[1] **Dr. Harvey T. Ong**

The Impact of Management Information System's Organizational Slack to Syngenta Company

Abstract: - Management information systems (MIS) is the usage of information systems at the operational, tactical, and strategic levels so that businesses are aided in the achievement of goals. (Oprea, 2007) While the use of MIS is already quite common, its many benefits have lately piqued the interest of researchers particularly on the phenomenon of slack. Companies typically prefer to remove slack as it has suffered from a negative reputation. However, recent studies by Bae and Rhee (2014) as well as by Heng, Ding, Guo, and Luo (2014) have shown that slack actually leads to innovation. It is because of these interesting discoveries that pushed the proponent to conduct a study on the contribution of organizational slack towards the innovative performance of Syngenta company. Survey were gathered to provide the needed information. Key informants were likewise interviewed in order to generate additional insights about the variables under investigation. The results showed convincingly that slack affects the innovation of the company. However, some effects of the slacks were positive and some were negative. The recommendations put forward by this research is that JDI should maximize its innovation, they should reduce both absorbed and unabsorbed slack as much as possible since slack and innovation are inversely proportional in JDI's case. As long as they cut back on excessive spending on equipment and make use of their spare resources like reserve funds, then the innovation the company will surely improve.

Keywords: Absorbed Slacks, Unabsorbed Slacks, Management Information Systems, Innovation.

I. INTRODUCTION

1.1 Background of the Study

Management information system contributes to the effectiveness and efficiency of organizations by providing relevant information for sound decision-making and by assisting in making necessary changes in the organizational plans and procedures. This is supported by the study of Adonie, Russo, and Dean (2007) that relevant information through the use of MIS can provide recommendation to enhance products and allows the organizations to gain competitive advantage in this fast changing environment. The effects of MIS can be seen from the perspective of customer service, and financial and operations management of firms. De Queiroz and Olveria (2014) also support this, stating that companies such as clothing retail businesses are searching for such technology that gives them more flexibility and smoothens operations, as well as gives them a competitive advantage over their current competitors and soon-to-be competitors.

1.2 Rationale of the Study

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

Despite its negative connotations, organizational slack can actually have a positive effect on companies. Some researchers have shown that slack in organizations have proven to be 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 work week 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 case of emergencies, such as the need for repairing equipment, sudden change in supply and demand, or changes in the economic environment. Improving the creativity of employees and other such positive effects of organizational slack can lead to more ways on how 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 determined if organizational slack is indeed beneficial to companies, particularly companies under the home improvement industry in the Philippines. Unsurprisingly, slack has a negative implication on industry practitioners and business owners in the Philippines but using it as an opportunity to innovate can

[1] De La Salle University – Manila, Decision Sciences and Innovation Department, 2041 Taft Ave., Manila, PHILIPPINES.
Harvey.Ong@dlsu.edu.ph

greatly improve the performance of organizations. The researchers likewise aims to know how organizational slack can help in the long-term plans of companies so that their presence in the market can be further strengthened. In the end, this study is important for it can help small- and medium-enterprise owners increase their competitive advantage through a phenomenon which conventional wisdom told them to eliminate.

1.3 Statement of the Problem

When using Management Information System, what are the organizational slacks that can be produced by Syngenta company and its impact ?

1.4 Objectives of the Study

MIS is a system that collects and processes data and provides it to managers at all levels for decision-making, planning, and implementation (Michalek, 2006). The purpose of this research is to discover the organization slacks that can be produced by Syngenta's MIS.

1.5 Significance of the Study

The study offered significant information concerning the organizational slacks that being produced by Syngenta company when using their MIS. The results of the study revealed important information for the benefit of the following entities:

- Home and Garden Industry

Organizational effectiveness and efficiency are something all companies want to maximize and with the current rise of MIS in business models, it is important to see the impact that MIS holds in many regards namely customer satisfaction, operational management, and financial investments. Other organizations could easily apply the information gathered from this research to improve their performances and strengthen their market positions.

