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Management Innovation and Business Performance of Micro, Small, and Medium Enterprises in Cotabato City During the COVID-19 Pandemic

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Abstract: The micro, small and medium enterprises or the MSMEs are considered as the backbone of the Philippine economy because of its major contributions to the economic development particularly in the generation of income and employment.However, during this challenging and trying time, one of the most affected industries are the SME's in the country. This study determined the management innovation activities of the MSME's in Cotabato City during the time of pandemic and its relationship to business performance. Specifically, product innovation, process innovation, service innovation, and organizational innovation were analyzed in this study. Moreover, descriptive-correlational research design was utilized in this study and a total of 64 MSME owners were the respondents of this study. The results revealed that the product innovation has a significant moderate relationship with business performance. Thus, MSME owners are highly encouraged to improve their product innovation strategies like offering wide variety of products with utmost quality.

Keywords: *product innovation, management innovation, business performance, COVID-19 pandemic*

I. Introduction

After thorough assessments, the World Health Organization (WHO) has declared a pandemic caused by the coronavirus in March 2020. Moreover, this pandemic has brought drastic changes to everyday life across the globe. For instance, in the business industry, nothing could have ever prepared them for the hard hit effect of the COVID-19 crisis. Some of the effects of this crisis to the different enterprises are loss of profit, disruptions to supply chain, and the worst is business closure and bankruptcy.

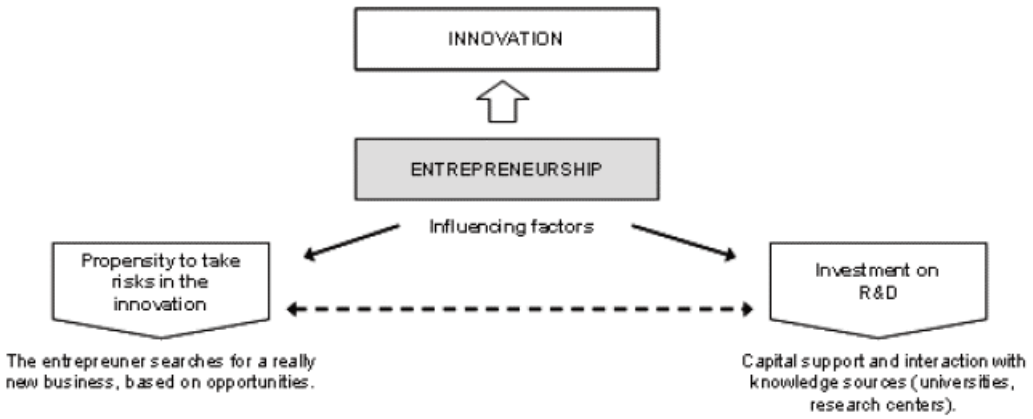
The micro, small and medium enterprises or the MSMEs are considered as the backbone of the Philippine economy because of its major contributions to the economic development particularly in the generation of income and employment. In 2017, the MSMEs in the country were accounted to 99.52% of the total establishments and generated 62.9% in the labor force. However, during this challenging and trying time, one of the most affected industries are the SME's in the country(https://psa.gov.ph/wholesale-retail/aspbi).

Nevertheless, some of the business owners have developed new strategies for business continuity and survival during this time of pandemic. According to Abrahamson (1996) and Kimberly (1981), innovation is the "new to the state of the art," which essentially means without known precedent. Moreover, approaches to innovation are the introducing of new technology, applying new products and services or procedures, developing new markets, and introducing new organizational styles (Drejer, 2004). For the business to sustain, Kotler(2003) stresses that there should be a constant innovation in an organization not just to meet the customer's satisfaction but also to reduce the costs or enhance consumer services and further improve the industry.

Theoretical Framework

This study was guided by the Entrepreneurship Innovation Theory of Joseph Schumpeter. This theory gives emphasis on the importance of entrepreneurs in the development process. According to Schumpeter, innovation develops when the business owner presents product in new form, uses unique production methods, offers to an emerging market, and discovers for good sources of raw materials (Bathla, 2013).

Figure 1.



Influencing Factors of the Entrepreneurship to Innovation

Schumpeter recognizes the significant impact of the business owners in the process of innovation. The vision and risk taking capacity of an individual can lead to organization structure and facilitate innovation process (Zawislak, Castro-Lucas & Souza, 2007). The entrepreneurs also chase for profit maximizing opportunities of the firm through research and development. This means that innovation is pivotal in the entrepreneurial model just as considered by Schumpeter (Zawislak, Borges, Wegner, Santos, & Castro-Lucas, 2008).

