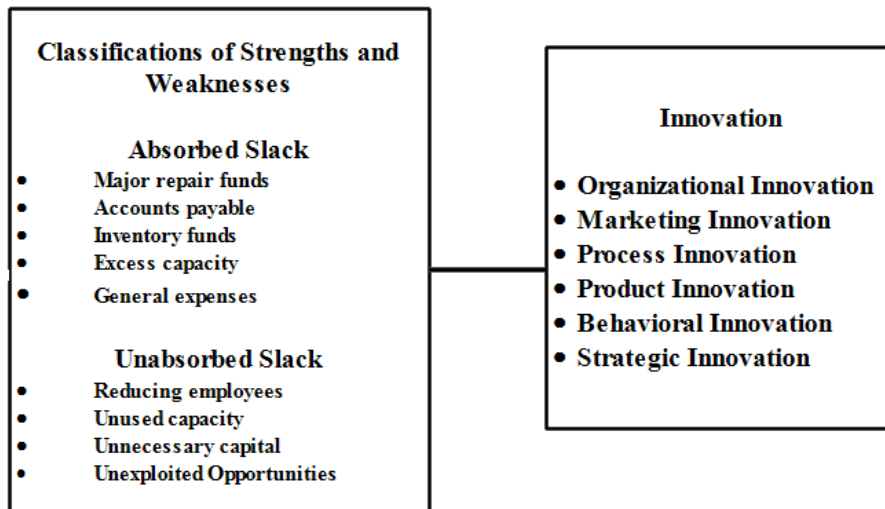


Figure 1: Operational Framework with Variables

The operational framework (Figure 1) involves two major steps that lead to strategic planning: The first step was to be able to determine the classifications of the strengths and weaknesses of MMI. An expected result of this assessment is organizational slack, which, according to Tan and Peng (2003), despite its usual negative connotation, can prove beneficial to the company. Researchers such as Tan and Peng (2003) and Bae and Rhee (2014) suggested that organizational slack and innovation can be explained through MIS and organizational slack. Tan and Peng (2003) talked about organizational slack and its implications. Gunday et al. (2011) and Wang and Ahmed (2004) discuss the dimensions of innovation in depth and their implications for firms' performance. Plessis (2007) mentioned that this new knowledge is embodied in new products, processes, services, or methods, and Wonglimpiyarat (2004) added that these activities would improve the firm's strategic position. Dehning et al. (2004) discuss the effects of information technology on organizational slack.

The second step determined what variables from absorbed and unabsorbed organizational slack contribute to the creation of innovation models in the company. Geiger and Cashen (2002) suggest that too much available and recoverable slack can impact the firm negatively; however, greater levels of potential slack appear to positively impact the firm. The presence of organizational slack has a positive relationship with innovation performance. The figure also shows that there is an optimal level of organizational slack that would lead to optimal innovation performance. Additional organizational slack above the optimal level will decrease innovation performance. Bae and Rhee (2014) discuss the connection between slack and innovation with environmental uncertainty mediating them.

Gunday, Ulusoy, Kilic, and Alpkan (2011) proposed several types of innovation, namely, product innovation, process innovation, marketing innovation, and organizational innovation. Moreover, Wang and Ahmed (2004) proposed behavioral, product, process, market, and strategic innovation. There are different innovation models from which the variables were extracted. The determination of the strengths and weaknesses of the companies and the absorbed and unabsorbed slack would further lead to innovation. As stated, the optimal level of organizational slack can lead to maximum innovation. According to Rainier and Turban (2009), innovation would detect the organization's

decision in developing new technologies. These innovation models would be significant in determining the performance of the firm and improving it.

The determination of slack would allow further innovation in the work processes being done in the company. The innovation models would pave the way for the firm's improvement. Najmaei (2014) stated that innovations are developed by a firm to maintain its competitive advantage.

Based on the literature and basic understanding, this study's proposition is that organizational slack creates innovations, where organizational slack is defined as "*pool of resources in an organization that is over the minimum necessary to produce a given level of organizational output.*" (Bae and Rhee, 2014).

