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Editorial Policy

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Objectives and Scope

The objective of the “*The Erudite*” is to publish semi-annually high quality qualitative and quantitative research abstracts and/or full papers in terms of novelty, contribution, style, and intellectual integrity in the areas of: (1) financial accounting and reporting; (2) management accounting; (3) accountancy education; (4) auditing, assurance, and information technology; and (5) business regulations.

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Compliance of Small Online Sellers on the Issuance of Revenue Regulations for Business Registration

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Abstract – The growth of E-commerce, specifically online sales and small online sellers during the pandemic, gives a basis for a lawmaker to catch up with the rapid growth of the digital economy. It brings into the tax fold and business registrations with the Revenue Memorandum Circular (RMC) 60-2020, reminding online sellers of their obligations. This study surveys one hundred (100) small online business owners in Metro Manila to determine the compliance level of small online sellers on the issuance of Revenue Regulations for Business Registration under Revenue Memorandum Circular (RMC) 60-2020 in different territorial coverage of the business name ranging from (1) Regional; (2) Municipal; and (3) Barangay. And to assess the impact of the issuance of the said circular to the small online business sellers. It utilized the descriptive survey method. The researchers have carefully examined the data gathered and summarized all findings, conclusions, and recommendations. The study shows that most online sellers tend to work hard and do some side business and their online business to cope with the business registration regulation. It has been determined that registering business names is likely to impact online sellers, particularly since most struggle in terms of financial capacity. Overall, the Business Name Registration compliance scale is commendable, implying that small online sellers are likely to comply with all the business policies per instruction of Revenue Memorandum Circular (RMC) 60-2020 for Online Sellers.

Keywords: *Business Name Registration, compliance level, impact, small online sellers, obligations*

Introduction

The global spread of the CoronaVirus (COVID-19) has put heavy pressure on the worldwide health crisis and the economic system. The widespread has taken a critical toll on economies and individuals of all countries and ages, from all walks of life, across the world. Both locally and internationally, social media and virtual gatherings have become the "new normal" as individuals endeavor to keep commonality in their lives amid pandemic limitations.

The recent report of Hootsuite and We Are Social showed that 64% of Filipino web clients are investing more time on social media, with 23% demonstrating an expanded movement in their online shopping movement. Business visionaries have grasped the computerized online shopping phenomenon, with consumers turning more to online shopping amid widespread limitations. Several E-commerce websites and applications are at the cutting edge of these online shopping platforms with anticipated surges in deals incomes in millions of pesos. Media and Technology in

the present have changed online trade exchanges into a boundless commercial center where conducting commerce has ended up more helpful and productive for both merchants and vendees. With the heave in online deals and business movement, the government aims to remind online dealers of their charge commitments, specifically in tax. According to the Bureau of Internal Revenue (BIR), under the issuance of Income Reminder Circular (RMC) No. 60-2020, their obligation is entitled "Obligations of People Conducting Trade Exchanges Through any Shapes of Electronic Media and Take note to Unregistered Businesses." The said circular essentially orders all trade proprietors locked in in an internet commerce stage in any computerized or electronic frame to enroll their businesses with the BIR and pay charges on their deals.

The increasing number of online businesses and online sellers is an opportunity for the country's economy and the entrepreneurs' finances. However, the compliance of Small Online Business Owners with Revenue Memorandum Circular (RMC) 60-2020 during the Covid-19 Pandemic is not yet determined. Thus, the researchers are interested in conducting the study to establish a baseline research data that would cater to the understanding of small online business owners accompanying business through any forms of electronic media regarding their compliance with the business policies, specifically the registration of their interaction with the Bureau of Internal Revenue (BIR).

Statement of the Problem

The study aimed to evaluate the compliance of small online sellers on the issuance of Revenue Regulations for Business Registration under Revenue Memorandum Circular (RMC) 60-2020 issued by the Bureau of Internal Revenue (BIR) on June 01, 2020, during the COVID-19 Pandemic.

Specifically, it aimed to answer the following questions:

1. How aware are the small online sellers of their obligation to comply with the new guidelines and processes of business registration imposed by the Revenue Memorandum Circular (RMC) 60-2020 in different business levels such as:
 - a. Regional
 - b. Municipal
 - c. Barangay
2. To what extent do small online sellers comply with all the business policies per instruction of Revenue Memorandum Circular (RMC) 60-2020 for Online Sellers?
3. How do Small Online Sellers cope with the requirements of Revenue Memorandum Circular (RMC) 60-2020 amid the COVID-19 Pandemic?

Research Framework

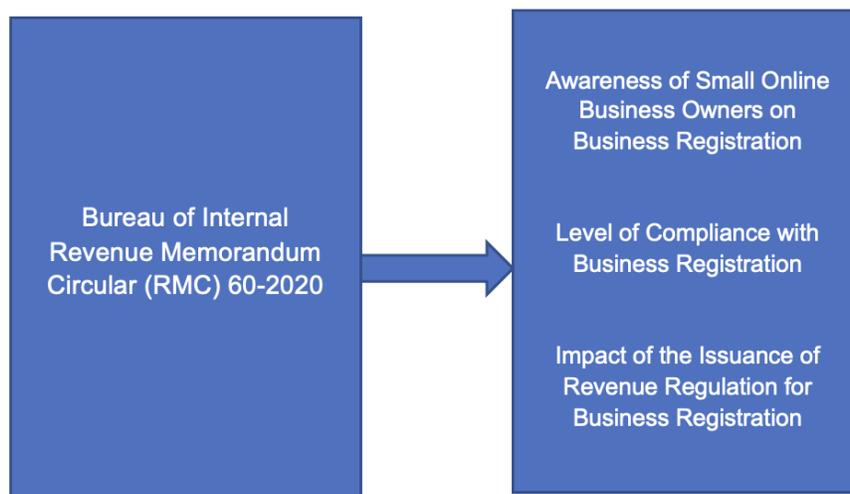


Figure 1. Research Paradigm

The research paradigm focuses on awareness, compliance with business registration, and the impact of the issuance of business regulations under the Bureau of Internal Revenue Memorandum Circular (RMC) 60-2020.

Review of Related Literature

Xinhua (2020), based on his study outcome, online business applications in the Philippines increased as more small entrepreneurs created business opportunities via the internet to profit due to enforced quarantine measures and restricted trips outdoors to prevent the spread of the deadly virus. The authors investigated the Philippines' Department of Trade and Industry (DTI), and the data showed that registration of online businesses surged more than 40 times to 75,876 as of September 2 from 1,753 recorded in January to March 15 before the local government placed Metro Manila and a large part of the economy under quarantine.

With this surge in online sales and business transactions, as people begin to rely on their needs and satisfaction with online sellers, the Bureau of Internal Revenue (BIR) set its sight on online shops due to their high increases in online sales and decided that online sellers enroll their businesses just like those with retail storefronts and impose Revenue Memorandum Circular No. 60-2020 which reminds the people who are locked in in an internet commerce stage in any frame, whether computerized or electronic, to register their businesses with the BIR and pay charges on their deals. As mentioned by Unciano (2020), in an attempt to clear confusion about the imposition of the Revenue Memorandum Circular No. 60-2020 entitled "Obligations of Persons Conducting Business Transactions Through any Forms of Electronic Media and Notice to Unregistered Businesses," registration of businesses with the Bureau of Internal Revenue (BIR) does not necessarily mean payment of income tax. However, all online sellers would still have to register or pay penalties regardless of income.

As Alejo et al. (2015) studied, 47% of their respondents viewed the registration fee as expensive, while 53% deemed the cost alright and reasonable. Half of the 763 respondents perceived that the business name registration fees are costly, making it one of the struggles for aspiring entrepreneurs to establish their businesses in the Philippines. Furthermore, the existing

process of Business Name Registration in the Philippines includes paying fees as required by the Department of Trade and Industry.

Moreover, in his findings, Rubio (2020) revealed that business registration of online businesses will affect small-business owners trying to make ends meet during the pandemic for having lost their jobs or companies and are now improvising on the internet. It could be more work than worth it for them, for they earn very little. They have to pay for business registration in the form of registration fees and other charges paid to the government and others involved in the registration process (such as notaries) and in the form of expenses and unrealized revenue arising from the time spent on the registration process instead of running the business.

However, Tobias (2020) argued that registering online business at the Bureau of Internal Revenue (BIR) does have some advantages. In particular, it lends the company a sense of legitimacy, giving customers peace of mind that they are transacting with someone trustworthy enough to be recognized by the BIR. Also, legitimizing one's business through registration makes it eligible to avail of loans, subsidies, and tax breaks from the Department of Trade and Industry (DTI) and other government agencies. Meanwhile, online businesses that operate without registration can be punished by massive fines, closure of the company, or even imprisonment.

Research Method

Researchers used quantitative research in this study. The study also adopted a descriptive type of research to determine the compliance level of small online sellers on the issuance of Revenue Regulations for business registration. This method included a survey method in which the respondents' answered questions administered through questionnaires, and the researchers described the responses.

The study respondents were small online sellers earning a yearly income of less than Php 250,000.

The survey questionnaire was distributed to respondents online using google forms. Researchers classified, tallied, and tabulated the collected data after the researchers retrieved the questionnaires. Data were subjected to statistical treatment to determine the validity of some ideas and possibly to answer the established questions.

Results and Discussion

This study aimed to evaluate the compliance of small online sellers on the issuance of Revenue Regulations for Business Registration under Revenue Memorandum Circular (RMC) 60-2020 issued by the Bureau of Internal Revenue (BIR) on June 01, 2020, during the COVID-19 pandemic.

Out of 100 population, only 66 percent are aware of Revenue Regulations for Business Registration under Revenue Memorandum Circular (RMC) 60-2020 issued by the Bureau of Internal Revenue (BIR). Accordingly, only 56 percent know about the content of the memo. Meanwhile, 85 percent of the respondents know business name registration regulations. 32.9 percent answered that they have already registered their business, and 21.2 percent answered: "In the process." However, having 21.2 percent answer "In the process" is the same as having an additional 21.2 percent registered business names. 54.1 percent (46 respondents) have complied with the business registration regulation, which is commendable.

Online sellers who have already registered their business name and those whose registration is still in the process, half of the total population applied to barangay as their business level mainly because it has the lowest Php 200, followed by municipal level. Meanwhile, the minority used at the regional level, which has the highest fee of Php 1000. However, the remaining respondents chose not to disclose what business level they have applied 45.9 percent (39 respondents) answered “No,” implying they have not registered their online business in the DTI office. Nevertheless, out of 39 respondents, 92.3 percent (36 respondents) answered that they plan to register their business names anytime soon.

Table 1. Compliance on Revenue Memorandum Circular RMC 60-2020

Descriptors	Mean	Interpretation
I am more willing to register my online business in the Department of Trade and Industry (DTI)	3.84	Likely to comply
I am thinking of complying and enlisting my online business to avoid penalties (i.e., fines and or closure of the company)	3.77	Likely to comply
I am going to comply and register to obtain all the privileges (i.e., legitimacy and protection)	3.88	Likely to comply
I will comply and register to continue operating my online business without worrying later about the required paperwork	3.84	Likely to comply
I will enlist my online business regardless of registration fees and the pandemic	3.60	Likely to comply
Composite Mean	3.79	Likely to comply

Table 1 shows the composite mean of 3.79, which concludes that small online sellers are *likely* to comply with all the business policies per instructions of Revenue Memorandum Circular (RMC) 60-2020.

Table 2. Impact to Small Online Sellers of the Revenue Memorandum Circular 60-2020

Descriptors	Mean	Interpretation
I try to work as hard as possible to earn enough income to pay for my business registration.	3.73	Likely to have an impact
I am motivated to register my online business and pursue making my online business grow	3.80	Likely to have an impact
I do side business in addition to my online business and plan on registering my business soon	3.44	Likely to have an impact
It does not bother me because I can comply with all the requirements anytime.	3.27	Neutral
I urge you to register my online business, but I still have insufficient money.	3.53	Likely to have an impact
Composite Mean	3.55	Likely to have an impact

Table 2 shows a composite mean of 3.55, affirming that registering an online business is *likely* to impact online sellers, particularly amidst the pandemic; most struggle in terms of financial capacity. Small online sellers tend to work hard and do some side business and their online business to earn enough money. Nevertheless, they are motivated to register their online business as they see it as a tool to pursue and expand their online business, with the highest weighted mean of 3.80 among the variables.

Conclusions

The study intended to know how aware the small online sellers are of their obligation to comply with the new guidelines and processes of business registration imposed by the Revenue Memorandum Circular (RMC) 60-2020 in different business levels can be found at the statement of the problem.

The overall scale of awareness of Business Name Registration is commendable; out of 100 respondents, 85 of them are aware of their obligation to register their business name in the Department of Trade and Industry (DTI), which shows the effectiveness of DTI in disseminating the information regarding the said regulation. 54.1% (46 respondents) have already complied with the business registration regulation, commendable. Accordingly, out of these 46 respondents, 53% (24 respondents) chose the Barangay level, 22% (10 respondents) chose the Municipal level, and 13% (6 respondents) chose the regional level.

Half of the respondents chose the Barangay level because among the three business levels, namely (1) Barangay; (2) Municipal; and (3) Regional, the Barangay level cost the lowest fee of Php 200 while the minority of 13% chose the regional level having the highest fee of Php 1,000. Additionally, all business registration fees must include a Php 30 documentary stamp. It shows that businesses already pay Php 230 to Php 1,030 from the business name registration alone.

The study affirms that small online sellers are likely to comply with all the business policies per instruction of Revenue Memorandum Circular (RMC) 60-2020 for Online Sellers, as shown by the following evidence.

Not just thriving and surviving during the COVID-19 Pandemic is the sole reason why respondents started an online business, but as well to create a company that fits their interest; 66% of the respondents answered that their motive for starting an online business is to make a living amid Pandemic; while 53% of the respondents answered what prompted them to start an online business is to create a company that fits their interest.

Despite the wide gap between the 85% who are aware of their obligation to register their business name in the Department of Trade and Industry and 15% who are not aware of the said obligation, 45.9% (39 respondents) answered “No” implying they haven’t registered their online business in the DTI office. However, out of 39 respondents, 92.3% (36 respondents) answered that they plan to write their business names anytime soon.

The overall Business Name Registration scale is commendable; 45.9% of the respondents answered “No,” implying they haven’t registered their online business; only 32.9% responded that they have already registered their company, and 21.2% answered, “In the process.” However, having 21.2% answer “In the process” is the same as having an additional 21.2% registered business names. 54.1% (46 respondents) have already complied with the business registration regulation, which is commendable.

The study intended to know how Small Online Sellers cope with the requirements of Revenue Memorandum Circular (RMC) 60-2020 amid the COVID-19 Pandemic.

Small online sellers tend to work hard and do some side business in addition to their online business to earn enough money, with a weighted mean of 3.44. Nevertheless, they are motivated to register their online business as they see it as a tool to pursue and expand their online business, with the highest weighted mean of 3.80 among the variables.

It also shows that registering their online business is likely to impact online sellers, particularly amidst the Pandemic; most of them struggle in terms of financial capacity gaining a weighted mean of 3.53. The respondents also indirectly raised an issue of quickly complying with the requirement because of the existing fees required to pay for registration. The Barangay level costs the lowest Php 200 while the regional level has the highest price of Php 1,000. Additionally, all business registration fees must include a Php 30 documentary stamp. It shows that businesses already pay Php 230 to Php 1,030 from the business name registration alone. Nevertheless, despite their concerns about fees and pandemics, they are willing to do their utmost to register their business as they anticipate seeing their online business grow soon.

Recommendations

Based on the findings of this study, the following recommendations are given:

1. A simple and inexpensive business registration process is considered a critically important component of the business environment and is vital for small business owners; that is why the researchers find it necessary to reduce the registration cost. It will boost the creation of firms in the Philippines.
2. Students must be aware of legal and regulatory requirements to avoid penalties in starting a business. The pressure of needs might be expensive, but knowing this critical business information will give them an edge in the industry. Hence, the researchers recommend that

students allocate and give importance to the business requirements and regulations in the Philippines.

3. There is a need to review the requirements required by the Department of Finance because it serves as a predicament in the existing process. Suppose the necessary documents are minimized, and essential documents are required, making it easier for small online business owners and entrepreneurs to comply. In that case, it will boost business creation (traditional or online), making them motivated.
4. There is a need to improve the dissemination strategy of the Department of Trade and Industry because it serves as a quotient in increasing the existing figure of business name registrants. Suppose they extend and organize seminars and workshops discussing the benefits and advantages of registering business names. It will create more opportunities for small online business owners and entrepreneurs, thus further motivating them to establish and enlist their businesses name.
5. Before operating a business, small online business owners should be responsible enough to register their business name in the Department of Trade and Industry. One of their legal obligations is to know the basic legal and regulatory requirements for starting a small business. Compliance with Revenue Memorandum Circular (RMC) 60-2020 is crucial, particularly in this time of Pandemic. After all, doing so will give them a business advantage.
6. Further research should be conducted to investigate further the totality of online sellers' compliance levels on the Revenue Regulation for Business Registration. However, it should include a larger sample size not only limited to Metro Manila, as they could apply a similar study to other geographical areas and conduct this study using respondents from large-scale enterprises.

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Impact of CPA Licensure Examination National Passing Percentage to Students and Reviewees

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Abstract – It is evident that there is a national trend on the passing percentage in the Certified Public Accountant (CPA) Licensure Examination in the Philippines. This study aimed to determine the impact of the declining trend on the program choice of students, level of preparation of the board reviewees; and identify the established practices of respondents. One hundred thirteen (113) respondents composed of sixty-two (62) 1st and 2nd year accountancy students of Technological Institute of the Philippines-Manila, and fifty-one (51) board reviewees residing in the National Capital Region were considered in this study. A survey questionnaire was administered and distributed online using Google forms. The study employed descriptive statistics such as frequency counts, percentages, and weighted means as statistical tools. Results showed that there's a low impact on the student's interest in the program as never thought of shifting to another program; their interest and satisfaction with their chosen program; and their determination and motivation to pursue the program; low impact was also reflected on their capability to continue the program as confidence in qualifying the profession, never losing hope on being capable with their program, and certainty that they have potential and ability to continue their chosen program. However, there's an overall high impact on the level of preparation among board reviewees. The result, furthermore, identifies that there are established practices among the respondents. Altogether, the overall response of the respondents is greatly impacted by their awareness of the national passing percentage of CPALE.

Keywords: *Certified Public Accountant Licensure Examination, Declining Trend, Program choice, Level of Preparation, Established Practices*

INTRODUCTION

The quality of education offered in a certain college or institution is frequently determined by the graduates it produces. In like way, the quality of graduates delivered by an institution is measured by their execution in board examinations. This execution based on the rate of passing within the licensure examination serves as an indicator that gauges the quality of education they obtained in a specific school. Agreeing to Dr. John S. Bala, the Vice Chairman of the Board of Accountancy, the CPA board exam is one of the most difficult government Licensure examinations

in the Philippines in terms of the low national passing rates as compared to other government licensure examinations.

Licensure is the mark of a professional. It could be a standard that's recognized by the government and by the public to present benchmarks of greatness, rules of behavior, rules of enlistment, and measures of assurance of its individuals. It guarantees a tall sense of devotion, obligation, expertise and quality towards one's professions.

Admittedly, the CPA Licensure Exam (CPALE) is one of the hardest exams to pass. Each year, thousands of examinees try to pass this test and have the title CPA after their names. And each year, there was a decrease within the passing rate of the Examination Result but still, the number of examinees is continuously increasing.

To be a Certified Public Accountant (CPA) is a desire for any graduate with a Bachelor's Degree in Accountancy. CPAs are multi-talented professionals and are viewed as an influential group of professionals (Tan, 2014). Also, CPAs are valued and appreciated by their companions, customers, and society and add renown and regard. In any case, the factors that may impact the exhibition of the accountant to be CPA can be isolated into two classes, specifically factors identified with the up-and-comer and factors identified with the test.

It was observed for the past five years, specifically school years 2015 to 2019, that the national passing performance in the board examinations were poor, and unstable, and based on consensus, most of the schools and universities did not get a 100% passing percentage, especially the top-performing schools. Comparing the average rating for the 10 examinations from May 2015 to October 2019 of 31%, this result is far below the other profession's board examinations of at least 35% passing percentage. Based on the data provided by the Professional Regulation Commission, the trend in the board examination performance for the past five (5) years from May 2015 to October 2019 with (10) board examinations conducted by the Commission showed low performance.

It also clearly showed that no matter the results were consistently declining still, the number of examinees in certain examination periods was continuously increasing. So, this study aimed to determine the impact of CPALE results in terms with the decision of the students as well as the board reviewees to continue striving and compete in the CPA Licensure Examination. The results have to do with accountancy students' program choice, its effect on the level of preparation of board reviewees, and lastly, identify the established practices of accountancy students and board reviewees due to the CPALE's passing percentage.

Statement of the Problem

This study aimed to examine the impact of the CPA licensure examination national passing percentage on the accountancy students and board reviewees. Specifically, it aimed to answer the following questions:

1. How does the CPALE's passing percentage impact the program choice of accountancy students;
 - a. Interest in the Program
 - b. Capability to continue the program
2. How does the CPALE's passing percentage impact the level of preparation of board reviewees in terms of;
 - a. Time Management
 - b. Supplementary study
 - c. Commitment to study

3. What are the established practices of Accountancy students and board reviewees due to the CPALE's passing percentage of the following;
 - a. Group Study
 - b. Practice Testing
 - c. Organized Review Materials
 - d. Review Schedule

Research Framework

The framework of the study was anchored on the Weiner's (2005) Attribution Theory which will be the guide to know the effect or identify the impact of knowing the CPA Licensure Examination Passing Percentage on the behavior of the students in their decision making of continuing or not the program. Moreover, when these causal factors are identified and a causal model is thus created.

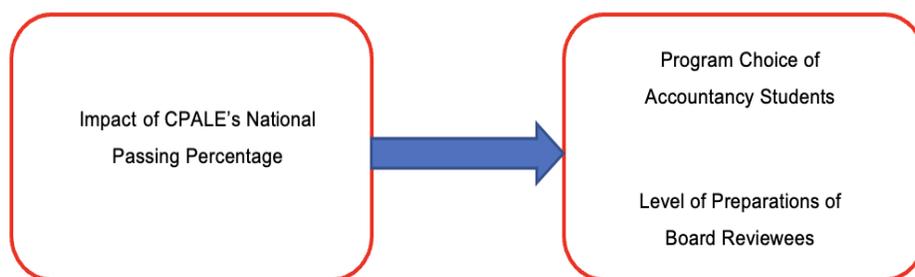


Figure 1. Research Paradigm of the Study

Figure 1 shows the impact of CPALE's National Passing Percentage on the program choice of accountancy students and the level of preparation of board reviewees.

Review of Related Literature

As indicated by Reilly and Stettler (1972), the applicants' evaluation point in school courses is the main logical variable that influences accomplishment on the CPA assessment. College undergraduates will in general choose course majors and professions in regions where they feel more certain to contend and dominate (Pajares, 2006). Likewise, Gushue et al. (2006) set that fearlessness in settling on profession related choices gives undergraduates a superior feeling of their capacities, which impacts undergraduates' probability to embrace or take part in exercises identified with the vocation they are sure about.

Moreover, Hsieh et al. (2007) recommend that undergraduates with higher trust in their capacities are by and large willing to persevere despite affliction, and this impacts their selections of assignments. As Chemers et al. (2001) induced, individuals with trust in their capacities are tough, able to invest additional exertion and can adapt to the requests related with the picked course of action. Hence, the viability of undergraduates is basic in the choice of cognitive-related courses such as mathematics, accounting, and engineering. Bong (2001) sets that undergraduates with more elevated levels of trust in their capacities are industrious and more willing to embrace testing errands and therefore show unrivaled scholastic execution. Uyar et al. (2011) in this way infer that undergraduates who need trust in their numeric capacities are less inclined to seek after a vocation in a space like accounting.

Then again, as indicated by the finding of Tan and Laswad, (2009), the requirement for a dynamic and testing climate has a positive critical impact on understudies' decision of accounting. In any case, the finding of Wells and Fieger, (2005) repudiates Tan and Laswad discovering who tracked down that the requirement for a dynamic and testing climate has a critical adverse consequence on understudies' decision of accounting. Since society saw that accounting is definitely not a superb profession for understudies who need a difficult workplace.

With respect to the licensure assessment or purported extreme test, the board exam for aspiring accountants must take and pass is called CPALE. Every year a great many applicants sit for the Certified Public Accountant (CPA) licensure examination in the Philippines, be that as it may, the passing measurements is just around 20% of first-time candidates (Bala, 2008).

METHODS

This study used the quantitative descriptive method as the research design. It is a purposive process of gathering, analyzing, and tabulating data about prevailing conditions, practices, phenomena, beliefs, processes, trends, and cause and effect relationships and then making an adequate and accurate interpretation of such data with the aid of some simple percentile and statistical method (Marsman, 1999). Researchers utilized the quantitative descriptive method to determine the impact of the current phenomena: the decline in CPA licensure examination national passing percentage of the accountancy students and board reviewees through a collection of quantifiable information for statistical analysis.

The sampling procedures that research used was purposive-non-probability sampling technique with respect to the board reviewees. It involves the researcher using their expertise to select a sample that is most useful to the purposes of the research, and choose only those people who deemed fit to participate in the research study. The study also used a cross-sectional method, in which all data will be collected at the same time. This method allowed the research to maximize their time in gathering data.

The population of the study are the CPALE board reviewees who are currently undergoing a review in preparation for the upcoming CPALE residing in National Capital Region (NCR) , and the 1st year and 2nd year BSA students under the College of Business Education of Technological Institute of the Philippines - Manila totaling to 162 students composed of ninety-three (93) first year students and sixty-nine (69) second year students. Given the sampling procedures utilized in this study, the sample taken as a representative will be a minimum of 113 respondents in which fifty-one (51) are CPALE board reviewees, and sixty-two (62) are from BSA students, composed of thirty-five (35) or 57% of 1st year students and twenty-seven (27) or 43% of 2nd year students.

To gather the information needed for this study, a research-made questionnaire developed by the researchers was used as the data-gathering instrument. The questionnaire was divided into five main sections. The primary source of the data gathered is from the survey-questionnaire which is purposely prepared for the respondents that are relevant to the study and for the collection of functional information.

RESULTS AND DISCUSSIONS

This study aimed to determine how the CPALE's passing percentage impacts the program choice of accountancy students, the level of preparation of board exam reviewees, and the

established practices of Accountancy students and board reviewees due to the CPALE's passing percentage.

Table 1. Impact As to the Program choice of accountancy students

Interest in the Program	Mean	Interpretation
I became more interested and satisfied with my chosen program.	2.45	Low Impact
I never thought of shifting to another program.	2.06	Low Impact
I tend to be more productive in every course subject of my program.	2.73	Moderate Impact
I am now more focused on myself in improving my low points and my weakness in different accounting course subjects.	2.76	Moderate Impact
I became more determined and motivated to pursue this program.	2.53	Low Impact
I am more eager even though I know that there are some who failed to continue their program choice.	2.69	Moderate Impact
Composite Mean	2.54	Low Impact

Table 1 discloses that the Impact as to the Interest in the Program where the descriptor, *I am now more focused on myself in improving my low points and my weakness in different accounting course subjects* got a mean of 2.76 interpreted as, with moderate impact. The descriptor, *I tend to be more productive in every course subject of my program*, got a mean of 2.73, interpreted as, with moderate impact. The descriptor, *I am more eager even though I know that there are some who failed to continue their program choice*, got a mean of 2.69, interpreted as, with moderate impact. Meanwhile, the descriptor, *I became more determined and motivated to pursue this program*; descriptor, *I became more interested and satisfied with my chosen program*; and descriptor, *I never thought of shifting to another program* got mean of 2.53, 2.45 and 2.45 respectively interpreted as low impact. Overall mean of 2.54, interpreted as, with low impact. This indicates that the CPALE has a low impact on their interest in choosing the program.

Table 2. Impact as to their Capability to Continue the Program

Capability to Continue the program	Mean	Interpretation
I am more confident that I will qualify in the accounting profession.	1.82	Low Impact
I became aware of the accountant skills I must possess such as analytical skills and problem-solving skills and so, I am positive that I have those.	2.21	Low Impact
I am more certain that I have the potential and ability to continue my chosen program.	2.16	Low Impact
I strive harder and become more studious and competitive with the major courses I am taking.	2.23	Low Impact
I never lose my spirit in the hope that I am capable of my chosen program.	1.84	Low Impact
I am more certain that I choose the right path for me.	2.27	Low Impact
Composite Mean	2.09	Low Impact

Table 2 reveals that as to Capability to Continue the program, descriptors, *I am more certain that I choose the right path for me.*; *I strive harder and become more studious and competitive with the major courses I am taking.*; *I became aware of the accountant skills I must possess such as analytical skills and problem-solving skills and so, I am positive that I have those.*; *I am more certain that I have the potential and ability to continue my chosen program*, got a mean of 2.27, 2.23, 2.21 and 2.16 respectively interpreted as, with low impact. Descriptors, *I never lose my spirit in the hope that I am capable of my chosen program* and *I am more confident that I will qualify in the accounting profession*, got a mean of 1.84 and 1.82 respectively, interpreted as, with low impact as well. Overall mean of 2.09 interpreted as, with low impact. This indicates that CPALE has low impact in their capability to continue the program.

Table 3. Level of Preparation of board reviewees in terms of Time Management

Time Management	Mean	Interpretation
I always practice the habit of putting first things first.	4.14	High Impact
I set my goals for my daily routine when reviewing and prioritize them wisely.	4.14	High Impact
I am more organized and secured with my time table review schedule.	3.65	High Impact
I spend most of my time reviewing and doing tasks that are important for the board exam.	3.94	High Impact
I tend to double my review time and put more attention to my review rather than procrastinating.	3.67	High Impact
I put more focus on my review than the other work such as part-time, household chores, etc.	3.61	High Impact
Composite Mean	3.86	High Impact

Table 3 presents the level of preparation in terms of Time Management, the descriptors, *I always practice the habit of putting first things first* and *I set my goals for my daily routine when reviewing and prioritize them wisely*, both got a mean of 4.14, interpreted as, with high impact. Descriptors, *I spend most of my time reviewing and doing tasks that are important for the board exam*; *I tend to double my review time and put more attention to my review rather than procrastinating*; *I am more organized and secured with my time table review schedule*; and *I put more focus on my review than the other work such as part-time, household chores, etc.*, got a mean of 3.94, 3.67, 3.65 and 3.61 respectively, interpreted as with high impact as well. The overall mean of 3.86, interpreted as, with high impact which means that CPALE has a high impact on the level of preparation of board reviewees in terms of time management.

Table 4. Level of Preparation of board reviewees in terms of Supplementary Study

Supplementary Study	Mean	Interpretation
I bought or have my own additional workbooks to expand my learning and strengthen my problem-solving.	4.49	Very High Impact
I enrolled at online review courses.	4.51	Very High Impact
I look for different resources on the internet that are helpful with my review.	4.18	High Impact
I practice some mock tests available online and also watch youtube accounting tutorials.	4.12	High Impact
Composite Mean	4.33	Very High Impact

Table 4 indicates that in the Level of Preparation in terms of Supplementary Study, descriptor, *I enrolled at online review courses* and *I bought or have my own additional workbooks to expand my learning and strengthen my problem-solving* got a mean of 4.51 and 4.49 interpreted as, with very high impact, while descriptors, *I look for different resources on the internet that are helpful with my review* and *I practice some mock tests available online and also watch youtube accounting tutorials*, got a mean of 4.18 and 4.12 respectively, interpreted as, with high impact. Overall mean of 4.33 is interpreted as, with very high impact. This means that CPALE has a very high impact on the level of preparation of board reviewees in terms of supplementary study.

Table 5. Level of preparation of board reviewees in terms of Commitment to Study

Commitment to Study	Mean	Interpretation
I see myself being more committed to what I'm doing and taking my review seriously.	4.14	High Impact
I make more massive actions when it comes to my way of reviewing or studying.	3.98	Moderate Impact
I become more consistent to continually learn everything I can in the review materials.	4.0	High Impact
I tend to have the willingness to lose some sleep and saying no to unnecessary things to focus on my review.	3.24	Moderate Impact
I commit myself to never give up and work hard to continue to take and pass the board examination.	4.27	Very High Impact
Composite Mean	3.93	High Impact

Table 5 displays the level of preparation of board reviewees in terms of commitment to study where the descriptor, *I commit myself to never give up and work hard to continue to take and pass the board examination*, got a mean of 4.27, interpreted as, with a very high impact. The descriptors, *I see myself being more committed to what I'm doing and taking my review seriously* and *I become more consistent to continually learn everything I can in the review materials* had means of 4.14 and 4.0, respectively interpreted as with high impact. While the descriptors, *I make more massive actions when it comes to my way of reviewing or studying* and *I tend to have the willingness to lose some sleep and saying no to unnecessary things to focus on my review* revealed means of 3.98 and 3.24, respectively, interpreted as, with moderate impact. Overall means of 3.93 interpreted as with high impact which means that results of CPALE has a high impact on their preparations as to commitment to study.

Table 6. Summary of the Level of Preparation of board reviewees

Indicators	Mean	Interpretation
Time Management	3.86	High Impact
Supplementary Study	4.33	Very High Impact
Commitment to Study	3.93	High Impact
Weighted Mean	4.04	High Impact

Table 6 exhibits the summary responses of the level of preparation of board reviewees for the board examination, among the indicators supplementary study got a mean of 4.33 with a very high impact, while commitment to study and time management had means of 3.93 and 3.86, respectively, interpreted as with high impact. Overall mean of 4.04 interpreted as with high impact.

Table 7. Summary of Established Practices of Respondents

Practices	Students		Reviewees	
	Mean	Interpretation	Mean	Interpretation
Group Study	3.60	Frequently	3.45	Frequently
Practice Testing	3.0	Sometimes	4.19	Frequently
Organized Review Materials	3.70	Frequently	4.13	Frequently
Review Schedule	3.58	Frequently	3.44	Frequently
Weighted Mean	3.47	Frequently	3.80	Frequently

Table 7 conveys the summary of responses about the established practices of both students and reviewees in preparation for the board examinations. For students, organized materials, group study, and review schedule had means of 3.70, 3.60 and 3.58, respectively, interpreted as frequently, while the variable practice testing got a mean of 3.0 interpreted as sometimes. For reviewees, variables got means of 4.19, 4.13, 3.45, and 3.44, respectively interpreted as frequently.

CONCLUSION

The current declining trend in CPA licensure examination national passing percentage does have a significant impact on accountancy students, as well as, on the board reviewees. This is proved by the collected responses on the given survey for this study.

The study stressed out that the results of the national passing percentage had a low impact on accountancy students' program choice which are related to interest in the program and capability to continue the program. In terms of the level of preparations of board reviewees. The results of the board examination had a very high impact related to supplementary study while there was a high impact in terms of the level of preparations related to variables, time management and commitment to study.

Finally, this study also stressed out that both board reviewees and students have established practices due to CPALE's passing percentage since the majority of them agreed that they've established it and practiced it frequently. This would suggest that CPALE's passing percentage has a significant impact on their established practices. Those established practices of the respondents are identified as group study, practice testing, organized review materials, and review schedule.

RECOMMENDATIONS

Based on findings, it is suggested that students and reviewees must focus on their studies and preparation as results of the board examination may change over time. It is also recommended that reviewees assess themselves before taking the board examination if they are really prepared to take the board examination. School administrators should prepare students physically, emotionally, and intellectually before taking the board examination.

It is recommended for further research with different variables about the impact of licensure examination to students and reviewees.

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A Correlational and Longitudinal Analysis on the Academic Performance of BS Accountancy Students in Face-to-Face and Online Class Modalities

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Abstract – In response to COVID19 pandemic, educational institutions adopted online learning modes and shifted away from the traditional face-to-face class. With the recent discussions as to which learning modality to implement in the “new normal”, this study seeks empirical evidence on the academic performance of students under both modalities. This quantitative research investigated the academic performance of purposively selected 104 BS Accountancy students as reflected in their semestral GPAs during the periods before COVID era and compared these to their GPAs during COVID times. In addition, this research examined the factors affecting academic performance under each modality, particularly looking into gender, academic load and past scholastic achievement. This study is a descriptive and longitudinal research and statistical tools such as correlation, independent t-test and paired t test were applied in the data analysis. Findings revealed that under both modalities, gender showed no significant relationship on academic performance. However, the variables on academic load and past scholastic achievement showed significant relationship to academic performance. It was revealed that among the variables scrutinized, past scholastic achievement emerged as the strongest factor. Furthermore, the analysis showed that the sudden shift has affected students’ academic performance, but students later adjusted and fared moderately with the online mode. However, the longitudinal analysis showed that students generally performed better in a face-to-face class modality. The implication of this study is showing what factors affect academic performance under both learning modalities and that these results can serve as potent basis in curriculum planning and student intervention programs.

Keywords: *academic performance, accounting students, face-to-face versus online class*

1. Introduction

The Covid-19 pandemic, which has overblown the entire world, has caused a significant change in education, particularly in teaching and learning. The universities and schools have been compelled to design digital learning platforms. No one was ready to adopt the sudden switch to online platforms. It is anticipated that this shift will have a notable effect on the students’ academic achievement .

To respond to the crisis in education brought by COVID-19, CHED mandated the switch to an online learning platform. The switch from face-to-face to online platforms was sudden, and there was no advance preparation for such an urgent scenario. Students shifted to being seated in front of the screen for hours from sitting in the classrooms that provided them with much-needed socialization.

Online learning’s effectiveness is still a subject of argument. The retention of information

by students has been studied by the experts and how the social skills and student's development has been affected by remote learning. They decided that the effectiveness of online learning relies on the following circumstances. First is having a computer and stable internet connectivity. Second is having well-trained teachers conduct online classes. And lastly, a platform that gives individualized learning to go with each student's individual journey. A study conducted by Darkwa and Antwi (2021) showed that online learning was less effective than classroom learning and students manifested better academic performance in classroom learning than online learning.