According to Venkataraman (1997) entrepreneurship varies from management as the entrepreneurship provides changes in the economic aspect. The entrepreneur utilizes resources that facilitate opportunity recognition and prepares the needed resources for the business. As the firm grows, the entrepreneurs' roles are gearing toward research and development. It means that the entrepreneurs become responsible not only to the routinely done functions but also to innovation (Zawislak et. al., 2008).

Conceptual Framework

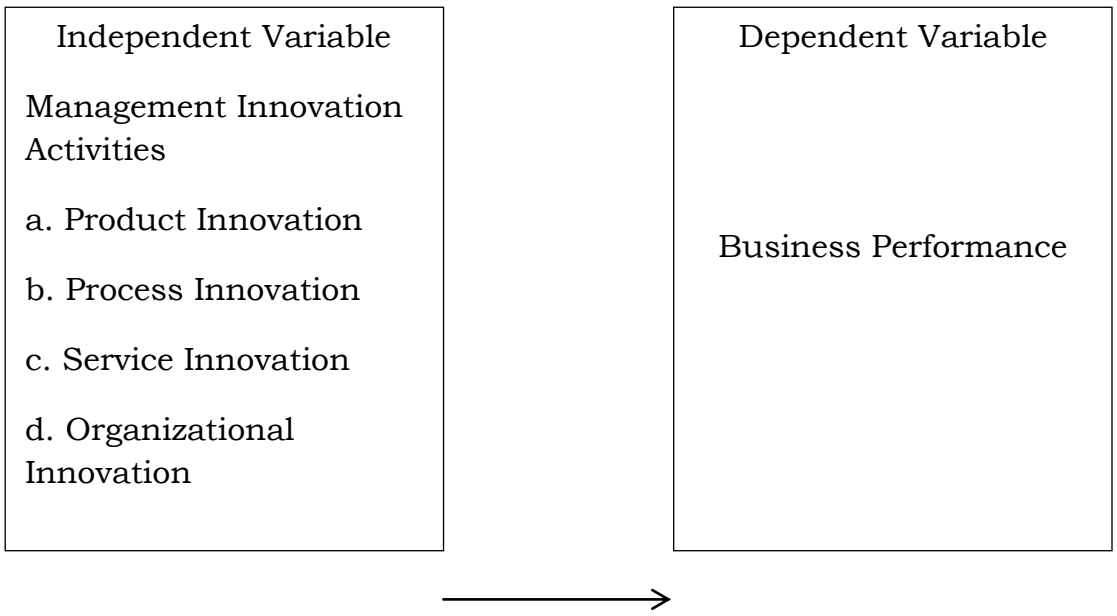


Figure 2. Conceptual Framework

This study utilized the Independent-Dependent Variable. Moreover, the independent variable refers to the Management Innovation Activities of the MSMEs in Cotabato City specifically in terms of product innovation, process innovation, service innovation, and organizational innovation during the time of COVID-19 pandemic. On the other hand, dependent variable refers to the business performance of the MSME's during the time of pandemic. A significant relationship was also studied between the management innovation activities and the business performance of the MSMEs in Cotabato City.

Statement of the Problem

This study determined the management innovation activities and the business performance of the MSMEs in Cotabato City during the COVID-19 Pandemic.

Specifically, this study answered the following questions:

1. What is the level of the management innovation activities of the respondents in terms of the following:
   a. Product Innovation
   b. Process Innovation
   c. Service Innovation
   d. Organizational Innovation
2. What is the level of business performance of the respondents during the time of COVID-19 Pandemic?
3. Is there a significant relationship between the management innovation activities and business performance of the respondents during the COVID-19 Pandemic?

Hypothesis

Ho1- There is no significant relationship between the management innovation activities (Product Innovation, Process Innovation, Service Innovation, and Organizational Innovation) to business performance.

Significance of the Study

The results of this study may be beneficial to the following:

a. **MSMEs-** the results of the study may provide them valuable information on the different management innovations that can be used for business continuity and survival.

b. **Potential Entrepreneurs-** the results of the study can provide them information that even in pandemic, business can still be viable with the adaptions of different management innovations.

c. **Department of Trade and Industry-** can provide then baseline information on the status of the different MSMEs in the city and extend considerable support to the MSMEs during this challenging time.

d. **Academe**-can provide information to the teachers and students who are inclined to business administration on the different management innovations used by the MSMEs.

e. **Future Researchers-**the results of the study can serve as a guide if they are interested in conducting researches related to management innovation and MSMEs.