3. RESEARCH METHODOLOGY

3.1 Company Background

Marswin Marketing, Inc. (MMI) is a small-medium enterprise (SME) that started operating on March 15, 1993. It is a distribution company that distributes paint products, chemical products, hardware, and electrical products in the Philippines. The company's mission is to provide quality products and services through the marketing and distribution of affordable, fast-moving paints, hardware, and electrical supplies in the country while adhering to its philosophy of serving the consumer with the utmost integrity and excellence. The organization's vision is to become the most preferred distributor of affordable, quality fast moving paints, hardware, and electrical suppliers in the Philippines.

3.2 Research Design

This mixed-method study used the multiple-embedded case study design in gathering and analyzing data. Methods to gather both quantitative and qualitative data included surveys, participation observation, and fieldwork. The survey was used in the study because it can gather data from a large population in a relatively convenient and efficient manner. Surveys are systematic, self-monitoring, and representative, as they are often used in research studies (Burton, 2007). On the other hand, participation observation was also used in the study. Furthermore, survey forms were also deployed to assess the management information system (MIS) efficiency and effectiveness in an organization. With the data from the surveys and interviews, the proponent used 3 major methods of analysis for this study, namely, descriptive analysis, cross-tabulation, and correlational analysis. Descriptive analysis is the summarization of the data retrieved from the respondents and presenting them in an easy-to-understand manner; this includes the mean, median, and mode. For the case of this study, however, the researcher decided not to include the median, as it is not relevant to the investigation. Cross-tabulation is a statistical analysis that presents the data in tables in such a way that it is easier for the reader to find patterns and trends; it is done by plotting the variables or subvariables to be used against the different cases of the study. A correlational analysis is the use of statistical tools to evaluate the intensity of the relationship between variables. The correlation coefficients range from -1.00 and 1.00; negative values mean that the variables are inversely proportional, while a positive value denotes a directly proportional variable.

3.3 Sampling Plan

According to Robert Yin (2014), the embedded case study involves more than one unit of analysis; it occurs when, within a single case, attention is also given to a subunit or

subunits. The subunits can often add significant opportunities for extensive analysis, enhancing the insights into the single case. The research studied one (1) company in the home and garden industry of the home improvement category; thus, this study was a single case study design.

MMI companies were screened to ensure that they had been using management information systems (MIS) for at least three (3) years to account for the lag effect in innovation. The chosen company was given surveys to be answered by both internal and external users to determine the effect MIS has on employees and their customers. Furthermore, as this study used a mixed method approach, the researcher also conducted interviews with all the departments involved in using the chosen companies' MIS, as well as the finance and information technology (IT) departments, to obtain the needed information outside of the surveys. The internal respondents refer to the employees that use the MIS and the external users refer to the long-term (5-10 years) clients of the companies.

3.4 Method of Data Analysis

According to Creswell (2009), there are different approaches to mixed-method data analysis. In concurrent strategies, data can be transformed into either quantifying qualitative data or qualifying quantitative data. Quantifying qualitative data involves creating codes and themes and counting the number of times they occur in the text data, which enables a researcher to compare results with the data. Another approach is to examine multiple levels. In a concurrent embedded model, surveys were conducted at one level to gather quantitative results about a sample, and interviews were done at the same time to be able to explore the phenomenon with specific individuals. When comparing data, information from both data types is combined into a matrix. The horizontal axis could be a quantitative categorical variable, while the vertical axis would be qualitative data. Information in the cells could be either quotes, counts of the number of codes, or some combination. The matrix presented an analysis of the combined data.

Qualitative data were taken from the interviews conducted with the respective individuals from the different departments involved in using MIS. From the information collected, a content analysis was conducted with a matrix showing the similarities and differences of the data gathered from the chosen company.