Students experienced difficulties in the Philippines as a consequence of the COVID-19 pandemic. The following are problems encountered by online learners: lack of a reliable internet connectivity; poor learning resources; electric power disruptions; too much lesson activities; tight instructors scaffolds; below-par peer communication; home responsibilities; unclear learning modules; not having access to distraction free learning environment poor; financial difficulties; and not being able to self-motivate to study well because of financial and health issues.

Narad & Abdulla (2016) defines academic performance as educational goals to be achieved over a specific period as set by students and teachers and the knowledge gained as evaluated by teachers. Cambridge University Reporter (2003) said that academic performance is commonly defined as the performance portrayed by students in exams, course works, and tests.

Gonzales, Rubia et al. (2020) analyzed the reaction of restraint of COVID-19 on learning performance of students in the university. They divided 458 into two groups, control and experimental. The results indicated that there is a crucial positive reaction of the restraint of COVID-19 on students' performance. COVID-19 restrains enhanced learning strategies of the students to an extra continuing habit, so better grades in students' assessment are anticipated, and improved learning performance can explain that.

Another study by Tinjie and Halilie (2020) analyzed the impact on the academic success of students of the digital semester imposed on them due to the Covid-19 outbreak. The research established a remarkable negative impact of the digital semester on academic success of students, profoundly that students performed crucially worse after the Covid-19 breakout that caused the institution to shift from face-to-face teaching to online learning. Another study conducted by Nasu (2020) investigated the connection between the performance of accounting students and variables like ethnicity, marital status, employment and gender in online platforms. Male students outperformed females in a sample of more than 11 000 observations.

The study of Al Omari (2020) investigated the connection between the academic performance of paper and pen examinations and computer-based examinations for the students of the department of accounting of the university as well as the connection of the gender of students to differences. With a sample of more than 100 students, a paper-and-pen examination was conducted prior COVID-19 plight, while the computer-based examination was after COVID-19 plight. The study concluded no statistically significant connection between the academic performance of computer-based examinations held after COVID-19 plight and paper-and-pen held prior COVID 19. The results also indicated that the educational achievement differences resulting from computer-based examinations have to do with the student gender variable in favor of male students.

Paul and Jefferson (2019) lead a research comparing three measures—pure gender, modality, and class rank in online and face-to face learning. They studied whether one teaching modality was significantly more effective than the other. The research indicates that there is no notable difference between online and face-to-face learning students' performance concerning gender, modality, or class rank.

With the extant literature, this study sees an opportunity to address a research gap in the subject matter. In the Philippine setting and to the researchers' best knowledge, there are very limited studies investigating the academic performance of BS Accountancy students during face-to-face and online class modalities. With the recent discussions as to which learning modality to implement in the "new normal", educators and institutions alike differ in perspectives.

At some point during the pandemic, CHED announced a "no going back" policy emphasizing that there will be no turning back to the full-packed face-to-face classes (ABS CBN News, 2021). CHED emphasized that flexible learning will be the new norm in line with the millions of peso investments in teacher training, technological upgrades and in retrofitting schools' facilities just to cater online education (ABS CBN News, 2021). Institutions alike invested heavily on ICT improvements, not just the infrastructure but also equipment support to faculty and students. Worth mentioning is the initiative of MSU-Marawi Campus in distributing free laptops to each faculty, to semi-academic offices and thousands of laptops to each student enrolled. All these efforts were made to support online class modality.

However, there were studies on the challenges presented by online education, thus some stakeholders pushed a new agenda of fully going back to 100% face-to-face class. As the pandemic eases out, some schools have already started face-to-face but still numerous issues were raised as to its practicality, such as the risks involved to all stakeholders, discrimination to the unvaccinated, and the uncertainty factor of this COVID19 pandemic.

Hence, this present research aims to investigate the academic performance of purposively selected 104 students of Bachelor of Science in Accountancy of MSU Marawi City as reflected in their GPAs during the periods of face-to-face class modality and compared these GPAs during online modality. This study further explored the factors such as gender, academic load, and past scholastic achievement and how it affects the academic performance for each modality. Particularly, this research seeks answers to the following:

1. What is the academic performance of students in face-to-face class modality before covid in terms of gender, academic load, and past scholastic achievement?
2. What is the academic performance of students in online class modality during COVID era in terms of gender, academic load, and past scholastic achievement?
3. What factors affect/predict students' academic performance in a face-to-face class modality?
4. What factors affect/predict students' academic performance during Online class modality?
5. Is there a significant difference between the students' academic performance in face-to-face versus online class modalities?

Theoretical Framework

Walberg's theory on educational productivity will serve as the underpinning for this study. This theory was empirically tested as one of the very few theories of academic achievement (Rugutt and Chemosit, 2005). The education production model posits that student outcome is associated with certain educational inputs. The key variables that affect a student's academic performance are: student's ability/prior achievement, motivation, age/developmental level, quantity of instruction, quality of instruction, classroom climate, home environment, peer group and exposure to mass media outside of school (Walberg et al., 1986). Among these variables, this study focuses on the student's ability, which is measured by his past scholastic achievement, and the quantity of instruction, which is measured by the current academic load or semestral load units enrolled. In the literature review of Huntington-Klein, and Gill (2021), they mentioned that a

student's outcome is generally measurable using GPA or standardized test scores. Both the academic load and previous performance fits into this theory as inputs to students' outcome.

Conceptual Framework

In the context of this study, three variables are used to assess their effects on the academic performance of BSA students, namely, gender, academic load, and past scholastic achievement.

Gender

Several studies have used gender as a factor to associate with academic performance. For example, Hashemi's (2021) study on Afghan students during the pandemic revealed that the academic performance of male students is significantly different from their female counterparts. This difference is because most of the females do not have access to the necessary devices and programs. Hashemi (2021) also cited Aristovnik et al., 2020, stating that male students are more confident with their technical skills. Kupczynski et al., 2014 cited Ashong & Commander, 2012, that because of males' positive attitude towards computers, their comfort levels are higher, giving them an advantage over females in the online classroom. The direct opposite was found in a study conducted in Saudi Arabia, which showed that the adoption of ICT improved the academic performance of female students more than their male counterparts (Basri et al., 2018). In a similar study in Kuwait (Alharaj and Alasfour, 2014), results show that the academic achievement of female business students is higher than males.

According to Parajuli and Thapay, 2017, several studies have reported that female students outperform their male counterparts. On the other hand, Rajandran et al., 2015, in a survey on first-year undergraduate students, revealed that gender is an insignificant determinant of academic performance. This is confirmed by Paul & Jefferson, 2019, in their comparative study, where they found out that there is no significant difference in academic performance across gender in a face-to-face setting and in an online setting. Hence, the following hypotheses were developed

H1: There is no significant difference in the academic performance of students during a face-to-face class modality based on gender.

H4: There is no significant difference in the academic performance of students during online class modality based on gender.

H7: There is no significant relationship between academic performance and gender of students in a face-to-face class modality.

H10: There is no significant relationship between academic performance and gender of students in an online class modality.

H13: There is no significant difference in academic performance based on gender between a face-to-face class modality and in an online class modality.

Academic Load

In the context of this study, academic load represents the total number of credit units or the total credit hours that a student registered for in the current semester. Szafran (2001) stated that academic load affects a student's academic performance because it represents his commitment to his academics relative to other time-consuming activities such as those involving family or work. A common assumption is that having a lighter academic load will improve academic performance. However, Szafran, 2001, indicated that students who enroll for more credit units earn higher GPAs. He explained that using Tinto's (1993) longitudinal model of institutional departure, positive academic experiences would increase academic integration, resulting in higher educational

intentions, goals, and institutional commitment.

In a study conducted by Boumi and Vela (2021), findings revealed that students with more engagement with the university have higher academic performance than those with lower engagement. Boumi and Vela (2021) cited the findings of Shami et al., 1980, and Zakir Khouj et al., 1982 where they showed a positive relationship between the students' academic load and their academic performance. Huntington-Klein and Gill (2021), stated that a high academic load might reduce the time invested in each course, giving a high academic load a negative causal effect on academic performance. Their study showed, however, that there is no evidence that high academic load has a negative impact on students' GPA, even for students with low academic performance. Hence, the following hypotheses were developed

H2: There is no significant difference in the academic performance of students during a face-to-face class modality based on academic load.

H5: There is no significant difference in the academic performance of students during online class modality based on academic load.

H8: There is no significant relationship between academic performance and academic load of students in a face-to-face class modality.

H11: There is no significant relationship between academic performance and academic load of students in an online class modality.

Past scholastic achievement

Students' entrance examination scores and high school grade point average were significantly related to cumulative GPA after the first year in university (Friedman and Mandel, 2009). Franklin and Singh (1996) proposed that the strongest direct effect on academic achievement was the previous achievement (as measured by previous grades). This claim was strengthened by McKenzie & Schweitzer (2001) when they identified previous academic performance as the most significant predictor of university performance. Huntington-Klein, and Gill (2021) insist that there is strong evidence to support that previous academic achievement and intelligence-based measures are positively associated with the student's future academic performance. In other words, future academic performance was strongly predicted by past performance (Salanova, et al. 2010). Hence, the hypotheses developed were

H3: There is no significant difference in the academic performance of students during a face-to-face class modality based on past scholastic achievement.

H6: There is no significant difference in the academic performance of students during online class modality based on past scholastic achievement.

H9: There is no significant relationship between academic performance and past scholastic achievement of students in a face-to-face class modality.

H12: There is no significant relationship between academic performance and past scholastic achievement of students in an online class modality.

Academic Performance

In this study, students' academic performance is represented by their Grade Point Average (GPA). Students' grades are "closely tied to each student's curriculum, a more sensitive measure of learning, and therefore more likely to show change as a result of learning" (Rugutt and Chemosit, 2005). The GPA is a cumulative measure of academic performance in a given semester. It has been the primary indicator and an established method to demonstrate learning (Pike & Saupe, 2002).

When comparing students' academic performance in a face-to-face setting and online distance learning environment, studies have varying results. For example, in a study conducted by Darkwa and Antwi (2021) in Ghana, students exhibited better academic performance in face-to-face learning than online learning; however, the difference was not statistically significant. In contrast, in the study of Shachar et al. (2010), the academic performance of many of those under distance learning is better than those in face-to-face classes. In order to verify the findings, the following hypothesis was developed:

H14: There is no significant difference between the academic performance of students during face-to-face class versus the online class modalities.

2. Method

This present study used the descriptive method of research. Descriptive research is a research method describing the characteristics of the population or phenomenon that is being studied. It is also used to validate any existing conditions that may be prevalent in a population. Moreover, this is quantitative research that attempts to collect quantifiable information to be used for statistical analysis of the population sample. This study is a correlational and longitudinal research. This present study investigated the academic performance of BS Accountancy students as reflected in their semestral GPAs during the periods before and compared these to their GPAs during COVID-19 pandemic. In addition, this research examined the factors affecting academic performance under each modality, particularly looking into gender, units enrolled and past scholastic achievement.

The research setting was in Marawi City where the state university is situated. The unit of analysis were the 104 purposively selected students taking up BS in Accountancy. A purposive sampling design was employed to confine this study to specific types of research subjects who can provide the needed information, because they have the data needed and they fit to the criteria preset by the researchers. This research focused on students who have at least three enrolled semesters before COVID where classes were held face-to-face and assessed their academic performance in terms of gender, semestral load, and past academic achievement. Moreover, the academic performance of the same set of selected students were then assessed during the three semesters of COVID period in an online class environment.

Primary quantitative data on students' GPA were taken from the database of the University. Data on gender, units enrolled and past CGPA were also generated from the university registry. Excel and IBM SPSS software were used in encoding the data and statistical tools such as mean, independent sample t-test, and correlation analysis were employed in the data analysis. In addition, paired t-test with 95% confidence level was also utilized to investigate the significance of differences between the grade point average (GPA) of students before covid where classes are face-to-face and compared these to their GPAs on online class modalities during COVID. The results were then construed and presented through tables and figures.

3. Results and Discussion

3.1. What is the academic performance of students in face-to-face class modality before covid in terms of gender, academic load, and past scholarly achievement?

This study investigated the academic performance of accounting students during the traditional face-to-face class setting pre-COVID era. Particularly, this research sought to understand whether there are differences in the academic performance between female and male students during the traditional face-to-face class modality. Secondly, the research examined whether there are differences in the students' academic performance when comparing students with more academic load versus students with less academic load. Furthermore, this study compared whether there are differences in the academic performance during face-to-face modality between honor students, those who have high past CGPA versus those non-honor students. The table below summarizes the relevant results:

Table 1. Differences in the academic performance of BS Accountancy students during face-to-face class modality

VARIABLES	SCHOOL TERM	P-VALUE	INTERPRETATION
Gender	1ST SEM 2018-2019	.599	No significant difference
	2 ND SEM 2018-2019	.696	No significant difference
	1 ST SEM 2019-2020	.632	No significant difference
Academic Load	1ST SEM 2018-2019	.986	No significant difference
	2 ND SEM 2018-2019	.148	No significant difference
	1 ST SEM 2019-2020	.000	Has a significant difference
Past Scholastic Achievement	1ST SEM 2018-2019	.000	Has a significant difference
	2 ND SEM 2018-2019	.000	Has a significant difference
	1 ST SEM 2019-2020	.000	Has a significant difference

3.1.1. Gender Differences in academic performance during face-to-face class

Study results revealed that there is no significant statistical difference in the academic performance in terms of gender during face-to-face class modality. That is, there is no statistical difference in the academic performance between female and male students in the traditional face-to-face learning. This is in contrast with the study results of Parajuli and Thapa (2017), that showed that female undergraduate students outperformed male undergraduates in their GPAs.

3.1.2. Differences in academic performance in relation to academic load during face-to-face class

Secondly, there is no significant statistical difference in the academic performance in terms of academic load during face-to-face class modality. Those students with more semestral load did not statistically differed significantly as compared to those students with lesser semestral load. This is different from the result of the study of Boumi and Vela (2021) that showed that the students who have more engagement with the university have higher academic performance than those with lower engagement. However, the researchers noted a significant difference for 1st sem 2019-2020 results, showing that those students with lesser academic load performed better in terms of higher GPA than those enrolled with more units. Similarly, this result is in contrast with the results of

Boumi and Vela (2021).

3.1.3. Differences in academic performance in relation to past scholarly achievement during face-to-face class

In terms of past scholarly achievement, results showed that there is a significant statistical difference in the academic performance during face-to-face class modality. Students who are past achievers such as Dean's, Chancellor's and President's listers performed better as compared to other students. This is consistent with McKenzie & Schweitzer (2001) when they identified previous academic performance as the most significant predictor of university performance.

3.2. What is the academic performance of students in online class modality during COVID era in terms of gender, academic load, and past scholarly achievement?

This study further investigated the academic performance of accounting students in the online class modality during COVID era. This research sought to understand whether there are differences in the academic performance between female and male students during their online class. The research also examined whether there are differences in the students' academic performance when comparing students with more academic load versus students with less academic load in the online learning. Furthermore, this study compared whether there are differences in the academic performance during online modality between honor students, those who have high past CGPA versus those non-honor students. The table below summarizes the relevant results:

Table 2. Differences in the academic performance of BS Accountancy students during Online class modality

VARIABLES	SCHOOL YEAR	P-VALUE	INTERPRETATION
Gender	1ST SEM 2020-2021	.675	No significant difference
	2 ND SEM 2020-2021	.963	No significant difference
	1 ST SEM 2021-2022	.599	No significant difference
Academic Load	1ST SEM 2020-2021	.001	Has a significant difference
	2 ND SEM 2020-2021	.000	Has a significant difference
	1 ST SEM 2021-2022	.208	No significant difference
Past Scholastic Achievement	1ST SEM 2020-2021	.000	Has a significant difference
	2 ND SEM 2020-2021	.000	Has a significant difference
	1 ST SEM 2021-2022	.000	Has a significant difference

3.2.1. Gender Differences in academic performance during online class

Findings showed that there is no significant statistical difference in the academic performance between female and male students during online class modality. Results suggest that during the shift to online classes brought by the pandemic disruption, both female and male students performed indifferently. Unlike in a study conducted in Saudi Arabia, which showed that the adoption of ICT improved the academic performance of female students more than their male counterparts (Basri et al., 2018). Direct opposite was found in a study of Afghan students, Hashemi (2021), concluded that there is a statistically significant difference of Afghan students' academic performance as female students were outperformed by male students.

3.2.2. Differences in academic performance in relation to academic load during online class

This research further revealed that there is a significant statistical difference in the academic performance in terms of academic load during online class modality. For the earlier two semesters after the shift (basically the second and third semester during the pandemic), those students who had more semestral load performed better than those students who had less enrolled units. However, for 1st semester 2021-2022, results showed that students with lesser academic load performed better than those students with more academic load, however, the difference was not statistically significant.

3.2.3. Differences in academic performance in relation to past scholastic achievement during online class

Findings revealed that there is also a significant statistical difference in the academic performance in terms of past scholastic achievement during online class modality. This study inferred that honor students still performed better as compared to other non-honor students even during online class modality. This is similar to what Huntington-Klein, and Gill (2021) mentioned in their study that there is strong evidence to support that past scholarly achievement and intelligence-based measures positively affects the academic performance of students.

3.3 What factors affect/predict students' academic performance in a face-to-face class modality?

This present research seeks to investigate the factors affecting students' academic performance during face-to-face class modality. Variables scrutinized are gender, academic load and past scholastic achievement. The table below summarizes the results of the correlational analysis:

Table 3. Correlation Analysis in the academic performance of BS Accountancy students during Face-to-face class modality

INDEPENDENT VARIABLES	DEPENDENT VARIABLE	SCHOOL TERM	R	P-VALUE	INTERPRETATION
Gender	GPA	1ST SEM 2018-2019	.065	.511	<i>No significant relationship</i>
		2 ND SEM 2018-2019	.108	.138	<i>No significant relationship</i>
		1 ST SEM 2019-2020	-.139	.080	<i>No significant relationship</i>
Academic Load	GPA	1ST SEM 2018-2019	-.005	.958	<i>No significant relationship</i>
		2 ND SEM 2018-2019	.348	.000	<i>Has a significant relationship</i>
		1 ST SEM 2019-2020	.552	.000	<i>Has a significant relationship</i>
Past Scholastic Achievement	GPA	1ST SEM 2018-2019	*	*	<i>*No statistical treatment applied</i>
		2 ND SEM 2018-2019	.982	.000	<i>Has a significant relationship</i>

1 ST SEM 2019-2020	.603	.000	<i>Has a significant relationship</i>
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The Pearson Correlation Coefficient for GPA and past scholastic achievement (CGPA) is significant ($p < 0.05$ for a two-tailed test) while the Pearson Correlation Coefficient for GPA and Academic Load is also significant ($p < 0.05$ for a two-tailed test) based on 104 complete observations. On the contrary, the Pearson Correlation Coefficient for GPA and gender is not significant ($p > 0.05$ for a two-tailed test). Based on the results, we can state the following inferences:

GPA and Gender have no statistically significant relationship. This is consistent with Rajandran K, et al (2015) conclusion that gender is not a significant determinant of academic performance of students. However, this is in contrast with Arora and Singh (2017) who concluded that there is a difference in academic achievement in terms of the gender of students. Usually, females performed better than males.

GPA and Academic Load have a mixed result. In one semester it showed a statistically insignificant relationship ($r = -.005$, $p > 0.05$). But in the other two semesters, it showed a statistically significant relationship where $p < 0.05$. The direction of the relationship is in substance, negative ranging from weak to moderate correlation. The more units enrolled during face-to-face class modality, the lower the GPA. This is in contrast with Huntington-Klein, and Gill (2021) who concluded that there is no proof that high course loads have a negative influence on student's performance, including students at the low-level of grades bracket. It is also different from the result of the study of Boumi and Vela (2021) that showed that the students who have more engagement with the university have higher academic performance than those with lower engagement.

In a face-to-face class modality, GPA and past scholastic achievement have a statistically significant relationship ($p < 0.05$). There is also a strong & positive correlation. Students who performed well in the past, also performed well in the currently enrolled semester. McKenzie & Schweitzer (2001) pointed out that previous academic performance was the most significant predictor of university performance. This was confirmed by Salanova, et al. (2010) by concluding that future academic performance was strongly predicted by previous performance.

3.4. What factors affect/predict students' academic performance during Online class modality?

This present research also seeks to investigate the factors affecting students' academic performance during online class modality scrutinizing same set of variables. The table below summarizes the results of the correlational analysis:

Table 4. Correlation Analysis in the academic performance of BS Accountancy students during Online class modality

INDEPENDENT VARIABLES	DEPENDENT VARIABLE	SCHOOL YEAR	R	P-VALUE	INTERPRETATION
Gender	GPA	1 ST SEM 2020-2021	.043	.332	<i>No significant relationship</i>
		2 ND SEM 2020-2021	- .042	.336	<i>No significant relationship</i>
		1 ST SEM 2021-2022	.013	.448	<i>No significant relationship</i>
Academic Load	GPA	1 ST SEM 2020-2021	- .368	.000	<i>Has a significant relationship weak positive correlation</i>
		2 ND SEM 2020-2021	- .526	.000	<i>Has a significant relationship Moderate positive correlation</i>
		1 ST SEM 2021-2022	.597	.000	<i>Has a significant relationship Moderate negative correlation</i>
Past Scholastic Achievement	GPA	1 ST SEM 2020-2021	.744	.000	<i>Has a significant relationship Strong positive correlation</i>
		2 ND SEM 2020-2021	.796	.000	<i>Has a significant relationship Strong positive correlation</i>
		1 ST SEM 2021-2022	.730	.000	<i>Has a significant relationship Strong positive correlation</i>

This study showed that the Pearson Correlation Coefficient for GPA and gender is not significant ($p > 0.05$ for a two-tailed test). On the contrary, the Pearson Correlation Coefficient for GPA and past scholastic achievement (CGPA) is significant ($p < 0.05$ for a two-tailed test) while the Pearson Correlation Coefficient for GPA and Academic Load is also significant ($p < 0.05$ for a two tailed test) based on 104 complete observations. Based on the results, we can state the following inferences:

GPA and Gender have no statistically significant relationship during online class modality.

This is consistent with (Amro, Mundy, & Kupczynski, 2015), who concluded that gender could not affect the student performance in online modality.

GPA and Academic Load have a statistically significant relationship during online class modality with $p < 0.05$. For the first 2 semesters, the direction of the relationship is in substance, positive. The more units enrolled, the higher the GPA. This is consistent with the result of the study of Boumi and Vela (2021) that showed that the students who have more engagement with the university have higher academic performance than those with lower engagement. This is also consistent with (Chung, Mckenzie, Schweinsberg & Mundy, 2022) who revealed that students' semester load (in either traditional campus or online study) was not related with performance.

However, in the latest semester analyzed (1st Sem, 2021-2022), the direction of the relationship is in substance, negative. Based on the BS Accountancy syllabus, students are enrolled in their OJT in this particular semester. Study shows an interesting negative relationship, the more units enrolled, the lower the GPA for this semester. This is consistent with (Jaggars, Edgecombe, & Stacey, 2013) who concluded that students who grabbed higher credits online were less likely to complete a degree than students who took lower credits online. This suggests that more online course load has a negative effect on the students' performance.

GPA and past scholastic achievement have a statistically significant relationship ($p < 0.05$). There is also a strong & positive correlation. Students who performed well in the past, also performed well in the currently enrolled semester during online class modality. This is the same with Calafiore and Damianov (2011) who established that the higher the student's prior GPA, the higher their academic performance in online class modality. This is also consistent with (Chung, Mckenzie, Schweinsberg & Mundy, 2022) who concluded that students' prior grades are predictive of their current and future grades in online higher education.

3.5. Is there a significant difference between the students' academic performance in face-to-face versus online class modalities?

A longitudinal analysis was conducted in this research, focusing on the subject matter of academic performance across different time periods, pre-COVID and during COVID. This study sought to investigate whether students performed differently in the recent online class as compared to the traditional face-to-face class modality.

The results of the paired t test revealed a p-value equal to 0.003077 which is lesser than the level of significance of 0.05. Hence, we have sufficient evidence to reject the null hypothesis. Therefore, we can conclude that there is a significant difference in the academic performance of BS Accountancy students between face-to-face and online class modalities. This study revealed that accounting students perform better during face-to-face classes. This is consistent with Faidley, (2018) who revealed that students have a significantly higher grade on accounting courses in face-to-face classes than online classes.

However, this is in contrast with Little and Jones (2020), the results of their research indicate that, overall, students of Accounting Principles performed greater academically in the hybrid and online classes than in the face-to-face class. This is also different with Fatzel et al., (2021), who concluded that students of accountancy performed much greater academically during online modality as compared to face-to-face modality.

Investigating the performance of female students in both modalities, results revealed that the p-value is equal to 0.009919 which is lesser than the level of significance of 0.05, using paired t test. Hence, we have sufficient evidence to reject the null hypothesis. In addition, the critical value turns out to be 1.989686. Since our test statistic t is greater than this value, we successfully

rejected the null hypothesis. Once again, this means we do have sufficient evidence to say that the two population means are different. Therefore, we can conclude that there is a significant statistical difference between face-to-face and online class modalities for female students. It was further found out that female students perform better during face-to-face class than in the online modality. This result is contrary to Paul and Jefferson (2019) who concluded that gender has no statistically significant difference in terms of academic performance between face-to face and online. This result is similar with Little and Jones (2020) suggesting that female performance was fairly consistent across the three different delivery methods and further positing that females outperformed males in the face-to-face format but did not do as well in hybrid or online.

With regards to male students, results revealed that the p-value is equal to 0.157903 which is greater than the level of significance of 0.05. Hence, we do not have sufficient evidence to reject the null hypothesis. In this case, the critical value turns out to be 2.079614. Since our test statistic t is lesser than this value, we failed to reject the null hypothesis. Once again, this means we do not have sufficient evidence to say that the two population means are different. Therefore, we can conclude that there is no significant statistical difference between face-to-face and online class modalities for male students. This result is partly consistent with Paul and Jefferson (2019) who concluded that gender has no statistically significant difference in terms of academic performance between face-to face and online. Only that this study supports their study with regards male students only. This is in contrast with Little and Jones (2020) , their results suggest that male students performed much better in the online and the hybrid format than face-to-face.

4. Conclusion

Several factors affect the academic performance of students either in face-to-face or online class modalities. Such factors include gender, academic load and past scholastic achievement. The influence of gender as a personal characteristic of the students was verified to have no influence on their academic performance in either learning modalities. Gender is a widely used variable in these types of studies, but this study has shown no significant relationship between it and the students' academic performance. In addition, there is no significant difference in the academic performance of students if based on gender alone.

In terms of academic load, results show a weak relationship with academic load and academic performance. Interestingly, there is a weak negative correlation during face-to-face class while there is a weak positive correlation during online class modality. During face-to-face class, students who had less semestral load performed better than those who had more. On the contrary, during their online class, students who had more semestral load performed better than those who had less. This could imply that students are well-adept in the pervasive use of technology in their learning. The only exception is with regards to 1st Sem, 2021-2022 showing a negative correlation, the more units enrolled, the lower the GPA for this semester. In this particular semester, a negative correlation may be exhibited, however, the differences of academic performance between students who had more units as compared to those with less units was deemed not statistically significant. Furthermore, it is important to mention that students have little to no control over this specific variable as the department usually enrolls the students upto the maximum number of allowed credit units as stated in the program. Academic load has shown significant statistical difference in both class modalities.

However, since results show different relationships under each modality, this implies that proper planning should be in place in assigning semester load of students depending on the learning

modality. This could imply that when the mode is face-to-face, students who have less semestral load will perform better than those who have more. Thus, for face-to-face classes, overloading students could negatively impact their performance. On the other hand, for online class modality, results show a weak positive relationship. This could further imply that students adapt well to online learning and were able to perform better even if they had more units enrolled. Factors to further consider would be the “home environment”, “lesser distraction”, “students as active learners”, among others.

In terms of past scholastic achievement, results showed that there is a strong relationship with academic performance of students. This factor emerged as the strongest predictor of current academic performance. Study results also revealed a statistical difference in the academic performance in both face-to-face class and online modality. Students who are past achievers such as Dean’s, Chancellor’s and President’s listers perform better as compared to other students in both face-to-face and during online class modalities. This study could implicate the behavioral and cognitive aspect of student engagement. That is to say, regardless of the differences in delivery mode, those students who are committed to excel, will find ways to excel at all costs.

5. Recommendations for further research

This study offers avenues of reflections that though it would be possible to return to school in the next coming months, things that are learned in this experience would possibly mean that the accounting education in this digital age would not fully return to how things were before COVID19. The following could be pursued for future potential research.

1. Replicate the study in other schools offering BS Accountancy to substantiate the findings in the Philippine context.
2. Further research is needed to include other factors that predict students’ academic performance during online class and face to face modality.
3. As students are well-adept in the new technology, future studies could include studying further the risks, costs, and benefits of doing things differently and explore how technology can best leverage online learning.
4. Explore the feasibility of blended learning which inclines more on online learning, both the costs and benefits associated with it.
5. With the study results leaning on the face-to-face modality, future studies could focus on the social impact of online learning, incorporating the technical deprivation of Filipino students, particularly in areas where there is poor and costly Internet access, unstable power supply, and inequitable access to technological equipment and facilities.

About the Researchers

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Adopting E-invoicing System: Readiness, Challenges, and Amenability to Small and Medium Enterprises (SMEs) in Northern Mindanao

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Abstract – As surrounding Asian countries are constantly developing and joining the trend of adopting electronic invoicing systems (EIS) in their businesses, the Philippine government is also taking actions towards digital transformation. Section 237 of the TRAIN Law mandatorily requires large taxpayers to adopt EIS by 2022. Banking on the possibility that this requirement will extend to small and medium enterprises (SMEs) just like the neighboring countries, and anchored on Diffusion of Innovation Theory and Technological, Organizational, and Environmental Framework, this study aims to determine the factors that affect the amenability of SMEs in Northern Mindanao in adopting EIS. Based on the regression analysis of the results, with 394 respondents from the five provinces of Northern Mindanao, this study found that level of preparedness and environmental consciousness are significant factors. Specifically, the study concludes that SMEs with a high familiarity level with EIS and are technologically, financially, and organizationally ready are willing to adopt EIS. Further, environmental consciousness was deemed to be a significant factor to their willingness. Results show that SMEs are highly environmentally conscious and are keen on reducing their carbon footprint. On the other hand, presence of challenges and barriers are found to be statistically insignificant in the SMEs' amenability to adopt EIS. This may emanate from the respondents' uncertainty of the specific challenges they may face when adopting EIS since 58.6% of the respondents are still using manual invoicing systems.

Keywords: *SMEs, Electronic Invoicing System, Amenability, Environmental Consciousness*

Introduction

Background of the Study

In today's globalized world, where competition is fierce, there is a strong need for process automation to gain competitive advantage in terms of cost and productivity (Ngo, 2013). With the deepening of economic globalization, information technology (IT) has shown great importance on business development. In fact, most companies today put investment into ITs, such as e-commerce and online services (Yang, 2015). Also, in aiming for a greener business processes, information and communication technology (ICT) has the potential to address climate change (The Boston Consulting Group [BCG], 2012) since ICT solutions reduce the need for physical consumptions of resources (e.g. fuel, paper).

One of the low-cost transaction processing systems that leverages on IT is the Electronic Invoicing System (EIS) (United Nations [UN], 2012). Electronic invoicing (EI) allows the sharing of invoices between a buyer and a seller in an electronic format which in turn automates and eliminates manual intervention in sending and sharing of invoices (Mahana, 2020). This method of invoicing eliminates intermediary activities from the point of issuing to receiving and inputting invoices into the company's accounting system. Consequently, EIS helps to overcome costs, complexity, and other barriers to international trade; thereby reducing uncertainty about local tax compliance requirements and the lack of trust in cross-border transactions (Cory, 2020). Furthermore, many academic researchers have pointed out the massive saving potential of the EIS, as compared to its traditional counterpart of using the paper format (Ngo, 2013).

More governments and firms around the world are embracing EIS to support traditional and digital trade, and to improve tax, business, and trade services. EI has been widely used by governments to combat fraudulent activities, and improve tax and other business services (Asia-Pacific Economic Cooperation [APEC], 2019). The successful adoption of EI mandates in countries such as Brazil, Mexico, Chile, Argentina, and Italy have inspired various other countries to follow the path to curb tax evasion and enhance fiscal control in segments such as B2G, B2B, and B2C (Business Wire, 2020). In Asia, the implementation of EI was led mainly by Singapore, Hong Kong, Taiwan, and South Korea (Oñaderra, 2019). Accordingly, Singapore is a pioneer within Asia in terms of adopting e-invoicing in 2003, and mandatory implementation for all central government authorities starting from 2018. Other Asian countries also showed manifestation of successful digitalization. This success has led the Philippine government to take a further step in planning and innovation.

One of the main reasons why the Philippines has lagged far behind other countries in implementing EI is the government's continued reliance on physical documentation or use of hard copies in its processes (Balboa, 2019). The Bureau of Internal Revenue (BIR) still stamps the invoices/receipts as proof of the claims for VAT refund (Pascual, 2019), and examiners rely only on hard copies of original documents to examine the taxpayer's compliance with tax rules and regulations in tax audit (Villanueva, 2013). Hand in hand with these, proper handling of and reliance upon fully digitized records and systems remain inadequate (Balboa, 2019). Hence, the Philippine government is currently in careful steps towards digital transformation.

Statement of the Problem

Given the undeniable advantages of using fully digitalized systems, the BIR's Strategic Plan for 2019-2023 seeks to adapt to modern technology to improve tax-related processes (Zulueta, 2020). As mandated under Republic Act 10963 or the Tax Reform for Acceleration and Inclusion (TRAIN) Act, large taxpayers and exporters are required, within the next five years, to issue invoices, receipts, and sales data digitally to the BIR at the point of sale (TRAIN Law, 2017). Although e-invoices have been recognized as a legal equivalent to paper documents since 2000 in the Philippines, the recent move is a long-awaited push towards fully welcoming the digital transformation into government practices. The changes will require a considerable amount of education for taxpayers on the new processes, as well as the need for businesses to invest in new in-house systems (Balboa, 2019; Egeskog, 2020). Consequently, large taxpayers served as the first step towards digitalization.

In 2021, EI was expected to grow by 11% for B2B and B2G and 7% in B2C market in the Asia-Pacific region (Electronic Invoicing in Asia-Pacific, 2020). With the benefits of EI is trickling down to small and medium firms (UN, 2012), and with the vision of using fully digitalized systems

in the near future, small and medium enterprises (SMEs) in the Philippines are expected to follow this digital transformation (Koch, 2015).

According to a survey commissioned by Epson, 86% of SMEs in the Philippines identified digital technology adoption as the way to improve business processes including, customer experience (Lugtu, 2021). With the demand for digital innovation, EI seems to be a good starting point for the SMEs to enter a digital environment for it automates an organization's financial process and consequently, helps in achieving digital transformation (CIO Adviser APAC, 2019). Despite the need and advantages of adopting e-invoicing, SMEs are still hesitant to accept the new system.

Accordingly, extra investments, inadequate resources for IT structure, and the preference for paper invoices are the main hurdles of the firms from Vietnam in adopting EIS (Ngo, 2013). Further, complex implementation processes, relatively little knowledge, and lack of service providers were also identified as relevant factors. Lack of financial and credit resources is also the reason why the implementation of EIS in the SMEs in Europe is still at a low level (Ahtola, 2016). In addition, the risk of not being preferred due to its technological requirements on both suppliers and customers (UN, 2012) also weighs down the implementation of EIS. On another aspect, Vermont Council on Rural Development (n.d.) cited that moving from paper-based invoicing to EI decreases the carbon footprint of one invoice (lifecycle) by 63% (Tenhunen et. al, 2010). This further underlines the benefits of electronic processing of invoices in addition to the processing cost savings.

Equally important as the economic impact of implementing EI, is its environmental impact. Duffy (2020) noted that ten percent of the trees that anyone in the world cuts down becomes paper for invoices. An electronic invoice is on average four times as environmentally friendly as a paper invoice. The carbon footprint of a single electronic invoice was as small as 150 grams, whereas for a paper invoice the same figure was 450 grams. Online invoicing makes possible the practice of environmentally friendly and sustainable business, where environmental values and objectives are tied in with the operations of the enterprise.

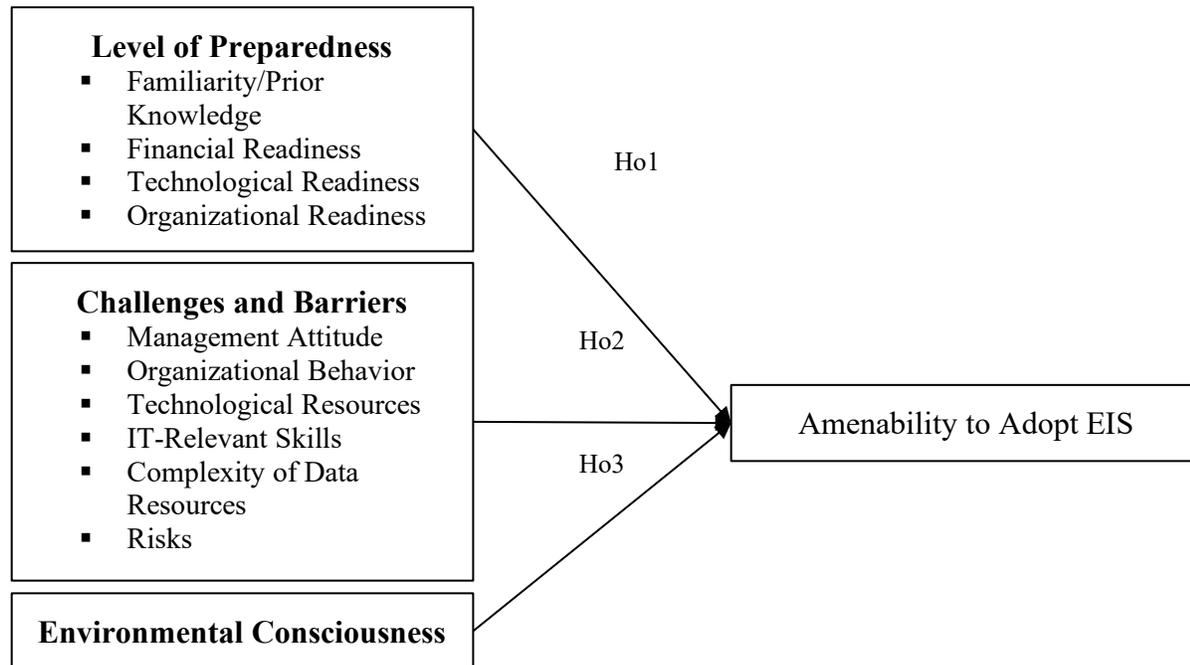
Despite the increasing interest around EI and more organizations sending their invoices electronically, only a handful of large organizations and government agencies utilize e-invoicing (Sundström, 2006). Hence, to mainstream the implementation of the EIS to SMEs in the Philippines, the researchers conducted a study to determine the readiness and willingness of SMEs in Northern Mindanao in adopting EIS. As the past literatures have also discussed, constructs like the challenges and barriers, and the environmental consciousness were also explored in the EIS pre-adoption within Philippine context.