Review of Related Literature and Studies

Management Innovation

Management innovation is defined as the integration of novelty in an organization. In a broader sense, it involves the uniqueness in the form, quality, and management of activities (Hargrave & Van de Ven, 2006; Van de Ven& Poole, 1995:512). Moreover, management innovation is the creation and implementation of new set of practices, processes, structures, or techniques in an organization. However, management innovation differs from traditional technological product and process models of innovation in that it relates to new organizational structures, administrative systems, management practices, processes and techniques (Birkinshaw et al 2008). Management innovation is viewed as potential source of competitive advantage (Battisti & Iona, 2009).

The OECD (2005) defines management innovation adapted in this paper includes the implementation of new organizational methods in a firm's business practices, workplace organization or external relations, and the implementation of new marketing methods involving significant changes in product design or packaging, product placement, product promotion or pricing. Some of the examples of management innovation are the following: (1) a new group of people hired to manage the technological innovation process of an organization primarily intended to improve the technological and product innovations, and to handle multiple product and market firms, (2) the implementation of new set of practices and processes for the purpose of improving production effectiveness and efficiency and in the end increasing customer satisfaction, (3) designing of new techniques for expanding investment and budgeting decisions, (4) creation of new organizational structure to increase employee initiatives, employee satisfaction, and informed decision-making.

In this study, management innovation shall be explored in the following contexts: product innovation, process innovation, marketing innovation, and organizational innovation. Product innovation is the adaption of new goods to offer in the market to ensure the firm's ability to survive and to improve the profit (Thom, 1990). Process innovation is the adaptions of new processes within the company to increase productivity, use of raw materials and energy, profit potential can be increase, and security at the place of work can be enhanced (Thom, 1990). Moreover, according to Hipp et al (2000) the process innovation refers to the application of new or important approaches to developing or creating new services. Gallouj (2002) defined service innovation as types of services which consumers acquired in certain places, different from the originally perceived ones, i.e. an organization offering services different from the ones consumers.Service innovation refers to the implementation of major improvements in the current services the

organization is offering (Hipp, et al, 2000). Organizational innovation refers to new management practices, new organization, new marketing and new corporate strategies (Battisti&Stoneman, 2010). In addition, Organizational innovation new organizational methods in a firm's business practices, workplace organization or external relations (OECD, 2005).

II. Research Methodology

This study utilized the descriptive-survey method to describe the different management innovation activities implemented by the respondents during the pandemic. Moreover, the extent of these management innovations was determined as well as its relationship to business performance leading it to become correlational study. The respondents of the study were the 64 selected owners of the different businesses in the city provided that they have a physical store. A modified survey questionnaire was used as a major tool in data gathering; enumerators were hired to ensure the process of data gathering. Moreover, personal interview was also conducted to validate the responses of the respondents. In terms of ethical consideration, before the conduct of the survey, the purpose of the research was explained to the respondents and they are free to participate in the survey. All the data that were gathered were treated objectively.

III. Results and Discussions

Table 1.1 shows the level of product innovation. It clearly shows that the respondents disagree that they offered a wide range of products and increased their market share. It was validated through the interview conducted with the respondents that the products that they offer and their customers remain to be the same before and during the pandemic. On the other hand, respondents agree that they offer higher quality of products, use different promotional strategies and implemented price changes.

Table 1.1 Product Innovation

Statement	Mean	Standard Deviation	Description
Offered wider range of products.	2.48	.756	Disagree
Increased market share.	2.45	.615	Disagree
Offered higher quality of products.	2.78	.766	Agree
Offered different promotional strategies.	2.67	.892	Agree
Offered price changes.	2.80	.769	Agree

1.0-1.75	Strongly Disagree
1.76-2.50	Disagree
2.51-3.25	Agree
3.26-4.0	Strongly Agree

Table 1.2 depicts the level of process innovation. It clearly shows that the respondents agree of higher flexibility of product with mean of 2.69; higher production capacity with mean of 2.78; lower labor cost per unit with the mean of 2.59; and fewer materials and energy produced per unit with the mean of 2.61. It was validated through the interview conducted with the respondents that there were months that they had to close their business and they had to lay off their workers leading to decrease labor cost and use of fewer materials and energy.