- Companies involved in the study

Syngenta Company, being the sole respondent of the paper, stands to gain the most since the data gathered and recommendations given will be tailored to Syngenta's needs. Whether MIS actually improves effectiveness and efficiency and to what extent it impacts customer satisfaction, operational management, and financial investment will all prove to be vital information.

- Academe

There have been several empirical studies arguing the influence of MIS, there is also scant literature in the Philippine setting regarding these topics. This study added to the existing literature will help improve the quality of dissertations with similar topics, especially in the same industry.

- Future Researchers

This research could give additional information to future researchers for their studies as this can be used as a comparison or base article for the further continuation of this study. Others could identify possible research gaps in this study, so they could make improvements to their research.

1.6 Scope and Limitation

The following were included in the study:

- Syngenta Company is the sole respondent of this dissertation
- Management information systems (MIS) from Syngenta were used as the basis of the study.
- Interviews regarding the Syngenta company's organizational slacks and the use of MIS was conducted with involved department heads.
- Surveys regarding the organizational slacks were conducted, and respondents included both internal and external users (for applicable variables) of the chosen company.

On the other hand, this study is limited to the following:

- Other industries and other companies from the same industry that also utilize MIS were not included so a more focused scope can be achieved.
- This study is only limited to the Philippines due to obvious logistical and cost constraints.
- Factors outside MIS were disregarded or just scantly considered.
- Some information requested from the company was deemed too confidential and was not disclosed by the key informants; these included financial records, specific names of their MIS and their developers, and a variety of sensitive company documents.

II. REVIEW OF RELATED LITERATURE

Organizational slack has been known to be affected by the results of man's desire for efficiency, which is heavily improved by the use of technology, this section talks about organizational slack which is believed to be affected by MIS, a connection that will be discussed in more details on a latter part of the study. Organizational slack is the cushion of actual or potential resources for an organization that allows them to be more flexible should any unexpected situation occur (Daniel et al., 2004). This also helps the organization formulate strategic plans without overlooking possible external stimulus.

Organizational slack represents potentially utilizable resources that can be redeployed to achieve the firm's goals (Daniel et al., 2004). It can be divided into (1) absorbed slack (such as underutilized capacity) and (2) unabsorbed slack (such as currently uncommitted cash flows and untapped lines of credit). By definition, absorbed slack is not easy to be redeployed, and unabsorbed slack is more flexible and more easily redeployable. Therefore, unabsorbed slack allows for greater CEO discretion.

Absorbed slack is the type of slack that corresponds to excess amounts of cost in organizations (Tan & Peng, 2003). Compared to other types, absorbed slack is not easy to deploy as it is difficult to recover. Tan and Peng (2003) stated that major repair funds are *"designated for repairs of large equipments, typically has little alternative use other than its designated purpose. This is because in many cases machines are used well after they are fully appreciated, and repair costs are very high"* whereas accounts payable is often used by managers as a way of delaying payments. Chen & Huang (2010) mentions that absorbed slack give individuals necessary things that allow them to be more innovative and creative, such as space, time, and opportunities to test out their ideas and findings. Absorbed slack acts as a safety net for some employees and makes them feel less pressured about their tasks, this in turn promotes a relaxed yet efficient working environment and boosts overall productivity as well as innovation in some cases.

Unlike absorbed slack, unabsorbed slack is easy to deploy. Depreciation funds are originally designated for capital investment, however, in practice; it is often used to cover various unanticipated needs. They argued that "these resources are not tied with current production, and become unabsorbed slack" (Tan & Peng, 2003). Another example of unabsorbed slack is the reserve fund. This fund is specifically assigned for daily operations. Reserve funds are also one of the most liquid and flexible resources that managers can utilize. Loans are associated with discretionary purposes. Sales expenses are considered as major source of managers to cover various payments such as possible gifts and in some cases even bribes. Like loans, firms have a great deal of discretion on retained earnings, thus, making these as strongest form of unabsorbed slack. To put in simpler terms, unabsorbed slack represents untapped resources and not yet been designated for particular purposes, most common examples include pools of capital to fund innovation or increases in dividend payments to stockholders.