Research Framework

As stated by Lin (2014), a theoretical model for e-business adoption must consider the factors that influence the propensity to evaluate, adopt, and implement IT innovation; such factors are rooted in specific technology innovation characteristics and a specific firm's organizational characteristics and environmental context. Hence, this study is anchored on both the Diffusion of Innovation Theory, and the Technological, Organizational, and Environmental (TOE) Framework.

Figure 1

Schematic Diagram of the Operational Framework anchored on DOI Theory and TOE Framework



Rogers (2003) tackled the innovation-decision process which highlights the adoption or rejection of the innovation. Accordingly, the innovation-decision process consists of five stages: an individual passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision. The TOE Framework on the other hand identifies three aspects of an enterprise's context that influence the process by which it adopts and implements a technological innovation: technological context, organizational context, and environmental context (Oliveira & Martins, 2011).

Review of Related Literature

Manual invoice is a major business document which ensures the legitimacy and validity of the transaction, while also being the primary element for tax and audit procedures. It also allowed increased control over data entry, better protected privileged information, and avoided having to learn complicated software (Berg, 2016). Attention shifted from manual invoicing to electronic invoicing because of significant factors like increased man-hours, risks of human error, and risks of high carbon footprint (Olaleye & Sanusi, 2019); however, the most important motive for switching to e-invoicing was the price. For both buyers and sellers, the main costs were printing, labor, postage, and filing which is estimated to be \$30.87 while processing electronic invoices entails \$27.67. Many traditional invoicing costs were reduced or eliminated altogether because of reduced manual processing and electronic sending. It has been calculated that e-invoices were approximately 70% cheaper than traditional or manual invoicing (Traditional invoicing and e-invoicing: A comparison, 2019).

Other difficulties of manual invoicing include the required time for delivery of the invoice and payment of invoiced amount, which negatively affect the whole cash flow. Furthermore, there

were following related issues: error rate of exposure, sending, and the loss of documents. There were also difficulties associated with secure archiving, whether technical or methodological, and therefore with a possible non-compliance with legislative requirements (Veselá & Radiměřský, 2014).

SMEs account for more than 99% of registered businesses in the country and provide 60% of jobs in the Philippines (International Trade Centre, 2020) while employing 70% of its working population, and accounting for 35% of GDP (Fong, 2019). Indeed, SMEs are vital to dispersing new industries to the countryside and stimulating employment (Miranda & Miranda, 2018) as they are more likely to be labor intensive. Supposedly, SMEs are also comparatively better positioned than large firms in terms of their operating agility to exploit the avowed potentials of new technologies (Awa et al., 2016). However, Fong (2019) cited that SMEs face a host of growth challenges including lack of technical capacity, difficulty in accessing regional markets in ASEAN and, most notably, lack of access to finance. As such, he added that the problem lies within the organization, the lack of level of readiness and openness to internal learning, and the adoption of entrepreneurial activities to adapt and win in a competitive environment (Fong, 2019).

E-invoicing (EI) is particularly important to SMEs. They facilitate the development of more transparent, efficient, and secure “account receivable factoring” which allows suppliers to meet their working capital needs, to lenders for cash (i.e., getting paid upon completion of work rather than waiting weeks or months for customers to pay their bills). Since the logistics involved in manual invoicing (i.e. printing, mailing, documenting, storing and reconciling paper invoices) is eliminated, it reduces the billing and collection cycle; consequently, working capital management is improved (UN, 2012). It also helped SMEs survive by helping to improve on-time payment (Cory, 2020). However, these firms have not accepted EI to the same extent as large companies and the public sector in Sweden (Sandberg et al., 2009).

Factors that affect the low adoption rate among business and resistance among very small firms to use e-invoicing were being determined by earlier research (Haag et al., 2013). These factors include technological and financial readiness (Yang, 2015), organizational readiness (Sandberg et al., 2009) and prior knowledge; and challenges and barriers (Salmony & Harald, 2010). Yang (2015) also found evidence that environmental factors significantly affect the firms’ willingness to adopt EI. Countries like China, India, Nigeria and other countries encounter these factors in the early years of the adoption or implementation process in the respective countries.

In earlier studies by Sandberg et al. (2009), it was determined that SMEs experienced pressure to accept EI from their customers. In addition, technologically, the SMEs were ready for an acceptance of e-invoicing. Furthermore, the technological and financial assistance and coercive methods were important strategies to facilitate the acceptance of e-invoicing in SMEs. Hence, external pressure, technological and financial assistance were of utmost significance in their adoption of EIS.

Along with this, the study of Poel et al. (2016) also examined the willingness of the firms to pay for necessary investment to transition to EI. Findings showed that, on average Belgian firms were willing to pay up to €2,380. Further, the perceived time and reduced risk gains positively influenced the willingness to pay the firms. On the other hand, Yang (2015) concluded that the familiarity level with EI development in China was the most important predictor for companies’ adoption intentions. Accordingly, the main drivers for adoption were management attitudes and supports, and the technological and financial readiness effectively facilitated EI adoption. The main obstacles that negatively affected adoption were technical and legislation issues. Further,

environmental and external factors strongly influenced enterprises' adoption decisions, whereby government and policy promotion had the most significant effect (Yang, 2015).

Olaleye and Sanusi (2019) considering the environmental factors that affect the motivation of Nigerian Companies to switch from manual invoicing to electronic invoicing is to reduce their carbon footprint, promoting a green environment, and healthy society.

Research Method

The study focused on determining the relationship between and the impact of the independent and dependent variables involved; therefore, correlational research design was followed in this research. According to McCombes (2020), a correlational research design measures a relationship between two variables without the researcher controlling either of them. It determines prevalence and relationships among variables, and to forecast events from current data and knowledge (Curtis et al., 2015). To satisfy the research design, this study incorporated quantitative research methods to investigate the stated research problem and to get the required information to carry out further research and test the hypotheses.

According to the Department of Trade and Industry (DTI), there were 24,876 SMEs in Northern Mindanao in 2020. Using the Slovin formula, 394 respondents were chosen proportionately from each city and province. The distribution of the sample size is presented in Table 1.

Table 1

Distribution of Sample Size over the Different Cities and Municipalities

Province	Total SME	Percentage	No. of Samples
Bukidnon	5,188	21%	82
Camiguin	1,495	6%	24
Lanao del Norte	4,865	20%	77
Misamis Occidental	3,889	16%	61
Misamis Oriental	9,439	38%	150
Total	24,876	100%	394

To gather the information for each construct, this research used a survey questionnaire. The formulation of the questionnaire was adopted from various literatures. Questions were adapted from Ngo (2013), Yang (2015), and Olaleye and Sanusi (2019) in consideration of all factors under the level of preparedness, and challenges and barriers. They were all chosen with regards to the applicability of the factors within the Philippine context to provide validity. Considerably, questions regarding the environmental consciousness of SMEs were from Ye et. al (2020). Further, the responses were captured through a five-point Likert scale. Data was collected both through offline and online surveys.

Prior to data analysis, the questionnaire was pretested to assess the questions' reliability and validity. To analyze the data, this research employs both descriptive and inferential statistics. To test the hypotheses, a multiple regression analysis was conducted.

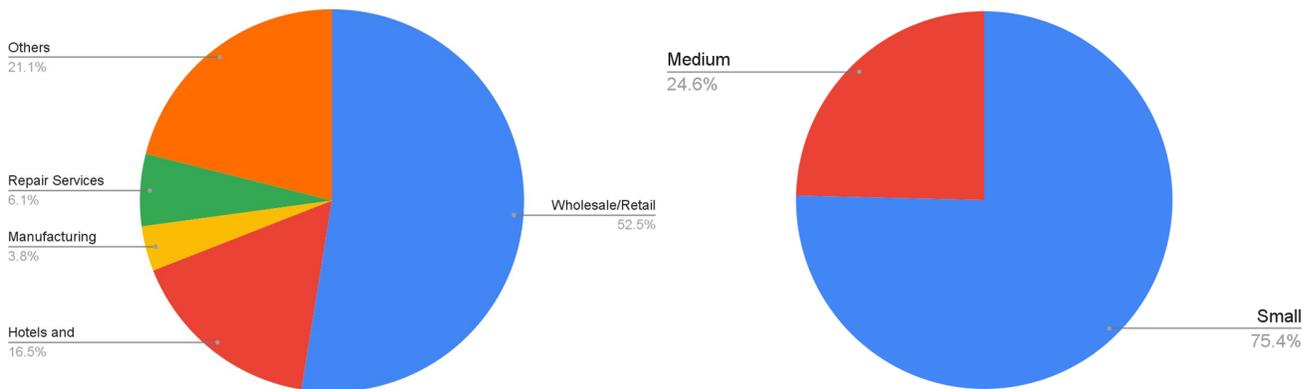
Results and Discussions

Descriptive Statistics

According to DTI (2019), 96% of SMEs in the Philippines are categorized as small firms. Further, the largest industry is the Wholesale/Retail Trade Industry comprising 46.2% of the SMEs while the Hotel and Restaurant is third largest at 14.4% (DTI, 2019). In an almost similar manner, as presented in Figure 2, the sample composition in this research is significantly composed of wholesale/retail business comprising 52.5% of the respondents and followed by firms in the hotel and restaurant industry (16.5%). In addition, the majority (75.4%) of the respondents also belong to the small category of entities.

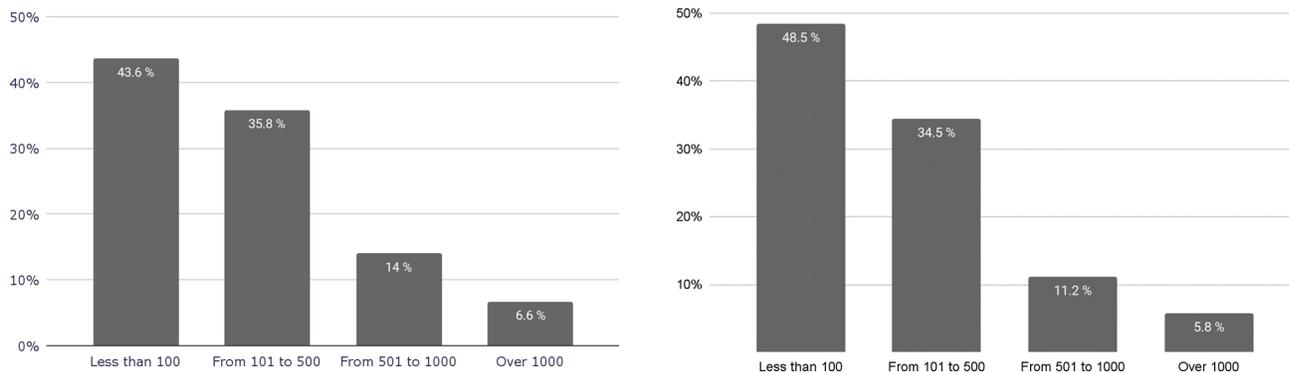
Figure 2

Distribution of Respondents per Industry and Size



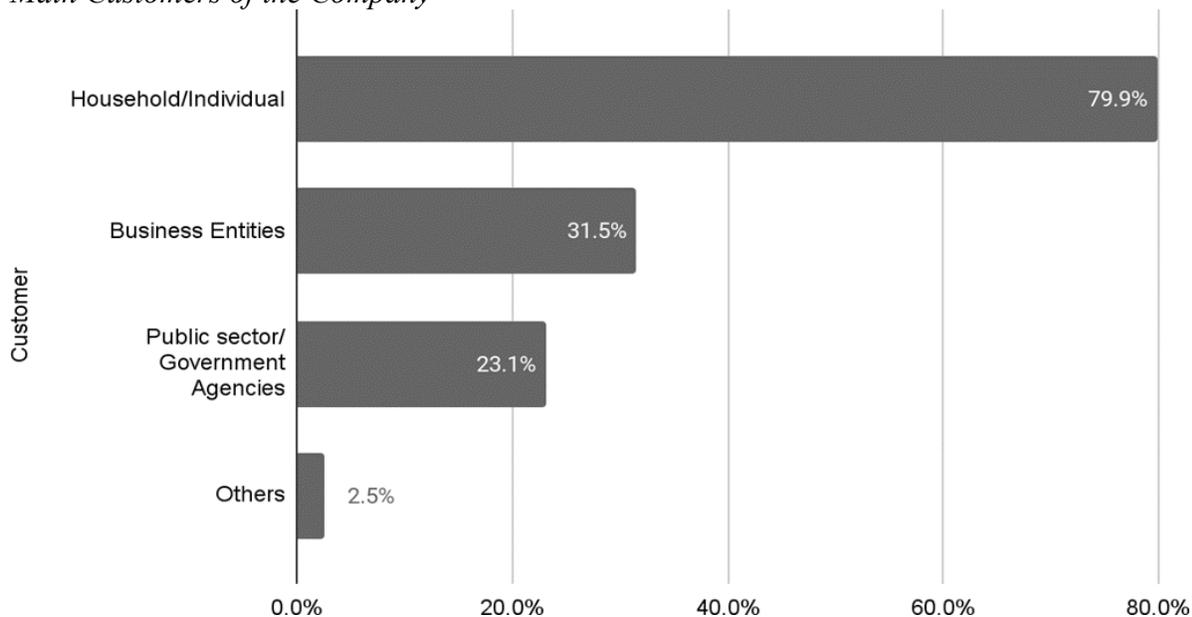
It is shown in Figure 3 that the majority of the enterprises that participated in the survey are issuing less than 100 invoices per month, 35.8% of the respondents issue from 101 to 500 invoices per month, while the remaining 14% and 6.6% are distributed for companies issuing from 501 to 1000 and over 1000 invoices per month respectively.

Figure 3
Number of Invoices Issued and Received by the Respondents



The incoming invoices somehow take the same trend as the one for the outgoing invoices. The chart above illustrates that the interval of less than 100 invoices per month is still the highest and the next interval which is from 101 to 500 is over thirty percent. Lastly, invoices from 501 to 1000 and over 1000 are being received by 11.2% and 5.8% of the respondents respectively. It can be observed that the majority of the respondents chose the lowest number of invoices issued or received. This might be due to the fact that the major customers of roughly 80% of the respondents are households/individuals who do not request for invoices. As presented in Figure 4, business entities which put value on the importance of invoices only come in second, comprising 31.5% followed by the public sector. The other customers that gained 2.5% of the responses include bikers, pet owners, and students.

Figure 4
Main Customers of the Company

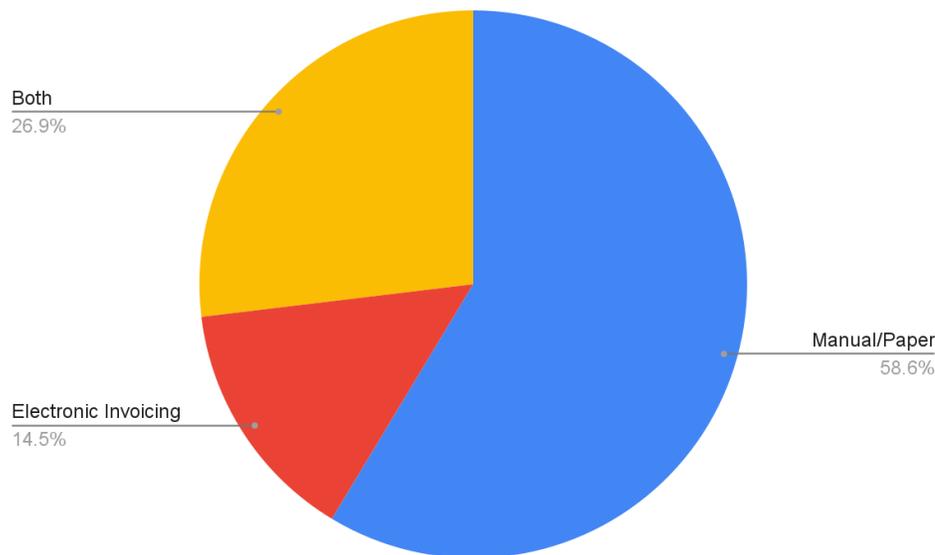


As presented in Figure 5, the majority (58.6%) of the entities that participated in the survey use manual/paper invoicing. Results also show that a total of 41.4% of the entities are aware and with prior knowledge in using electronic invoicing for their transactions since they both used

manual and EI. According to the feedback from the respondents, they only use EI when necessary (e.g. mandated by BIR). Accordingly, there are establishments that only use EI internally but issue manual invoices to customers since the latter is easy to access and more convenient.

Figure 5

Type of Invoicing System Currently Used by the Respondents



Main Findings of the Constructs

As presented in Table 2, Considering the results of each factor, SMEs' level of preparedness is deemed to be high implying readiness in terms of adopting EI. This result emanated from the high level of familiarity on the features and requirements of the system. Specifically, respondents have high level of awareness that EIS require a computerized accounting system and the importance of the invoice reference number (IRN). Further, results also show high level of readiness in the respondents' financial, technological, and organizational aspects.

Respondents agree that they have the financial capacity to migrate to EIS or they can easily raise funds to finance the adoption of EIS. However, they are unsure whether they can reach out to the government for financial support. Further, majority of the respondents currently have an Internet Service Provider (ISP) and can provide cyber security and data privacy. However, they are unsure if they can provide the necessary hardware (e.g. machines, fiscal drive and memory) or software (computerized accounting system). Employees of the firms are also familiar with IT, and use of other software and system. Respondents also plans to provide training when EIS is adopted

Table 2
SMEs' Level of Preparedness to Implement EIS

Indicators/ Construct	Mean	Verbal Description
Familiarity/Prior Knowledge	3.78	High
Financial Readiness	3.56	High
Technological Readiness	3.48	High
Organizational Readiness	3.46	High
Level of Preparedness	3.57	High
Management Attitude	2.6	Low
Organizational Behavior	2.83	Moderate
Technological Resources	2.9	Moderate
IT Relevant Skills	2.9	Moderate
Complexity of Data Sources	2.96	Moderate
Risks	2.96	Moderate
Challenges and Barriers	2.85	Moderate
Environmental Consciousness	4.14	High
Amenability to Adopt EIS	3.68	High

Based on the results, the respondents on the average are unsure about the challenges and barriers that they may be facing when EI will be fully implemented. This may stem from the lack of experience in terms of using EIS as this is yet to be fully implemented. This generally stems from the uncertainty in the business capabilities and management support. It is notable that the respondents acknowledge the challenges related to risks and complexity of data sources.

The respondents, on the average, have high level of environmental consciousness. Majority of the respondents agree that environmental issues need to be solved and they should take part in the solution to improve the environment. They also care about the environmental issues and believe that it will greatly impact the future and one of the solutions is implementing EIS as it will greatly reduce the use of papers and thus will promote zero waste. and their belief to resolve environmental problems.

The overall result in the amenability construct indicates that there is high level of willingness to adopt EIS. This may imply also that the respondents are t convinced about the benefits of e-invoicing in their business outweighs the challenges and risks associated with it. This may also emanate from the level of preparedness the businesses currently have in implementing EIS and the high level of env.

Regression analysis

Table 5*Result of Multiple Linear Regression Analysis for Each Construct*

Construct	Unstandardized		Standardized	t	Sig.
	Coefficient	Std. Error			
Constant	.568	.254		2.234	0.026
Level of Preparedness	.676	.043	.651	15.861	.000
Challenges & Barriers	-.034	.037	-.035	-.918	.359
Environmental Consciousness	.197	.046	.158	4.304	.000

Dependent Variable: Amenability/Acceptance to Adopt E-invoicing

The table shows a statistically significant positive value of beta for the companies' level of preparedness and their environmental consciousness which means that for every unit increase in their level of preparedness and environmental consciousness, there is also a unit increase in their willingness to implement EIS. Thus, the more firms are prepared and the more they are environmentally concerned, then the more they will want to implement in their company/business a paper-less invoicing. Consistent to the findings of Sandberg et al. (2009) and Yang (2015), the high level of familiarity, technological, and financial readiness are important predictors of EI adoption.

In addition, this finding is also consistent with the study conducted by Olaleye & Sanusi (2019) wherein one of the significant factors causing the shift from manual invoicing to EI includes the concern to promote a green environment and reduce carbon footprint.

It is notable that the companies' perception on the challenges and barriers shows a negative beta (-0.034), albeit statistically insignificant, implies that the more complicated the data structures are and the more complex and riskier EI is, the less likely they will adopt EIS in their company/business. This might emanate from the respondents' perception of a low level of management attitude. According to Yang (2015), effectiveness of the management support with the EIS facilitation is an important factor in the adoption.

Conclusions

This study used the combination of the Technological, Organizational, and Environmental (TOE) Framework and Diffusion of Innovation (DOI) Theory to determine the factors that affect the Small and Medium-sized Enterprises (SMEs) in adopting e-invoicing. This research examined the level of preparedness, challenges and barriers, and environmental consciousness of the SMEs in Northern Mindanao, and test their impact on their amenability to adopt EIS.

Similar to the composition of SMEs in the Philippines, the majority of the respondents are from Wholesale/Retail. Considering that the major customers of most of the respondents are household or individual who do not request for receipts, majority of the respondents issue less than 100 invoices per month. Further, considering their sizes, consequently their volume of transactions from suppliers, majority of the SME's also received less than 100 invoices per month. Currently, more than half of the SMEs in Northern Mindanao still use manual or paper invoices while only 14.5% solely uses electronic invoicing. This corresponds to the fact that most are continuing to

use manual invoicing. However, it is notable as well that 26.9% of SMEs are using both manual and e-invoicing.

Consequently, the findings of the multiple regression showed that the indicator of the level of preparedness is found to be significant at a 0% significance level, to their amenability to adopt EIS. This means that given the fact that the SME owners have sufficient knowledge about EIS and its features, when the businesses are financially capable to migrate electronically, or when technologically or on the organization level, EIS is compatible, the firms are amenable to implementing EIS.

Considering that 41.4% of the SMEs are using EI, it can be inferred that they already have knowledge on its uses and features. Consequently, the firms already have acquired technological and organizational readiness in implementing EIS. Further, business entities in the region either has current funds to finance the shift to EI or has the capacity to raise funds. Hence, SMEs in Northern Mindanao has a high level of readiness to implement EIS.

However, it has been determined challenges and barriers are statistically insignificant even, at 5% significant level. This is consistent with the studies of Gonzalo, et. al (2016) and Harindranath & Ozcan (n.d.). This finding is expected since results showed that the management attitude of SMEs in Northern Mindanao is low. According to Ghobaklhoo, et. al. (2012), the management attitude is significant when it comes to EIS adoption since executives have role in the implementation. Although numerous studies concluded that IT-relevant skills (Sundstrom, 2009, Haag et. al, 2013), and complexity of data structures (Deichler, 2019), as well as computer literacy are important when it comes to the adoption of EI, this study failed to find statistical support for SMEs in Northern Mindanao.

As per interview with some owners who are currently using the manual invoicing, implementing EIS is expensive. Some of them also have a computerized accounting system (e.g. QuickBooks) which is required in the implementation of EIS, however, their employees lack the technical competence to use the system. Others also employing a self-made accounting system that are incompatible with that of required by EIS.

Results also imply that the environmental consciousness of owners/managers positively affects their amenability to adopt e-invoicing. This means that the more environmentally conscious and care about the environment, the higher the possibility to adopt. SMEs in Northern Mindanao has high level of environmental consciousness. According to Malmodin and Lundén (2018), as the effect of digitalization has led other companies to reevaluate their help to the environment with the means of digital usage. This development indicated that companies are willing to change their system to reduce carbon footprints.

Recommendations

The level of preparedness of the SMEs in Northern Mindanao is the most important predictor for their willingness to adopt e-invoicing. It is recommended that the government agencies/authorities create programs to spread awareness about EIS to encourage those firms that are reluctant to adopt e- invoicing given they lack prior knowledge. This may serve as a springboard for government authorities to act upon the vague and inadequate comprehension of firms towards the implementation of e-invoicing and the significant benefits that it could offer.

Further, as this research found that SMEs have high level of environmental consciousness and that this construct is significant in their amenability to adopt EIS, it will also be helpful if the

contribution of the shift to EI to the environment will be highlighted in the implementation proposal and guidelines.

The preference of the respondents over traditional invoicing emanates from the lack of expertise of the employees and the relatively advance accounting system required. To help the firms adopt easier, service providers may create an e- invoicing platform that offers more add-on and plug-in features and a user-friendly setup that could help IT workers cope up and learn easily.

Future research may expand this research to include other variables and extend the analysis to include moderating effects of some firm-specific characteristics (e.g. size, age, type, industry). The results may also be validated (e.g. FGD or KII).

About the Researchers

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Budget and Program of Expenditure Classification of Public HEIs: Western Visayas Analysis

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Abstract – Public higher education institutions (HEI) are funded based on performance per Joint Circular 02 series of 2004 of Department of Budget and Management (DBM) and Commission on Higher Education (CHED) along with other criteria. Also, with the implementation of the “Higher Education Modernization Act of 1997,” CHED Memorandum Order No. 20 and “Public Higher Education Reform Framework”, these pushed public HEIs to monitor their performance not just financially but also academically. It is a fact though, only four of the nation’s universities were included in the QS (Quacquarelli Symonds) World University Ranking Survey since 2017 until 2022 and only one out of the four, is a public HEI, the other three are private HEIs. This study is an analysis of the reports of public HEIs in Western Visayas uploaded in Commission on Audit (COA), CHED and DBM vis a vis University of the Philippines (UP) report for 2017 to 2020, with the aim to target areas for improvement. However, the accuracy and integrity of those uploaded data will not be covered in this study. Data shows that Western Visayas SUCs receives less than 10% of the budget granted to UP which is rational given that majority have erratic enrolment, minimal number of Center for Excellence (COE) or Center for Development (COD) programs for a select few, average graduates’ employability, average percentage of board passing percentage and a handful of research.

Keywords: *state universities and colleges (SUC), public higher education institution (HEI), Western Visayas, Negros Island, program of expenditure classification (PREXC), budget*

Higher education institutions (HEIs) “are the schools at the tertiary levels, as distinguished from the schools at the basic level, which run from kindergarten through Grade 1 to Grade 12. Note that the four years of high school have expanded to six years and are referred to as Grade 7 to 12. The tertiary level schools are either private or public, and the public schools are further distinguished as LCUs (local colleges and universities), SUCs (state universities and colleges) and UP (University of the Philippines), which is the country’s national university.” (Tan, 2017). Tan (2017) explained further that LCUs are those run by local governments while, SUCs are public schools started by Spaniards and expanded by Americans. All these schools are accountable to CHED or the Commission on Higher Education.

Private HEIs budget allocation is usually anchored on the number of its enrollees and allocated based on needs of the cost centers. Consequently, “private schools struggle to pay for their operations, relying significantly on income derived from income payments. With the dwindling enrollment in private schools, the logical outcome is almost inevitable.” (Acidre, 2019). However, the sustainability of the private education sector and the skewed competition between public and private schools as Acidre (2019) puts out will be set aside in this study.

Public HEIs on the other hand, has subsidy from the national government and have internally generated funds. Subsidy from the national government is allocated based on normative funding formula per Joint Circular of Department of Budget and Management (DBM) and CHED number 02, series of 2004; where emphasis is on certain criteria geared towards quality instruction, research and extension, financial prudence and fiscal responsibility.

Further comparison leads to the QS or the Quacquarelli Symonds World University Ranking Survey. Moran (2017) refers to QS as an entity that conducts social-scientific research and ensures reputational surveys are reliable, quantitative data is accurate and find relevant ways to capture how a university achieve essential aspects of its overall mission. “QS has examined which goals appear to be broadly common to the world’s universities – to teach, to research, to internationalise, to perpetuate knowledge creation and transfer. With this done, they then aim to find ways of measuring how well universities achieve these goals.” (Moran, 2017). Craig O (2022) of TopUniversities and TopMBA enumerated the six (6) metrics used by QS World University Rankings: academic reputation 40%, employer reputation 10%, faculty/student ratio 20%, citations per faculty 20%, international faculty ratio 5% and international student ratio 5%. Over the last six years, only four (4) HEIs of the country have been included in the QS World University ranking top 1,000. And of the four, only one (1) is a public HEI – expectedly, the country’s national university, UP.

Statement of the Problem

It is in this premise, that triggered the analysis of Western Visayas (WV) public HEIs as compared to UP. How far are WV public HEIs when matched to UP on budget, enrolment, student – faculty ratio, graduates’ employability, academic reputation, and research. Establishing this, would lessen the gap between other public HEIs and UP but more particularly public HEIs in WV. Also, considering the evaluation in the national government of National Economic Development Authority or NEDA (2020), which include setting of targets, budget allocation, implementation and monitoring, this would also have material effect to national development goals (Figure 1).

Research Framework

For purpose of simplicity, the conceptual framework considers the IPO model of Gouran and Hackman and Morris as discussed by Vigilante (2022). Inputs include enrolment, budget per student, student – faculty ratio, accredited programs, graduates’ employability, board passers and research. These data will be compared and/or graphed to verify which of the SUCs have better number or at par with UP. Findings would be basis for developmental program or for further study. Visual presentation is shown in the appendices labelled as Figure 2.

Review of Related Literature

There are various studies related to the analysis of SUC funding and efficiency, two are shown in Philippine Institute for Development Studies discussion papers. Among others, Manasan & Revilla’s (2015) paper concluded that SUCs funding grow annually by 8% between 2003 to 2012. While, Cuenca’s (2011) paper covered the period 2006-2009 for 78 SUCs and concluded that SUCs have an efficiency score of 1 or inefficient. Ligan, De Guzman & Lopez (2011) on the other hand, revealed that from the seven SUCs in Metro Manila, liquidity and solvency position is strong however profitability is weak. Finally, as to research programs of SUCs, Galleto’s (2016) study revealed that among 17 regions in the Philippines, faculty profile, faculty-research ratio and SUCs with center of excellence/development has insignificant effect on research programs while

research services allocation and number of accredited programs of SUCs significantly influence SUC research programs.

Research Method

Data were condensed from the official website of two government agencies, DBM and CHED and were analyzed using the comparative research analysis method.

Results and Discussions

Budget

Table 1 summarizes the budget of eleven WV SUCs between 2017 to 2020 which clearly shows the disparity on the fund provided, 91% or 10 out of 11 SUCs in the said region only average 2% of the annual budget of UP while the other remaining is at 8%. As to budget per student, majority of the WV SUCs only average 14% of the budget per student of UP while the remaining SUC at 29%.

Enrolment

As UP average 36% of the total enrolment, i.e. all WV SUCs and UP, during the last four years, it would be expected that the enrolment graph in Figure 3 would show the eleven SUC cramped on the lower 20%. The highest was only 30% of UPs population, however, this SUC showed a declining trend and closed at 22% in 2020.

Student – faculty ratio

UP has maintained the student – faculty ratio at less than 15. For WV, 3 out of 11 have less than 30 while majority had less than 25. Details for the last four years per school is shown in Table 3 in the appendices.

Graduates' employability

The national expenditure program of DBM for fiscal year 2022, showed the actual employability of UP graduates at 95.23% in 2020. As for WV SUCs, it ranges from a low of 21% to a high of 81.27%.

Academic reputation

CHED reports that for 2020, UP has a whopping 39 center for excellence (COE) programs and 5 center of development (COD) programs. While WV has 3 COEs scattered to two SUCs and among the 4 of the 11, an aggregate of 9 CODs. For % of first-time licensure exam takers that pass the licensure exams, UP has 100% while WV SUCs ranges 39.55% to 96.59%. Another factor that would fall under this item is the number of accredited undergraduate and graduate program of the SUC, majority have 100% accredited undergraduate programs while for graduate programs there were 4 out of 11 SUCs without accreditation.

Research

With the data shown in Table 3, it is undeniable that UP has extensive output and contribution as to research in 2020. As to percentage there were 3 out of 11 WV SUC that exceeded UP. However, the aggregate absolute figures of those SUCs is only 1.82% for number

of researches used by the industry and 10.83% for the number of research conducted within the year as compared to UPs four figure research outputs. Research related statistic is shown in Table 4 to 6 for 2019 till 2017 in the appendices.

Conclusions

The annual National Expenditure Program (NEP) report of DBM has extensive data to verify the performance of all SUCs in the country and all other government agencies. These data help quantified why UP is in the QS World University Ranking Survey Top 1,000. Financially, it is given tens of billion in budget not just because of its stable and five-digit number of students but more so on the number of COE/COD programs they have, high employability rate of graduates, high board passing percentage and thousands of research contributed to various industry. Western Visayas SUCs on the other hand, have budget of less than 10% of budget granted to UP which is rational given that majority have erratic enrolment, not all have COE/COD programs, average graduates' employability, average percentage of board passing percentage and a handful of research.

Recommendations

Considering the limited analysis, it is worth trying to:

1. Conduct further study to benchmark the delivery of teaching in Western Visayas SUC vis a vis UP. This would have domino effect on result of board passers and graduates' employability.
2. Check whether the ratio of student – faculty has a bearing on quality education. UP has always maintained a ratio of 15 : 1 while the WV SUCs doubled those figures.
3. Replicate analysis to include all other SUCs in the country.
4. Benchmark with UP as to reviewing of program offering of WV SUCs, along with viability studies and reasonableness of the program considering WV environment.
5. Further rationalize allocation of budget especially for far-flung areas.
6. Consider additional government assistance to private HEIs when three out of the four country's university were included in the QS World University Ranking Survey.
7. Verify the percentage of international faculty and students of UP and WV SUCs or of other SUCs in the country or private HEIs and see whether this has impact on academic reputation or performance of the school. This item also comprises 10% of the QS survey rating.

This comparison may not be directed towards inclusion in the QS World University Ranking Survey, however, improvement in performance and eyeing to be at par with the country's national university, UP, would be tantamount to uplifting the quality of education in the Philippines and meeting our national development goal or even United Nations' Sustainability Development Goal.

About the Researcher

Ma. Christina Galen G. Parrocho is a novice in research undertaking. She is a Bachelor of Science in Accountancy and Master in Business Administration graduate of University of Saint La Salle – Bacolod batch 1998 and 2003 respectively. By 2009, she finished Doctor of Philosophy in Educational Management with CHED certification, authentication and verification from International Academy of Management and Economics (now Makati Medical College) in Makati, Philippines.

Work experience include a brief exposure in Yusay Credit and Lending Corporation as Assistant Pensioner's Loan In-charge, aggregate of 21 years of teaching and corporate accounting and budgeting in West Negros University (now STI West Negros University), a few months' stint in Colegio San Agustin Bacolod as Internal Auditor and currently as Assistant Professor I with designation as Management and Audit Analyst in Carlos Hilado Memorial State University.

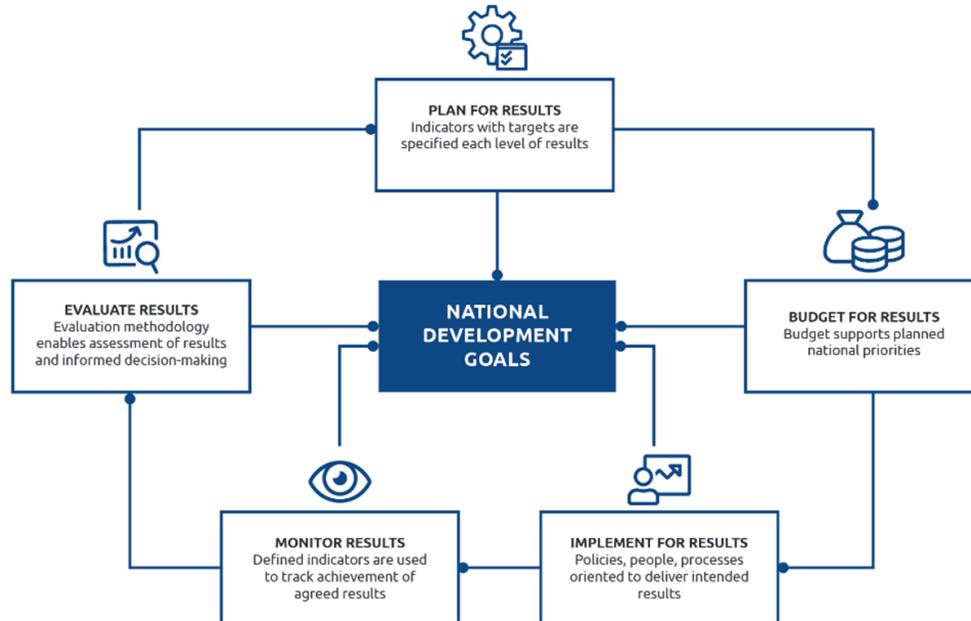
She is also fascinated with the stories behind the numbers and believes that numbers are all around and it has purpose, in nature or corporate world. They all have a story to tell and if we are fortunate it can even open windows to uncharted path.