4. RESEARCH FINDINGS

4.1 Initial analysis

As mentioned in the previous chapter, the researcher used self-administered questionnaires to gather data from both the staff and customers of the MMI Company. Afterward, in-depth interviews were conducted with the IT heads of the company so that their insights could be gathered. Both quantitative and qualitative data were collected, and internal customers and external customers were invited to answer the survey on organizational capabilities, organizational effectiveness, and efficiency, absorbed slack, and unabsorbed slack. The survey also covered the 6 innovation models on organizational, marketing, process, product, behavioral, and strategic concerns. By using correlational analysis, the researcher was able to establish the association between the variables, and it further revealed whether the relationship between the constructs was significant. Further details regarding the statistical analysis of the gathered quantitative data are shown throughout this chapter.

4.2 Relationship between organizational slack and innovation

Table 2: Slack table

Absorbed slack	<p>The equipment has not reached its limits.</p> <p>The productive capacity of the firm is not fully utilized by its employees.</p> <p>The firm always has accessible funds for major repairs.</p> <p>The firm has excess inventory funds.</p> <p>The firm has excess capital for general expenses.</p>
Unabsorbed slack	<p>Retained earnings of the firm have been sufficient.</p> <p>A pool of financial resources can be used on a discretionary basis.</p> <p>Necessary bank loans can be obtained.</p>

Table 3: Innovation table

Organizational Innovation	<p>The company renews its routines, procedures, and processes to execute firm activities innovatively.</p> <p>The company renews the supply chain management system.</p> <p>The company renews the production and quality management systems.</p> <p>The company renews the human resources management system.</p> <p>The company renews the in-firm management information system and information sharing practice.</p> <p>The company renews the organization structure to facilitate teamwork.</p> <p>The company renews the organization structure to facilitate coordination between different functions such as marketing and manufacturing.</p> <p>The company renews the organization structure to facilitate project-type organization.</p> <p>The company renews the organizational structure to facilitate strategic partnerships and long-term business collaborations.</p>
Marketing Innovation	<p>The company renews the design of the current and/or new products through changes such as appearance, packaging, shape, and volume without changing their basic technical and functional features.</p> <p>The company renews the distribution channels without changing the logistics processes related to the delivery of the product.</p> <p>The company renews the product promotion techniques employed for the promotion of current and/or new products.</p> <p>The company renews the product pricing techniques employed for the pricing of the current and/or new products.</p> <p>The company renews general marketing management activities.</p>
Process Innovation	<p>The company determines and eliminates nonvalue-adding activities in production</p>

	<p>processes.</p> <p>The company decreases variable cost components in manufacturing processes, techniques, machinery, and software.</p> <p>The company increases output quality in manufacturing processes, techniques, machinery, and software.</p> <p>The company determines and eliminates nonvalue-adding activities in delivery-related processes.</p> <p>The company decreases variable costs and/or increases delivery speed in delivery-related logistics processes.</p>
Product Innovation	<p>The company increases manufacturing quality in components and materials of current products.</p> <p>The company decreases manufacturing costs in components and materials of current products.</p> <p>The company develops newness for current products leading to improved ease of use for customers and improved customer satisfaction.</p> <p>The company develops new products with technical specifications and functionalities differing from the current ones.</p> <p>The company develops new products with components and materials differing from the current ones.</p>
Behavioral Innovation	<p>Employees receive a lot of support from managers if we try new ways of doing things.</p> <p>Employees tolerate individuals who do things differently.</p> <p>Employees are willing to try new ways of doing things and seek unusual, novel solutions.</p> <p>Everyone is encouraged to think and behave in original and novel ways.</p> <p>Employees' behavior depends on what the company wants them to do.</p>
Risk Innovation	<p>The firm's R&D or product development resources are adequate to handle the development needs of new products and services.</p> <p>Key executives of the company are willing to take risks to seize and explore "chancy" growth opportunities.</p> <p>Senior executives constantly seek unusual, novel solutions to problems via the use of "idea men" or someone who provides original ideas.</p> <p>When employees see new ways of doing things, they are first at adopting them.</p> <p>Employees prioritize a new way of doing things rather than using old ways.</p>

4.3 Correlation analysis

The researcher used a correlation analysis to determine whether organizational slack significantly relates to innovation in the MMI Company. A correlation analysis is used to find the relationships between the 2 variables of the study. In this case, the two variables are

organizational slack and innovation. Organizational slack is divided into absorbed and unabsorbed slack, while innovation is divided into organizational, marketing, process, product, behavioral, and strategic slack. A positive correlation value would mean that as one variable increases, the other variable would increase as well. On the other hand, a negative correlation value means that as one variable increases, the other variable decreases. The proponent decided to use a confidence level of 95% in conducting this correlation analysis of the study.