III. FRAMEWORK

3.1 Theoretical Framework

3.1.1 Types of Management Information Systems (MIS)

The four categories of management information systems are based on the level of support that the information system provides in the process of decision-making.

Databank Information System is responsible for observing, classifying, and storing any data item that can potentially be useful to the decision maker. The information from the databank system is only suggestive and it is best for unstructured decisions.

The Predictive Information System provides data and information as well as predictions and inferences. This system assists decision-makers in answering "what if" questions and it verifies if the underlying assumptions are true. Hence, this type of MIS is catered toward semi-structured decisions.

The Decision-making Information System gives professional or expert recommendations to managers in the form of a single recommended course of action or a list of possible courses of action, all of which are according to the value system of the organization. A decision-maker only has to approve, deny or modify the recommendation, hence, making decision-making faster yet still accurate. The decision-making information system is more suitable for structured decisions.

Lastly, the Decision-Taking Information System is where the information and the decision maker are the same. It has both the abilities of the predictive information system and the decision-making information system. It is when the system is completely accurate that it creates decisions without actual managerial interference.

3.1.2 Organizational Slacks

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 as seen in Figure 1; their results show two major findings. When the firm size and firm age are controlled, both absorbed and unabsorbed slack have positive effects on technological innovation. And *environmental uncertainty negatively moderates the relationship between absorbed slack and technological innovation while the environmental uncertainty had no moderating effect 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 actually aid in technological innovation and may contribute to better performance.

In addition, slack resources play significant role on 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 for innovation, only the slack resources variable was a very strong predictor of innovation on its own, regardless of the other variables.

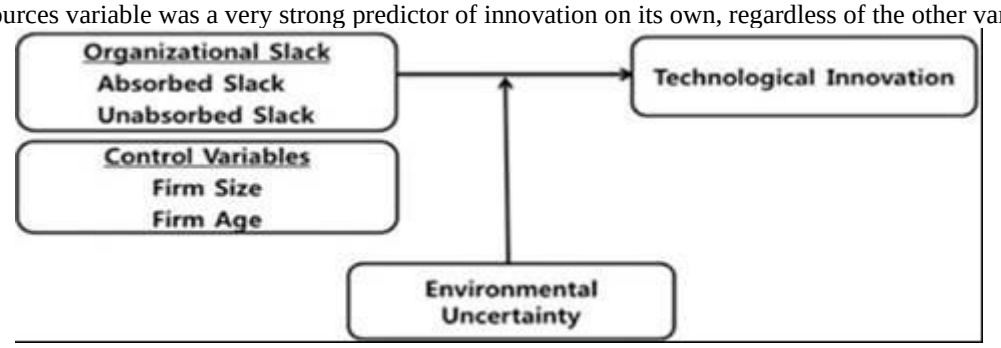


Figure 1 : Conceptual Model on Slack-Innovation Relationship (Bae& Rhee, 2014)

In Figure 2, it shows that Heng, Ding, Guo, and Luo (2014) also did a research on the relationship of organizational slack and innovation. They constructed a conceptual model (Figure 3.2) that links organizational slacks, entrepreneurial orientation and product innovativeness together, based on the insights from both resource-based view (RBV) and dynamic capability theory (DCT). Through drawing implications from both RBV and DCT, their study not only gives a more holistic perspective on slack but also helps firms to achieve the innovation implications of Entrepreneurial orientation (EO) by its moderating impacts on slack – innovation linkage. From its review of related literature, on the first part it points out that the absorbed slacks as resources can be substitutable with other resources that are less constrained in the redeployment factor, while the unabsorbed slacks as resources cannot be substitutable with resources such as absorbed slack. From its second set of review of related literature, it points out that when adding entrepreneurial orientation as the moderator, the relationship between two types of slack and product innovativeness becomes highly responsive.