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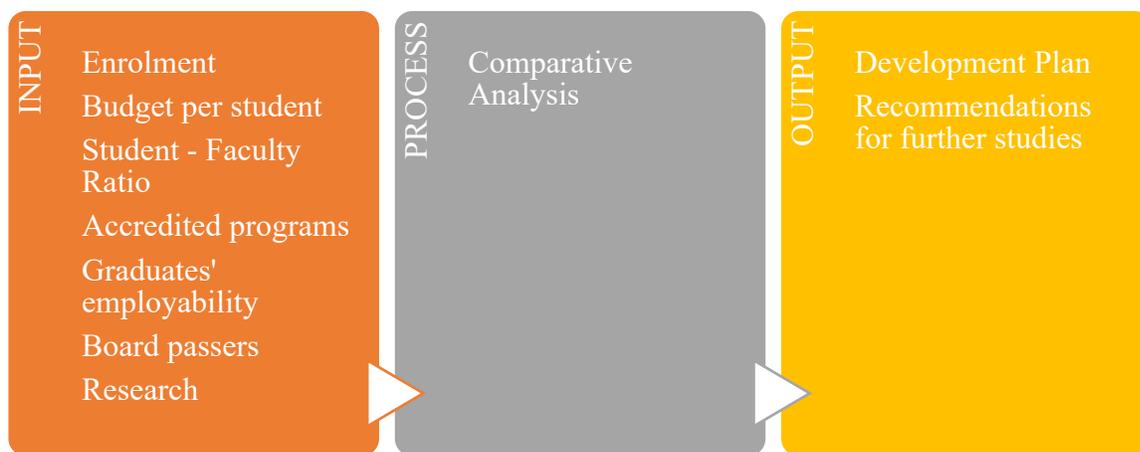
Appendices

Figure 1
Evaluation and the Public Sector Cycle



Note: Diagram was cited in the Guidelines on evaluation in the national government of NEDA (2020) which was taken from Asia-Pacific Community of Practice (APCoP, 2018)

Figure 2
Conceptual Framework



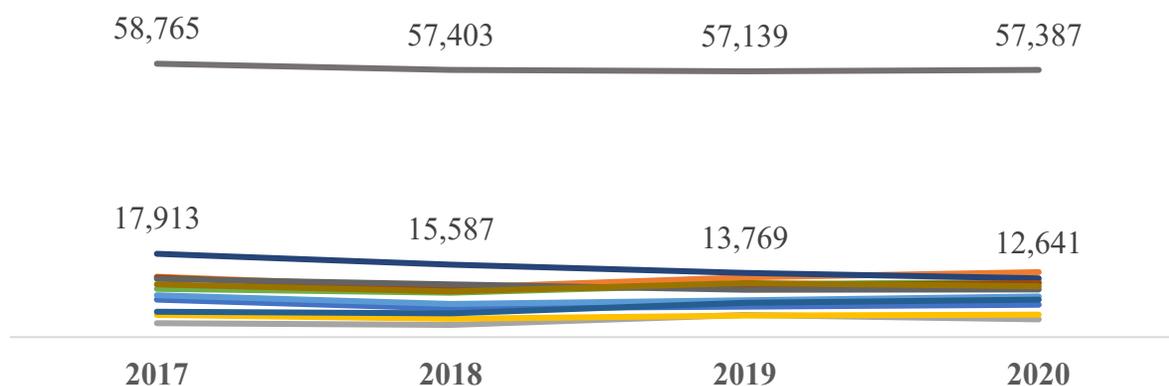
Note: Adapted from Gouran (1973) in communication and Hackman and Morris (1975) in psychology IPO model as discussed by Vigilante (2022).

Table 1

Gross budget per year and annual average budget per student

School	Budget (in millions PhP)				Budget / student (in thousands PhP)			
	2020	2019	2018	2017	2020	2019	2018	2017
WV1	369	415	403	408	52,802	63,277	65,384	50,624
WV2	571	677	534	606	40,841	52,549	50,208	46,907
WV3	389	351	274	306	37,724	34,456	24,314	24,470
WV4	252	181	194	137	23,152	15,598	19,751	12,133
WV5	153	106	90	94	39,584	22,219	34,245	31,409
WV6	609	560	541	469	52,140	50,422	52,925	36,575
WV7	255	344	307	300	52,737	74,037	77,709	63,325
WV8	328	364	385	390	37,286	45,618	53,967	43,300
WV9	129	179	181	134	15,937	24,542	35,368	24,415
WV10	262	400	362	290	21,976	35,143	37,936	27,890
WV11	1,218	1,243	1,252	1,175	96,326	90,275	80,352	65,606
UP	18,691	17,005	16,156	13,512	325,705	297,614	281,450	229,929

Note: Average budget per student is computed by dividing gross budget by number of students. These data are presented as nearest million and thousand respectively. Data from CHED.

Figure 3*Enrolment*

Note: Line graph with 57,387 enrollees in 2020 is UP while lower line graphs are the 11 WVSUCs. Line graph showing 12,641 enrollees in 2020 is WV11. Data from CHED.

Table 2
Student – Faculty Ratio

School	Student – Faculty Ratio			
	2017	2018	2019	2020
WV1	23 : 1	19 : 1	20 : 1	20 : 1
WV2	24 : 1	19 : 1	23 : 1	23 : 1
WV3	17 : 1	13 : 1	23 : 1	22 : 1
WV4	21 : 1	21 : 1	21 : 1	22 : 1
WV5	24 : 1	20 : 1	23 : 1	24 : 1
WV6	26 : 1	22 : 1	25 : 1	27 : 1
WV7	19 : 1	20 : 1	15 : 1	18 : 1
WV8	26 : 1	36 : 1	24 : 1	24 : 1
WV9	31 : 1	42 : 1	25 : 1	23 : 1
WV10	32 : 1	28 : 1	33 : 1	29 : 1
WV11	24 : 1	25 : 1	30 : 1	29 : 1
UP	16 : 1	15 : 1	15 : 1	14 : 1

Note: Data from CHED.

Table 3
Research related statistic for 2020

School	# of researches in the last three years used by industry	# of researches completed within the year	% of published research
WV1	4	29	25.92%
WV2	3	35	3.00%
WV3	15	109	41.67%
WV4	8	39	4.65%
WV5	6	42	100.00%
WV6	5	25	44.00%
WV7	25	98	21.00%
WV8	4	60	74.29%
WV9	11	38	70.00%
WV10	5	40	28.00%
WV11	18	52	5.11%
UP	1,157	1,293	61.23%

Note: Data from DBM's National Expenditure Program for FY 2022

Table 4
Research related statistic for 2019

School	# of researches in the last three years used by industry	# of researches completed within the year	% of published research
WV1	6	27	42.31%
WV2	3	55	5.45%
WV3	19	88	51.56%
WV4	6	43	4.65%
WV5	6	33	100.00%
WV6	3	36	55.56%
WV7	25	98	21.00%
WV8	5	70	100.00%
WV9	9	40	59.46%
WV10	5	43	28.00%
WV11	14	72	14.22%
UP	1,385	1,421	63.59%

Note: Data from DBM's National Expenditure Program for FY 2021

Table 5
Research related statistic for 2018

School	# of researches in the last three years used by industry	# of researches completed within the year	% of published research
WV1	4	31	48.00%
WV2	3	73	8.00%
WV3	19	79	51.90%
WV4	7	45	n/a
WV5	6	33	100.00%
WV6	3	36	55.56%
WV7	24	96	20.00%
WV8	5	63	106.35%
WV9	10	40	111.11%
WV10	1	27	25.92%
WV11	14	77	13.17%
UP	2,049	1,407	n/a

Note: Data from DBM's National Expenditure Program for FY 2020

Table 6
Research related statistic for 2017

School	# of researches in the last three years used by industry	# of researches completed within the year	% of published research
WV1	n/a ¹	30	76.92%
WV2	235	89	39.15%
WV3	58	n/a ²	36.00%
WV4	2	n/a	0.00%
WV5	9	n/a	n/a ³
WV6	n/a ⁶	n/a ⁷	76.03%
WV7	n/a ⁴	n/a ⁴	92.00%
WV8	1	n/a	0.00%
WV9	27	n/a	n/a ⁵
WV10	24	n/a ²	100.00%
WV11	14	n/a	0.00%
UP	1,682	2,036	39.55%

Note: Data from DBM's National Expenditure Program for FY 2019

¹ Absolute figure not available, data showed 76.47% of the research work for the last three years were used by industry

² Absolute figure not available, data showed 100.00% of the research work were completed within the year.

³ Percentage of published research not available, data showed 1 research work was published.

⁴ Absolute figure not available, data showed 100% of the research work for the last three years were used by the industry and 100% of the research work were completed within the year.

⁵ Percentage not available. Data showed 6 research work were published.

⁶ Absolute figure not available. Data showed 66.29% of the research work for the last three years were used by industry.

⁷ Absolute figure not available. Data showed 50% of the research work were completed during the year.

The Impact of Accounting Environment on the Control of Corruption in ASEAN Countries

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Abstract – Corruption is a pressing issue that is continuously discussed by different sectors of society in terms of understanding how to reduce it. In fact, accountants have a key role in controlling corruption through promoting transparency across both in the private and public sectors. Despite this, current literature has failed to consider the accounting environment together with the role of corporate governance, regulatory policy formation, and economic development in mitigating corruption within ASEAN countries. Therefore, this study proposed to address the current research gap by utilizing a panel regression model on ASEAN countries from 2010 to 2019. The findings of this study show that the accounting environment does not have a significant impact on a country's control of corruption, implying that the current accounting environment is lacking in the scope used to define corruption and in the actions taken to address it as the focus is only on increasing transparency and creating standards for disclosure for companies instead of targeting and catching fraudulent activities. On the other hand, regulatory quality and economic development are found to have significant moderating impacts on the relationship between the accounting environment and control of corruption. As such, this study recommends strengthening the current regulatory quality, specifically in the accounting standards and practices, to further reinforce the accounting environment and consequently mitigate the instances of corruption within the ASEAN countries. In relation to the moderating impact of corporate governance, it is insignificant as a result of the large levels of corruption experienced in certain countries within the ASEAN.

Keywords: *corruption, accounting environment, corporate governance, regulatory policy formation, economic development, control of corruption, ASEAN*

I. INTRODUCTION

Corruption is happening in many parts of the world. It is a prevalent, persistent, and deeply-rooted issue in society. The World Bank (1997) simply defined corruption as taking advantage of public power for private gains. However, a more comprehensive definition is deriving personal benefits from the intentional noncompliance with regulations and principles (Tanzi, 1995). This definition acknowledges that public power is not a necessary element in determining the presence

of corruption. In fact, corruption can take on many forms, existing in both the political and economic landscapes. Political corruption, as the name suggests, involves the misuse of political power and influence by decision-makers to utilize public goods for private payoffs (Amundsen, 1999). Economical or commercial corruption, on the other hand, is the act in which an individual misuses their position and disregards his duty to the organization in which he belongs for his personal gain (Wells, 2014).

Surprisingly, the economic implications of corruption are ambiguous, as some researchers argue that corruption can bypass rigid bureaucratic red tapes to smoothen business transactions and attract direct foreign investments (Amundsen, 1999). However, other studies consistently observe corruption as a hindrance to economic growth by disrupting business operations, reducing tax revenues, and weakening the effectiveness of financial assistance programs (Šumah, 2018). Corruption also redistributes wealth and power in an unbalanced manner, encourages conspicuous consumption of goods and services, and generates a culture of distrust in society (Caiden et al., 2001). The varying effects seem to depend on the type of corruption and whether it is controlled or uncontrolled (Amundsen, 1999) - economic growth is not hampered if businesses are able to properly forecast and estimate the effects of corruption; however, it is damaging to the economy if it is disorganized, plentiful, and unpredictable.

As such, necessary measures are placed to minimize the prevalence and negative effects of corruption by tackling the issue from the roots and recognizing its determinants and signs. This includes country-level factors, such as the level of economic development, the state of political institutions, civil society, and organizational culture. For example, there are higher incidences of corruption when institutions are weak (Amundsen, 1999). Most of these weak institutions are characterized by ineffective governments, weak rule of law, violence, political terror, poor regulatory quality, and political instability, among other factors (Rice & Patrick, 2008). Moreover, low-income countries are also found to have higher corruption incidence, along with low rates of economic development and high income inequality (Gyimah & Munoz, 2006). It is much harder to tackle corruption from this perspective, since this involves cultures and political systems. However, there are also firm-level factors, which includes the accounting environment. This contributes to controlling corruption through the implementation of effective management information systems, empowering strong legal frameworks, and adopting sound accounting and auditing standards for strong external and internal controls which are factors that can be controlled by regulatory bodies (The World Bank, 1994).

1.1. Problem Statement

At present, countries are still being held back by high incidences of corruption. In the case of some ASEAN countries, corruption is still rampant despite recent economic developments, which have consequently lowered the trust of its citizens (Schoeberlein, 2020). As such, it is necessary to identify measures that can feasibly aid in minimizing the incidence of corruption so countries are able to fully maximize their resources to achieve economic growth and development.

This leads to the research statement of this study “What is the moderating impact of the regulatory policy formation, corporate governance, and economic development on the relationship between the accounting environment and control of corruption in ASEAN countries from 2010 to 2019?” This study examined whether a country’s accounting environment, which encompasses both private and public accounting quality, is correlated to controlling the level of perceived corruption in a country. More specifically, the accounting environment is determined by both private accounting, as represented by the adoption of International Financial Reporting Standards

(IFRS), and public accounting, as represented by the adoption of International Public Sector Accounting Standards (IPSAS). Moreover, this study examined the moderating impact of regulatory policy formation, corporate governance, and economic development on this relationship. The countries included in the study are the ten original members of the ASEAN, namely: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. Furthermore, the time frame covered by the research is from 2010 to 2019. The use of this timeframe is to provide a stable sample period in relation to the economic crises faced by the global economy prior to the onset of the COVID-19 pandemic. The findings of this study can be utilized in the formulation of policy recommendations that include deciding the optimal level of adopting accounting standards, corporate governance, and regulatory frameworks, and suggesting specific courses of action to minimize if not eradicate corruption among ASEAN Countries.

1.2. Literature Review

To provide a foundation of the context of this research, the literature review tackles the impacts of a country's accounting environment, audit environment, corporate governance structure and regulatory policy formation on national corruption, and identifies the significance of each determinant on controlling corruption on the national level.

Accounting Environment and Corruption

Accounting standards were created to improve accountability. As a result, the accounting environment is influenced by the local accounting standards the private and public accounting sector adopts. According to Hoque and Monem (2016) and Wu (2005), the length of IFRS experience and extent of disclosure inversely affects the perceived national corruption, especially if the country is a developing country. Similarly, Tawiah (2021) found that the adoption of IPSAS aided in constraining corruption in 77 developing countries. This can be expected since the standards are set to improve information distribution and to promote consistency in the reporting of information.

However, according to Neu et al. (2013), strengthening accounting practices does not mitigate the number of corrupt individuals that study the existing loopholes. Therefore, the study of Everett et al. (2007) identifies that it is important to design the accounting standards towards combating corruption and profiling actual fraudsters. Finally, a study on 15 European countries finds that the adoption of accounting standards can only have a significant increase in the reliability of financial statements within corrupt countries if they have much more room to benefit from imposing additional standards that monitor accounting information.

Audit Quality and Corruption

In addition, the role of audit quality is included in the accounting environment. According to Shihata, Tanzi, and Torres (1997), sound auditing is necessary to discover corrupt acts and discourage a culture of corruption. Although auditors are responsible for detecting material misstatements that result from fraud, Lino et al. (2021) argued that there is a risk of ignorance or collusion as auditors face undue burden on reporting acts of corruption in corrupt nations with poor regulatory frameworks. As a result, the auditing profession is reluctant in addressing corruption as evidenced by the lack of explicit inclusion of corruption under the scope of fraud in the International Standard on Auditing and textbooks (Eilifsen et al., 2014; Arens et al., 2014, Gray & Manson, 2008).

Regulatory Policy Formation and Corruption

Laws and policies may differ per country to address unique concerns, but they generally exist to prevent harmful or self-serving actions by increasing the probability of detection and requiring transparency and accountability. Studies such as that of Soh and Amin (2020) say that this can solve market failures, including corruption. Alternatively, studies such as that of Ionescu (2015) say that it can make corruption worse, as too many regulations can invite opportunities for future corrupt transactions as a means to avoid the regulatory constraints.

Kostova et al. (2018) also argues that rule of law must be taken into consideration. Dincer and Fredriksson (2018) also claim that the same is true for public trust, which Wang et al. (2019) considers as a close substitute to rule of law. According to them, a strong rule of law or high public trust would strengthen the mitigating effects of regulation on corruption as it provides a reliable mechanism for punishment after detection.

Corporate Governance and Corruption

Corporate governance, as explained by Gillan and Starks (1998), directly governs the company's operations. Accordingly, Sullivan et al found that strong corporate governance promotes a high level of trust through the proper practice of transparency, accountability, fairness and responsibility. Wu also found that good governance can disincentivize managers from committing corruption. Alternatively though, Donadelli et al. (2014) claim that high corruption exacerbates agency conflicts between managers and owners, weakening the effective implementation of good governance. Consequently, Sebhatu and Li (2016) argue that prevailing instances of corruption hinder the enhancement of corporate governance policies. Hence, these contrasting claims have kept the role of corporate governance in controlling corruption questionable.

Theoretical Framework of the Study

In considering the impact of corruption in the firm-level and economic-level, as well as the role of the accounting environment in controlling corruption, the following are the theoretical bases used in this study:

Sand the Wheel Hypothesis (SWH) - Corruption is detrimental for the economy as it disincentivizes investment across developing countries, which then leads to hampered economic growth and development (Keita & Laurila, 2016; Mauro, 1995). Moreover, higher corruption causes sluggish productivity as corruption paves the way for ease in doing unjust and unfair business transactions and economic activities, which then leads to massive redistribution of resources to rent-seekers - leaving the rest of the economy with little to no benefits at all (Coorey & Schneider, 2016). This results in higher returns to scale; thereby, indicating that corruption sands the wheel for the overall development of the economy at large.

Agency Theory - Agency relationship is identified as a contract whereby principals delegate authority to an agent to undertake decision making tasks and perform services (Jensen & Meckling, 1976). In a typical firm setting, agents are identified as the managers or minority shareholders, whereas owners or majority shareholders are identified as the principals. Due to the separation of control and ownership of these two parties, agency problems arise as their intentions and motivations misalign. Consequently, corruption may arise due to agency problems as

managers may have the option to exploit corporate resources to bribe public officials to get better deals, government favor or solely for private benefits (Donadelli et al., 2014).

Institutional Theory - This presents a rather logical way of perceiving a firm's tendency of adapting to the technical and political environment it thrives in. More specifically, it explains how institutional elements, such as rules, norms and societal behavior influence how a firm responds and interprets issues that persist (Li et al., 2008). Accordingly, firms are not only reliant on their economic objectives of maximizing profit and minimizing cost; rather, they tend to act strategically as a means of survival amid competitive environments; hence, it is imperative for firms to seek favor in the eyes of the state and the society at large through obtaining legitimacy (Meyer & Rowen, 1977).

COSO'S Internal Control-Integrated Framework - The Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework is utilized to assess the design and operating effectiveness of their internal control systems. Instead of limiting the measures through the assessment of external financial reporting, this framework provides much emphasis on the internal processes done to produce financial statements as the quality of process determines the quality of the output (Uwadiae, 2015). Accordingly, the framework for internal control consists of 5 major components, which are: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring activities.

Operational Framework of the Study

Building on the benchmark model of Houqe and Monem (2016), this study performed a quantitative analysis using the operational framework shown in Figure 1.

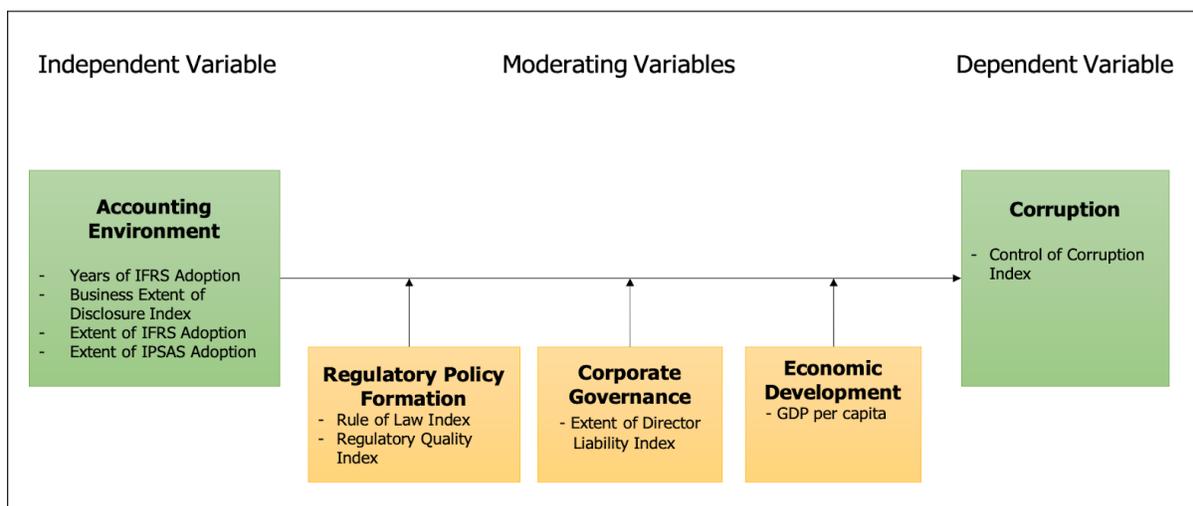


Figure 1. Operational Framework

In order to satisfy the general objective of understanding the moderating impact of regulatory policy formation, corporate governance, and economic development on the relationship between the accounting environment and control of corruption, the dependent variable of this study is control of corruption, measured by the Control of Corruption Index (CCI). Meanwhile, the independent variable, accounting environment, is measured by the length of IFRS adoption, Business Extent of Disclosure Index, extent of IFRS adoption, and extent of IPSAS adoption. Since the accounting environment is determined by both the quality of private sector accounting and

public sector accounting, the first three measures are included to represent the private sector accounting while the last measure is included to represent public sector accounting.

In accordance with the benchmark model, variables that have a moderating impact on the accounting environment are also included as moderating variables in the operational framework. More specifically, these are regulatory policy formation, measured by Regulatory Quality Index and Rule of Law Index, corporate governance, measured by Extent of Director Liability Index, and economic growth, measured by GDP per capita. The definitions of each variable are summarized in Table 1.

Variable	Measure	Definition
<i>Dependent Variable</i>		
Control of Corruption	<i>CCI</i>	Measured on a scale of -2.5 to +2.5 whereby a higher index indicates less corruption.
<i>Accounting Environment</i>		
IFRS Experience	<i>IFRS</i>	Measures the number of years since the mandatory IFRS adoption of a country.
Extent of Disclosure	<i>DISC</i>	Measured on a scale of 0 to 10 whereby a higher index indicates greater disclosure of related-party transactions.
IFRS Adoption	<i>XTNT</i>	IFRS Extent of Adoption measures the extent by which a country has required the adoption of the IFRS on a scale of 0 to 2 whereby 0=neither required nor permitted, 1=permitted, and 2=required.
IPSAS Adoption	<i>IPSAS</i>	Measured on a scale of 0 to 2 whereby 0=not adopted, 1=partially adopted, and 2=fully adopted.
<i>Regulatory Policy Formation</i>		
Regulatory Quality Index	<i>RQI</i>	Measured on a scale of -2.5 to +2.5 whereby a higher index indicates stronger perceived ability to implement sound policies.
Rule of Law Index	<i>LAW</i>	Measured on a scale of -2.5 to +2.5 whereby a higher index indicates stronger capacity to hold agents liable to the rules of society.
<i>Corporate Governance</i>		
Extent of Director Liability Index	<i>INV</i>	Measured on a scale of 0 to 10 whereby a higher index indicates stronger investor protection.

Economic Development

GDP per capita	<i>GDP</i>	Calculated by dividing the gross domestic product by midyear population.
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Hypotheses of the Study

This study hypothesized direct and moderating effects discussed in the following subsections.

Direct Effect of Accounting Environment to Control of Corruption Index

This research hypothesizes that the accounting environment has a negative or indirect impact on the level of corruption a country faces – that is, the stronger the accounting environment, the less corruption a country faces. However, since this study utilized the Control of Corruption Index as an indicator of corruption, then this research hypothesizes that the accounting environment has a positive effect on the CCI. In other words, the stronger the accounting environment, the more able the government is to control corruption. It is significant to identify that, for the purposes of this research, the accounting environment comprises a country's length of IFRS adoption, Business Extent of Disclosure Index, extent of IFRS adoption, and extent of IPSAS adoption.

H_{A1}: Accounting environment has a significant impact on the Control of Corruption Index.

Moderating Effect of Regulatory Policy Formation, Corporate Governance, and Economic Development

This research also accounted for the moderating impact of non-accounting factors such as the regulatory policy formation, corporate governance, and economic development, on the relationship between the accounting environment and control of corruption. The hypotheses for each variable included in the analysis of a country's corruption are as follows:

H_{A2}: Regulatory policy formation has a significant moderating impact between the accounting environment on the Control of Corruption Index.

H_{A3}: Corporate governance has a significant moderating impact between the accounting environment on the Control of Corruption Index.

H_{A4}: Economic development has a significant moderating impact between the accounting environment on the Control of Corruption Index.

II. METHODOLOGY

This study utilizes secondary data on ASEAN countries obtained from the World Bank, IFRS, and IFAC for the period 2010 to 2019 to determine the moderating impact of the regulatory policy formation, corporate governance, and economic development on the relationship between the accounting environment and control of corruption using Stata as the statistical tool.

The proponents controlled for unobserved endogeneity and heterogeneity and allowed for the estimation without aggregation bias by considering the usage of the Fixed Effects (FE) and Random Effects (RE) panel regression models to allow each country a different intercept term using panel data covering ten countries in the ASEAN region for a ten-year period from 2010 to 2019 (Gujarati & Porter, 2008). Nevertheless, the use of the Pooled OLS (POLS) regression model was also considered to ensure that there was no bias in the model estimation.

In order to achieve the objectives, the panel regression models used the control of corruption index as its dependent variable, the accounting environment as its independent variable, and regulatory policy formation, corporate governance and economic development as its moderating variables. Therefore, regression models vary based on the moderating variable that enters the model. This is to better assess its impact on the control of corruption when considered with accounting environment variables.

III. RESULTS AND ANALYSIS

This section provides the descriptive statistics of the data set, results of the statistical tests conducted, final model presentation, and analysis of results.

3.1. Regression Results

Table 2 summarizes the descriptive statistics based on a sample size of 100 observations across all countries in the ASEAN and variables from 2010 to 2019.

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	Range
CCI	100	-0.21	0.96	-1.67	2.18	3.85
IFRS	100	2.80	3.05	0.00	10.00	10.00
DISC	100	6.64	3.12	2.00	10.00	8.00
XTNT	100	1.13	0.95	0.00	2.00	2.00
IPSAS	100	0.46	0.59	0.00	2.00	2.00
RQI	100	0.04	0.95	-2.24	2.26	4.50
LAW	100	-0.14	0.87	-1.55	1.88	3.43
INV	100	5.24	3.39	0.00	10.00	10.00
GDP	100	12,394.66	18,505.52	785.50	66,188.78	65,403.28

Based on the descriptive statistics of 100 observations in the sample, the average Control of Corruption Index score is negative, which indicates high incidence of corruption in ASEAN in the past decade. Notably, the least corrupt country in the sample, Singapore, was also the 3rd least corrupt in the world in 2019. In addition, it has the highest levels of regulatory quality and corporate governance and is the richest country in the sample. On the other hand, the most corrupt country in the sample, Myanmar, was also the 2nd most corrupt in the world in 2010. In addition, it has the poorest levels of regulatory quality and corporate governance and is the second poorest country in the sample. As such, it can be observed that corruption is inversely related with the

accounting environment, regulatory policy framework, corporate governance, and economic development.

Control of Corruption Index (CCI) - The mean CCI score is -0.21, which indicates that the countries in the sample are highly corrupt on average (Houqe & Monem, 2016; Kraay et al., 2010). On average, out of the 10 countries in the sample, 7 countries are highly corrupt while 3 countries are the least corrupt. Notably, the lowest CCI score of -1.67 was observed from Myanmar in 2010, which indicates that the country is extremely corrupt. This is also observed globally as Myanmar ranked 191st out of 192 countries. This is also coupled with the fact that Myanmar has the poorest levels of regulatory quality and corporate governance and is the second poorest country in the sample. On the other hand, the highest CCI score of 2.18 was observed from Singapore in 2010, which indicates that the country is not corrupt. This is also observed globally out of 192 countries wherein Singapore has stayed within the Top 4 position for majority of the time. This is also coupled with the fact that Singapore has the highest levels of regulatory quality and corporate governance and is the richest country in the sample.

IFRS Experience (IFRS) - The mean number of years the countries in the sample have adopted IFRS since 2010 is 2.80 years, which indicates the slow convergence of ASEAN countries to IFRS due to lack of technical infrastructure required to implement the same and cultural reluctance (Trabelsi, 2016). In fact, among the 10 countries in the sample, only Myanmar and Philippines have adopted mandatory IFRS since 2010 while Indonesia and Vietnam still have not adopted mandatory IFRS. Notably, out of the 8 countries currently adopting IFRS, Singapore is the last country to do so in 2018. Nevertheless, it should be noted that Singapore has had the highest levels of regulatory quality and corporate governance throughout the period, which indicates the presence of a strong financial reporting framework even before its full convergence to IFRS. This observation aligns with the findings of Houqe and Monem (2013) which show that strong political institutions within a country determine the effectiveness of the adoption of IFRS in controlling corruption.

Business Extent of Disclosure Index (DISC) - The mean DISC score is 6.64, which indicates that the countries in the sample have high levels of disclosure requirements in place. In fact, among the 10 countries in the sample, 4 countries, namely Indonesia, Malaysia, Singapore, and Thailand have consistently received the highest score of 10 from 2010 to 2019. Despite having relatively high disclosure scores across the sample, it can be observed that developing countries in the sample are still highly corrupt, which contradicts the findings of Houqe and Monem (2016). This may be due to the fact that political institutions are not strong enough to enforce the disclosure requirements (Houqe & Monem, 2013).

IFRS Extent of Adoption (XTNT) - The mean XTNT score is 1.13, which indicates that ASEAN countries on average are permitted but not required to use IFRS. As of 2019, 7 out of 10 countries in the sample have required the use of IFRS as Vietnam has yet to start mandating the use of IFRS by 2025 and Indonesia is slowly converging its national accounting standards toward IFRS without any plans of a full adoption (PwC, n.d). Moreover,, the observations show that half of the countries in the sample saw a great improvement in their CCI scores within the first three years of full adoption to the IFRS, which aligns with the findings of Rad and Embond (2014) stating that information quality significantly improves post-IFRS adoption and thus reduces the perceived corruption in a country.

IPSAS Extent of Adoption (IPSAS) - The mean IPSAS score is 0.46, which indicates that ASEAN countries on average have not yet fully adopted IPSAS and are lagging behind Organization for Economic Co-operation and Development (OECD) countries due to challenges,

such as poor recordkeeping, limited IT infrastructure, and insufficient training capacities, which are prevalent in emerging economies (Deloitte, 2017; Kolesnikov-Jessop, 2018). In fact, as of 2019, 4 out of 10 countries in the sample, namely Brunei, Cambodia, Myanmar, and Vietnam, have not yet adopted IPSAS or a similar framework. Moreover, the observations show that half of the countries in the sample saw a great improvement in their CCI scores within the first three years of greater adoption to the IPSAS, which aligns with the findings of Tawiah (2021) and may be attributed to the local government's ability to present faithful, relevant, and timely information in accordance with IPSAS.

Regulatory Quality Index (RQI) - The mean RQI score is 0.04, which indicates that ASEAN countries have moderate regulatory quality. It should be noted, however, that 6 out of 10 countries, namely Cambodia, Indonesia, Laos, Myanmar, Philippines, and Vietnam, have consistently earned a negative score, which indicates that more than half of ASEAN countries have poor regulatory quality. Moreover, among the sample countries, rankings based on CCI and RQI largely follow the same order, which indicate that the extent to which individuals follow institutional policies and regulations against corruption is heavily linked to the soundness of such policies and regulations.

Rule of Law Index (LAW) - The mean LAW score is -0.14, which indicates that ASEAN countries have weak rule of law. In fact, throughout 2010 to 2019, the ASEAN average score has consistently placed well below the global average range of -0.03 and -0.04. The extremely poor rankings are attributable to the fact that on average, 7 out of 10 countries, namely Cambodia, Indonesia, Laos, Myanmar, Philippines, Thailand, and Vietnam, have received a negative score. It can also be observed that among the sample countries, rankings based on CCI and LAW also largely follow the same order, which indicate that the extent to which individuals follow institutional policies and regulations against corruption is heavily linked to the extent by which the law holds all individuals and institutions equally accountable.

Extent of Director Liability Index (INV) - The mean INV score is 5.24, which indicates that ASEAN countries have moderate investor protection. Out of the 10 countries in the sample, 4 countries, namely Laos, Myanmar, Philippines, and Vietnam, have received a score below 5, which indicates that nearly half of the countries in ASEAN have weak investor protection. Notably, Cambodia has consistently received a perfect score of 10 throughout the sample period, which indicates that minority investors have all measures in place to hold directors accountable. Despite having the ability to sue directors, however, Cambodia ranked last among ASEAN countries in terms of Control of Corruption and second to the last in terms of Rule of Law. This indicates that although policies and regulations are in place, these are not being implemented due to poor Rule of Law, hence contributing to the prevalence of corruption.

GDP per capita (GDP) - The mean GDP per capita in current U.S. dollars is USD 12,394.66. Although all countries in the ASEAN are considered developing nations, there is a stark difference in the phase of their development (United Nations, 2020). Using GDP per capita to measure the standard of living of each country, it can be seen that the majority of the ASEAN countries fall largely behind Singapore and Brunei. It can also be observed that among the sample countries, rankings based on CCI and GDP also largely follow the same order, which indicate that the extent to which individuals follow institutional policies and regulations against corruption is heavily linked to the standards of living in each country, which affects the amount of resources available and quality of institutions within the country.

Upon understanding the descriptive statistics of the data which provide an overview of the results expected, the researchers then proceeded to estimate the models to verify the presumptions derived from the descriptive statistics and the hypothesis. The results showed that the RE models best fit the data and yielded the most accurate understanding on the relationship between the variables. Upon estimating the model, the researchers obtained the final model by utilizing robust standard errors since the panel data suffers from heteroscedasticity but no serial correlation. Equation (1) provides for the final model on the impact of the accounting environment on the control of corruption.

$$CCI = -0.2136 + 0.0215IFRS - 0.0083DISC - 0.0183XTNT + 0.0460IPSAS + u_i + \varepsilon_{it} \quad 1)$$

Next, Equation (2) provides for the final model on the moderating impact of regulatory policy formation, when assessed together with the accounting environment, on the control of corruption.

$$CCI = -0.1260 - 0.0030IFRS - 0.0143DISC + 0.0317XTNT + 0.0350IPSAS + 0.4732RQI + 0.3493LAW + u_i + \varepsilon_{it} \quad 2)$$

As for Equation (3), it provides the moderating impact of corporate governance, when assessed together with the accounting environment, on the control of corruption.

$$CCI = -0.1689 + 0.0221IFRS - 0.0086DISC - 0.0152XTNT + 0.0424IPSAS - 0.0087INV + u_i + \varepsilon_{it} \quad 3)$$

Equation (4) provides for the final model on the moderating impact of economic development, when assessed together with the accounting environment, on the control of corruption.

$$CCI = -0.7398 + 0.0163IFRS + 0.0148DISC - 0.0174XTNT + 0.0622IPSAS + 0.0000306GDP + u_i + \varepsilon_{it} \quad 4)$$

In terms of the significant results, it was found that the impact of the regulatory policy formation, specifically, the regulatory quality index is the only one that had a significant positive impact towards controlling corruption. Similarly, economic development was also found to be positively significant in mitigating corruption. However, it should be noted that all parameter estimates relating to the accounting environment variables are insignificant in all models estimated. The same is applicable to the effect corporate governance has on controlling corruption as its parameter estimate was found to be insignificant.

3.2. Discussion

The regression results have evidently shown the direct impact of the accounting environment on controlling corruption, as well as the moderating impacts of regulatory policy formation, corporate governance and economic development in the relationship between the accounting environment and control of corruption. As such, this section primarily discusses the rationale behind the obtained results.

Direct Impact of the Accounting Environment - Based on the regression model estimates presented earlier, it is observed that the accounting environment has no significant impact on the ASEAN's control of corruption index. This may be the case because the current accounting environment places a strong attention towards ensuring compliance with reporting requirements instead of the various forms of corruption that may take place. In other words, accountants may be more focused towards maintaining understandability within financial statements and pay less attention to the means by which fraud occurs. In fact, this is supported by the findings of Everett et al. (2007) which states that the current accounting environment is driven towards the uniformity of financial statements instead of being catered to identifying the profile of actual fraudsters in the current context. This may be worsened by the idea of fraud evolving since each day the fraudsters are unidentified, the more time they have to identify loopholes and exploit weaknesses in the accounting environment. This may be especially true when considered with the findings of Neu et al. (2013) on how corrupt individuals do not decrease when reporting standards are established since these do not consider all forms of fraud and corruption. Hence, the main driver of the insignificant relationship is the idea that the current accounting environment may not address the issue of corruption and how accountants should play a role in actively mitigating it (Eilifsen et al., 2014). With the reduced scope of what accountants should be vigilant for and additional burden to report instances of corruption without the necessary protection, accountants may provide less ethical attention towards instances of corruption.

Moderating Impact of Regulatory Policy Formation - The results of the regression reveal that regulatory quality has a positive and statistically significant impact on the ASEAN's control of corruption index, which may imply that regardless of the relatively high level of corruption in the ASEAN, its laws and regulations are somewhat successful in controlling the behavior of individuals. Its positive relationship also aligns with the findings of Bjørnskov (2011) and Wysocki (2014). This may be due to how said regulations increase detection and the likelihood for punishment (Harri et al., 2020), as well as transparency and accountability in firms (Kaller et al., 2018). On the other hand, rule of law was found to have a positive but statistically insignificant impact on the ASEAN's control of corruption index, which may be attributed to the negative average score in the region. This could have weakened the effectiveness of regulatory policies and institutions to the point where it could no longer perform its intended effect, as citizens believe that not everyone is equally subject to the law. However, its statistical insignificance may indicate that despite the relatively weak rule of law in the region, regulations may still be able to control corruption. This aligns with the findings of Bjørnskov (2011) who believe that weak rule of law can weaken the mitigating impact of regulation.