Table 1.2 Process Innovation

Statement	Mean	Standard Deviation	Description
Higher production flexibility for our products.	2.69	.753	Agree
Higher production capacity.	2.78	.678	Agree
Lower labor cost per unit.	2.59	.729	Agree
Fewer materials and energy produced per unit.	2.61	.704	Agree

1.0-1.75	Strongly Disagree
1.76-2.50	Disagree
2.51-3.25	Agree
3.26-4.0	Strongly Agree

Table 1.3 represents the level of service innovation. As depicted in the table, the respondents agree on that they have developed new techniques or channels for the promotion of their product with the mean of 2.81. Moreover, based

on the interview conducted, the respondents reiterated that they have to developed new strategies like online strategies to reach their clients. In addition, the respondents also agreed that they offered delivery services, offered higher quality of service, and developed new methods for establishing the prices of the service with the mean of 2.63, 3.08, and 2.73 respectively.The main reason why they have to implement these strategies is because of the emerging proliferation of online sellers selling products similar of their offering.

Table 1.3 Service Innovation

Statement	Mean	Standard Deviation	Description
Developed new techniques or channels for the promotion of the product	2.81	.871	Agree
Offered delivery services.	2.63	.845	Agree
Offered higher quality of service.	3.08	.697	Agree
Developed new methods for establishing the prices of the service.	2.73	.740	Agree

1.0-1.75	Strongly Disagree
1.76-2.50	Disagree
2.51-3.25	Agree
3.26-4.0	Strongly Agree

Table 1.4 displays the level of organizational innovation. As illustrated in the table, respondents agree on the new business practices in the organization; new knowledge management systems; new organizations method for the work places; and new business models for external relations. Based on the interview conducted, these things happened when the city opened its door for lesser restrictions leading for the re-opening of their businesses. Further, some of the new systems that they have implemented are the compliance of the minimum health protocols for their workers and customers.

Table 1.4 Organizational Innovation

Statement	Mean	Standard Deviation	Description
New business practices in the organization.	2.70	.706	Agree
New knowledge management systems to improve the use or exchange of information, knowledge and ability within the company.	2.69	.614	Agree
New organization methods for the work places in the company for the purpose of better distribution of responsibilities and decision making.	2.72	.629	Agree
New business models for external relations with other companies or public institutions.	2.64	.698	Agree

1.0-1.75	Strongly Disagree
1.76-2.50	Disagree
2.51-3.25	Agree
3.26-4.0	Strongly Agree

Table 2.1displays the level of business performance. As can be seen in the table, the respondents agree that they have increased their sales growth, maintained their market share, increased net profits, increased public image and increased customer loyalty. Based on the interview conducted, these things happened when the city opened its door for lesser restrictions leading for the re-opening of their businesses.

Table 2.1 Business Performance

Statement	Mean	Standard Deviation	Description
Increased sales growth.	2.55	.665	Agree
Maintained market share.	2.56	.710	Agree
Increased net profits.	2.55	.733	Agree
Increased public image.	2.75	.777	Agree
Increased customer loyalty.	3.03	.689	Agree

1.0-1.75	Strongly Disagree
1.76-2.50	Disagree
2.51-3.25	Agree
3.26-4.0	Strongly Agree

Table 3.1 presents the Correlation Matrix that depicts the strength and direction of the relationship between the independent variables and the dependent variable. The correlation coefficient can range in value from −1 to +1. The larger the absolute value of the coefficient, the stronger the relationship between the variables (Hair, et al., 2014). As shown in the table, the Pearson Correlation Coefficients ranges from .111-.592. The correlation coefficient of organizational innovation was .111 suggesting a slight correlation or the relationship between organizational innovation and business performance was so small. Moreover, the correlation coefficients of service innovation and process innovation were .340 and .333 respectively suggesting a low correlation or the relationship between these two independent variables and business performance was weak. However, the correlation coefficient of product innovation was .592 suggesting a moderate correlation or the relationship between product innovation and business performance was moderate.

The direction of the relationship was determined by the sign of the correlation coefficients. Since all of the correlation coefficients were positive, it simply means that for every unit increase in the each of the independent variable there is a corresponding unit increase in the dependent variable. Moreover, the significance of the correlations of the independent variables and the dependent variable was determined. Since the p-values were less than the significance level for the three independent variables such as the product innovation, service innovation and process innovation, it was concluded that the correlation for these three variables was significantly differ from zero.