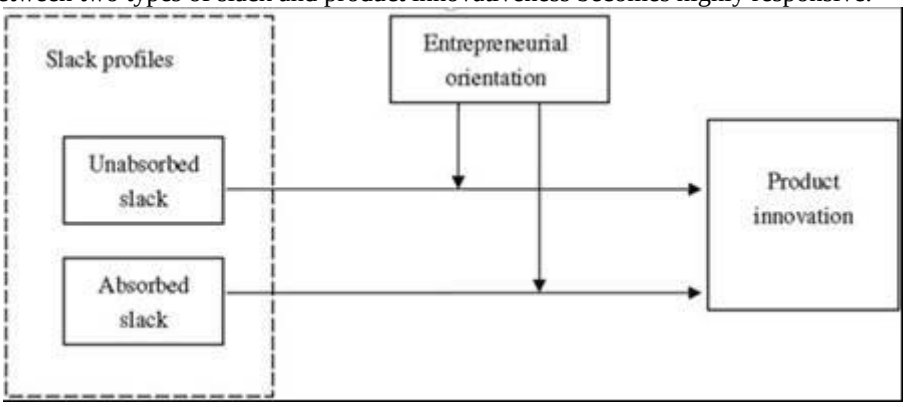
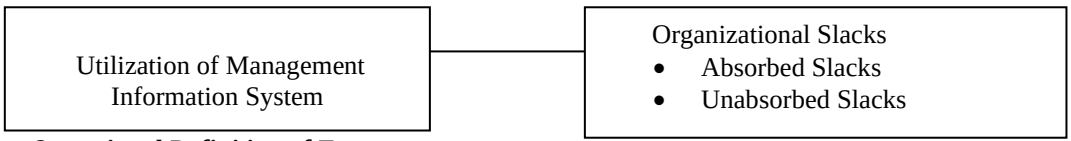


Figure 2 : Conceptual Model on Slack-Innovation Relationship (Heng et al., 2014)

3.2 Operational Framework



3.3 Operational Definition of Terms

- Absorbed Slack - a type of slack that corresponds to excess amount of cost in organizations
- Hardware – these are the physical components of the computer that enables it to run a mix of programs and processes called software
- Home and Garden – a type of industry associated with housing and gardening
- Industry – a group of companies providing the same or similar goods and/or services
- Management Information System (MIS) – a computer-based system that provides upper management tools to evaluate and make decisions
- Organizational Slack – *"pool of resources in an organization that is in excess of the minimum necessary to produce a given level of organizational output."* (Bae and Rhee, 2014)
- Unabsorbed Slack - a type of slack where resources are untapped and has not been designated for particular purposes

- Utilization – to make effective use of something

IV. RESEARCH METHODOLOGY

4.1 Research Design

This mixed-method study used the single-embedded case study design in gathering as well as analyzing data. Methods to gather both quantitative and qualitative data included surveys, participation-observation, and fieldwork. The survey was used in the study as it can gather data from a large population in a relatively convenient and efficient manner. Surveys are systematic, self-monitoring, and representative as it is often used in research studies (Burton, 2007). Survey as a methodology studies the sampling of individual units from a population and constructs questionnaires as a form of quantitative data collection. On the other hand, participation-observation was also used in the study. Burton (2007) defined participant observation as the systematic description of behaviors in a social setting of a chosen study. Furthermore, survey forms were also deployed to assess the management information system (MIS) efficiency and effectiveness in an organization. The researcher also chose to do fieldwork for this study since it is often used to monitor human behaviors in natural conditions of their daily life (Basinska, 2012). Hence, the researcher is closer to the real world and thus gains from immediate contact with the respondents. It is one of the best ways to discover the particular information required and to answer research problems.