Moderating Impact of Corporate Governance - As presented in the regression results, corporate governance, as proxied by the extent of director liability index, has no significant impact on the relationship between the accounting environment and control of corruption. This may be due to the high instances of corruption in certain ASEAN countries which may have overridden the moderating impact of corporate governance in the relationship between the accounting environment and control of corruption. Specifically, the greater the prevailing corruption, the more difficult it is to control the self-serving interests of managers and corporate leaders as fraud becomes somewhat normalized due to inefficient monitoring systems. This leads to loss of trust between managers and owners, resulting in intensified agency problems that further harms the interest of the shareholders. This is supported by the study of Donadelli et al (2014), which stated that corporate governance negatively affects the performance of companies operating specifically in corruption-sensitive industries as corruption further exacerbates agency problems. Likewise,

Sebhatu and Li (2016) observed from multiple case studies of corporate corruption in China that prevailing instances of corruption indeed hinder the effective implementation and development of corporate governance policies from a firm-level and industry-level perspective. As such, it can be said that the intensity of corruption in the ASEAN has an impact on how effective corporate governance can be carried out by managers.

Moderating Impact of Economic Development - In the context of this research, it was found that economic development has a significant moderating impact on the ASEAN's ability to control corruption in a positive manner. This is expected since increases in the average wage rate results in a decreased need to progress the interests of individuals and, consequently, corruption (Dzhumashev, 2014; Kimbro, 2002). This is further supported by the findings of Bajada and Shashnov (2019) who provide that there exists an inverse relationship between corruption and economic development in the Asia-Pacific region since development equates to progress in the institutional quality and an increased pressure from the general public to deter corruption.

IV. CONCLUSION

Corruption has remained to be a significant and pressing issue in society, as it has allowed people in positions of power to take advantage of their resources in spite of all the established regulations for their personal gain. Some studies believe that this may positively affect the country's economy as it bypasses bureaucratic red tapes, a common and significant hindrance to doing business, and consequently attracts foreign direct investment (Amundsen, 1999). However, even more studies have consistently observed that corruption is more of a hindrance to a country's economic growth (Šumah, 2018), causing social trust to weaken and deterring both local and foreign businesses (Caiden et al., 2001). In the ASEAN in particular, corruption has been found to hold back business transactions and deter foreign investors, thus hindering economic growth (Schoeberlein, 2020). Anti-corruption agencies have been found to be only partly effective in fulfilling their responsibilities to mitigate corruption. As such, with corruption being a grave and persistent problem, all stakeholders must take part in doing what they can to help eradicate it. Accountants and auditors, being public servants, bear the same responsibility and may play a role in mitigating corruption in all sectors, and even on a national level. Thus, the objective of the study was to confirm the relationship between the accounting environment and the control of corruption in ASEAN countries and consider the moderating impact of regulatory policy formation, corporate governance, and economic development.

Based on the panel regression analysis performed using Stata on the ten ASEAN countries from 2010 to 2019, the following findings were ascertained:

Accounting Environment - The accounting environment in the scope of the study may not have a significant impact on the country's control of corruption. These results suggest that reporting standards for entities may still be lacking in terms of the scope used to define corruption and the actions taken to address it, as the focus is on increasing transparency and creating standards for disclosure for companies instead of targeting and catching fraudulent activities. As such, without more specific standards in place, efforts to combat corruption may prove to be ineffective.

Regulatory Policy Formation - The accounting environment still does not have a significant impact on the country's control of corruption when the moderating impact of regulatory policy formation is taken into consideration. However, regulatory quality itself was found to have a positive and significant impact. This means that careful attention must be paid to the quality of the regulations being implemented instead of the quantity, as more regulatory burden on the part

of firms would negatively affect the control of corruption, especially in developing countries (Soh & Amin, 2020). Similarly, rule of law also positively affects the control of corruption, however its statistical insignificance indicates that this may not have a significant impact on this relationship. This may be explained by the relatively weak rule of law in the ASEAN, which may have weakened the institutions and prevented them from accurately controlling corruption. Weak rule of law in the region may have also weakened the mitigating impacts of regulatory policies (Bjørnskov, 2011) and aggravated corruption especially in developing countries, but this may not necessarily completely undermine the existing regulations.

Corporate Governance - Further findings in this study show that corporate governance does not have a significant impact on the relationship between the accounting environment and control of corruption, which is in contrast with studies that consider corporate governance as a tool that strengthens the accounting environment and consequently reduces corruption (Wijayati et al., 2016; Wu, 2005). Nonetheless, the results can be attributed to the high intensity of corruption in some countries in the ASEAN, which may have exacerbated internal agency problems within firms, thereby, leading to poor execution of corporate governance (Sebhatu & Li, 2016; Donadelli et al., 2014). Put simply, corporate governance frameworks present to be ineffective in the presence of high instances of corruption.

Economic Development - Economic development has been found to have a significant impact on the relationship between the ASEAN's ability to control corruption and their respective accounting environments. More specifically, higher levels of economic development imply higher institutional quality and better quality of life for the people, which may then justify reduced urge to practice corruption (Bajada & Shashnov, 2019; Dzhumashev, 2014; Kimbro, 2002).

Overall, this study provides that corruption cannot and will not be resolved by the mere deliverance of a good accounting environment due to the limited scope of corruption in the current accounting standards, more specifically in the lack of explicit inclusion of corruption under the International Standard on Auditing, which hinders accountants from detecting and reporting corrupt activities. Although the accounting environment has shown an insignificant impact on the ASEAN's ability to control corruption, results in this study have emphasized the moderating impacts of regulatory quality and economic development on the relationship between the accounting environment and control of corruption. It is necessary to strengthen the current regulatory quality, specifically in the accounting standards and practices, to further reinforce the accounting environment and consequently mitigate the instances of corruption among ASEAN countries. Moreover, as a region composed mostly of emerging economies, continuous, and robust economic development will be vital in strengthening the ASEAN's ability to control corruption.

V. RECOMMENDATIONS

As a result of the finding that the accounting environment has an insignificant impact on the control of corruption, the researchers suggest that both the government of the ASEAN countries, the IFRS Foundation, and IFAC work together in attempting to improve the current accounting standards, for both public and private institutions, by including a greater scope of fraud and corruption. This will entail collaboration since both parties have varying understandings of the profile of actual fraudsters, but will result in a significant accounting environment and one that can better mitigate the instances of corruption. In terms of the individual countries' capacity to control corruption through their regulatory frameworks, it was shown that there was a significant impact and, therefore, the researchers suggest that the governments continue to enforce strong regulatory

policies and formulate a more stringent environment in which corruption is avoided because of the large repercussions present and the capacity of governments to detect it.

Having determined the important role of the accounting environment along with the political arena and economic development in controlling corruption, the academe must also improve on the current curriculum on accounting education to include corruption in the discussion of ethics in accounting. Given that current textbooks do not include corruption in the scope of fraud, educational institutions must make use of the latest scientific journals and articles to present a more accurate and updated picture of the role of accountants in the current world where corruption remains rampant. By shedding light on the importance of studying corruption and the responsibilities that come with the profession, future accountants would effectively have an active role in mitigating the presence of national corruption.

Lastly, this paper recommends the following to future researchers:

- A larger sample size can be used to verify the impacts that the variables have on the control of corruption index and identify possible relationships between variables based on the demographics of the countries included in the sample.
- Despite the CCI being based on 31 sources of data, it should be reemphasized that this is perceptions-based. Hence, future research can improve on this research by utilizing a measure of corruption that goes beyond public perception and use data on actual amounts lost within private and public companies through corruption.
- Future researchers may include the use of audit quality variables, such as Strength of Auditing Standards (SARS) and the presence of the Big 4 accounting firms, separately as its impact in this study is simply focused within the adoption of local standards and the corporate governance.
- The regression analysis performed in the study revealed the statistical insignificance of rule of law as a moderating variable. As such, future researchers may consider utilizing alternatives such as social trust, which Wang et al. (2019) sees as a valid substitute to capturing societal behavior and beliefs especially in countries where rule of law is usually weaker.
- Future researchers may pursue non-parametric statistical tests, such as Spearman rank-order correlation or Pearson's correlation, and hold sets of randomized control trials that are an experimental means of identifying causal links between variables.

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Global Events and the Stock Exchange Indices of Hong Kong and the Philippines: An Event Study

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Abstract – This study on global events and the stock exchange indices of Hong Kong and the Philippines is an event study on the impact of twelve (12) global events to the index returns of the Hang Seng Index (HSI) and the Philippine Stock Exchange Index (PSEi). Twelve events from the period 2011 to 2021 were defined events of this study. Three events represented each global region: the Middle East, the European Union, the United States, and Southeast Asia. For the purpose of this event study, a 200-day estimation window and 11-day event window was used, consisting of the event day, five days prior, and five days after. The t-statistics of the average abnormal returns (AARs) and cumulative abnormal returns (CARs) were used to test the null hypothesis that there is no significant difference in the AARs and in the CARs. At a confidence level of 95% and critical value of 1.96, the null hypothesis is rejected for Event 1 in the HSI and for Events 1 and 6 in the PSEi. The Arab Spring had significant negative abnormal returns on both the HSI and the PSEi. Brexit only had significant negative abnormal returns on the PSEi. The results of the non-parametric test showed significant AARs on Events 1 and 9, the Trade War in the PSEi only. Consequently, the Hong Kong Stock Exchange is more efficient than the Philippine Stock Exchange. This study recommends careful consideration of diversification techniques and interdisciplinary approaches into observations of investor behavior.

Keywords: *abnormal returns, capital markets, event study, global events, market efficiency, stock exchange indices*

INTRODUCTION

Background of the Study

“It is indeed true,” says Nobel Prize in Economics awardee Paul Samuelson, “that the stock market can forecast the business cycle.” As early as the 1900s, the efficient market hypothesis postulated that financial markets are efficient and that financial assets sold in these markets reflect all publicly available information. These assets are sold in their respective markets at “market values” and it is generally accepted that these values reflect the nature of current events (Harder, 2010). In other words, prices of traded assets reflect all known information and they instantly change when new information becomes available (Miller, Vandome, and McBrewster, 2009).

The stock market has become one of the most important financial markets known today. Like other financial markets, stock markets provide the link between those with surplus funds, or the “investors” and those with deficit funds, or the “entities” raising capital (Madura, 2021). It is said that the growth in the stock market portrays a pivotal role in the overall story of the growth of

an economy (Hafer and Hein, 2007). A stock exchange is identified as an association of stock brokers who transact business with each other in accordance with some regulation (Schwartz, Byrne, and Wheatley, 2014). Duguid (2017) cites it “as the nerve-center of the politics and finances of nations; as the barometer of their prosperity and adversity.”

The importance of stock exchanges and the efficient market hypothesis both have led to a burgeoning number of studies on the impact of an event on share performance. The idea that stock markets are “informationally efficient” has been around for a very long time but stock market efficiency became a point of interest for finance studies only in the 1960s. In the 1970s, Eugene Fama hypothesized that stock prices reflect all available information (Barnes, 2012). Indeed, most researches in finance seek to determine the effect of certain announcements to share price. These studies are called by literature as “event studies” (Ramesh and Rajumesh, 2015).

Event studies in the past have focused on economic or corporate events such as when a corporation issues dividends, undergoes mergers and acquisitions, or repurchases its stocks. Until recently, event studies have also focused on non-economic world events (Ramesh and Rajumesh, 2015). Such event studies have been performed in countries such as Pakistan and Canada (Yeung and Aman, 2016), the United States (West, 2018), Sri Lanka (Ramesh and Rajumesh, 2015), Southeast Asia (Nazir, Khan, Akram and Ahmed, 2018) and of the entire world (Arora, 2017). Event studies are vastly performed from economic events such as public listings (Lakshmi and Joshi, 2016) to non-economic events such as terrorist attacks (Chaudhry, Roubaud, Akhter and Shahbaz, 2018).

This study is an application of event study methodology of selected global events and the stock exchange indices of Hong Kong and the Philippines. The Hong Kong Stock Exchange was established in 1891. One of its indices is the Hang Seng Index (HSI) composed of sixty-four (64) constituents. The Philippine Stock Exchange is one of the oldest stock exchanges in Asia, having started in 1927. Its index, the Philippine Stock Exchange Composite Index (PSEi), is composed of thirty (30) of the most active publicly traded companies in the exchange. As of this writing, the PSEi was awarded the best stock exchange in Southeast Asia by the Marquee Awards (Valmonte, 2022). Meanwhile, the Hong Kong Stock Exchange was one of the worst performers in 2021 among major markets (Yu, 2021). Comparing the impact of global events on two stock exchange indices became this study’s objective because comparative event studies between the stock exchanges of a developed and a developing economy are rarely performed in finance literature. The Hong Kong Stock Exchange represents the stock exchange of a developed economy. The Philippine Stock Exchange is the stock exchange of the researcher’s home country. This study also takes inspiration from the event study of Yeung and Aman (2016) on the impact of global events on Pakistan's Karachi Stock Exchange and Canada’s Toronto Stock Exchange.

Statement of the Problem

This study aims to determine the impact of global events on the stock exchange indices of Hong Kong and the Philippines using event study methodology. Specifically, it aims to answer the following questions:

1. What are some of the non-economic global events from the past ten years that have occurred in the regions of:
 - a. the Middle East;
 - b. European Union;
 - c. the United States of America; and
 - d. Southeast Asia?

2. What are the actual and expected rates of return for:
 - a. the Hang Seng Index; and
 - b. the Philippine Stock Exchange Index?
3. What are the abnormal rates of return for:
 - a. the Hang Seng Index; and
 - b. the Philippine Stock Exchange Index?
4. Is there a significant difference in the average abnormal returns (AARs) in the event windows of:
 - a. the Hang Seng Index; and
 - b. the Philippine Stock Exchange Index?
5. Is there a significant difference in the cumulative abnormal returns (CARs) in the event windows of:
 - c. the Hang Seng Index; and
 - d. the Philippine Stock Exchange Index?

Conceptual Framework

The schematic diagram illustrating the conceptual framework used in this study is presented in Figure 2. The diagram illustrates how the variables in the Statement of the Problem were used to achieve the general objective of the study. The conceptual framework also attempted to capture the procedures generally performed in event studies as interpreted by Beverley (2007).

The framework starts with event definition. For purposes of this study, three (3) non-economic events were selected from each of the four global regions, for a total of twelve (12) events. The framework continues with the measurement of actual and expected returns for both stock indices under study. The actual (or historical) rates of returns were extracted, with one rate representing each day in the “event window.” The expected (or normal) returns, on the other hand, were measured by averaging the historical returns of the past two hundred days up to ten days before the event date, otherwise called the “estimation window” in order to isolate the returns of these two hundred days from the occurrence of the global event. The availability of the actual and expected returns made possible calculation of the abnormal returns for each date in the event window. The abnormal return is measured as the difference between the actual and expected returns. These data are subsequently used to derive the average abnormal returns (AAR) and the cumulative abnormal returns (CARs) to be used as input variables in the computation of t-values. These t-values will be compared with the critical value of 1.96 in determining if there is a significant difference in the abnormal returns, which signifies an impact of an event on the index.

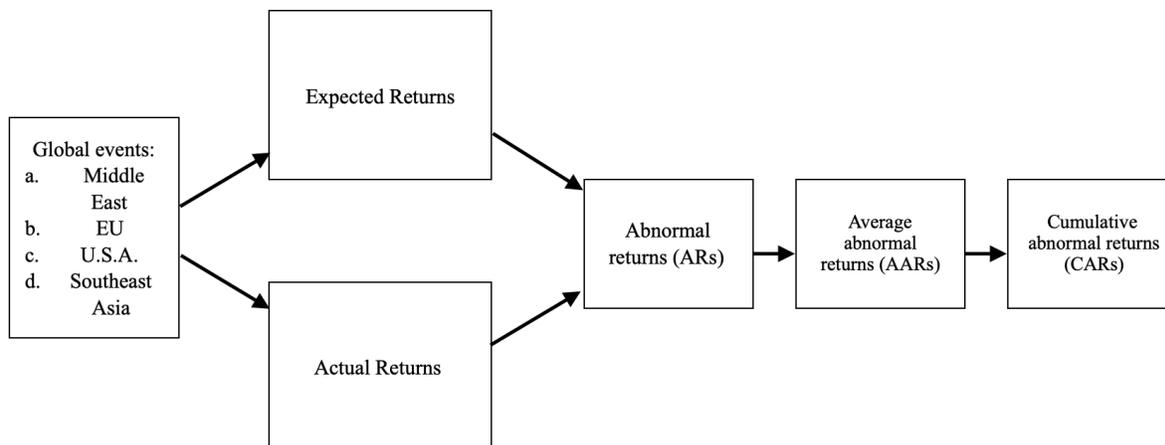


Figure 1. Schematic diagram of the study

Review of Related Literature

Event studies

Upon its inception in the 1960s, the efficient market hypothesis, or simply EMH, has both been accepted by scholars and challenged by practitioners. This paradigm is considered one of the most important contributions to finance in the twentieth century (Read, 2012). The hypothesis traces its roots to the concept that stock prices follow a “random walk” (Kirkpatrick II and Dahiquist, 2010) as proposed by Louis Bachelier, deemed the Father of Modern Finance (Read, 2012). The random walk concept states that future steps cannot be predicted by past steps. Likewise, future stock prices cannot be determined by past stock prices (Kirkpatrick II and Dahiquist, 2010). This “random walk” concept was firstly only applied to stock markets through Paul Samuelson, another great mind in finance. According to Samuelson (2015), if a future stock price can be correctly predicted, the stock price would quickly move towards that price. In reality this is not the case and as a result, stock price fluctuations occur. Samuelson also states that the randomness of stock prices is due to the active participation of investors. Since investors are unable to curtail their greed, they will take advantage of every single information and reflect it on stock prices. The more efficient a market, the more random the stock prices (Lo and MacKinlay, 2011).

The principles of Bachelier and Samuelson gave rise to the efficient market hypothesis (EMH) of Eugene Fama, whose framework is the foundation of this study. EMH states that in an efficient market, all publicly available information is incorporated into the prices of its securities. Fama further distinguishes weak, semi-strong, and strong forms of efficiency. The weak form asserts that security prices reflect all past information. The strong form, on the other hand, asserts that all information, both public and private, are reflected in security prices. The semi-strong form stands in between these two forms by asserting that security prices reflect all publicly available information (Petty, Titman, Keown, Martin, Martin, and Burrow, 2015). Thus, political events, assumptions, perceptions, and even gossip can affect stock price (Schmidt, 2010). It is the semi-strong form that supports event studies in finance literature. Event studies operate on the null hypothesis that a defined event has no impact on a security or a market. That is, if a market is efficient and security prices reflect publicly available information, then no investor can possibly earn abnormal returns unless some investors have knowledge of impactful events that others do not have.

The general principle for event studies is simply deriving “abnormal returns” of a security over a period of time within which an event occurred. Afterwards, this is followed by statistically testing if there is a significant difference in the abnormal returns of that period. Thus, in an event study, a market is efficient when the null hypothesis is not rejected (Sharda, 2021) and inefficient when it is rejected (Salameh and Albahsh, 2011). The findings of Yaya, Vo, and Adekoya (2021) found the Hong Kong stock market to be efficient. On the other hand, the study of Chen and Diaz (2014) found the Philippine stock market to be inefficient.

Literature can be divided into two classifications of event studies according to the kind of event chosen. That is, either the study pertains to economic events such as stock splits and listings or non-economic events such as politics and natural calamities.

One example of an economic event study is one by Lakshmi and Joshi (2016). The event was the listing of 106 stock futures and 31 stock options on the Futures & Options (F&O) segment of the National Stock Exchange (NSE) of India. Their research aimed to determine whether those listings had an impact on the prices of the underlying assets of the futures and options. For this purpose, the researchers used a 200-day estimation window and three different event windows: 21 days, 11 days, and 3 days. The researchers extracted data from a website. To compute the expected returns, the researchers converted the data into log terms and applied the market model. Subsequently, they computed the average abnormal returns (AARs) and cumulative average abnormal returns (CAARs) as input variables for testing. The computation of the AAR by Lakshmi and Joshi was applied to this study as well. The AAR is represented by the following equation:

$$AAR_t = \sum_{t=1}^N \frac{AR_{ti}}{N_t} \quad (1)$$

Where:

AAR_t is the average abnormal return as of day t;

AR_{tj} is the abnormal return on day t for index i; and

N is the number of returns.

The rationale for averaging abnormal returns is to neutralize the abnormal returns should the abnormality in a certain day be caused by an event other than the event under study.

Lakshmi and Joshi cited that non-normality of returns is not an issue for event studies as the large sample size “converges” the securities to normality. Although not cited, the researchers may have implied the central limit theorem in this regard. Nonetheless, the study employed both parametric and non-parametric tests for hypothesis testing. The study revealed that the listing of futures had an impact on the underlying assets but the listing of options did not. The researchers implied that this may be due to investors losing confidence in the options.

The first example of a non-economic event study is the event study of Ramesh (2015) on the impact of 40 political events across five (5) years on the Colombo Stock Exchange of Sri Lanka. Ramesh’s research is of particular interest to the researcher of this study because it studied the stock exchange of a developing country, similar to the Philippines. Ramesh expressed that several studies had claimed political events to crucially influence a stock market’s operations. He likewise phrased economic events as “firm specific informational events” and non-economic events as “market-related information events”. Both phrases were not used in the study for simplicity and clarity. Ramesh likewise highlighted an important premise of event studies, which is that they were originally performed to analyze the efficiency of markets.

The event study on the Colombo Stock Exchange aimed to fill in the wide research gap of event studies on political events in emerging or developing countries, despite the increased instability in these countries making event study researchers more significant.

Ramesh used judgmental sampling in selecting 40 major events and 69 companies for the event study. The expected returns were also extracted from a website, but no mention of log normal returns were used. He employed a 180-day estimation window and a 21-day event window. He used t-values of the AARs, abbreviated as T(AARs) in determining statistical significant differences. The study of Ramesh concluded with the finding that the AAR is significant (at 5%) on the event date, which Ramesh interpreted as supporting the efficient market hypothesis. Ramesh's study revealed that political events give negative information to the Colombo Stock Exchange and negative abnormal returns are generated only after, and not before or during the event dates.

The second example of a non-economic event study is the event study of Yeung and Aman (2016) which aimed to determine the sensitivities of Pakistan's Karachi Stock Exchange (KSE) and Canada's Toronto Stock Exchange (TSE) to "major global events." The study endeavored to assist in the investment decisions of Pakistani immigrants in Canada. For purposes of their event study, the researchers selected eighteen (18) major global events categorized into three: terrorist events, economic events, and health events. The term "economic events" is used differently in their research as the researchers defined them as events of financial or stock crises. The selection of the events were subjective, with focus on events that captured global media attention.

Yeung and Aman used a 20-day estimation window, and only post-event dates for their event window. Notably, the researchers computed for log expected returns which they eventually annualized. The researchers computed for the expected returns as a simple mean over the estimated window, represented by the equation as follows:

$$\bar{R}_i = \frac{1}{N} \sum_{t=1}^N R_{ti} \quad (2)$$

Where:

\bar{R}_i is the expected return for index i

N is the number of days in the estimation period; and

R_{ti} is the actual return on day t of index i.

They subsequently expressed the equation for abnormal returns as follows:

$$AR_{ti} = R_{ti} - \bar{R}_i \quad (3)$$

Where:

AR_{ti} is the abnormal return on day t of index i;

R_{ti} is the actual return on day t of index i; and

\bar{R}_i is the expected return for index i.

Notably, Yeung and Aman tested the null hypothesis on cumulative abnormal returns (CARs) in contrast to cumulative average abnormal returns (CAARs) of the previously cited study. Using an 11-day event window, the computation for cumulative abnormal returns (CARs) is summarized in the equation below:

$$CAR_i = \sum_{t=1}^N AR_{ti} \quad (4)$$

Where:

CAR_i is the cumulative abnormal return of index i; and
AR_{ti} is the abnormal return on day t of index i.

The findings of Yeung and Amen revealed that Pakistan's Karachi Stock Exchange only had a statistically significant t-statistic on one event, the 9/11 bombings while Canada's Toronto Stock Exchange exhibited statistically significant t-statistics on more events. The researchers interpreted this to mean that the Toronto Stock Exchange is more sensitive to major global events over the Karachi Stock Exchange.

The third example of a non-economic event study is the event study of Arora (2017) on the impact of Brexit on the stock exchanges of Australia, Canada, India, New Zealand, Sri Lanka, UK, and the USA. Arora's event study uniquely expanded her methodology with symmetric and asymmetric models into her event windows. Because these models were not adapted in this event study, the symmetric and asymmetric models were not discussed in this review. Arora's decision to include several stock exchanges was based on the premise that globalization has made spillover effects ripple across nations.

Arora obtained data for returns by extracting closing prices of the stock indices from Yahoo! Finance. Arora chose five different event windows, and no estimation window due to referencing 3-month U.S. treasury rate as the expected returns. Nonetheless, the paper presented the following equation for calculating the arithmetic returns:

$$R_t = \frac{V_{it} - V_{it-1}}{V_{it-1}} \times 100 \quad (5)$$

Where:

R_t is the return of the index on day t;
v_{it} is the value of the index on day t; and
v_{it-1} is the value of the index on day t-1, the day before.

Arora then used a paired sample t-test for hypothesis testing. The study's results showed that India, New Zealand, and Singapore showed a significant impact on the event date, while Sri Lanka and the UK showed a significant impact only after the event date.

The fourth example of a non-economic event study is the event study of Ndekugri and Pesakovic (2017), which aimed to determine the impact of three separate U.S. election results on the stock market performance of only three firms: Exxon Mobil, Toyota Motors, and Gazprom. Data was also extracted from Yahoo! Finance.

Compared to the previously cited studies, Ndekugri and Pesakovic used one-sample t-test to determine statistical significant differences in the adjusted stock prices of the three firms over a 62-day event window. The t-statistics were compared with the Z-value of 1.96. The results rejected

the null hypothesis. Ndekugri and Pesakovic concluded that there was a significant difference in stock returns before and after the elections.

The fifth example of a non-economic event study is the event study of Chaudhry, Roubaud, Akhter, and Shahbaz (2018) on the impact of terrorism on stock markets across the South Asian Association of Regional Cooperation (SAARC) countries. The terrorism attacks were further classified into four categories: bombing/explosions, assassinations, armed assaults, and hostage-taking (kidnapping) in order to establish a relationship between the kind of attack and the market returns.

The researchers selected 400 terrorist attacks through stratified random sampling from the Global Terrorism Database. A 3-day event window was used. Because the objective of the study was to determine a relationship between the classification of attack and the impact on the stock market returns, fixed-effect regression analysis was used as the statistical tool. This is in contrast to event studies operating on the null hypothesis of no significant differences in the abnormal returns.

Brooks (2020) in his textbook “Introductory Econometrics for Finance” presented two ways of hypothesis testing. One on average abnormal returns (AARs) and another on cumulative abnormal returns (CARs). AARs may be computed using the equation illustrated by Lakshmi and Joshi (2016) as expressed in Equation 1.

Yeung and Aman (2016), assuming an 11-day event window illustrated the computation of CARs as expressed in Equation 4. Both AARs and CARs are computed for each day within the event window.

Then, t-statistic for the AARs is illustrated by Brooks (2020) using the following equation:

$$t_{AAR} = \frac{AART_i}{\sigma} \quad (7)$$

Where:

t_{AAR} is the t-value of the average abnormal return;

$AART_i$ is the average abnormal return on day t of index i; and

σ is the standard deviation of the returns within the estimation window.

Some event studies would also perform testing on cumulative abnormal returns (CARs) particularly with longer event windows. As such, the test statistics for the CARs is provided by Beverley (2007) with the equation as follows:

$$t_{CAR} = \frac{CART_i}{\frac{\sigma}{\sqrt{N}}} \quad (8)$$

Where:

t_{CAR} is the t-value of the cumulative abnormal return;

$CART_i$ is the cumulative abnormal return on day t of index i; and

σ is the standard deviation of the returns within the estimation window

N is the number of days in the event window.

Applying the method of Brooks earlier, if the expected returns were computed using the constant mean return model, that is the average of the historical returns within an estimation window, the variance of the returns within the estimation window would simply be used as the variance in the denominator instead.

The statistical format of event studies had remained unchanged for more than three decades with emphasis still remaining on the measurement of abnormal returns around an event date

(Khotari and Warner, 2006). The normal distribution of the returns have also been assumed in testing the null hypothesis. The study of Dyckman (1984) even found that non-normality of returns would not affect the inferences that will be drawn by an event study. Nonetheless, some event studies had included non-parametric testing in their methodology, with the purpose of testing the robustness of the results of the parametric test rather than being standalone tests in themselves. This is the innovation of the event study of D'Elia (2005) who incorporated non-parametric testing into the event study of environmental news in Argentina. D'Elia employed Wilcoxon signed-rank test as a more thorough non-parametric test as it considers both the sign and the magnitude of abnormal returns. D'Elia found that the conclusions are insensitive to the statistical tool employed.

METHODS

Research Design

This study on global events and the stock exchange indices of Hong Kong and Philippines used a quantitative research design. A quantitative research design is defined as one in which the researcher is looking for a pattern in a large quantity of data. This design starts with a null hypothesis to be tested using empirical data. The hypothesis sets the direction of the research making the objectives of the study testable (Ang, 2014).

The length of the estimation window from which the expected returns were calculated was set at 200 days (Lakshmi and Joshi, 2016). The event window from which the actual returns were extracted was set at 11 days composed of the event date, five days prior, and five days after (Lakshmi and Joshi, 2016). Preferably, the estimation window and the event window should not overlap each other. In addition, the estimation window should be as far from the event date as possible. This way, it will be safe to assume that the returns extracted for each day within the estimation window were not “contaminated” by the occurrence of the event. Figure 3 below presents the timeline of the estimation window and event window. In total that would be 211 dates for each of the twelve (12) events defined for this study, or a total of 2,532 dates.

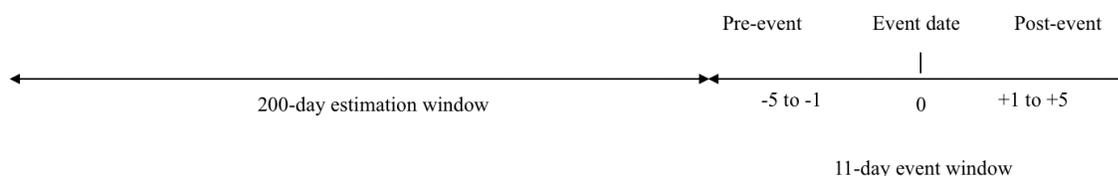


Figure 2. Timeline representing the estimation and event windows

RESULTS AND DISCUSSION

The results of t-test on the average abnormal returns (AARs) and cumulative abnormal returns (CARs) of the Hang Seng Index for Middle Eastern events are presented in Table 1. Likewise, the results of t-test on the average abnormal returns (AARs) and cumulative abnormal returns (CARs) of the Philippine Stock Exchange Index for Middle Eastern events are presented in Table 2.

The t-statistic of the AAR at Day -5 of Event 1 in the Hang Seng Index is -3.003. At 95% confidence level and critical value of 1.96, the null hypothesis is rejected. Thus, the Arab Spring

solicited a significantly negative abnormal return on the Hang Seng Index five days before the event date.

The impact of the Arab Spring on the HSI can be analyzed in the light of the various protests that transpired in Hong Kong. A year before the Arab Spring, for instance, witnessed the 2010 Hong Kong protests when thousands of demonstrators protested for Beijing to grant full democracy to the region (The Guardian, 2010). The proximity of Hong Kong's own protest may have struck a chord among investors when an unrest took place in another Asian region. In fact, the year 2011 bore witness to Hong Kong's Occupy Central, an occupation protest addressing economic equality and corporate influence in Hong Kong society.

Table 1.

Results of t-test on the AARs and CARs of the Hong Kong Stock Exchange for Middle Eastern events

	Event 1				Event 2				Event 3			
	AAR	t-statistic	CAR	t-statistic	AAR	t-statistic	CAR	t-statistic	AAR	t-statistic	CAR	t-statistic
-5	-3.27%	-3.003	-3.27%	-0.906	-0.04%	-0.053	-0.04%	-0.016	0.01%	0.009	0.01%	0.003
-4	-1.17%	-1.075	-2.34%	-0.648	0.06%	0.078	0.12%	0.047	0.21%	0.111	0.11%	0.067
-3	-0.29%	-0.265	-0.87%	-0.240	-0.04%	-0.046	-0.11%	-0.042	-0.84%	-0.206	-0.21%	-0.186
-2	-0.11%	-0.105	-0.46%	-0.126	0.10%	0.122	0.39%	0.147	0.85%	0.058	0.06%	0.070
-1	-0.07%	-0.061	-0.33%	-0.093	0.15%	0.189	0.76%	0.285	-0.50%	-0.054	-0.05%	-0.082
0	-0.15%	-0.140	-0.91%	-0.253	0.07%	0.093	0.45%	0.168	0.83%	0.092	0.09%	0.167
1	-0.14%	-0.129	-0.99%	-0.273	0.13%	0.158	0.89%	0.334	-0.40%	0.022	0.02%	0.046
2	0.00%	0.005	0.04%	0.011	0.09%	0.113	0.72%	0.272	-0.46%	-0.039	-0.04%	-0.093
3	-0.19%	-0.179	-1.75%	-0.485	0.11%	0.137	0.99%	0.372	0.87%	0.063	0.06%	0.171
4	-0.23%	-0.215	-2.34%	-0.649	0.08%	0.098	0.79%	0.296	0.70%	0.127	0.13%	0.383
5	-0.25%	-0.227	-2.72%	-0.753	-0.05%	-0.062	-0.54%	-0.205	1.61%	0.261	0.26%	0.867

The PSEi would show a delayed reaction for the Arab Spring. The t-statistic of the CAR at Day +4 of Event 1 is -2.175. The t-statistic of the CAR at Day +5 of Event 1 is at -2.567. At 95% confidence level and critical value of 1.96, the null hypothesis is rejected. Thus, the Arab Spring solicited significantly negative abnormal returns on the Philippine Stock Exchange Index four and five days after the event. The large population of Filipino migrant workers in the Middle East and North Africa may have triggered an overwhelmingly negative response to the event.

In contrast to a related event study on the effect of the Arab Spring on the Dubai Financial Market (Alsharairi and Abubaker, 2016), the cumulative abnormal returns were insignificant. Thus, the event study found that the Arab Spring did not impact the Dubai Financial Market in spite of the geographic proximity of the market to the location of the events. Perhaps it is this geographic proximity that facilitated better quality of information received by the Dubai market

over that received by Hong Kong and the Philippines. The perceived resemblance of the Arab Spring to past protests and the welfare of migrant workers triggered the reactions found in the HSI and PSEi.

Table 2.

Results of t-test on the AARs and CARs of the Philippine Stock Exchange for Middle Eastern events

	Event 1				Event 2				Event 3			
	AAR	t-statistic	CAR	t-statistic	AAR	t-statistic	CAR	t-statistic	AAR	t-statistic	CAR	t-statistic
-5	-2.30%	-2.167	-2.30%	-0.653	0.24%	0.244	0.24%	0.073	0.06%	0.063	0.06%	0.01
-4	-2.20%	-2.077	-4.40%	-1.253	-0.04%	-0.037	-0.07%	-0.022	0.42%	0.461	0.85%	0.27
-3	-1.48%	-1.396	-4.44%	-1.263	-0.12%	-0.124	-0.37%	-0.113	0.19%	0.203	0.56%	0.18
-2	-0.95%	-0.892	-3.78%	-1.076	0.19%	0.196	0.78%	0.237	0.19%	0.207	0.76%	0.24
-1	-0.48%	-0.456	-2.42%	-0.688	0.11%	0.107	0.53%	0.162	0.08%	0.083	0.38%	0.12
0	-0.36%	-0.343	-2.18%	-0.621	0.29%	0.290	1.72%	0.525	0.11%	0.122	0.67%	0.22
1	-0.59%	-0.561	-4.16%	-1.184	0.16%	0.162	1.12%	0.342	0.17%	0.188	1.21%	0.39
2	-0.64%	-0.605	-5.13%	-1.459	0.22%	0.220	1.74%	0.531	0.19%	0.211	1.56%	0.51
3	-0.68%	-0.641	-6.11%	-1.738	0.13%	0.135	1.20%	0.366	0.11%	0.121	1.00%	0.32
4	-0.76%	-0.721	-7.65%	-2.175	0.16%	0.162	1.60%	0.488	0.20%	0.218	2.01%	0.65
5	-0.82%	-0.774	-9.03%	-2.567	0.06%	0.064	0.70%	0.212	0.23%	0.252	2.55%	0.83

The t-statistic of the CAR for Day +3 of Event 6 is -2.166. The t-statistic of the CAR for Day +4 of Event 6 is -2.337. The t-statistic of the CAR for Day +5 of Event 6 is -2.129. At 95% confidence level and critical value of 1.96, the null hypothesis is rejected. Thus, Brexit solicited significantly negative abnormal returns on the Philippine Stock Exchange Index three to five days after the event date.

Event 6, which is the decision of the United Kingdom to leave the European Union, remains a popular subject matter in numerous event studies. The study of Arora (2017) performed an event study on Brexit for seven stock exchanges. The study found significant impacts of the event on the stock markets of Canada, India, New Zealand, the United Kingdom, and the United States. Needless to say, the Brexit referendum was remarkable in its “spillover effect” as global markets lost a total value of \$2 trillion in its wake (Arora, 2017). Nonetheless, between Hong Kong and the Philippines, only the latter’s stock exchange reacted negatively to Brexit with a three-day streak. This is an unexpected turnout, as the Philippines did not have an apparent dependence on the region. The only major connection would be the UK’s foreign direct investment in the country, making the UK the third largest source of FDI in the Philippines (KMC, 2016). This impact may only be short-term however with long-term effects of the event to be inconsequential anyway.

Table 3.