Table 4: Proposition 1

Proposition	Slack	MMI		
		Survey		Interview
<i>Organizational slack creates innovations</i>	Absorbed	Organizational Pearson R= -.295 P-Value=0.046*	Marketing Pearson R= .031 P-Value=0.428	Organizational slack can help create innovative models for companies under study since as a company it is best to minimize slack time as much as possible.
		Process Pearson R= .168 P-Value=0.176	Product Pearson R= .030 P-Value=0.434	
		Behavioral Pearson R= .155 P-Value=0.194	Strategic Pearson R= .334 P-Value=0.029*	
	Unabsorbed	Organizational Pearson R= .328 P-Value=.031*	Marketing Pearson R= .205 P-Value=.127	
		Process Pearson R= .181 P-Value=.157	Product Pearson R= - .035 P-Value=.425	
		Behavioral Pearson R= -.290 P-Value=.051	Strategic Pearson R= .047 P-Value=.398	

4.4 Significance of slack in innovation

As observed in Table 4, several types of innovation are affected by absorbed slack, including organizational and strategic innovation. Among the six types of innovation, only marketing, process, product, and behavioral innovation do not have a significant effect on MMI companies, and the remaining two factors affect MMI negatively. For unabsorbed slack, only organizational innovation was the only factor that significantly affected MMI.

Table 5: Significance of Absorbed Slack & Unabsorbed Slack on Innovation

Absorbed Slack	MMI
Organizational	Significant (-)
Marketing	Not Significant
Process	Not Significant
Product	Not Significant
Behavioral	Not Significant
Strategic	Significant (+)

Unabsorbed Slack	MMI
Organizational	Significant (-)
Marketing	Significant (-)
Process	Not Significant
Product	Not Significant
Behavioral	Significant (-)
Strategic	Significant (-)

Table 6: Slack x Innovation table

Organizational Slack	Innovation	Effects of Slack on MMI
Absorbed	Organizational	Absorbed Slack harms Marswin's Organizational Innovation
	Marketing	Absorbed Slack does not affect Marswin's Marketing Innovation
	Process	Absorbed Slack does not affect Marswin's Process Innovation
	Product	Absorbed Slack does not affect Marswin's Product Innovation
	Behavioral	Absorbed Slack does not affect Marswin's Behavioral Innovation
	Strategic	Absorbed Slack has a positive effect on Marswin's Strategic Innovation
Unabsorbed	Organizational	Unabsorbed Slack has a positive effect on Marswin's Organizational Innovation
	Marketing	Unabsorbed Slack does not affect Marswin's Marketing Innovation
	Process	Unabsorbed Slack does not affect Marswin's Process Innovation
	Product	Unabsorbed Slack does not affect Marswin's Product Innovation
	Behavioral	Unabsorbed Slack does not affect Marswin's Behavioral Innovation
	Strategic	Unabsorbed Slack does not affect Marswin's Strategic Innovation

4.6 The impact of organizational slack

Table 8: Proposition 2

Proposition	MMI Company
<i>Organizational slack has a positive impact on an organization</i>	Organizational slack can have a positive or negative impact on an organization. It depends on the employee on how he/she will utilize his/her available slack time.