Basinska (2012) emphasized the importance of fieldwork especially in data gathering in different organizations as it allows the researcher to interact, understand the people in the company, and see problems that cannot be extracted from interviews. Through the use of the data from the surveys and interviews, the proponent used descriptive analysis for this study. 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 from it; it is done by plotting the variables or sub-variables to be used against the different cases of the study.

4.2 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 Syngenta's Company which is in the home and garden industry of the home improvement category. The Company was screened to make sure that they have 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.

4.3 Method of Data Analysis

According to Creswell (2009), there are different approaches in a mixed method data analysis. In concurrent strategies, data can be transformed to 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 the qualitative data. Information in the cells could be either quotes, counts of the number of codes, or some combination. The matrix would be able to present an analysis of the combined data.

V. RESEARCH FINDINGS

5.1 Initial Analysis

As mentioned in the previous chapter, the researcher used self-administered questionnaires in gathering data from both the staff and customers of Syngenta. Afterwards, in-depth interviews were conducted with the IT heads of the company so that their insights can be gathered. Both quantitative and qualitative data were collected, internal customers from the respondent companies were invited to answer the survey on organizational slacks when using MIS.

5.2 Demographic Profile

5.2.1 Company Background

Syngenta brings customers integrated solutions and innovative products, helping them to improve farms through more efficient use of resources and higher yields. The main focus of their business is creating solutions for farmers, to deliver above-market growth and higher profitability. Syngenta creates a constant flow of innovation leading to new products, developing integrated offers that meet the needs of growers and operating efficiently to improve margins. Their business model integrates with farmers and growers to meet the ever-increasing demand for food and other plant-based resources such as bio-fuels. The main drive of the organization is to help humanity face its toughest challenge: how to feed a rising population and sustainability. The demand for greater quality and quantity is rising, and it must be met without putting further on already stretched resources.

Syngenta offers eight major crops that make up the majority of global food production: cereals, corn, diverse field crops, rice, soybean, specialty crops, sugar cane, and vegetables, plus our Lawn and Garden portfolio. Innovation and ethical operations are the heart of our businesses. The research and development lead the agricultural study. Corporate Responsibility includes environment, labor practices, and human rights-adheres to the Global Reporting Initiative (GRI), which helps businesses communicate their impact on sustainability issues.

The organization addresses farming challenges using various technologies, alone or in combination, with six areas of research. Their innovation centers on chemicals, such as spray or seed treatment, native trait breeding, and genetic modification. They use the most advanced technology such as biological, which include naturally occurring organisms, and RNAi, a naturally occurring process that happens in a cell of plants, animals, and people. The heart of the organization is the Good Growth Plan, which to face food challenges and security-which depends on sustainable resources, healthy ecosystems, and thriving rural communities.

5.2.2 Company Respondents Profiling

As the company backgrounds have already been established in the previous chapter, Table 1 shows the demographic profile of respondents from each company. The table also includes the profile of each IT manager (or its equivalent) who was selected for the interview. The internal respondents of the study were the IT managers of the respective companies and the users of the MIS while the external respondents of the study are the customers who avail of each company's products and/or services.

Table 1 : Syngenta Respondent Profile

Company Name	**Internal Respondents**		**External Respondents**	
Syngenta	Freq count	% share	Freq count	% share
1. Location				
Warehouse	15	31.91%	N/A	N/A
Office	32	68.09%	N/A	N/A
2. Age				
18-25	3	6.38%	8	29.63%
26-30	16	34.04%	5	18.52%
31-35	10	21.28%	4	14.81%
36-40	5	10.64%	5	18.52%
41-45	8	17.02%	5	18.52%
46-50	5	10.64%	0	0%
51-55	0	0%	0	0%
56-60	0	0%	0	0%
3. Gender				
Male	20	42.55%	12	44.44%
Female	27	57.45%	15	55.56%
Syngenta	**Name**		**Rank**	
4. IT Representative	Stephen Jones Sumulong		IT Manager	