Results of t-test on the AARs and CARs of the Philippine Stock Exchange for EU events

	Event 4				Event 5				Event 6			
	AAR	t-statistic	CAR	t-statistic	AAR	t-statistic	CAR	t-statistic	AAR	t-statistic	CAR	t-statistic
-5	-1.33%	-1.147	-1.33%	-0.346	0.83%	0.656	0.83%	0.198	0.65%	0.695	0.65%	0.209
-4	0.04%	0.031	0.07%	0.019	0.75%	0.627	0.79%	0.378	0.32%	0.340	0.64%	0.205
-3	-0.25%	-0.214	-0.74%	-0.193	0.56%	0.566	0.71%	0.512	0.56%	0.596	1.68%	0.539
-2	0.00%	0.002	0.01%	0.003	1.31%	0.684	0.86%	0.825	0.48%	0.516	1.94%	0.622
-1	0.13%	0.114	0.66%	0.172	-0.14%	0.525	0.66%	0.791	0.28%	0.296	1.39%	0.447
0	0.48%	0.411	2.86%	0.744	-0.35%	0.391	0.49%	0.708	-0.17%	-0.184	-1.04%	-0.334
1	0.21%	0.181	1.47%	0.383	-1.31%	0.187	0.23%	0.394	-0.72%	-0.762	-5.02%	-1.609
2	0.33%	0.282	2.62%	0.680	1.11%	0.274	0.34%	0.660	-0.52%	-0.551	-4.14%	-1.329
3	0.14%	0.124	1.29%	0.336	-0.65%	0.186	0.23%	0.506	-0.75%	-0.798	-6.75%	-2.166
4	0.23%	0.196	2.28%	0.592	1.69%	0.302	0.38%	0.909	-0.73%	-0.775	-7.28%	-2.337
5	0.13%	0.115	1.46%	0.380	-0.03%	0.272	0.34%	0.902	-0.60%	-0.642	-6.64%	-2.129

Results of non-parametric testing

The results of the non-parametric test show that there are no statistical significant differences in any of the AARs for the Hang Seng Index. Meanwhile, there is a statistical significant difference in the AARs of the Philippine Stock Exchange Index for Event 1, the Arab Spring and Event 9, the US-China Trade War.

While the parametric test showed a significant difference in the AAR of the HSI on Day - 5, this was not captured by the result of the non-parametric test. Nevertheless, both parametric and non-parametric tests did not reject the null hypothesis for the remaining eleven (11) events. For the PSEi, both parametric and non-parametric tests reject the null hypothesis for Event 1, the Arab Spring. The results would differ, however on Event 6 or Brexit, where the null hypothesis was rejected by the parametric test only. And also on Event 9 or the US-China Trade War, where the null hypothesis was rejected by the non-parametric test only. Nevertheless, both parametric and non-parametric tests did not reject the null hypothesis for the remaining nine (9) events.

Table 4.

Results of the Wilcoxon signed-rank test on the HSI and PSEi

Event	Hang Seng Index	Philippine Stock Exchange Index
1	0.39358	0.0250
2	0.39358	0.42858
3	0.12302	0.10749
4	0.0778	0.42858
5	0.21186	0.14231
6	0.12302	0.32997
7	0.18673	0.46414
8	0.09176	0.29806
9	0.50000	0.04551
10	0.10749	0.12302
11	0.46414	0.50000
12	0.35942	0.18673

CONCLUSION

Using judgmental sampling, the research selected twelve (12) major non-economic events from the period 2011 to 2021, with three events representing each global region: the Middle East, the European Union, the United States, and Southeast Asia. The events defined for the Middle East included the Arab Spring, the Syrian civil war, and the US rapprochement with Iran. The events defined for the European Union included the European Stability Mechanism Treaty, the European Union Fiscal Treaty, and Brexit. The events defined for the United States included Donald Trump's inauguration as the 45th president of the United States, the US departure from the Paris Accord, and the US-China Trade War. The events defined for Southeast Asia included the Philippines' victory over its arbitration case, the North Korean missile launch, and the Trans-Pacific Partnership Agreement. These events received wide global media attention and several news outlets reported their historical significance.

Nonetheless, the null hypothesis was rejected only for Day -5 of Event 1 in the Hang Seng Index. The null hypothesis was rejected for Days +4 and +5 of Event 1 and Days +3, +4, and +5 of Event 6 in the Philippine Stock Exchange Index.

Thus, the Arab Spring had a negative impact on the HSI five days before the event. The Arab Spring had a negative impact on the PSEi four to five days after the event. Brexit had a negative impact on the PSEi three to five days after the event.

The non-parametric test later showed that there are no statistical significant differences in any of the AARs for the Hang Seng Index. Meanwhile, there is a statistical significant difference

in the AARs of the Philippine Stock Exchange Index for Event 1, the Arab Spring and Event 9, the US-China Trade War.

Because the null hypothesis is rejected twice in the PSEi twice more than the HSI, it can be implied that the Hong Kong Stock Exchange is more efficient than the Philippine Stock Exchange. For most events in this event study, however, both markets displayed market efficiency.

RECOMMENDATIONS

Investors who diversify their portfolios by investing across capital markets within a region may not be rewarded as safely they would have thought. The findings of this study showed that efforts in investing across regional markets does not eliminate the risk entirely, but only cushions the timing of the impact should the investor perceive a market inefficiency. Stock brokers are recommended to use event studies as possible frameworks for testing their trading approaches. This event study showed delayed negative impact of events to the Philippine Stock Exchange Index and early negative impact of an event to the Hang Seng Index. This may provide an insight into how events impact these markets in real-time, potentially implying the merits of trading positions before, during, and after events as they unfold. Future researchers of event studies for Hong Kong and the Philippines are recommended to use other models in estimating expected returns other than the constant mean return model used in this research. There may also be merits in using other parametric and non-parametric tests other than the widely popular t-test. Most importantly, however, is that event study researchers are recommended to perform event studies not only in the light of finance or economic research. But also as a research into human behavior, chronicles of history, and the pulse of society.

ABOUT THE RESEARCHER

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APPENDIX

The global events for this event study on the Hong Kong and Philippine stock exchange indices are summarized in the table below. Judgmental sampling or subjective selection was the method used as in the studies of Ramesh (2015) and Yeung and Aman (2016).

Region and event	Event number	Date of occurrence	Description of event
<i>Middle East</i>			
Arab Spring	1	January 17, 2011	A series of events that witnessed the collapse of four authoritarian heads of state
Syrian Civil War	2	March 15, 2011	Several pro-democracy protestors were killed in Syria
U.S. rapprochement with Iran	3	September 26, 2013	The Iran had its first multilateral talks with the United States since 1979
<i>European Union</i>			
Signing of the European Stability Mechanism Treaty	4	February 2, 2012	The ESM was established as an international financial institution aimed to help euro area countries in financial crisis
Signing of the Fiscal Treaty	5	March 2, 2012	The European Union established a treaty which requires a balanced budget rule in domestic legal orders
Brexit	6	June 23, 2016	Brexit is the term coined for the withdrawal of the United Kingdom from the European Union

The United States of America

Trump assumes office as the 45th President of the USA	7	January 20, 2017	Donald Trump was inaugurated president over Democratic nominee, Hilary Clinton
U.S. leaves the Paris Accord	8	June 1, 2017	The United States leaves the most important climate change agreement of the century
US - China Trade War	9	July 6, 2018	U.S. implement first China-specific tariffs on 818 imported Chinese products

Southeast Asia

Philippines wins arbitration case	10	July 12, 2016	Permanent Court of Arbitration decides that the Philippines has sovereignty over the West Philippine Sea
North Korea Ballistic Missile Launch	11	August 29, 2017	Early Tuesday morning a North Korea Missile flew over Japan and landed into the Pacific Ocean
Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)	12	March 9, 2018	11 countries signed the revised version of the TPP Agreement

Influence of Accounting Information System on the Fiscal Performance of Cooperatives in Tagum City

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Abstract – This research aims to determine the influence of accounting information system on the fiscal performance of cooperatives in Tagum City. This research is expressed in a quantitative approach using a non – experimental research design. The study's results will offer a substantial data and information about the significance of accounting information system especially for those cooperatives which had less resources implementing this program. 213 employees of cooperatives in Tagum City with a random distribution were chosen as the respondents of this study. Moreover, to determine the influence of accounting information system, the following indicators were used: system quality, information quality, and system threats. Overall, these indicators garnered a total mean score of 4.24 and a standard deviation of 0.81 and descriptive equivalent of high. This means that there is a positive response to the level of utilization of accounting information system.

Keywords: *Accountancy, Accounting Information System, Fiscal Performance, Cooperatives, Philippines*

INTRODUCTION

Rationale

Globally, cooperatives are an excellent way for poorer people to achieve equity, social justice, and long-term economic growth. The financial performance of cooperatives should be better for them to be more successful and play a more significant role in the development of the community; however, if cooperatives management does not elevate their performance, there is a considerable concern and a widespread problem. They must know that any cooperative's financial performance is a fundamental factor in its success. Since the evolution of the modern firm, researchers have been looking into the factors that influence cooperatives' performance. From a financial standpoint, the accounting information system is one of the factors contributing to its performance (Ibrahim, Ali, & Besar, 2020; Wei & Zhang, 2018).

Cooperatives were considered a significant contributor to the Philippines' economic growth and have retained their prominence in the industry. The development movement of cooperatives in the country shows different ups and downs. It was mainly due to poor financial planning and decisions, proper management, and constant need for cooperative management development, growth, and expansion. These pushed them to apply advanced techniques to enhance decision-making. These approaches are intended for them to stay on track amidst technological advancements. As a result of advances in information technology, most manual accounting

systems are being phased out and replaced by digital Accounting Information Systems, which are more accurate and faster to run. When implemented successfully, a management Accounting Information System has a substantial impact on improving the organization or company's financial performance (Rehab, 2018; Davoren, 2019; Kamanga, R. and Alexandra, P.M., 2019; Suzan et al., 2019).

As one of the most considerable economic pillars in Tagum City, cooperatives have an excellent opportunity to create jobs and grow the economy. However, the firm's financial performance needs to improve. Accounting information must be of high quality, relevant, and valuable in the decision-making process to be successful in the decision-making process. However, many of them are currently unable to create high-quality accounting information relevant to decision-making. A study found that an Accounting Information System can be used to improve the "representational faithfulness" of its accounting data by emulating the audit function (Farah, Farrukh, & Faizan, 2017; Septriadi, 2020; McCallig, Robb, and Rohde, 2019).

In this context, the researchers were persistent in researching the extent of influence of the accounting information system among the cooperatives in Tagum City. This research will address the issues and needs of cooperatives using accounting information systems as a basis of an empirical future research.

Research Objectives

This research focused on the influence of the accounting information system of cooperatives in Tagum City. In particular, this aims to achieve the following objectives:

1. To evaluate the level of utilization of the accounting information system in terms of:
 - 1.1. System Quality;
 - 1.2. Information Quality; and
 - 1.3. System Threats;
2. To assess the level of the fiscal performance of cooperatives in Tagum City in terms of:
 - 2.1. Profitability,
 - 2.2. Liquidity;
 - 2.3. Solvency;
 - 2.4. Corporate Governance;
 - 2.5. Capital Structure; and
 - 2.6. Economic Condition.
3. To determine the significant relationship between the influence of the accounting information system and the fiscal performance of cooperatives.
4. To find out which indicator of the accounting information system significantly influences the fiscal performance of cooperatives.

Review of Related Literature

This part is the literature and studies in line with the present study and would better understand the used variables. Theories, principles, and concept excerpts from different authors relevant in this study are discussed in this section to give reliable sources to elaborate on the other variables under scrutiny.

Accounting Information System

Since the modern market environment is highly unpredictable and dynamic, businesses need more data to make timely business decisions and improve competitiveness. The accounting

information system is a computer-based electronic system that collects financial and accounting data and then processes and communicates it in financial statements to assist and guide organizational decision-making. Computers serve as the primary gateway for accounting data since they serve as the platform for all information systems to run simultaneously. Installing the computer program on the operating system that the management will use for the accounting information system will make sure it can work as well as possible (Manchilot, 2019; Chenhall, 2018).

System Quality

The Accounting Information Systems literature is founded on the concepts of double entry accounting, financial accounting, and management accounting. Accounting systems must have certain qualities and potentials to be reliable, safe, and suitable for planning and decision-making processes, such as being user-friendly, being versatile enough to be modified or changed as needed, and having coordination and conciseness, using a comprehensive set of rules that consider amount and charges of sensory structures, as well as the smoothness and protection of these systems when inspecting and auditing them. Furthermore, the availability of assisted information assistance has a direct impact, which fosters and strengthens the characteristics of these programs for them to be as efficient and successful as possible (Sari et al., 2019; Kanakriyah, 2017; Dibrell, Davis, P.S. and Craig, J., 2018).

Information Quality

A researcher examines the effect of accounting systems for effective legal compliance on a firm's financial performance. The results demonstrated that when restrictions are implemented proficiently, productivity increases, financial statements become more accurate, and users can start making more informed choices. A successful information quality must have integrity, simplicity, information flow, and several factors and quality, consistency, and accurate outputs. In the same context, this system must be of the best standard and diverse from those other technologies (Firas and Al-Dalabih, 2018; Teru, Idoku, and Ndeyati, 2017).

System Threat

Keeping accounting systems protected from intruders requires motivation and an adequate energy supply. The researcher claims that complicated keys and equations are used to secure accounting data. Accounting systems must always be ready regardless of the form of security. Furthermore, the information generated must be sound, integrated, precise, and detailed, ensuring that consumer privacy is not jeopardized and sensitive information about customers is protected. Stable accounting systems will effectively ensure that procedures are followed to turn data or input into information valuable for management or clients. Researchers, as such, originally agreed that a control system is needed to collect user input for governance (Abu-Mahdi, 2017; Emeka-Nwokeji, 2019).

Fiscal Performance of Cooperatives

The researchers emphasized the significant nature of financial accounting and assessment for the progress and advancement of medium-sized businesses. Every year, the management should assess to get a picture of the business's life. Report financial transactions and investigate. Members can use financial performance to either sell their shares or maximize their investment. Additionally, it acts as a reference for management to determine which parts of the organization

need progress. The state and the community are interested in the fiscal viability of the cooperative (Kristanovic and Barbaca, 2017; Rapina, 2014).

Regardless of location, cooperative financial performance is essential for every company because it reflects the capability to disburse and utilize materials. The primary goal of evaluating cooperative performance, in addition, is intended to motivate workers to accomplish company objectives while adhering to established ethical standards to generate the actions and outcomes that have been anticipated. The Return on Assets (ROA) metric may be utilized by cooperatives to evaluate financial performance. It is necessary to keep in mind the aforementioned: return on asset (ROA) is used as an indicator of fiscal efficiency and as a dependent variable since it is utilized to evaluate the efficacy of cooperative in producing earnings via the usage of the asset it owns (Borhan and Bader, 2018; Ntim CG, 2019).

Profitability

Another study was expected to find the impact of AIS on small-sized firms' profitability in Uganda. According to the research conclusions, they experienced low profits because they were not using the accounting information system as a tool. Furthermore, the researchers discovered that businesses would attain higher yields if only these firms used accounting information systems (Muhindo et al., 2018).

Liquidity

Revenue optimization and business financial success are dependent on proper working capital management. To satisfy short-term liquidity needs, a company must efficiently use its working capital. A link has been shown between stock liquidity and business performance. Investors will be interested in making transactions if the company's performance demonstrates a high level of value. When stock prices go up, it implies that the business is doing well. Also, the study found that the liquidity of stock significantly impacted the business' profitability (Wira, 2017; Pouraghajan, 2018; Maness and Zietlow, 2005).

Solvency

By looking at a company's solvency, you can figure out how financially sound it is. Most fiscal indicators are often employed to evaluate a company's financial performance. A financial ratio is a single element in the accounting records separated by another. An analysis of economic indicators may help identify how well a business is doing. Solvency has also been used to measure the company's financial health. The preference of a cooperative's board of directors for equity capital over debt capital is referred to as solvency. A solvency ratio calculates the percentage of a cooperative's assets held by its members (Lin & Liu, 2017).

Corporate Governance

Researchers studied the correlation between institutional management policy uniformity and fiscal performance. The findings showed that businesses with better corporate governance rules had excellent fiscal outcomes. Corporate governance principles influence how a company organization develops objectives, designs strategies, monitors outcomes and manages risk. Reasonable corporate governance procedures can increase efficiency (Chugh et al., 2018; Ueng, 2017).

Capital Structure

Researchers examined the connection between asset/equity returns and fiscal performance in prior research. The result shows that firms utilized debt ratio and other measures to measure the capital structure. They discover evidence that lowering debt ratios will help businesses perform better. Also, China has shown that capital structure influences a company's financial success. The capital structure of a business affects its overall success. The debt and equity funding ratio are known as capital structure (Pouraghajan, A., 2018; Su & Vo, 2019; Abu-Rub, 2019).

Economic Condition

Accounting software produces accurate data, which is critical for running a company. Accuracy, faithfulness to the real world, and objectivity are essential characteristics of accounting information systems. Despite its central position in accounting information systems, reliability is dynamic and elusive. For accounting requirements to be met, firms must provide more unfettered disclosures connected with the entire economic systems represented by financial information to assist consumers in determining the trustworthiness of accounting information (Emeka-Nwokeji, 2019; Abu-Mahdi, 2019).

Theoretical Framework

This study is based on the Technology Acceptance Model (TAM) introduced by Davis (1986). It is one of the most widely used models to explain user acceptance behavior. This model is grounded in social psychology theory in general and the Theory of Reasoned Action (TRA) in particular (Fishbein, & Azjen, 1975). TRA asserts that beliefs influence attitudes, which lead to intentions and therefore generate behavior. Davis (1989) conducted numerous experiments to validate TAM by using Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) as two independent variables and system usage as dependent variable. He found that PU was significantly correlated with both self-reported current usage and self-predicted future usage.

This study is supported by the proposition of Ezenwoke et al. (2019) who mentioned that the phenomenon “Accounting information System”, is wide and multidisciplinary in nature. Kamanga, R. and Alexandra, P.M (2019) expanded that to ensure that digital transformation is embraced by all communities, it is vital to address real-world issues. Digital technology has transformed the way we conduct human activities, making it nearly impossible for any business owner to operate without access to some type of digital technology, regardless of their location or size of business.

Puspitawati (2021) discovered that the quality of accounting information is influenced by the effective use of accounting information systems and that a company's business plan has an effect on the effectiveness of accounting software. Thus, this study looks at contingency and agency theories as its theoretical lens because the firm's external and internal environment can have an impact on it. Concerning agency theory, there is a concern about a specific type of transactional relationship, those that involve people who have some conflicting interests and who may be limited by imperfect or asymmetric information.

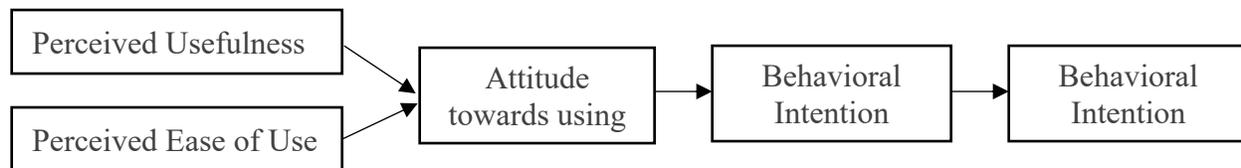


Figure 1. Technology Acceptance Model (1989)

METHOD

This section describes the study design, the research setting, instrument, population and sample size, the data collecting process, and the statistical tools.

Research design

The researchers used a quantitative non-experimental design utilizing the correlational research method in this study. As McBurney and White (2009) described, Non-experimental research, also known as correlation analysis, explores through checking for associations between the variables. Non-experimental research designs aim to look for associations or relationships among studied variables (Polit & Beck, 2004). Further, this design does not manipulate the independent variable. It is usually used to look for relationships or associations between variables (Baker, 2017).

Relationships between variables are explored in correlation research. Furthermore, this type of research focuses on what is connected to previous events affecting or influencing present conditions/circumstances (Johnson, 2007). The researchers used a correlational approach since this study seeks to establish the connection between the accounting information system and cooperatives' fiscal performance in Tagum City.

Research locale

The findings of this study are specific to the context of the employees in different cooperatives in Tagum City, Davao del Norte. The possibility for the general applicability of the findings was limited by the scope, and the sample.

Population and sample

Stratified random sampling was employed in determining the respondents for this undertaking. Stratified random sampling is a population sampling approach by which the population is split into subgroups and the units of the subgroups are picked randomly. Stratification is extremely common in interview samples of target populations (Frey, 2018). Respondents of this study are the employees of various cooperatives in Tagum City. Those who are working in the cooperatives 6 months to 1 year were excluded from this study. The data collection period was done from the entire month of September to November 2021. The total number of respondents who participated in this study is 213.

Table 1. Distribution of Respondents

Name of Cooperatives	Number of Respondents
Tagum Cooperative	30
FICCO	10
AC Multipurpose Cooperative	16
King Cooperative	18
City Cooperative Development Unit	16
ACDI Multipurpose Cooperative	20
Pantukan Chess Club Cooperative	17
Northern Davao Electric Cooperative	25
Tagum City Employees Multi – Purpose Cooperative	25
Medical Mission Services Cooperative of Tagum	23
Sonrise Multi – Purpose Cooperative	13
Total	213

Research instrument

The study used researcher-made questionnaires validated by internal validators, who modified and enhanced the data to collect the relevant data. The questionnaires as an inquiry device, has gained widespread acceptance as a practical way of eliciting data to answer the specific problems in the research.

Statistical Tools

The following are the statistical tools that are used for data analysis and interpretation. *Mean* used for research to assess the degree to which the accounting information system affects the fiscal performance of Tagum City cooperatives. *The standard deviation* has been used to measure the dispersion of the frequency distribution. *Researchers* utilized *Pearson r* to create a strong link between a cooperative's accounting information system and its fiscal success. *Linear Regression* was utilized to ascertain the extent to which the accounting information system affects the fiscal performance of Tagum City cooperatives.

RESULTS AND DISCUSSIONS

This chapter reveals all the inferential results, analyzed at a significance level of 0.05. They are presented based on the problems raised in the previous chapter. The data for the study's results, analysis, and interpretation are discussed from highest to lowest means of indicators presented in tabular and textual forms.

Level of Utilization of the Accounting Information Systems

Table 2. Level of Utilization of the Accounting Information Systems

Indicator	Mean	SD	Descriptive Level
System quality	4.26	0.74	Very High
Information quality	4.26	0.89	Very High
System threats	4.19	0.95	High
Overall	4.24	0.81	High

As appended in table 2, items on accounting information system through *system quality* and *information quality* got the following weighted means garnered the highest overall mean score of 4.26. Regarding *system quality*, D Rosa and Purfini (2019) hypothesize that cooperatives have noticed the methods of collecting data, services, and individuals contributing to helpful information. As a result, an accounting system helps employees, owners, customers, and other stakeholders by effectively communicating data and information about an organization's operations. A review of the privacy, usability, timeliness of utilization, configuration management, and providing accurate and practical information is also congruent with Kashif's (2018) theory. Every organization's accounting system should always show these four elements.

The *information quality* was also very high. It indicates an accounting information system's information quality is excellent. It also means that it should be derived from experimental observations with proper restrictions to ensure the information's validity. Users can make better decisions due to increased productivity and accurate financial statements. A successful information quality must have integrity, simplicity, information flow, and various aspects, according to Firas and Al-Dalabih (2018). This system must be outstanding to other technologies in the same context.

Finally, regarding *the system threat* who got the weighted means of 4.19. It indicates that system threats in an accounting information system are observed. It means that in an accounting information system of the cooperatives, the data are valid, complete, and secured. Accounting systems include sensitive data that must be kept protected. Also, it is always essential to have backup files and other retrieval techniques. De Gorostiza et al. (2017) cited that implementing this accounting information system will benefit the company in reducing the number of incorrect business choices made.

Level of Fiscal Performance of Cooperatives

Another concern of this study is to describe the fiscal performance of cooperatives in Tagum City in terms of profitability, liquidity, solvency, corporate governance, capital structure, and economic condition.

As shown in table 3. The high level of *corporate governance* predicted an excellent financial performance. It means that corporate governance is a critical factor in financial performance. These findings are related to Chugh et al. (2018) and Ueng (2017). They determine how a company sets goals, implements strategy, evaluates performance, and manages risk. Effective corporate governance can boost a company's efficiency. To guarantee that all stakeholders' interests are aligned, corporate governance sets rules and procedures that govern how a firm function. Encouraging good corporate governance leads to financial viability. Furthermore, Petersen and Rajan (2015) suggested that financial market rivalry hinders long-term commercial relationships with financial institutions.

Similarly, the respondents had an agreeable rating on a fiscal performance about *economic condition* described as very high, which specified that items indicated were positive in cooperatives in Tagum City. Meaning, good economic conditions are thought to make people more optimistic about the future, which could lead them to invest more in the hope of getting a good return. Accountants must disclose more information about the core economic systems represented by financial information because It will let clients assess the accuracy of accounting records, according to Abuh-Mahdi (2019).

Table 3. *Level of Fiscal Performance of Cooperatives*

Indicator	Mean	SD	Descriptive Level
Profitability	4.28	0.65	Very High
Liquidity	4.32	0.63	Very High
Solvency	4.29	0.64	Very High
Corporate governance	4.54	0.45	Very High
Capital structure	4.30	0.65	Very High
Economic condition	4.38	0.61	Very High
Overall	4.35	0.52	Very High

More so, the respondents also displayed a very high level of *liquidity*. It means the cooperative can pay its debts. It also shows the cooperative has a sound business model, manageable cash flow, and leverage on the balance sheet, all predicted. Liquidity refers to the ability to meet short-term obligations and is vital to the smooth operation, according to Obasesin and Olaoye (2019). Thus, doing a liquidity study has numerous consequences for a company's operations. Liquidity will help your company overcome difficulties, secure loans, and forecast.

In the same way, the respondents had an agreeable rating on a fiscal performance about *capital structure*. It is described as very high which means that the cooperatives assure access to the capital structure necessary to finance future development and improve financial performance. It is in line with Pouraghajan's (2018) views, which stated that a business's capital structure might be characterized as a combination of shareholders' money. The percentage of firm resources is derived from various sources, including both internal and external financiers.

Correspondingly, the respondents also displayed a very high level of *solvency*. It implies that management is developing methods to protect against solvency risks to improve financial performance. It means that the administration is also closely analyzing their financial statements so it will be able to assess the financial performance of the cooperatives. The above findings collaborated with the idea of Lin and Liu (2017). They believed that one might determine its economic health by evaluating its solvency. Most fiscal indicators are often used to analyze a business's financial performance. An examination of fiscal indicators may assist in determining the health of a corporation.

Lastly, the very high level of *profitability* indicated that financial performance was positive. It means a proper organization of operating activities in the cooperatives. It is congruent with Muhindo et al.'s (2018) concept that firms' profits are low because firms are not using accounting information systems. Furthermore, they can attain higher profits if these cooperatives use an accounting information system. In addition, according to Vratskikh, Al-Lozi, & Maqableh, (2016), profitability is directly related to capital owners' wellbeing.

Significance of the Relationship between Utilization of Accounting Information System and Fiscal Performance of Cooperatives

Table 4 present the significant relationship between the utilization of accounting information systems and the fiscal performance of cooperatives in Tagum City. The null hypothesis was tested at a 0.05 level of significance using *Pearson Correlation Coefficient*.

Table 4. Significance on the Relationship between Utilization of Accounting Information System and Fiscal Performance of Cooperatives

Variables	Mean	SD	r-value	p-value
Utilization of Accounting Information System	4.24	0.81	0.832*	<.001
Fiscal Performance	4.35	0.52		

*Significant at 0.05 level of significance

Data revealed that the computed r-value is 0.832, which is significant. The result is due to the profitability level of 0.001 lesser than the 0.05 level of significance. Thus, the null hypothesis is rejected. This result means a significant relationship between the two correlated variables. Based on research on the relationship between the utilization of accounting information systems and the fiscal performance of cooperatives, it has been evident that a cooperative's accounting information system affects fiscal performance. Therefore, the correlation result exemplifies that the accounting information system is also high when the cooperatives' financial performance is high.

Regression analysis on the Influence of Utilization of Accounting Information System towards Fiscal Performance of Cooperatives

Table 5 displays the regression analysis on the level of influence of the accounting information system on the fiscal performance of cooperatives in Tagum City. Results reveal that only system quality and system threats predict cooperatives' fiscal performance since the probability of these two indicators are 0.001 and 0.001, respectively. These values are lower than the significance level of 0.05. The researchers can infer that the stated null hypothesis, no domain of accounting information system that significantly influences cooperatives' fiscal performance, is rejected. On the other hand, the overall model significantly influences the dependent variable given $R = 0.841$, F-ratio of 168.777 with a P-Value of <0.001 . The overall result of the accounting information system significantly influences the fiscal performance of cooperatives.

Table 5. Regression Analysis on the Influence of Utilization of Accounting Information System towards Fiscal Performance of Cooperatives

Independent Variable: Accounting Information System	B (Unstandardize d coefficients)	B (Standardize d coefficient)	t-value	p- value
Constant	2.101		18.367	<.001
System quality	0.198	0.280*	4.349	<.001
Information quality	-0.004	-0.006	-0.070	0.944
System threats	0.339	0.612*	7.225	<.001
Dependent Variable:	Fiscal Performance of Cooperatives			

$R = 0.841$

F-ratio = 168.777

$R^2 = 0.708$

p-value < .001

*Significant at 0.05 significance level

Conclusion

Based on the findings of the investigations, conclusions are drawn in this section. The level of accounting information system in terms of system quality is very high, very high for information quality, and high for system threat. It has an overall mean of high for the level of accounting information system in cooperatives. Besides, this means that they observed all indicators of accounting information in cooperatives. The fiscal performance of cooperatives in terms of profitability, liquidity, solvency, corporate governance, capital structure, and economic condition is very high. The overall mean of very high for the level of financial performance in cooperatives means that all measures described in the fiscal performance of cooperatives were very much observed.

On the other hand, there is a significant relationship between accounting information systems in the fiscal performance of cooperatives. The accounting information system significantly influences the fiscal performance of cooperatives in Tagum City. On top of that, this is in line with the study of Teru (2017), which stated that accounting information systems are substantially influenced by the skill and support of accounting managers at the organization's top levels, and accounting systems have a considerable impact on management productivity and overall firms' financial performance.

Recommendation

After reviewing and considering the results and conclusions, accounting information systems in terms of system quality, information quality, and system threats may be reached to a very much observed. Thus, to do this, management should prioritize system threats, particularly ensuring the system is free of substantial errors, and the policy should outline prohibitions on the dissemination of personal data. They also determine the appropriate techniques in securing information and identifying the process not well performed by the management. Moreover, their weakness and strengths in their work and giving the sight of suggestions and honest feedbacks for managements' improvement must also be emphasized.

Moreover, multi-factor authentication can be used by cooperatives to optimize data security. Strong authentication provides reassurance to the system administrator. When the user's identification and infrastructure are more trustworthy, the risk of a network attack decreases. Furthermore, it would be beneficial for cooperatives if they continue their interests in using accounting information systems which found out in the study that it will help in the decision making of the management.

Also, align the policies you set to safeguard your system with the organization's overarching security policies and principles. Several general strategies that are advised to assist in protecting your system from threats include the following:

- Restricting network access
- Monitoring activity by enabling a minimum level of logging (auditing and reviewing)
- Keeping up-to-date with the latest security information
- Configuring accounts securely, including securing session management and setting security parameters

Lastly, the researcher recommends the use of other indicators may be conducted for further investigation related to this study.

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The Influence of Web-Based Instructional Meetings on the Learning Outcomes of Accounting Students in UM Tagum College

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Abstract – This study aims to analyze the influence of web-based instructional meetings on the learning outcomes of accounting students in UM Tagum College, which has been extensively used since the beginning of the pandemic. In line with this purpose, a regression analysis was carried out to know if the two variables have a significant influence. Using Multiple-Regression, with a 316 total number of respondents, the data revealed that Web-based Instructional Meetings and Learning Outcomes of Accounting Students in Um Tagum City has a significant influence. The R²-value of 0.777 implies that Web-based Instructional Meetings affect 77.7% of the Learning Outcomes of Accounting Students in UM Tagum City, while other factors influenced the remaining 22.3%.

Keywords: *Accountancy, Web-based Instructional Meetings, Learning Outcomes, UM Tagum College, Philippines.*

INTRODUCTION

Rationale

Globally, tertiary education uses learning outcomes as guidelines on the information and skills that the students should acquire. Holmes (2020) stated that the quality assurance bodies, together with university program acceptance and evaluation systems, presume that students can communicate with them; however, from theoretical and practical perspectives, there is an excellent sign of pressure and challenges as per utilization of learning outcomes. Additionally, Ellis, Pardo, & Han (2016) believe in the sudden shift and application of online learning. There are tensions associated with the student learning outcome as determined that the current mode of use has far less flexibility than it should provide. Thus, it creates issues and concerns for teachers on how to develop activities on learning for the students to achieve their learning outcome.

Coronavirus has disturbed the more significant part of the ventures on the planet. Many nations shifted to the virtual ways of business, especially in Education (Mahyoob, 2020). The advancement of technology created many solutions on how to cope with the issues and problems in education through online learning (Oranburg, 2020). E-learning or web-based learning, the tertiary education settings, have been used increasingly. The use of the internet made the distribution of learning flexible and easy for the students and many organizational employees (Maqableh et al., 2015). In the Philippines, corresponding through the Education Sector, the Commissioner on Higher Education informed different foundations concerning for advanced education to execute distance instruction techniques for learning for its classes, for example, the

utilization of instructive innovation, to augment the academic term notwithstanding the suspensions (Alipio, 2020).

Student learning outcomes have been an important consideration in assessing a student. It decides whether the organization achieved its central goal and takes a gander at the number of and how well the alumni will put, i.e., the sorts of occupations and the average compensation the alumni are getting or fulfillment reviews of understudies and selection representatives (Martinson & Cole, 2002). In UM Tagum College, accounting students will not be exempt from this assessment on their learning outcomes.

However, the researchers have not run over any study conducted on the relationship of web-based instructional meetings and learning outcomes of accounting students in UM Tagum College. It shows that the current investigation will make an explicit commitment and produce information on web-based instructional sessions and learning outcomes of accounting students in UM Tagum College. In the setting, the researchers are intrigued to decide if the web-based instructional meetings and learning outcomes of accounting students can build attention to the expected recipients, along these lines, the need to direct this study.

Research Objective

The primary objective of the research is to figure out the influence of web-based instructional meetings on the learning outcomes of accounting students in the University of Mindanao, Tagum College. In particular, the research designed to get solutions to the following goals:

1. To determine the level of web-based instructional meetings in terms of:
 - 1.1 dialogue;
 - 1.2 structure; and
 - 1.3 learner autonomy;
2. To determine the level of learning outcomes of accounting students in UM, Tagum College in terms of:
 - 2.1 learning effect; and
 - 2.2 learning gain.
3. To determine if there is an essential link between the level of web-based instructional meetings and learning outcomes of accounting students in UM, Tagum College.
4. To determine which domains in web-based instructional meetings significantly influence the learning outcomes of accounting students in UM, Tagum College.

Hypothesis

The hypotheses mentioned above will be tested at the 0.05 level of significance.

1. There is no relationship between the two variables, the level of web-based instructional meetings and learning outcomes of accounting students in UM, Tagum College.
2. There is no domain in web-based instructional meetings that significantly influence the learning outcomes of accounting students in UM, Tagum College.

Review of Related Literature

This section presents observations, notions, information, records, ideas, and readings on Web-Based Instructional Meetings and Students' Learning Outcomes.

Web-Based Instructional Meetings

The World Wide Web can be utilized to give guidance and informative help. Web-based advice offers students unmatched admittance to instructive assets, far outperforming the range of the conventional homeroom (Olson & Wisher, 2002). Web-based instruction (WBI) alludes to using web assets, software, and programming for upgrading guidance and course conveyance techniques. Instead, any endeavor to incorporate these web assets for study hall guidance addresses a type of WBI (Mudawe & Mudawe, 2016). In Moore's model for transactional distance learning, the factors are dialogue, structure, and learner autonomy (Moore, 1993).

Dialogue

The educator is essential in delivering the learnings to the students, and many methodologies must be considered, especially in applying a mixed learning setting in the classroom (Florian & Zimmerman, 2015, p. 104). Technology has become beneficial to society, especially in education. For profound learning to occur, educators and students must work hand in hand to comprehend the utilization and opportunities that technology could enhance their education (Douglas et al., 2016, p. 18). Students and educators must have a piece of essential information on how to use the technologies, only the most fundamental levels; there should be a degree of ease in utilizing it, so the substance of the program is going to be significant to the students (Tang & Chaw, 2016). Once the learners clearly understand the teacher's expectations and have enough opportunity to participate in decision-making, they become more interested in learning (Delfino, 2019).

Structure

In distance learning, the utilization of innovation makes an enormous commitment to instructive organizations. Web-based education opens new possibilities arrangements in the instruction global through the development of innovation and should uphold by supporting gadgets like programming and equipment. Oranburg (2020) categorizes two components that permit educators and students to be associated with internet learning execution. The equipment hardware remembers PCs for CPUs, workstations, webcams, receivers, and organizations. The instructors and students also need to have exceptional information from the product to utilize internet software to gain knowledge. For example, the utilization of video chats may refer to any form of media used to help web-based learning, for instance, instructional content via Google Classroom, Emodo, Schoology, Zoom, as well as others (Enriquez, 2014; Sicat, 2015; Iftakhar, 2016), and communication platforms like WhatsApp (So, 2016) or video call apps like WhatsApp, Zoom, and others (Enriquez, 2014; Sicat, 2015; Iftakhar, 2016).

Learner Autonomy

Student attributes impact how online students learn and their web-based learning encounters. Howland and Moore (2016) concentrated on understudies' insight as distance students in Internet-based courses uncovered that understudies who were the best in their view of online learning were those with ascribes reliable with constructivist students. The best understudies were more accessible, proactive, and answerable for their learning. Interestingly, the understudies who detailed more adverse views of their online learning experience had similar assumptions for construction and data as they accomplished for an in-class design. Those understudies with negative discernments communicated the requirement for more input from the educator just as

more design. These understudies revealed the educator's absence of criticism and correspondence as deserting (Howland and Moore, 2016).