5. CONCLUSION

Based on the information gathered from interviews, it can be concluded that MMI have the appropriate organizational capability to run the MIS. Both absorbed and unabsorbed slack may influence specific types of innovation at MMI. Each type of slack influences the various types of innovation differently, and some types of innovation are not influenced by slack. When comparing the two slack types, it is apparent that absorbed slack affects innovation more intensively. However, not all effects from slack are positive. Based on the findings, to maximize innovation, it would be advisable for MMI to increase unabsorbed slack by investing more in excess resources (e.g., resource buffers), as doing so will improve the company's organizational innovation. MMI's absorbed slack would depend on the type of innovation they prioritize; if they target organizational innovation further, they should minimize absorbed slack by keeping track of excess costs, and should they want to promote strategic innovation, MMI should spend more on investments and consider building an IT team, as they are currently dependent on the sole IT person. Additionally, it would be advisable for the employees to receive additional training in using the system since the employees are unsatisfied with the current training.

REFERENCES

- [1] Bae, H., & Rhee, J. (2014). Organizational slack and technological innovation: The moderating effect of environmental uncertainty. *Asian journal of technology information*.
- [2] Basinska, A. (2012). Higher school of humanities and journalism. Retrieved from <http://www.crest.fr/congres-afs/basinska.pdf>
- [3] Burton. (2007). Survey research: Choice of instrument, sample. Bloomberg: School of Public Health. Retrieved from http://ocw.jhsph.edu/courses/hsre/pdfs/hsre_lect11_burton.pdf
- [4] Creswell, J.W. (2009). Research design: Qualitative, quantitative, and mixed method approaches. California: SAGE Publications, Inc.
- [5] Dehning, B., Dow, K. E., & Stratopoulos, T. (2004). Information technology and organizational slack. *International journal of accounting information systems*, 51-63. doi: 10.1016/j.accinf.2004.02.2003.
- [6] Geiger, S. W., & Cashen, L. H. (2002). A multidimensional examination of slack and its impact on innovation. *Journal of managerial issues*, 14, 68-84.
- [7] Gunday, G., Ulusoy, G., Kilic, K., & Alpkan, L. (2011). Effects of innovation types on firm performance. *International journal of production economics*, 133(2011), 662-676.
- [8] Heng, L., Ding X., Guo H., & Luo J. (2014). How does slack affect product innovation in high-tech Chinese firms: The contingent value of entrepreneurial orientation. *Asia pacific journal of management*, 31.1(2014): 47-68.

- [9] Najmaei, A. (2014). Towards an integrative model for management of organization's total innovation: Insights from the strategic-process view. *IUP journal of knowledge management*, 12(3), 61-73.
- [10] Oprea, M. (2007). With emphasis on the integration of three technologies. *International journal of computers, communications & control*, 2(1)
- [11] Plessis, M. (2007). The role of knowledge management in innovation. *Journal of knowledge management*, 11(4), 20-29. Retrieved from <http://www.emeraldinsight.com/doi/abs/10.1108/13673270710762684>
- [12] Rainier, R.K., & Turban, E. (2009). Introduction to information system: Enabling and transforming business. John Wiley and Sons, Inc.
- [13] Tan, J., & Peng, M. W. (2003). Organizational slack and firm performance during economic transitions: Two studies from an emerging economy. *Strategic Management Journal*, 24(13), 1249. Retrieved from <http://0-search.proquest.com.lib1000.dlsu.edu.ph/docview/225010659?accountid=28547>.
- [14] Ujari, P. U. (2002). Firm strategy and innovation: A contingent view of the impact of technology strategy, firm-level absorptive capacity and slack resources on technological innovation. Retrieved from <http://0-search.proquest.com.lib1000.dlsu.edu.ph/docview/275834761?accountid=28547>
- [15] Wang, C., & Ahmed, P. (2004). The development and validation of the organisational innovativeness construct using confirmatory factor analysis. *European journal of innovation management*, 7(4), 303-313.
- [16] Wonglimpiyarat, J. (2004). The use of strategies in managing technological innovation. *European journal of innovation management*, 7(3), 229-250.
- [17] Yin, R. (2014). Case Study Research Design and Methods (5th ed.). Thousand Oaks, California: Sage Publications, Inc.
- [18] Zinn, J., & Flood, A.B. Slack resources in health care organizations: Fat to be trimmed or muscle to be exercised? *Health services research*, 44(3), 812-820. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2699909/>