5.2.3 MIS Initial Analysis

Table 2 : MIS Analysis

	Syngenta
Website	http://www.fda.gov.ph/industry-corner/household-urban-hazardous-and-cosmetic-industry-all-registered-household-urban-hazardous-toys-and-cosmetic-manufacturers-distributors-and-traders/household-urban-hazardous-distributor/346788-ccrr-ncr-huhsd-0385-346788

Types of MIS	Financial/Transactional and Human Resource
MIS Developer	Microsoft Dynamics Great Plains https://www.calszone.com/microsoft-dynamics-gp/
Investment of the MIS	Approx. Php 1,000,000
Manages Maintenance of MIS	Microsoft and company employees
Operations of MIS	8 hours a day for 5 days a week
Number of Users	47
Number of IT Personnel	5
Accounting MIS	Yes
Manufacturing MIS	Yes
Human Resources MIS	Yes
Marketing MIS	Yes

In Table 2, it shows that Syngenta's MIS is more on Inventory, Transactional, and Human Resource types. They acquired it for approximately Php 2,000,000 which includes the software development (planning and designing) and implementation (training) and hardware (computers, routers, etc.). However, they refused to disclose the name of the vendor of their system and it was developed along with the inputs of the company's IT team. Due to the company being multinational and they need real time data, their system runs 24 hours a day, 7 days a week and is maintained by Stephen Jones Sumulong, as he was given a manual and troubleshooting guide in order to equip him with the tools to face any potential problems.

5.3 Organizational Slacks

Table 3 : Absorbed and Unabsorbed Slacks

Organizational Slack	**Syngenta Company**
Absorbed	Mean: 2.86 Mode: 3
Unabsorbed	Mean: 3.14 Mode: 3

Table 4 : Organizational Slack frequency table

Organizational Slack	Survey Questions	Local Company Syngenta (47)	
		Frequency	Share%
Absorbed Slack	1. The firm has been operating below engineered capacity.	1- 0 2- 10 3- 27 4- 10 5- 0	1- 0% 2- 21.28% 3- 57.45% 4- 21.28% 5- 0%
	2. The equipment have not reached their limits.	1- 0	1- 0%

		2- 22 3- 12 4- 13 5-0	2- 46.81% 3- 25.53% 4- 27.66% 5- 0%
	3. The productive capacity of the firm is not fully utilized by its employees.	1- 0 2- 21 3- 20 4- 6 5-0	1- 0% 2- 44.68% 3- 42.55% 4- 12.77% 5- 0%
	4. The firm always has accessible funds for major repairs.	1- 0 2- 3 3- 12 4- 32 5-0	1- 0% 2- 6.38% 3- 25.53% 4- 68.09% 5- 0%
	5. The firm has been having a hard time paying unsettled accounts.	1- 0 2- 19 3- 28 4- 0 5-0	1- 0% 2- 40.43% 3- 59.57% 4- 0% 5- 0%
	6. The firm has excess inventory funds.	1- 0 2- 16 3- 27 4- 4 5-0	1- 0% 2- 34.04% 3- 57.45% 4- 8.51% 5- 0%
	7. The firm has excess capacity.	1- 0 2- 14 3- 33 4- 0 5-0	1- 0% 2- 29.79% 3- 70.21% 4- 0% 5- 0%
	8. The firm has excess capital for general expenses.	1- 0 2- 12 3- 35 4- 0 5-0	1- 0% 2- 25.53% 3- 74.47% 4- 0% 5- 0%
Unabsorbed Slack	9. Retained earnings of the firm have been sufficient.	1- 0 2- 0 3- 30 4- 11 5-6	1- 0% 2- 0% 3- 63.83% 4- 23.40% 5- 12.77%
	10. A pool of financial resources can be used on a discretionary basis.	1- 0 2- 0	1- 0% 2- 0%