Learning Outcomes

Learning outcomes can contain all forms of learning. It will be determined as a set of statements describing what knowledge, skills, and abilities students should possess and demonstrate after completing a learning experience or a sequence of learning activities. Moreover, it allows students to grasp the significance of the knowledge and the advantages they will gain from participating in the learning activity (Caspersen et al., 2017). In accounting concentration, the learning outcome will design to allow students to prepare for careers in auditing, financial accounting, managerial accounting, and taxation (Ming et al., 2017). Learning effect and learning gain are two dimensions of factors that influence a student's learning outcome and give context from a specific variable (Hsu, 2012).

Learning Effect

A study determined the learning effect as one variable that influences student learning outcomes. In the context of web-based learning, it will state that successful learning courses when students participate actively may be a sign of the learning environment's effectiveness (Kintu et al., 2017). As antecedents of good learning outcomes, learners must also be capable of initiating, discovering, and completing the process of knowledge production for blended learning to be effective (Zhu, 2012).

E-learning tools impact students' achievement (Moravec et al., 2015). Teaching methods positively impact student contentment and are significant determinants of student learning outcomes. It emphasizes that teaching methods play an essential part in determining international learners' satisfaction. Teaching methods and strategies can be significant factors in assessing student satisfaction and, as a result, student loyalty to higher education institutions (Nadishan, 2020).

Learning Gain

Learning gain has been described as a piece of knowledge that has evolved the abilities, career preparedness, and professional and personal development, as well as the improvement of specific processes and behaviors in classified discipline and organization characteristics (OFS, 2018). A more comprehensive view of learning gain is it is an ongoing effort to quantify its rise through competencies, comprehension, and professional development obtained by students throughout the learning process (Evan et al., 2018); it is typically addressed in terms of meaningful learning outcomes. As shown in a study conducted in the United States, it describes the degree to which information qualities and expertise acquired through job-related training are generalized and retained in practice (Bates, Holton III, & Hatala, 2012).

Theoretical Framework

This study is based on the assumption of Transactional Distance by Moore (1997), which enunciates that distance education isn't just a geographic partition of students and instructors, yet, more significantly, it is an educational idea. It also points out when discussing distance education, we are ordinarily discussing an instructing environment where the partition between the instructor and student is enormous enough that exceptional educating learning procedures and strategies

should be utilized. Moreover, it states that as the degree of communication between instructors and students diminishes, student autonomy should increase.

This study was accompanied by the assumption of Boisvert (2000), who stated that the most commercialized advantage of web-based learning and training is the learning experience at any time and everywhere. It eradicates time and geographical location barriers. Consequently, without being present at the same time and location, students may connect and collaborate. They can interactively control their own time and research in their room, such as tracking their progress while learning and deciding where to expend additional effort to learn.

Twigg (2003) mentioned that web-based learning could further develop learning results by substituting lecture time with gathering and individual work that draws in understudies more effectively in picking up, empowering more prominent inspiration and more profound learning.

Conceptual Framework

The conceptual research framework is shown in Figure 1. The study's independent variable is the web-based instructional meetings with the following indicators: the structure controlled by the basic plan of the action, how coordinated was the guidance and the utilization of various media correspondences; dialogue could be simultaneous, offbeat, and exchange that disguised inside the student; learner autonomy identified with the individual student's self-directedness or feeling of moral duty (Kearsley and Moore, 2012).

The dependent variable is the learning outcomes of accounting students of University of Mindanao, Tagum College with the following indicators: learning effect, which incorporates test result, time for plan fulfillment, and scholastic accomplishment; and learning gain, which contains learning pride, achievement, and inclination (Hsu, 2012).

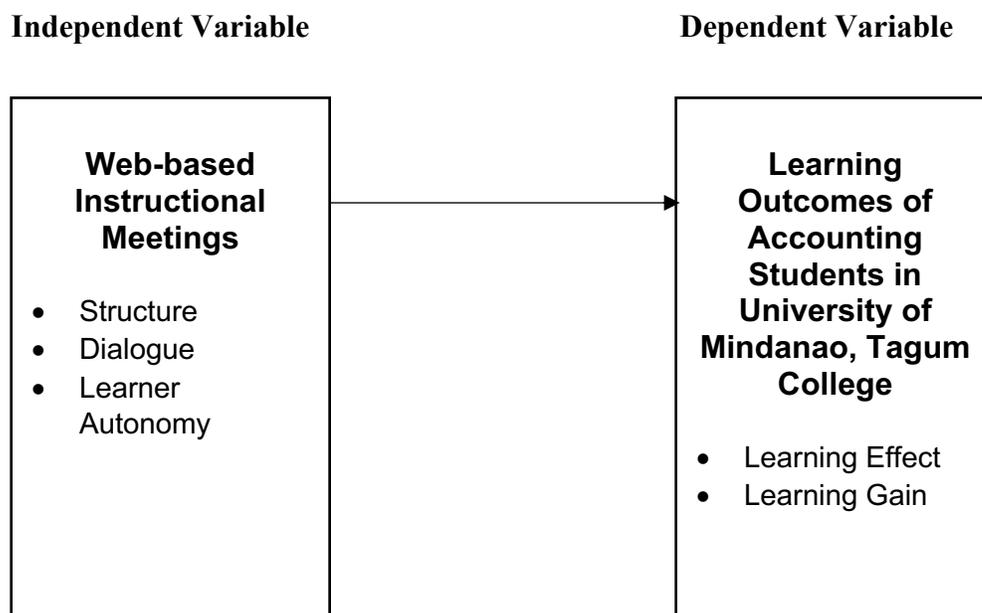


Figure 1. Conceptual Framework of the Study

METHOD

The research design, research locale, population and sample, research instrument, data collection, and statistical tools are all covered in this chapter.

Research Design

This study used a quantitative non-experimental research design utilizing a correlational technique. This method includes procedures with no control of any variable that generalizes a particular phenomenon's results. Correlational research finds and perhaps measures the connection between two or more variables (Mertler, 2014).

This overview manages the quantitative information about the said phenomenon. The quantitative angle is a suitable timetable for gathering the information intended for the objective respondents to address the inquiries. The method of invoking the report was based using a poll. The focal point of the investigation was to decide the level of web-based instructional meetings and learning outcomes of accounting students in UM Tagum College.

Research Locale

The results of this investigation are specific to the setting of accounting students at the University of Mindanao, Tagum College. The extension and the example restricted the opportunities for the overall appropriateness of the discoveries.

Population and Sample

The respondents were the 316 accounting students of UMTC. Displayed in Table 1 are the respondents of the examination who were understudies at the University of Mindanao, Tagum College for the school year 2020-2021.

The selection of the respondents used random sampling to get a total of 316 accounting students from the Department of Accounting Education. As stated in table 1, the respondents are categorized as follows: 1st year to 4th-year students will all have 79 respondents. The total number of students involved in the study is 316.

Table 1. Respondents of the Study

Year Level	Number of Respondents
1 st year	79
2 nd year	79
3 rd year	79
4 th year	79

Research Instrument

The instrument used in the research was acquired from a survey questionnaire of Petazzoni (2008) for the independent variable and Paechter & Maie (2010) for the dependent variable but selected only to fit the study's context. The first set of questionnaires associated with the web-based instructional meetings with three indicators; Structure, dialogue, and learner autonomy.

Statistical Tools

For data analysis and interpretation, the following statistical tools were used: **Mean**. This statistical tool was used to determine the level of web-based instructional meetings and the learning

outcomes of UM Tagum College accounting students. **Pearson (r)**. This statistical tool was employed to determine the significant relationship between web-based instructional meetings and the learning outcomes of UM Tagum College accounting students. **Multiple Regression Analysis**. This statistical tool was used to determine the influence of web-based instructional meetings and the learning outcomes of UM Tagum College accounting students.

RESULTS AND DISCUSSIONS

The data and findings of this research are discussed in this chapter. The following subcategories are used to organize the tables: Level of Web-based Instructional Meeting, Level of Learning Outcomes of Accounting Students, and Significance on the Relationship between Web-based Instructional Meetings and Learning Outcomes of Accounting Students, and Multiple Regression Analysis on the Influence of Web-based Instructional Meetings on Learning Outcomes of Accounting Students.

Level of Web-based Instructional Meetings

Table 2 shows the mean scores for the indicators of Web-based Instructional Meetings with an overall mean of 4.11 with a standard deviation of 0.51, represented as high. From highest to lowest, the following estimated mean scores have been used to arrive at the provided overall mean score: 4.13 or high descriptive level for dialogue with a standard deviation of 0.60; 4.07 or high descriptive level for Structure with a standard deviation of 0.59; and 4.14 or high descriptive level for learner autonomy with a standard deviation of 0.58.

Table 2. *Level of Web-based Instructional Meetings*

Indicator	Mean	SD	Descriptive Level
Dialogue	4.13	0.60	High
Structure	4.07	0.59	High
Learner autonomy	4.14	0.58	High
Overall	4.11	0.51	High

Regarding the *Learner Autonomy* as one indicator with the highest mean, it indicates that the web-based instructional meetings are much evident among the accounting students in UM Tagum City based on Table 2. This suggests that the students were independent and responsible for their Web-based Education. This is in line with the views of Post et al. (2015). Students should have a greater liability with the emergence of a new learning environment; they must conform to the unique setting and invest more in their learning to be effective in an online class.

This is followed by the positive *dialogue* and obtained the second-highest mean score. This indicates that the respondents respond to their academic professors through communication despite the geographical gap. This result indicates that conversation is evident in online learning in UM Tagum City, which means that the students were pleased with their academic lecturers' overall communication. This confirms the theory of Florian & Zimmerman (2015). Teachers play an essential role in the delivery of learning to the students. Additionally, Delfino (2019) states that students can be interested in learning once they clearly understand their teacher's expectations towards them. It gives them a clear idea of what to do and gives them the chance to participate in their meetings' decision-making.

Lastly, the Web-based instructional meetings evident among accounting students is *structure*, the indicator that obtained the lowest mean. This implies that the structure is evident among online sessions. This means that students are comfortable with the virtual learning environment. The viewpoint of Naciri et al. (2020) states that structure such as Google Meet and Zoom meetings makes learning even more possible, which permits learning anytime and anywhere. Moreover, Permata & Bhakti (2020) stated that Google Classroom is successfully used in virtual learning and utilized during this pandemic. For Santosa et al. (2020), the utilization of Google Classroom increases the numerical thinking capacity of students. Additionally, in a study, Naserly (2020) expressed that Zoom meetings are compelling and must use for virtual learning viability.

Level of Learning Outcomes of Accounting Students

Table 3 shows the mean scores for the indicators of Learning Outcome of Accounting Students with an overall mean of 4.13 with a standard deviation of 0.51, represented as high. The mentioned total means the following computed mean scores obtained score, in order of highest to lowest standard deviation: 4.11 or high for learning effect with a standard deviation of 0.52; and 4.16 or high for appraisal with a standard deviation of 0.57.

Indicator	Mean	SD	Descriptive Level
Learning effect	4.11	0.52	High
Learning gain	4.16	0.57	High
Overall	4.13	0.51	High

The level of *learning effect* as perceived by the students was high. This signifies that the Learning effect is much evident among the students. As Kintu et al. (2017) defined, the learning effect is where students participate actively in the learning course, and it is a variable that can influence the learning outcome. Moreover, the learning effect is the students' test results and academic accomplishments throughout online learning.

The results in terms of *learning gain* in the Learning Outcomes were high. This implies that accounting students were fulfilled and satisfied in their learning online. This viewpoint of Kuo et al. (2013) states that learning gain is essential in considering students' satisfaction in their education related to their virtual learning experiences.

Significance of the Relationship between Web-based instructional meetings and Learning outcomes

A critical objective of this research is to find out whether or not Web-based Instructional Meetings have a substantial relationship with the Learning outcomes of accounting students in UM Tagum College. The connection between the two variables was determined using Pearson-r. Table 4 shows the results of the computation.

According to the result of this research, there is an essential link between web-based instructional meetings and the learning outcomes of accounting students. This result means that web-based instructional sessions influence accounting students' learning outcomes in UM Tagum City. This confirms the study of Mobo & Sabado (2019), web-based learning gives students' time to be flexible, which provides them with a lot of time to do their academic work. This results from them being more productive and improved their ability to learn.

Moreover, the correlation between web-based instructional meetings and the learning outcomes of accounting students is significant. Consequently, this means that the learning outcomes of accounting students are dependent on web-based instructional conferences. This study affirmed the study of Thabet & Kalyankar (2019), which emphasized that online learning, has a significant effect on the students in education and improves their perspective towards the new method of learning. Suresh, Priya & Gayathri (2018) mentioned that web-based instructional meetings change the way the students think and consider and develop their academic excellence.

Table 4. *Significance relationship between Web-based instructional meetings and Learning outcomes*

Variables	Mean	SD	r Value	p-Value	Decision
Web-based instructional meetings	4.11	0.51			
Learning outcomes	4.13	0.51	0.760	<.001	Rejected Ho

*Significant at 0.05 significance level.

Regression Analysis of the Influence of Web-Based Instructional Meetings to the Learning Outcomes of Accounting Students

Table 5 shows the regression coefficients used to determine whether the general Web-based Instructional meetings significantly impacted Accounting Students' Learning Outcomes at UM Tagum City.

Using Multiple Regression Analysis, the data was identified that the influence of Web-based Instructional meetings and Learning Outcomes among Accounting Students has an F-value of 158.607 and a corresponding p-value of 0.001. This means that Web-based Instructional Meetings significantly influence Learning Outcomes since the probability value is less than 0.05. The R²-value of 0.777 implies that Web-based Instructional Meetings affect 77.7% of the Learning Outcomes of Accounting Students in UM Tagum City, while other factors influenced the remaining 22.3%.

According to Lin, Chen & Liu (2017), in contemporary society, when smart cell phones become famous, the internet breaks through the limitations on existence and turns into a pervasive learning device. Students believe that modernized learning is beneficial to subject learning. Significantly, Students' learning outcomes enhance as their instructional time increases with online learning.

Salamat, Ahmad, Bakht, and Saifi (2018) cited that web-based instructional meetings are a framework that gives students to be adaptable in their time in learning and gives excellent sources to help them in studying. Furthermore, the students feel comfortable using the internet as another source of their knowledge.

Table 5. Regression Analysis on the Influence of Web-based Instructional Meetings

Web-based Instructional Meetings (Indicators)	B (Unstandardized coefficients)	β (Standardized coefficients)	t-value	p- value
<i>constant</i>	1.019		6.936	<.001
Dialogue	0.192	0.255*	4.525	<.001
Structure	0.107	0.125*	2.566	0.011
Learner autonomy	0.455	0.514*	9.516	<.001
Dependent Variable:	Learning Outcomes of Accounting Students			
		R^2		
		=		
	R = 0.777	0.604		
	F-ratio = 158.607	p-value < .001		

*Significant at 0.05 significance level

Conclusion

In this part, conclusions are formed based on the study's findings. To all of it means accounting students have a high degree of web-based instructional meetings. This means that the level of Web-based Instructional Meetings was much evident among the accounting students in UM Tagum City.

Similarly, accounting students have a high level of Learning Outcomes across all measures. This indicates that all of the indicators listed that describe accounting students were much evident.

Furthermore, there is a significant relationship between Web-based Instructional Meetings and Learning Outcomes of Accounting Students in UM Tagum City. Moreover, the domain in Web-based Instructional Meetings that influenced Learning Outcomes of Accounting Students is Learner Autonomy. This is in line with the study of Boisvert (2000), web-based learning eradicates time and geographical barriers, and students can interactively control their time, tracking their own progress and deciding where to expand their knowledge.

Recommendations

The following suggestions have been made in light of the above facts and conclusion: the academic professors can support the students to strive more by providing interactive activities and tasks that will develop their excellence in accounting fields.

Moreover, the academic professors may continue to improve in building good relationships with their students and encourage collaboration in learning to achieve the desired results in the course objectives. The educational institution may implement new ways or strategies in improving the web-based instructional meetings used by the institution. Accounting students' web-based instructional meetings and learning outcomes may be elevated to a higher level by delivering academic activities that will satisfy the student. In addition, academic professors may provide educational activities and continue to communicate and collaborate with them in performing these activities. It will allow the students to be confident in their performance.

Finally, Students and professors would benefit from this research that they may continue improving the usage of web-based instructional meetings as Covid 19 pandemic is still going on.

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Determinants on the Survival of Small and Medium Enterprises: An Exploratory Analysis

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Abstract – Small and Medium Enterprises (SMEs) are considered as the backbone of developing and developed economies around the world. This study revolutionizes the knowledge on SME survival in three critical aspects. First, this study synthesizes existing literature by evaluating more than 100 variables that have been independently studied by researchers all over the world. This addresses the lack of comprehensive and globally oriented research that correlates financial and non-financial variables to SME survival. Second, this study utilizes advanced statistical techniques like cluster and exploratory factor analysis in evaluating which variables create consistent, complementary, and synergistic effects to SME survival. This addresses the lack of holistic understanding on the multivariate intricacies of SME bankruptcy. Finally, this study is contextualized in one of the most competitive and fastest growing cities in the Philippines. This addresses the lack of a nuanced understanding on SME bankruptcy that can be used as benchmark for other localities with similar geopolitical, socioeconomic, and demographic profiles. Out of 120 variables considered, six factors under two clusters have been identified to significantly contribute to SME survival. Most notably, access to financing and government support are not significant to SME survival. With escalating cases of bankruptcy that is exacerbated further by the COVID-19 pandemic, there is urgency in synthesizing global perspectives and localizing research to improve the viability and survivability of SMEs.

Keywords: *Survival of SMEs, Cluster and Exploratory Analysis, Davao Oriental, Philippines*

INTRODUCTION

Statement of the Problem

In the initial years of operation, Small and Medium Enterprises (SMEs) find it difficult to compete in the economy and inevitably face the pervasive threat of bankruptcy. While SMEs employ numerous survival techniques like advertising and adopting competitive prices, the risk of business failure remains as compelling as ever.

Such risk of business failure is further exacerbated due to the role that SMEs play in countries around the world. SMEs are commonly regarded as the backbone of economies (Mikolajczak & Pawlak, 2017). This is because SMEs play a crucial role in revenue generation, job creation, and market stimulation.

In the Philippines, Yason (2014) refers to SMEs as the lifeblood of local and national economies especially since micro, small, and medium enterprises account for 99% of all registered Philippine businesses and employs more than 60% of the workforce. In fact, the Department of Trade and Industry, in its Guide to the Magna Carta for Micro, Small and Medium Enterprises, explicitly proposes that policy makers and other government agencies should focus on the viability

and growth of SMEs as an industrial foundation for the Philippine Economy (n.d.). This demonstrates the deep and profound impact of SMEs on the local level.

Globally, developing and developed countries alike rely on SMEs to stimulate their economies, encourage multi-sectoral investment, and fast-track development. Most notably, the Association of Southeast Asian Nations (ASEAN) in its 2025 Economic Community Blueprint highlights the pivotal role of SMEs in Southeast Asia (Fam et al., 2018). This regional dependence on SMEs is a mirror-image reflection of the Philippines' reliance on SMEs.

Despite global consensus on how important SMEs studies are, multiple researchers have identified a plethora of problems that contribute to the vulnerability of SMEs. This vulnerability is further exacerbated by often uncontrollable externalities such as the COVID-19 pandemic. Not only does SME bankruptcy lead to a loss of personal economic resources, but it also leads to greater social harms such as unemployment, disruption of innovation, and adverse market sentiment. Ergo, the vulnerability of SMEs to business failure poses a pervasive risk of personal and socio-economic injury that cannot be neglected nor understated, especially in the context of a pandemic. After all, SME bankruptcy is not an imagined problem – it is tangible, pressing, and real.

Research Framework

This study is primarily anchored on multiple local and international theoretical propositions that argue how specific variables can contribute to the survival of such SMEs. This study is grounded also on the agency theory and the theory of wealth maximization.

Multiple international theoretical propositions argue how different variables can contribute to the survival of SMEs. Fam et al.'s work in 2018 cites Storey's 1994 theory of influences of growth, proposing that SME success is determined by three groups of growth determinants namely firm, entrepreneur, and strategy. Moreso, the Annual Report on European SMEs specifies ten principles, arguing the importance of entrepreneurship, internationalization, and responsive administration, among seven others, in fostering SME development in the European Union (Devnani, Gagliardi, Julius, Marzocchi, & Muller, 2016). Along with several internationally published works, these propositions that argue for various SME survival factors are essential starting points for this study.

Furthermore, several theoretical propositions in the Philippines also argue for numerous variables that may have a significant effect on the survival of SMEs. The Department of Trade and Industry in its Guide to the Magna Carta for Micro Small and Medium Enterprises (n.d.) cited nine specific directives, including access to funds, promotion of linkages, and intensified skills development, that arguably contribute to SME survival. Corollary to this, the Philippine SME Development Strategy similarly proposed that improving SMEs' access to finance, promoting domestic industry linkages, and narrowing concentration on identified priority industries can allow SMEs to survive better (Habito, Josef, & Tamangan, 2004). During the start of the Duterte Administration, the National Economic and Development Authority (NEDA) in its Davao Regional Development Investment Program for 2017 to 2022 (2017) also highlights the continuing commitment to the government in improving access to finance and increasing productivity and global competitiveness for SMEs. These locally contextualized policy frameworks and research works also serve as the jumping point for this research.

This SME study is also grounded on the agency theory. The Institute of Chartered Accountants (2005) explains that the agency theory proposes that managers act as the agents of businesses and, thus, are accountable to its business success or failure. Managers are burdened to go beyond their personal biases and act in the best interest of the SME since they are

viewed as extensions of the value-systems of the owners they represent. Realistically, business owners and their appointed managers have varying and often conflicting interests, beliefs, and priorities. However, this risk of goal incongruence is often lowered because most SME owners also perform managerial functions. This aggregation of functions uniquely found in SMEs means that the primordial burden of ensuring business success is still vested to SME owners who most often serve as the managers of their own businesses. This application of agency theory to SMEs will be considered heavily in this study especially given the influence that SME owner-managers have over their businesses.

Finally, this SME study is also grounded on the theory of wealth maximization. Brigham and Houston (2012) propose that the task of top management is the maximization of wealth through taking full advantage of limited resources to generate long-term and sustained profits. Wilkinson (2005) also notes that profit maximization is the most common objective of businesses, including SMEs, since SMEs also have scarce economic resources that are difficult to find and replace. This theory is important because the evaluation of SME survival is rooted on the concept of maximizing wealth. Thus, this theory becomes an important cornerstone for this SME study.

Review of Related Literature

SMEs are the bedrock of the Philippine economy. It has been fueling socio-economic development in rural and urban areas across the nation. The Philippine Statistics Authority reported in 2014 that more than 99% of registered enterprises were non-large, contributing more than 60% and 20% to employment and exports, respectively (Raneses, 2016).

In fact, several researchers have argued that despite the size of SMEs, these organizations produce more jobs than larger business enterprises (Shangase & Chinyamurindi, 2018; Raneses, 2016). This highlights the voluminous business transactions that involve and revolve around SMEs. This also highlights that a significant portion of the taxes and other revenue generation activities of the government come from the pockets of SMEs.

But like any business organization, SMEs face the risk of bankruptcy on a day-to-day basis. In 2002 alone, the number of enterprises dropped from 820,960 to 809,271, more than 90% of which are micro small and medium enterprises (Habito et al., 2004). This alarming drop goes to show the vulnerable SMEs are to business failure. Such bankruptcy risk remains as pervasive and as relevant as ever, despite the exhaustive efforts of SME owners to employ various survival techniques like adapting low-cost pricing models, as well as investing in print, radio, and social media advertising. SMEs have been historical victims of several systematic problems arising from adverse market conditions, predatory business practices, and politicking. The COVID-19 pandemic only worsened this risk of bankruptcy, driving many SME owners to the point of permanent closure.

Much is also needed in the academic study on the survival of SMEs. although developments in research have sparked a few to incorporate non-financial measures of success in measuring the survivability of SMEs, Fam et al. (2018) notes that existing literature on short-term survival and success of SMEs are largely restricted to studies that define success in financial measures.

What is needed most in volatile times like these are studies that incorporate both financial and non-financial measures in measuring SME performance. After all, business organizations do not only exist in financial figures but are largely composed of individuals who work, interact, and ultimately decide for or against the interests of SMEs. Understanding SME survival must be comprehensive and all-encompassing especially in a time where several industries are rapidly

saturating, market competition is peaking, and externalities like intercontinental conflicts, political maneuvering, and global pandemics exacerbate the risk of SME bankruptcy.

Existing local, national, and international literature identifies a multitude of internal and external factors that affect the survival of SMEs. Loan (2018) explains that internal factors are inside-effecting factors that directly affect business performance. This means that these internal factors are largely controllable, either by the manager or the business owner. Common to several of the reviewed literature on internal factors highlighted capital resource and financial management as influential to the success of SMEs.

Au contraire, external factors are largely non-controllable by business owners and are influenced by greater market-economic and socio-political forces. The economic environment within which SMEs operates and market demand were repeatedly identified as crucial external factors that affect the survival of SMEs. The 2018 study of Loan explicitly argues that external factors affect the success of SMEs more than that of internal factors.

First among the commonly cited factors of SME survival is capital resource or the ability of SMEs to gain direct or immediate access to economic resources. In fact, access to financing is a pressing issue for most SMEs (Raneses, 2016; Arshad, Zain, Arshad, & Kamil, 2017; Devnani et al., 2016; Sallem, Nasir, Nori, & Kassim, 2017). This is because the insufficiency of financial resources impairs the short-term financial flexibility and long-term growth potential of SMEs. In the Philippines, financial difficulties rank second in the internal difficulties faced by SMEs according to the presentation of Raneses (2016). Even in European states like Cyprus and Greece, access to finance is marked as a major issue, with over a quarter of SMEs reporting this as the most pressing issue (Devnani et al., 2016). This simply means that most business owners of SMEs do not have pools of economic resources to invest into their businesses.

Financial management is second on the list of commonly cited factors. Financial management practices have been correlated to the survival of SMEs (Arshad et al., 2017, Krištofik, Lament, Musa, & Wolak-Tuzimek, 2015; Muller et al., 2016). This is because the management of financial data, ratios, and trends are essential in the prevention and mitigation of business risks that SMEs face. Khoufi and Zammel's 2018 study correlated liquidity ratios such as current and cash ratios to SME bankruptcies (see also Krištofik et al., 2015). Similarly, Sainis, Haritos, Kriemadis, and Fowler (2017) correlated survivability of SMEs to profitability ratios such as the return on assets (see also Khoufi & Zammel, 2018; Krištofik et al., 2015). What these studies have in common is the utilization of financial data to develop effective business solutions that improve the viability and mitigate the vulnerability of businesses.

Market demand is the third commonly cited factor of SME survival. Muller et al. (2016) argued that demand deficiency is one of the reasons why enterprises end up in bankruptcy. This is because when the demand for products and services would decrease, the generated profits also effectively decrease. Even for developed economies, finding and retaining customers remain as a significant issue for SMEs and other business organizations. Devnani et al. (2016) presented that the European Union reported greater difficulties in finding customers in 2015 relative to that of 2013 and 2014. SMEs have been developing and implementing multiple survival techniques to capture their target market and grow their market share, but it remains inevitable that demand fluctuates based on the needs and wants, as well as the level of disposable income available to consumers.

Finally, various studies that have been reviewed thoroughly discussed how macro-economic environment affects SMEs. Muller et al. (2016, p.4) noted that adverse market conditions may lead to closure of enterprises. Loan (2018) also reasoned that the market size, the

physical distance between suppliers and buyers, and government support affect SME survival. Krištofik et al. (2015) further discussed that inflation as well as fiscal, monetary, and even exchange rate policies affect SMEs performance in their respective industries. These citations echo the reality that the market forces within varying macro-economic environments affect how firms and industries adjust to geopolitical conflicts, respond to trends in consumer behavior, and the maneuver through the ever-changing regulatory landscape governing the SME sector.

Synthesizing the preceding paragraphs, SMEs are the primary building blocks of any economy around the world. A variety of internal and external factors affects its survivability, viability, and sustainability. In an age of global competition and exacerbated volatility due to externalities like geopolitical conflict and pandemics, studying how SME survival has never been more important.

RESEARCH OBJECTIVES

The study seeks to develop constructs of survival of SMEs. Specifically, this study seeks to:

1. Identify factors on the survival of SMEs; and
2. Develop a framework based on the identified dimensions.

CONCEPTUAL FRAMEWORK

Presented on the right is the conceptual framework for this study. SME survival is the observable variable to be studied. The ovals, labeled Factor 1 to Factor N, represent the unobservable latent factors that significantly influence the survival of SMEs. The double-headed arc above the ovals represents correlations between the factors and the observable variable. The rectangles, labeled Item 1 to Item N, represent observed item statements that successfully load into the factors of SME survival. Finally, the arrows connecting the ovals and the rectangles represent the factor loadings between the unobservable factors and the item statements.

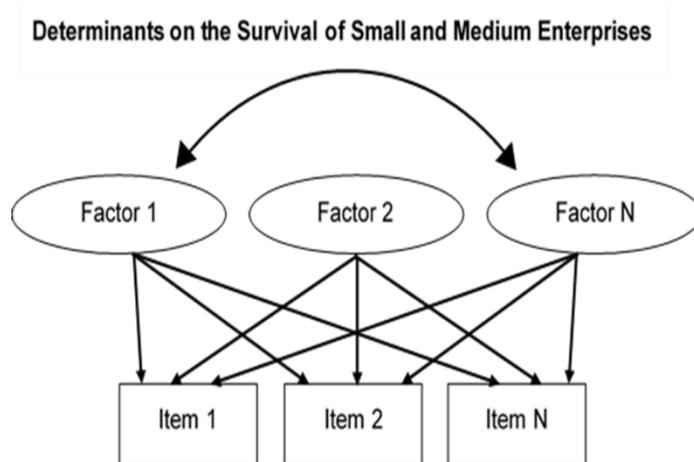


Figure 1 – Conceptual Framework

SIGNIFICANCE OF THE STUDY

The study has an enormous local and global significance, benefiting various stakeholders involved in the SME sector, and improving the existing body of literature. This research contributes valuable information to SME owners that can be sufficiently used to improve day-to-day operations and improve decision-making. Furthermore, government agencies can use the results of this study in improving currently existing policies as well as crafting a better regulatory framework for SMEs. Finally, this study contributes valuable information to current and future researchers. Currently, there is a big research gap because there is hardly any comprehensive, statistically-advance, and contextualized research on SME survival not only in the Philippines but across the world.

RESEARCH METHOD

RESEARCH DESIGN AND INSTRUMENT

The study adapted a descriptive, quantitative, non-experimental design using Exploratory Factor Analysis (EFA). A self-developed survey questionnaire was utilized, consolidating 120 variables argued to have influence on SME survival. These variables were adapted from existing literature that have been locally, nationally, or internationally published. The instrument also underwent two separate validation tests to verify the reliability and internal consistency of the instrument. First, a panel of four independent industry experts qualitatively reviewed the instrument. Second, the questionnaire was quantitatively validated using Cronbach's Alpha. The pilot testing was also conducted in the research locale and utilized purposive sampling. Statistical analysis show that the Cronbach's Alpha is 97.5%, indicating that the instrument is reliable and internally consistent.

RESEARCH LOCALE, POPULATION, AND SAMPLE SIZE

The study was conducted in the City of Mati in the Province of Davao Oriental in Region XI. The respondents of this study were business owners of SMEs registered with the Business Permits and Licensing Office of the City of Mati LGU whose total capitalization is above P3,000,000 but not more than P350,000,000. At the time of the conduct of the study, there were 203 SMEs registered. To ensure sampling adequacy, there must be at least 100 participants in the final data gathering. Out of 203 SMEs, 102 participated in the final data gathering on top of the 30 respondents who participated in the pilot testing. 51 respondents refused to participate in the study or withdrew their participation during the conduct of the survey.

SAMPLING PROCEDURES AND ETHICAL CONSIDERATIONS

Prior to the conduct of the study, the consent of LGU Mati to conduct the study was acquired first. A signed Informed Consent Form (ICF) is also secured from each SME. Prior to signing consent letters, the respondents were fully informed of the purpose of this study and only when consent was obtained was the instrument administered. Participation is voluntary and refusal to participate involved no penalty. The right to withdraw at any time without penalty was also given. SME owners were not required to place their names for the purpose of anonymity and all data were processed anonymously to preserve privacy and confidentiality. The survey was also conducted in a safe and conducive environment to avoid physical, socio-economic, and psychological risks. No deceit, fabrication, nor falsification in any document was permitted during the conduct of the study. Randomized sampling technique was adapted during the conduct of the study.

RESULTS AND DISCUSSION

Cluster Analysis reveals that the variables considered for this study fall under two clusters with the second cluster having two sub-clusters. EFA reveals that there are six factors of SME survival with only 32 loading variables. Summarized below are the clusters, factors, and loading variables.

Table 1*Summary of Clusters, Sub-Clusters, Factors, and Item Statements*

CLUSTER 1 Business Intelligence of Owners	FACTOR 1 Owner's Predisposition to Operating Businesses	Ethnic background of the owner/s			
		Customer service			
		Ratio of the assets that can be used/sold within one year to liabilities that would be paid within one year			
		Reliance of employees to manager/s			
		Commitment of successor/s to the business			
	FACTOR 2 Owner's Consciousness of Internal and External Bottlenecks	Level of consumption of households/families			
		Owner's awareness of the weaknesses of the business			
		FACTOR 3 Market Positioning of the Business	Market conditions		
			Establishment and maintenance of competitive advantages		
			Selling goods and/or rendering services on credit		
Ratio of total debt to the total assets					
Successor/s of owner/s are technically skilled					
Inventory management practices					
Owner/s value and practice the division of responsibilities					
FACTOR 4 Suitability of Owner's Leadership Style	Owner's awareness of the strengths of the business				
	Leadership style of the owner/s				
	Proper record keeping of the business for internal purposes				
	Number of competitors in the industry				
FACTOR 5 Cost Efficiency	Accounting knowledge of the owner/s				
	Cost of labor or production				
	Successor/s of the business are introduced early to the business				
	Customer loyalty				
	Planning skills of manager/s				
	Innovation in the business				
Level of economic activity					
CLUSTER 2 Responsiveness of Managerial Practices	SUB-CLUSTER 2.1 Competitive Leadership Practices	FACTOR 3 Market Positioning of the Business			
			FACTOR 4 Suitability of Owner's Leadership Style		
				FACTOR 5 Cost Efficiency	
			SUB-CLUSTER 2.2 Value Chain Management		FACTOR 5 Cost Efficiency
				FACTOR 3 Market Positioning of the Business	

			Owner periodically harvest profits from the business
			Employee performance evaluation
		FACTOR 6 Operational Effectiveness	Paying employees based on industry standards
			Openness of owner/s to change
			Ratio of sales/revenues to the total assets
			Skills of employees
			Availability of natural resources related to the business

To measure the sampling adequacy and the appropriateness of the dataset for factor analysis, the Kaiser-Meyer-Olkin (KMO) index and the Bartlett's Test on Sphericity were analyzed per cluster.

Since the KMO Index for all clusters is above the 0.60 minimum acceptable value, analysis reveals that the sample size is adequate and meritorious. Moreover, since the significance level for all clusters is less than 0.05, analysis reveals that the dataset used in this SME study is appropriate for factor analysis. Summarized below are the KMO Index and Bartlett's Test of Sphericity results. Taken altogether, the acceptable values above validate the results and findings of this SME study.

Table 2

Summary of KMO Index and Bartlett's Test of Sphericity Results Per Cluster

Cluster	KMO Index	Bartlett's Test of Sphericity		
		Chi-Square	Degree of Freedom	Significance
Cluster 1	0.847	381.963	28	Less than 0.05
Cluster 2.1	0.889	659.76	66	Less than 0.05
Cluster 2.2	0.91	1,253.556	91	Less than 0.05

CONCLUSIONS AND RECOMMENDATIONS

This study reveals that six determinants significantly impact the survivability of SMEs. The conceptual framework to the right summarizes these six factors that minimize the risk of SME bankruptcy.

Owner's business intelligence and value chain management are identified as vital aspects to SME management that should be monitored. The study also reveals that competitive leadership practices and the responsiveness of managerial practices are critical elements of the value chain that should be improved. The six factors have a significant effect on the aspects and elements discussed above.

Notably, access to financing as well as government support and regulation are not factors of survival for SMEs. This is an important discovery because several government agencies and entrepreneurs assume these to be essential for survival.

Relative to these discussions, the researcher first recommends that SME owners must wisely spend their existing scarce resources to move towards the identified determinants to improve their chance of recovering from the pandemic and surviving especially in highly competitive economies.

It is recommended further that the direction of SME policy making should no longer just focus on enabling access to finance and enhancing government support systems. It should focus more on capacity building for SME owners, managers, and employees.

Finally, it is highly recommended that this study should be contextualized in other localities to confirm if the same results are generated. Industry distribution and saturation of SMEs, evaluation of COVID-recovery plans, and other related studies should also be conducted to gain a rounder understanding of SMEs from creation down to identifying paths toward sustainable growth.



Figure 1 – New Conceptual Framework

ABOUT THE RESEARCHER

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EDUCATION

The researcher finished his Bachelor of Science in Accountancy degree with a Minor in Philosophy at Ateneo de Davao University on the April spring of 2017. He consistently served as a university scholar until his graduation and had been part of the Dean's List for four academic years. He was an accomplished public speaker and adjudicator under Ateneo Debate Varsity. He was also an exchange scholar who represented the Philippines during the 10th Philippine Youth Leadership Program at Northern Illinois University, United States of America.

He is completing his Master of Science in Accountancy degree at the University of Mindanao Professional Schools. Shortly after his Final Thesis Defense, he represented the during the Virtual Student Research Forum, an international research forum on cultivating resilience and innovation in business and education which was co-hosted by Universiti Teknologi Malaysia.

WORKING EXPERIENCE

The researcher is a licensed Certified Public Accountant who passed the professional examination on the October autumn of 2017. He formerly served as the Department Head of the Bachelor of Science in Accountancy Program of the Philippine College of Technology, Inc.

With almost five years of professional experience, he currently serves as the Corporate Planning Division Chief of Davao Oriental Electric Cooperative, Inc. A young entrepreneur himself, he is also the Founder and CEO of TPD Management Consultancy Services.