Table 3.1 Correlation Matrix

Correlations						
		Business Performance	Product Innovation	Process Innovation	Service Innovation	Org'l Innovation
Pearson Correlation	Business Performance	1.000	.592	.333	.340	.111
	Product Innovation	.592	1.000	.538	.521	.242
	ProcessInnovation	.333	.538	1.000	.400	.291
	Service Innovation	.340	.521	.400	1.000	.523
	Organizational Innovation	.111	.242	.291	.523	1.000
Sig. (1-tailed)	Business Performance	.	.000	.004	.003	.191
	Product Innovation	.000	.	.000	.000	.027
	ProcessInnovation	.004	.000	.	.001	.010
	Service Innovation	.003	.000	.001	.	.000

	Organizational Innovation	.191	.027	.010	.000	.
N	Business Performance	64	64	64	64	64
	Product Innovation	64	64	64	64	64
	ProcessInnovation	64	64	64	64	64
	Service Innovation	64	64	64	64	64
	Organizational Innovation	64	64	64	64	64

Table 3.2 illustrates the model summary in which using the stepwise method only the product innovation was determined to be a significantly related with business performance. In the model, the R or the correlation coefficient was .592. This denotes the strength of the association of the single significant variable which was the product innovation to the dependent variable which was the business performance. The R or the correlation coefficient falls under the range of .40-.70 with the descriptive equivalent of moderate correlation or moderate relationship (Hair et al., 2014). In addition, since the R is positive, it simply means that the association between the independent variables and dependent variable is positively related or for every unit increase in the product innovation there is a corresponding unit increase in the business performance. With the revealed results, the null hypothesis was not accepted.

In connection, the R square or the coefficient of determination was .350 which indicates that 35.0% of the variation of business performance may be explained by the variation of the product innovation. Furthermore, the adjusted R square was .339 which implies that 33.9% of the variation in the dependent variable which was the business performance may be explained by the variation in the independent variable as adjusted for the number of independent variables being measured.

Table 3.2 Model Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.592[a]	.350	.339	.4324	.350	33.379	1	62	.000	2.073

a. Predictors: (Constant), ProductInnovation

b. Dependent Variable: Business Performance

Table 3.3 shows the ANOVA table that examines the significance of the model developed. As shown in the table, the F value of the model was 33.379 and considered significant with p-value < .05. This implies that the variable product innovation was significantly related to business performance.

Table 3.3 ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.240	1	6.240	33.379	.000[b]
	Residual	11.590	62	.187		
	Total	17.830	63			

a. Dependent Variable: Business Performance

b. Predictors: (Constant), ProductInnovation

Conclusions

1. The respondents disagree that they offered a wide range of products and increased their market share. The respondents agree that they offer higher quality of products, use different promotional strategies and implemented price changes.

2. The respondents agree of higher flexibility of product; higher production capacity; lower labor cost per unit; and fewer materials and energy produced per unit.

3. The respondents agree on that they have developed new techniques or channels for the promotion of their product. The respondents also agreed that they offered delivery services, offered higher quality of service, and developed new methods for establishing the prices of the service.

4. The respondents agree on the new business practices in the organization; new knowledge management systems; new organizations method for the work places; and new business models for external relations.

5. The respondents agree that they have increased their sales growth, maintained their market share, increased net profits, increased public image and increased customer loyalty.

6. The correlation coefficient of organizational innovation was .111 suggesting a slight correlation or the relationship between organizational innovation and business performance was so small. Moreover, the correlation coefficients of service innovation and process innovation were .340 and .333 respectively suggesting a low correlation or the relationship between these two independent variables and business performance was weak. However, the correlation coefficient of product innovation was .592 suggesting a moderate correlation or the relationship between product innovation and business performance was moderate.

7. The model summary in which using the stepwise method only the product innovation was determined to be a significant predictor of business performance. The R or the correlation coefficient was .592. This denotes the strength of the association of the single significant predictor which was the product innovation to the dependent variable which was the business performance. The R or the correlation coefficient falls under the range of .40-.70 with the descriptive equivalent of moderate correlation or moderate relationship (Hair et al., 2014). In addition, since the R is positive, it simply means that the association between the independent variables and dependent variable is positively related or for every unit increase in the product innovation there is a corresponding unit increase in the business performance.

IV. Recommendations

1. MSME owners shall enhance their product innovation strategies by offering wider range of products with utmost quality.
2. MSME owners shall be equipped different strategies to cope up with emerging trends of online marketing.
3. The Department of Trade and Industry can extend trainings and seminars of management innovations particularly in developing product innovations.
4. The Cotabato City State Polytechnic College-College of Business Administration can integrate the new strategies for online marketing to the students.

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