		3- 34 4- 6 5-7	3- 72.34% 4- 12.77% 5- 14.89%
	11. Necessary bank loans can be obtained.	1- 0 2- 0 3- 30 4- 10 5-7	1- 0% 2- 0% 3- 63.83% 4- 21.28% 5- 14.89%
	12. The firm has redundant employees.	1- 0 2- 5 3- 38 4- 4 5-0	1- 0% 2- 10.64% 3- 80.85% 4- 8.51% 5- 0%
	13. The firm has unused production capacity.	1- 0 2- 6 3- 36 4- 5 5-0	1- 0% 2- 12.77% 3- 76.60% 4- 10.64% 5- 0%
	14. The firm has unnecessary capital expenditures.	1- 0 2- 19 3- 28 4- 0 5-0	1- 0% 2- 40.43% 3- 59.57% 4- 0% 5- 0%
	15. The firm has unexploited opportunities.	1- 0 2- 5 3- 36 4- 6 5-0	1- 0% 2- 10.64% 3- 76.60% 4- 12.77% 5- 0%

In Table 3, it shows that for Syngenta Philippines, the mean score for the questions under Absorbed slack for had a score of 2.86 and a mode of 3. All the questions had a mean score response of disagree except for question number 4. Which means that the users disagree that The firm has been operating below engineered capacity, The equipment have not reached their limits, The productive capacity of the firm is not fully utilized by its employees, The firm has been having a hard time paying unsettled accounts, The firm has excess inventory funds, The firm has excess capacity, and that the firm has excess capital for general expenses. On the other hand, the users had a neutral response on question number 4 wherein the question was that firm always has accessible funds for major repairs.

For Syngenta Philippines, the mean score for the questions under Unabsorbed slack had a score of 3.14 and a mode of 3, as shown in Table 4. All the questions had a neutral response except for question number 14. Which means that the users feel neutral wherein the Retained earnings of the firm have been sufficient, A pool of financial resources can be used on a discretionary basis, Necessary bank loans can be obtained, The firm has redundant employees, The firm has unused production capacity and The firm has unexploited opportunities. On the other hand, the users agreed that the firm has unnecessary capital expenditures.

Organizational Slack Cross-case Analysis

Table 5: Organizational Slack *Cross-case Analysis*

Organizational Slack					
	IT Manager	Survey Respondents	Company Documents	Overall	Mean and Mode
Syngenta	Syngenta Philippines has been operating at near optimal capacity with its machines and manpower. Although this is the case, Syngenta Philippines has maintained a pool of financial resources that can be allocated on the top managers' discretion.	Most of the employees stayed neutral when asked if the firm has excess inventory funds and capacity. However, they have agreed that the firm has excess capital for their general expenses.	The company's output is nearing the maximum capacity of the current system and their documents show that they are currently searching for an additional system or even change it all.	The company has funds when there are expenses being incurred by the company. The response of the survey respondents and the interviewee are similar.	Mean: 3 Mode: 3

Table 5 shows that cross-case analysis of Organizational slack in Syngenta Philippines, and it has been operating at near optimal capacity with its machines and manpower. Although this is the case, Syngenta Philippines has maintained a pool of financial resources that can be allocated on the top managers' discretion.

Most of the employees disagreed and stayed neutral when asked if the firm has excess inventory funds and capacity. However, they have agreed that the firm has excess capital for their general expenses and the funds are accessible when funds are needed. Moreover, the employees agree that a pool of financial resources can be used on a discretionary basis and that necessary bank loans can be acquired. They disagreed that the firm has unused capacity and that they have redundant employees.

VI. CONCLUSION/OBSERVATION

Between absorbed and unabsorbed slack, both of them can influence specific types of innovation. Each type of slack influences the various types of innovation differently and some types of innovation are not even being influenced by these slacks. When comparing the two slacks it is apparent that absorbed slack affects innovation more for all of the companies. But not all effects from slack are positive.

Organizational Slack	**Syngenta Company**
Absorbed slack	• The firm has been operating below engineered capacity. • The firm always has accessible funds for major repairs.
Unabsorbed slack	• Retained earnings of the firm have been sufficient. • A pool of financial resources can be used on a discretionary basis. • Necessary bank loans can be obtained • The firm has unexploited opportunities.

Organizational slack is not so evident in Syngenta Philippines. Using the system has made the company run more efficiently, with only little slack to provide. The only slack abundant in Syngenta Philippines is financial resources. This is normal for all companies because this excess resource can be used in emergencies. It is hard to determine within Syngenta Philippines whether or not organizational slack has a positive impact to an organization. However, based from the survey and interview, organizational slack can either be positive or negative. There is an optimal point wherein organizational slack can have positive impacts before it can do the opposite.

Therefore it can be concluded that organizational slack can contribute to customer satisfaction, operational management, and financial investment, but the effects of absorbed slack can either promote organizational effectivity and efficiency or hinder it.

For Syngenta Philippines, in terms of effectivity and efficiency in operational management, it is confirmed through the interview and survey that due to the implementation of the system, Syngenta Philippines

is able to function smoothly. The internal and external customers are also giving positive feedback regarding the system. In the words of the IT Manager, the users are given ease in their workload and also some peace of mind.

VII. RECOMMENDATION

After a thorough analysis, the researcher would like to propose several recommendations.

- *Syngenta*

While Syngenta's innovation is the least affected by slacks, but their absorbed slack still promotes marketing innovation. It is recommended that they invest more on permanent purchases such as equipment and machinery since this will drive up absorbed slack and offer more strategic decisions for management. As Syngenta's system is currently at maximum output, it is advisable that they invest in another MIS so that the workload will be divided. By doing so they will increase absorbed slack as well as marketing innovation.

Management should implement a random inspection for system usage since it has been mentioned that some employees have been too lax in checking their work due to being over-reliant to the system.

- Home and Garden Industry

As revealed by the companies in the study, the MIS helped them make their data more accessible and secure. The use of MIS vastly increased their productivity and improved the overall process of the system. Thus other companies may opt to start using MIS if they have not yet done so; and if they currently use MIS, it would be advisable to keep up with the updates of the system.

- Academe

There have been several studies arguing the influence of MIS, and whether organizational slack is beneficial or not. Additionally, there is scant literature in the Philippine setting regarding these topics. But after the gathering and analyzing of data for surveys and interviews, there have been new data and information that has come to light. This might further enrich the literature already established regarding MIS, absorbed and unabsorbed slack, and innovation models. It is recommended that the academe further pursue studies along these topics.

- Future Researchers

Future researchers must take into consideration the size of the company they are studying. Big companies will have little to no time to entertain such extensive scholarly undertakings. Future researchers must be patient with respondents and key informants since answering interviews and surveys will interrupt their work. It is also encouraged that future researchers do their best to improve the survey questionnaires as it was deemed too long by many respondents under the study.

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AUTHORS PROFILE

Dr. Harvey T. Ong (with the rank of Full Professor 2) is a full time faculty member of the Decision Sciences and Innovation Dept, RVR College of Business, De La Salle University. He was the former Chairperson of the Decision Sciences and Innovation Dept, RVR College of Business, De La Salle University. He was also the former Chairperson of Business Management Department of De La Salle University. He graduated with the degree of Bachelor of Science in Computer Science specialized in Software Technology (De La Salle University), Masters in Business Administration (De La Salle University) and Doctor of Philosophy in Business (De La Salle University). His expertise includes Management Information System, System Analysis and Design, Information Management, Project Management, Events Management, Entrepreneurship, Business Planning, and Business Mathematics.