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Table 3*Rotated Component Matrix for Cluster 1 - Business Intelligence of Owners*

Item Number and Variable	Component	
	1	2
11 Level of consumption of households/families		0.883
12 Owner's awareness of the weaknesses of the business		0.878
18 Ethnic background of the owner/s	0.804	
19 Customer service	0.737	
20 Current ratio	0.782	
22 Reliance of employees to manager/s	0.699	
23 Commitment of successor/s to the business	0.729	

Table 4*Rotated Component Matrix for Cluster 2.1 - Competitive Leadership Practices*

Item Number and Variable	Component	
	1	2
40 Owner's awareness of the strengths of the business		0.653
42 Leadership style of the owner/s		0.625
45 Number of competitors in the industry		0.85
46 Proper record keeping of the business for internal purposes		0.844
52 Market conditions	0.676	
55 Establishment and maintenance of competitive advantages	0.791	
56 Selling goods and/or rendering services on credit	0.72	
62 Ratio of total debt to the total assets	0.733	
87 Successor/s of owner/s are technically skilled	0.719	
97 Inventory management practices	0.693	
99 Owner/s value and practice the division of responsibilities	0.687	

Table 5*Rotated Component Matrix for Cluster 2.2 - Value Chain Management*

Item Number and Variable		Component	
		1	2
70	Paying employees based on industry standards		0.734
71	Openness of owner/s to change		0.785
73	Skills of employees		0.737
74	Ratio of sales/revenues to the total assets		0.818
75	Availability of natural resources related to the business		0.801
78	Accounting knowledge of the owner/s	0.663	
79	Cost of labor or production	0.608	
93	Successor/s are introduced early to the business	0.881	
94	Customer loyalty	0.803	
95	Planning skills of manager/s	0.831	
96	Innovation in the business	0.649	
98	Level of economic activity	0.735	
111	Owner periodically harvests profits from the business	0.713	
113	Employee performance evaluation	0.772	

Influence of Business Restrictions on the Survivability of Business Establishments

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Abstract – Entrepreneurship plays an important role to the growth of a specific economy and their survivability in functioning to the community influences the economy as this was affected by the restrictions imposed by the authority. This study intends to determine the influence of business restrictions on the survivability of business establishments in Pantukan, Davao de Oro by evaluating the level of business restrictions in terms of firm entry and labor market regulations, trade regulations and cost, regulations on courts, credit markets, bankruptcy laws and investor protection, tax regulations and business regulatory environment; and the level of survivability of business establishments particularly in characteristics of an entrepreneur, business performance, business strategy and economic conditions. It also aims to determine the significant relationship between business restrictions and survivability of business establishments. Also, which domains of business restrictions influence the survivability of business establishment. A Quantitative and Nonexperimental research design is used, with a correlation technique through adapted survey questionnaires where 100 business owners responded in the study. Results were tested at a 0.05 level of significance, whereas business regulatory environment has the highest level (4.13 mean and 0.884 standard deviations). Business Strategy is very much observed (4.30 mean and 0.699 standard deviations) in business owners. Using Pearson-r, significant value ($p = 0.000$), confirming that the business restrictions were significantly associated with the levels of survivability of business establishments. Moreover, through multiple regression analysis, 54% variance with a corresponding F-ratio = 21.828 and $p = 0.000$ revealed that business restrictions has significant influence on survivability of business establishments. Specifically, Firm entry and labor market regulations (Beta = 0.203, $t = 2.056$, $p = 0.043$), and Business regulatory environments (Beta = 0.607, $t = 6.761$, $p = 0.000$) are correlated to the business restrictions of business establishments. Every business establishments aim to longer the span of their business. Thus, having an effective tactics in operating the business can be of advantage to every business owner.

Keywords: *Business restrictions, survivability, business owners*

Rationale

Business establishments is one of the driving forces in the progress of economy and survivability affects the influence of the economy, a crucial problem of survivability is the Critical Success Factors level, a collection of factors that enable a company to gain a competitive advantage which includes characteristics of an entrepreneur, business performance, business strategy and economic conditions. Determining the survivability of business is very much important because it allows the discovery of threats and weaknesses and strengthens the strength and opportunities of the organization closures (Graham Harrison, 2020).

As business's economic power has developed over this last century, so has the increased number of legislations governing every aspect of its operations. These laws typically cover four areas: firm entry and labor market regulations, trade regulations on costs, court and credit market regulations, bankruptcy laws and investor protection, tax regulations, and the business regulatory environment. Institution of business and finance, as well as employees, interest groups, general public and customers can all benefit from business regulations. (Rubinstein, 2020).

In Region XI, survivability is nearly one of the goals of business establishment next to profit maximization where they formulated their strategies and tactics to compel with the long existence of the business. Where it also results to higher cost and sometimes by taking a single wrong step, it causes the business to close down and the ability of an entity to continue on the market that still exists during observation, which is similar to the lack of its liquidation and unfettered market activity, is known as survival of a corporation. Consequently, the present study conducted by researchers shall make a contribution and generate new ideas and knowledge on influence of business restrictions in relation to survivability of business establishments. As a result, there is a need to perform this study in order to create awareness among the study's intended beneficiaries and maybe establish plans and tactics for the sake of business development and survival.

Research Objectives

The study aims to assess the influence of business restrictions on the survivability of business establishments in Pantukan, Davao de Oro. Specifically, this endeavors to achieve the following objectives:

1. To assess the extent of business restrictions in terms of:
 - 1.1 Firm entry and labor market regulations⁷;
 - 1.2 Trade regulations and cost;
 - 1.3 Regulations on courts, credit markets, bankruptcy laws and investor protection;
 - 1.4 Tax regulations⁷; and
 - 1.5 Business regulatory environment.
2. To evaluate the survivability of business establishments in terms of:
 - 2.1 Characteristics of an entrepreneur;
 - 2.2 Business Performance;
 - 2.3 Business Strategy; and
 - 2.4 Economic Conditions.
3. To find out the significant influence between business restrictions and survivability of business establishments.

4. To determine which indicator of the business restrictions has significant influence on the survivability of business establishments. Page 157

Hypothesis

The study's hypothesis was evaluated with level of significance at 0.05, indicating that there is no significant influence between business restrictions and survivability of business establishments, and there is no domain in business restrictions that significantly influences the survivability of business establishments.

METHOD

This chapter covers the research design, research location, population and sample, research instrument, data collection, and statistical methods.

Research Design

This study used a correlational technique and a quantitative non-experimental research design. When there is no modification of an independent variable, participants are randomly assigned to conditions or ordering of conditions, or both qualities are relevant to experimental designs, this method is used. Correlation research involves collecting data to see if there is a relationship between two or more quantifiable factors and the degree of the relationship of two variables (Bernauer, 2013).

Both project monitoring and project evaluation data are collected using quantitative data gathering tools. Survey questionnaires were used to collect data for this project. A survey questionnaire is a type of research instrument that consists of a series of questions or other prompts aimed at gathering information from a respondent. In a typical research questionnaire, closed-ended and open-ended items are mixed together. Long-form, open-ended questions allow the respondent to expand on their thoughts (O'Dwyer 2013).

Research Locale

This study's findings are specific to the context of commercial enterprises in Pantukan, Davao De Oro. Pantukan, officially the municipality of Pantukan, a first-class municipality in the province of Davao, de Oro.

Population and Sample

The respondents of this study are the business owners from Pantukan, Davao de Oro, Philippines. Having a population of 90, 786 people determined in the last census of 2020 which is 11.83% of the total population of Davao de Oro province and 1.73% of overall Davao region population. Moreover, 100 of the total population are business owners. Using Slovin's formula to identify the desired degree of accuracy of the sample size of the respondents, it is calculated as n (sample size) = N (population) / $1 + Ne^2$ (margins of error at 0.05 squared) to have a result of one hundred (100) and one hundred (100) of them will be the respondents of this study. Sampling is the sampling technique utilized.

Research Instrument

The instruments that the researchers used in this study are standardized survey of Clark (2007) for the independent variable and Australian Human Rights Commission (2004) for dependent variable but modified questionnaire to suit the context of the study. The first set of

questionnaire deals with the business restrictions with five (5) indicators; firms' entry and labor market regulations, trade regulations and cost, regulations on courts, credit markets, bankruptcy laws and investor protection, tax regulations and business regulatory environment. Page 158

Data Collection

After the approval of the Panel the researchers had undergone the following steps and procedures in gathering data for the study. The researchers asked permission from different business owners to conduct study on their business establishments in Pantukan, Davao De Oro. Upon the approval, the letter of endorsement was sought to accommodate the researcher to administer the online survey questionnaire and printed copy of it to the respondents of the study. Consequently, the researcher had sent the online survey questionnaire link and the printed copies to the respondents. The researchers have utilized printed copy aside from its online survey questionnaire to address those business establishments that cannot communicate online.

Likewise, the researcher asked for approval from establishment owners in Pantukan Davao de Oro in distributing the online survey questionnaire and printed copy to them or their respective representatives. Furthermore, the researcher retrieved the survey questionnaire after the questionnaires have been answered. Finally, the researchers tallied and tabulated all the data gathered from the respondents, subject to statistical analysis. The statistical tools were analyzed and interpreted. With the data, conclusions are withdrawn and recommendations were formulated according to the findings of the study.

Statistical Tools

The statistical tools that were used for data analysis and interpretations are the following:

Mean. The statistical tool was used to determine the influence of Business Restrictions on the Survivability of Business Establishments in Pantukan, Davao De Oro.

Pearson (r). This statistical approach was utilized to figure out how much of an influence there was of Business Restrictions on the Survivability of Business Establishments in Pantukan, Davao De Oro.

Multiple Regression Analysis. This statistical approach was utilized to figure out how much of an influence there was of Business Restrictions on the Survivability of Business Establishments in Pantukan, Davao De Oro.

RESULTS AND DISCUSSION

This section presents the core findings of the study. Findings are presented in both textual and tabular form relating to the research objectives and questions raised and presented according to the statistical tools mentioned in the method section.

RO1: Level of Business Restrictions of Business Establishments

Shown in Table 1 below, the level of *Business Restrictions* of business establishments is measure by the weighted mean with the indicators: *Firm entry and labor regulations, Trade regulations and cost, Regulations on Courts, Credit Markets, Bankruptcy Laws and Investor protection, Tax Regulations and Business Regulatory Environment.* The level of business

restrictions is high with an overall mean of 3.99 and a standard deviation of 0.803, which means that the business restrictions is much evident.

Among the indicators, *Business Regulatory Environment* got the highest mean for the business owner which is 4.13 with a standard deviation of 0.884 which determined the level as high and is much evident. *Tax Regulations*, with obtained mean of 4.04 and a standard deviation of 1.046, was determined also as high and much evident, *Regulations on Courts, Credit Markets, Bankruptcy Laws and Investor Protection*, with obtained mean of 3.99 and a standard deviation of 0.901, was determined also as high and much evident, *Firm Entry and Labor Market Regulations*, with obtained mean of 3.90 and a standard deviation of 0.979, was determined also as high and much evident. Lastly, *Trade regulations and cost* with obtained mean of 3.86 and a standard deviation of 0.920 determined as high and is much evident.

The main business restriction that was mainly observed in Pantukan, Davao de Oro is *Business regulatory environment*, being an indicator with highest mean, whose main objective is for the improvement of economic growth, higher productivity and innovation. This has resulted for every business to follow guidelines and principles that has implemented by national authorities when it comes to the standardization and high-quality output of the product. Moreover, this would result to more standardized business operations as it adheres to the regulation in the environment where it is located and of course creating a unified business environment as it aligns to the business regulations that would finally result in displaying standard business operations and strong survivability potential.

Consequently, when it comes to *Tax regulations*, the respondents display high response on the rules and regulations that stipulate how, when, and how much must be paid in *taxes* to local, state, and federal authorities. Tax regulations encourage the businesses to pay taxes on production, people, property and environmental impact, as well as in its income. A well-crafted tax system investment and growth contributes to the sustainability of the economy. On the contrary, tax regulation may affect production and growth in businesses as it affects the business costs that will be incurred. Thus, it might impede the survivability of business especially those that are not yet stable in the market.

Table 1. Level of business restrictions

Indicators	Mean	SD	Descriptive Level
Firm entry and labor market regulations	3.90	0.979	High
Trade regulations and cost	3.86	0.920	High
Regulations on courts, credit markets, bankruptcy laws and investor protection	3.99	0.901	High
Tax regulations	4.04	1.046	High

Business regulatory environment	4.13	0.884	High	Page 160
Overall	3.99	0.803	High	

This is followed by *Regulations on courts, credit markets, bankruptcy laws and investor protection* which particularly refer to the laws that protect the financial and non-financial aspect of the business firms, as an indicator obtained the third highest mean score. The respondents display emphasis on the restriction that relates to leveraging, liquidity, fixed asset intensity, firm size, and firm value as well as the managerial ownership, government access of a business that affects the survivability of the business establishments. This restriction will be an additional business cost to be incurred as non-compliance to these may influence the survivability of the business establishments.

The fourth highest mean score is the *Firms entry and labors market regulations* which refer to high-profile area of public policy. Such business restriction if flexible, help keep costs down for firms, it majorly influences the location decisions for businesses. It should be set up in such a way that decentralized and individualized pay setting and transferrable job tenure rights make it easier for potentially high-growth businesses to expand. Such commercial restrictions, on the other hand, result in a large government bureaucracy that stifles progress. It has the potential to generate massive monopolies, resulting in higher prices for consumers, as well as to suffocate innovation through excessive regulation.

Gradually, this is followed by *Trade regulations and costs* being the business restriction with the least mean score. The respondents display minimal emphasis on the costs arising from transport, logistics and regulations in terms of affecting the survivability of business establishments. Such business restriction preserves jobs, ensures national security, ensure citizen's health, and contribute to the government through tariffs and other payments. On the contrary, it will also raise the prices of goods, reduce economic efficiency, reduce transfer rate of goods from one place to another, reduce consumption choice, and produce non-efficient use of resources.

RO2: Level of Survivability of Business Establishments

The level of Survivability of Business Establishments in the shoreline areas of Pantukan, Davao de Oro is indicated in the table below, with an overall mean of 4.20 and a standard deviation of 0.629 determined a high-level descriptive equivalent.

The indicator of survivability of business establishments which is *Business Strategy* got the highest mean of 4.30 and a standard deviation of 0.669 which determined the level as high and is much evident. Followed by *Characteristics of an Entrepreneur*, which obtained a mean of 4.20 and a standard deviation of 0.762, was determined also as high and much evident, *Economic Conditions*, which obtained a mean of 4.20 and a standard deviation of 0.752, was determined also as high and much evident and lastly the *Business Performance*, which obtained a mean of 4.20 and a standard deviation of 0.745, was determined also as high and much evident.

On the other hand, The main survivability of business establishment in Pantukan, Davao de Oro is *Business Strategy*, being the indicator with the highest mean, which the main goal is to make the business owner of an establishment to set actions and decisions of the company that would battle future problem that would occur and of course strengthen its sales in order to

achieve the principal objective of every establishment which is the profit maximization. Thus, the business strategy identifies the company's needs to do in order to achieve its goals which can serve as their map to follow steps in the operational activities of the company.

Followed by *Characteristics of an entrepreneur* with the second highest mean. It refers to the capability of a business man or the owner to work and achieve the firm's objective because they are continuously looking to the future and are focused on going forward. Entrepreneurs are very goal-oriented and have a clear understanding of what they desire. They set their objectives, and everything they do is directed at accomplishing those objectives. Having a clear vision can help you achieve your goals. The business institution can continue to operate due to the owner's positive attributes.

Third from the indicator with the highest mean is the *Economic condition*. It is the current state of society or country where the business establishment is located and doing its operations. As an economy goes through periods of expansion and contraction, these conditions vary over time with the economic and business cycles. When an economy is expanding, economic conditions are regarded sound or positive; when an economy is contracting, economic conditions are considered unfavorable or negative. Investors modify their views on economic growth and profitability based on economic statistics. Businesses, too, keep an eye on the economy to obtain insight into their own sales growth and profitability. As a result, the factor of survivability provides a positive viewpoint for enterprises to continue operating.

Table 2. Level of Survivability of Business Establishments

Indicators	Mean	SD	Descriptive Level
Characteristics of an entrepreneur	4.20	0.762	High
Business Performance	4.20	0.745	High
Business Strategy	4.30	0.699	High
Economic Conditions	4.20	0.752	High
Overall	4.20	0.629	High

Lastly, is the *Business performance* with the least mean among the indicators of the level of survivability of business establishments, it refers to relevant business metrics that display a measurable value and shows the progress of the business goals. The ability of a business to adopt optimal organization with the goal of producing a product or service that satisfies the expectations of consumers and customers determines business performance, which is strongly linked to commercial effectiveness. You may improve client visibility, establish a more effective sales pipeline, and promote organizational collaboration through enhancing company performance. As a result, it makes a significant contribution to the business contingency.

RO3: Level of Significant Relationship between Business Restrictions and Survivability of Business Establishments

The purpose of this study is to determine the significant relationship between significant relationship between financial literacy and money management. The study utilizes Pearson product-Moment Correlation (Pearson-r) to determine the correlation between two variables shown in the table below. The results show the computed r-value of 0.629 is significant, which implied that there is a significant relationship between business restrictions and survivability of business establishments. This is due to the results of the p-value of 0.000 which is lower than the 0.05 level of significance, confirming that the business restriction was significantly associated with the levels of survivability of business establishments. Thus, the null hypothesis which states that there is no significant relationship between business restrictions and survivability of business establishments is rejected.

The study revealed that there is really a significant relationship between business restrictions and survivability of business establishments in the shoreline area of Pantukan, Davao de Oro. This implies that business restrictions influences survivability of business establishments based on the data collected by the researchers from the respondents. This result adheres to the theory of Caliendo et al. (2010) where he stated that an entrepreneur's traits, company performance, business strategy, and economic conditions all have an impact on a firm's survival chances, influencing firm exits in different ways and causing a decline in the firm's competitiveness.

This also further means that there is influence between the two variables correlated. On the basis of researches done on the influence of business restrictions on survivability of business establishments, it has been evident that the business restrictions of an entity have an effect to the survivability of business establishments. Therefore, the result of the correlation exemplifies that when the business restrictions as observed by Pantukan, Davao de Oro business owners is the high, the survivability of business establishments is also observed to be high.

Table 3. Level of Significant Relationship between Business Restrictions and Survivability of Business Establishments

Variables	Mean	SD	R-value	P-value	Decision
Business Restrictions	3.97	0.768			
Survivability of Business Establishments	4.20	0.609	0.629	0.000	Ho is rejected

*Significant at 0.05 significance level.

RO4: Which Domains of Business Restrictions Significantly Influence Survivability of Business Establishments.

Data shown in the table are the regression coefficients to test the significant influence of the overall business restrictions and survivability of business establishments in Pantukan, Davao de Oro. Using the Multiple Regression Analysis, the data revealed that the influence of business restrictions towards survivability of business establishments in Pantukan, Davao de Oro has the F-value of 21.828 and corresponding p-value of 0.000.

This means that the business restrictions significantly influence survivability of business establishments since the probability value is less than 0.05. The R^2 value of 0.540 implies that 54% of the survivability of business establishments in Pantukan, Davao de Oro is influenced by the business restrictions in Pantukan, Davao de Oro while the remaining 46% were influenced by other factors.

The indicator *Firm entry and labor market regulations* has a beta of 0.203 and a corresponding p-value of 0.043 which means that *Firm entry and labor market regulations* has a significant influence on the *survivability of business establishments* in Pantukan, Davao de Oro business owners since the probability level is 0.043 which is less than the level of significance at 0.05. On the other hand, *Trade regulations and cost* has a beta of 0.003 and p-value of 0.973 which means that the *Trade regulations and cost* has no significant influence to the *survivability of business establishments* in Pantukan, Davao de Oro business owners since the probability level is 0.973 which is greater than the level of significance at 0.05.

Furthermore, *Regulations on courts, credit markets, bankruptcy laws and investor protection* has a beta of 0.08 and p-value of 0.555 which means that *Furthermore, Regulations on courts, credit markets, bankruptcy laws and investor protection* has no significant influence on the *survivability of business establishments* in Pantukan, Davao de Oro business owners since the probability is 0.555 which is greater than the level of significance at 0.05.

Also, *Tax regulations* has a beta of -0.068 and p-value of 0.578 which means that the *Tax regulations* has no significant influence on the *survivability of business establishments* in Pantukan, Davao de Oro business owners since the probability is 0.578 which is greater than the level of significance at 0.05.

Lastly, *Business regulatory environment* has a beta of 0.607 and p-value of 0.000 which means that the *Business regulatory environment* has significant influence on the *survivability of business establishments* in Pantukan, Davao de Oro business owners since the probability level is 0.000 which is less than the level of significance at 0.05. The overall result of the business restrictions significantly influences survivability of business establishments in Pantukan, Davao de Oro.

establishments in Pantukan, Davao de Oro is high for business strategy, high for characteristics of an entrepreneur, high for economic conditions and high for business performance and the overall mean of high for level of survivability of business establishments in Pantukan, Davao de Oro were positive.

There is a significant influence between business restrictions and survivability of business establishments in Pantukan, Davao de Oro. This is in line with the study of Rubenstein (2017).which emphasized that business restriction does affect the broad behavior of the company because most of the aspects or the operations done by the company are came from the regulation that they have followed set by authorities which can definitely leads to the survivability of business establishment whether in its short or long run.

RECOMMENDATION

In the light of foregoing findings and conclusion, the following recommendations are offered; business owners may always adhere to the restrictions imposed by authorities in order for them to improve the productivity of their product. Moreover, they may update the strategies and tactics and of course the performance of their company in order to catch up on the current market competition that leads to the longer span of the survivability of business establishments. Likewise, the business owners may also improve their characteristics and maintain their positive attitude as this can also give a big impact for the improvement of their business. Gradually, they may also give motivation to their workers or employees in order to have congruent result which is positive by giving bonuses or awards or any kinds of motivation. Nevertheless, it would be beneficial to the business if they continue their interest in the learning process and show good performance. At last, it may provide the future researcher a starting point on how to expand the coverage of their research in terms of the variables covered in the study.

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Remote Audit Standards Compliance and Audit Effectiveness of Local Auditing Firms

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Abstract – This study purports to identify the actual practices utilized by local auditing firms in the conduct of remote audits vis-à-vis promulgated remote audit standards. It also probes on their audit effectiveness thru analysis of identified gaps on audit standards compliance in order to explore relevant issues and constraints brought about by the sudden shift to a relatively new and unfamiliar audit modality. This study used the results of a previously unpublished research on selected local auditing firms subjected to re-analysis approach and corroborated by thorough documentary analysis and discipline-specific examination of gaps and audit effectiveness. This study found out that certain remote audit standards, regardless of their authoritative promulgation for global adoption, may or may not be fully utilized by local auditing firms in the actual conduct of remote audits due to significant constraints on cost, time, limited extent of operations, and circumstantial practicability. These imply that there exists a need for local auditing firms to find ways to improve their adoption and compliance to remote audit standards as well as alternative procedures or compensating strategies in order to maintain audit quality and audit effectiveness. Furthermore, there is also a need for authoritative bodies to review the applicability of promulgated remote audit standards and ensure that they are flexible and context-sensitive for purposes of universal application by auditing firms regardless of differences in size, extent of operations, or geographical boundaries.

Keywords: *Remote Audit, Standards Compliance, Audit Effectiveness, Gap Analysis, Auditing Firms*

INTRODUCTION

The global pandemic caused by the novel coronavirus disease (COVID-19) has resulted in not just a global public health crisis but also caused massive social, economic, and political disruptions to governments all over the world. As a result of this public health crisis, community quarantines and lockdowns were imposed, non-essential companies were forced to halt their operations, and travel bans were implemented on several countries. However, aside from business operations, the global professional services industry was also greatly affected by the impacts of the pandemic, with the accounting and auditing professions being no exception (ACCA, 2020). As the global pandemic pressed on in early 2020, Filipino auditors had to keep up with a lot of changes in the way they conduct audit engagements. As government enforced mandatory lockdowns to prevent the spread of the virus, employees were required to stay and work from home as much as possible. With the sudden shift to a remote work setup, a large bulk of the audit field work faced operational challenges. This meant that auditors will no longer be allowed to travel to the premises of their audit clients to conduct on-site engagements. This clearly meant that audit engagements had to be conducted remotely (ACCA, 2020). Because of the pandemic, auditors in the Philippines had to transition from the widely accustomed method of conventional on-site auditing to a dominantly remote or virtual audit setup.

The main purpose of this study is to identify the actual practices utilized by local auditing firms in the conduct of remote audits and ascertain whether they comply with promulgated remote audit standards. It also probes into the audit effectiveness of these identified practices by analyzing gaps in terms of audit standards compliance. The conduct of this study is significant because the sudden transition to an unfamiliar mode of performing audit engagements, especially among the smaller local auditing firms, gives rise to issues regarding audit quality and audit effectiveness. It also attempts to recommend actions for local auditing firms to improve the existing remote audit practices identified. This supports the notion that all audit practitioners, as stewards and vanguards of public trust, behoove upon themselves the duty to ensure that audit effectiveness is achieved even in the middle of a global pandemic.

Therefore, in cognizance of the above-mentioned research contexts, this study was conducted to achieve the following research objectives: (1) to determine the standard remote audit practices as promulgated by international and authoritative bodies; (2) to identify the actual remote audit practices of the local auditing firms during the time of the pandemic; (3) to identify the gaps between the actual and standard remote audit practices; and (4) to analyze the audit effectiveness of the actual remote audit practices (or non-practice).

Literature Review

Remote audits, simply put, are audit engagements performed virtually rather than on-site with a client. The primary difference between conventional audits and remote audits is the absence of in-person, face-to-face interactions which changed how some audit procedures like transaction walkthroughs, visual inspections, interviews, and substantiation of evidence are performed (Teeter, Alles, & Vasarhelyi, 2010). When performing engagements remotely, auditors leverage the use technology to carry out the audit work. These technology components usually include interactive and web-based video conferencing platforms, specialized software to securely share data, and remote access to the financial and operational systems of audit clients. Although the idea of remote audits is somewhat new, the shift to remote auditing is a natural professional engagement transition that was already occurring even before the pandemic (Shneyder, 2020). Many multinational firms in more developed countries have already explored and employed remote audits in the conduct of their audit engagements. These firms believe that remote or virtual audits represent the future direction of the assurance services industry. With the impact of technological modernization in the audit profession, the use of technology and remote auditing techniques is now considered as the leading alternative to the traditional face-to-face audit, proving beneficial for an engagement's continuity in crisis situations (Satya & Shauki, 2021). As countries slowly transition to the new normal, it can be argued that remote auditing would likely continue to be the future of external audit engagements due to its practical and efficient nature and the massive leverage brought about by technology. However, despite its deemed convenience and technological advancement, remote auditing also has its own share of significant risks, especially for countries who are just beginning to embrace the said engagement modality. Due to the highly remote setup of the engagement, audit procedures need to be modified leading to various challenges in executing the audit engagement (Murphy, 2020). Problems relating to meeting report preparation deadlines, difficulties in communication channels between auditors and clients, and insufficient or weak audit evidence in order to afford an audit opinion were also encountered (IFAC, 2020). Moreover, issues arising from remote audits have also raised regulatory concerns such as locational and logistical challenges, unreliable network connections, unavailability of audit clients due to poor internet connection or conflicts in schedules, and the lack of training and experience of

auditors in conducting remote audits (Shneyder, 2020). These enumerated issues collectively represent the experiences of auditors and audit firms who have already transitioned to remote auditing even before the pandemic.

In the Philippine setting, the practice of remote auditing is not yet as well-adopted and well-embraced since audit practices in the country still rely heavily on in-person work and on-site evidence gathering. The sudden transition to remote audit entailed a need for additional infrastructure and resources such as videoconferencing technology, staff training, security and privacy protocols, and the like. Despite the already growing popularity of remote audit as practiced by their international counterparts in various global regions, traditional on-site audit remains to be the more patronized audit modality by auditing firms in the Philippines. Most of the literature reviewed on remote audits (Satya & Shauki, 2021) focused on the experiences of auditing firms from other countries who have already been conducting (either partial or complete) remote audit work prior to the pandemic as part of their audit engagement modality. In Germany, researches were conducted that assessed the efficiency of remote audits as opposed to on-site audits (Eulerich, Wagner, & Wood, 2021), while in the United States, a similar study was also conducted but focused more on the impact of information technology on the quality of remote audit work (Bierstaker, Janvrin, & Lowe, 2008). There is, therefore, still a lack of empirical studies conducted on the status of remote audit work in the context of Philippine auditing firms, as well as their utilization of remote audit practices in the various phases of the audit engagement cycle. There is also a dearth of studies that probe into the compliance of Philippine auditing firms to remote audit standards promulgated by the International Federation of Accountants (IFAC) because these standards were formally promulgated only during the height of the global pandemic. Furthermore, a necessity also exists to shed light on the plight of local auditing firms, whose capitalization requirements and range of operations are relatively limited in terms of fully embracing the transition to the remote audit modality. Given the challenges brought forth by the pandemic situation and the sudden volatile shift to remote audit, leading Philippine audit firms have admittedly faced difficulties in the process of transitioning from conventional audits to remote audits due to the perceived unfamiliarity of the new methodologies to Filipino auditors. With this predicament, it can be intellectually surmised that if leading national firms undoubtedly struggled to transition to remote audit despite their substantially bigger capitalization and range of operations, smaller local audit firms could also face the same, if not worse, difficulties attributable to the sudden requirement to adapt to this new modality. There is, therefore, a need to delve deeper into the rudiments of remote auditing and explore its operational potential in the conduct of audit engagements in the Philippine audit profession especially among the local auditing sector in the country. Furthermore, as large auditing firms in the Philippines continue to grapple with the disruptive transition from on-site to remote audit albeit their extensive human resources, facilities, and logistical capacities, it can also be inferred that smaller auditing firms located and operating in the provinces are facing even more difficulties owing to their observably limited operational resource capacity. These were the research gaps that this study sought to address.

Research Framework

The foundation for the identification and evaluation of actual remote audit practices in this study comes from the application of the Gap-Discrepancy Theory by Charles Kepner and Benjamin Tregoe postulated in the 1960s. This theory describes a “gap” as a problem brought about by the discrepancy between actual conditions or *what is* and desired conditions or *what should be*. This study applies this theory through the premise that remote audit practices – regardless of their formal and

universal promulgation by authoritative bodies – may not always be applied in the actual conduct of audit engagements (discrepancy) due to certain constraints (gaps).

This study is also anchored on the universal auditing concept that compliance with engagement standards allows auditing firms to keep pace with the drastic changes in the auditing environment and be guided with what they need to do to address certain technical and practical issues. These principles-based and continuously applied standard audit practices as promulgated by authoritative and regulatory bodies such as the IFAC will not only preserve the effectiveness of audit engagements but also help audit professionals avoid non-compliance and negligence in the performance of their duties. Since the global pandemic has significantly affected the delivery of audit engagements during the transition to remote or virtual auditing, users of financial information demand greater transparency, giving additional pressure for auditing firms to ensure audit quality, audit effectiveness, and compliance to professional engagement standards. However, it is also worthwhile to note that the remote audit standards released were not entirely exhaustive. This means that non-practice of the standards does not necessarily mean that audit firms are ineffective in the conduct of remote audits. Audit firms may or may not have fully adopted these standards and may have practiced audit procedures differently from those that were prescribed due to factors, constraints, or circumstances unique to their audit firms and as a result of their professional judgment and expertise. Hence, gaps may be identified between these actual and standard remote audit practices. The practice (or non-practice) of these remote audit standards is most likely to produce benefits or risks which may improve or impair the audit effectiveness of the audit procedures utilized by auditors.

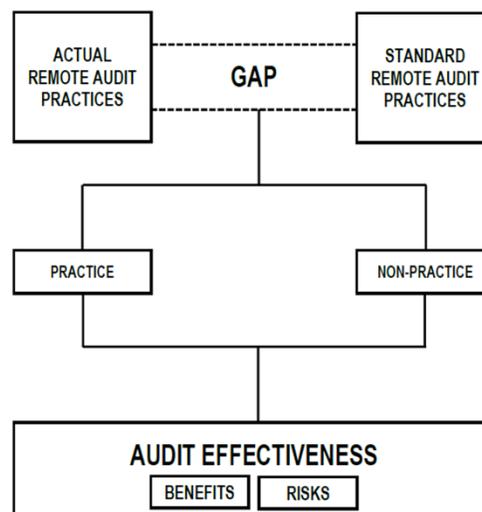


Figure 1
RESEARCH FRAMEWORK

RESEARCH METHODS

This study utilized four (4) distinct research methods which include: (1) documentary analysis; (2) re-analysis or secondary data analysis; (3) gap analysis of standards compliance; and (4) audit effectiveness analysis.

Documentary analysis is a form of qualitative research that uses a systematic procedure to analyze documentary evidence and answer specific research questions (Bowen, 2009; Sage Publications, 2018). Documentary analysis was conducted in order to obtain data about standard

remote audit practices promulgated by regulatory and authoritative bodies in the audit profession. The main research tool utilized for this method is a **documentary analysis guide** that lists the specific documents needed to facilitate the literature review aspect of this study. Only documents provided by authoritative sources (such as IFAC and its member audit entities) related to remote audits were obtained, inspected, analyzed, and consolidated to ensure the validity and reliability of the information to be obtained.

Re-analysis is the secondary analysis of either qualitative or quantitative data (or both) already collected in a previous study (also called as the original analysis), by a different researcher normally wishing to address a new research question (Dale et al, 1988; Hammersley, 1997). This means the use of data, collected in a previous study, for use in a second or new study. In simpler terms, this could also mean “*taking a second look at what could have been overlooked*” as well as “*taking a new and fresh look at old things*”. In conducting the re-analysis, this research made use of a previous unpublished research as its springboard. Throughout many empirical studies, there is a growing notion that the use of unpublished researches or “grey literature” is as important as those published in journal articles. Although it lacks the benefits of a peer review as well as the conduct of a thorough validation in some instances, these grey literature still provide a rich source of data that could strengthen key decisions in areas where they are most needed.

The secondary data re-analyzed by this study were the research results of a previous unpublished study that utilized the descriptive survey method and primarily examined the responses of local auditing firms in Legazpi City that were gathered with the intention of identifying the actual remote audit practices that were used in the conduct of remote audits. For purposes of research context, the original study focused on leading local auditing firms that rendered audit and assurance services to major business entities during the peak audit season from October 2020 to April 2021 which is a time period at the height of the global pandemic. Original respondents consisted of audit partners (owners) as well as audit associates and audit managers who were able to participate in a complete audit engagement during the said time period. Legazpi City was chosen as the research locale since it is considered as a fast-rising economic hub and the center of development and progress in the province of Albay owing to its massive infrastructure development, good corporate governance, and rapid business growth (Serrano, 2020). Furthermore, owing to the restrictions imposed by the government during the public health crisis, attempting to gather data from local auditing forms in other provinces and regions were deemed as generally unsafe and impractical. Therefore, the selected research locale proved to be purposively and conveniently prudent at the time of the conduct of the study in light of the surrounding circumstances. The original study, however, focused only on the identification of these actual remote audit practices and to some extent the factors that surround the context with which they are practiced. No attempt was made to further elaborate, analyze, or evaluate these identified practices in the original study. It is for this reason, therefore, that the re-analysis approach was utilized as a research method in the current study. The re-analysis focused on some aspects of the original study that may have been overlooked or under-analyzed by doing a “second look” or a “closer look” at the original research results and the accompanying secondary data.

In order to identify the discrepancies between the actual and prescribed remote audit practices, this study used a simple **gap analysis** approach which focused on standards compliance. In business and management research, gap analysis involves the comparison of actual performance with potential or desired performance. In this study, the identified differences (gaps) were obtained by comparing the actual remote audit practices of the local auditing firms with the prescribed remote audit standards promulgated by the IFAC. These highlighted differences or gaps were then summarized using a **gap**

analysis worksheet adapted from a template developed by Tom Wright (2019) and customized by the researcher to suit the premise of this study.

Furthermore, this study also utilized **audit effectiveness analysis** as a discipline-specific research method. **Audit effectiveness** refers to the degree with which one has achieved the audit objectives considering both the practice (or non-practice) of a standard audit approach. Used as a research method, it focuses on the accompanying benefits (advantages) and risks (disadvantages) of the identified audit practices (or non-practice) from the point of view of universally accepted principles governing sound and effective audit engagements. For purposes of analyzing audit effectiveness, this study used parameters and indicators obtained through literature reviews and consolidated from the audit engagement application guidelines practiced by leading international IFAC member audit firms. These parameters include five (5) significant audit aspects: (1) ensuring a high quality audit; (2) transparency audit committee activities; (3) relationships with the auditor; (4) appointment of the auditor; and (5) audit objectivity and independence. These audit aspects were collectively *taken as a whole* in analyzing audit effectiveness instead of using them as individual indicators in conducting the analysis.

RESULTS AND DISCUSSIONS

(1) Standard Remote Audit Practices

The IFAC provides that, despite the novelty of the situation at hand involving remote audits, compliance with the International Standards on Auditing (ISAs) must remain as an auditor's guiding principle. Auditors are also required to continue to embody such standards during the conduct of an audit, regardless of the constraints experienced by the profession due to the pandemic (IFAC, 2020). The IFAC, alongside various leading international auditing firms and other regulatory bodies, have developed a new set of audit standards and operational guidance in the conduct of remote audits (IFAC, 2020). These standards contained adjustments to the conduct of some key audit procedures to fit the needs of the audit profession despite the pandemic situation. These standards also resulted in the formulation of alternative procedures of obtaining sufficient and appropriate audit evidence to enable auditors to form an opinion. Thorough documentary analysis and literature review of official pronouncements promulgated by the IFAC on the conduct of remote audits revealed three significant remote audit focus areas: (1) **audit team management**; (2) **audit engagement management**; and (3) **audit client communications management**. Each of these focus areas (Table 1) also include specific parameters and indicators that are essential in terms of ensuring that financial transparency and adequate disclosure as hallmarks of the audit profession are achieved no matter how unprecedented the circumstances.

Table 1
STANDARD REMOTE AUDIT PRACTICES AS PRESCRIBED BY AUTHORITATIVE BODIES

REMOTE AUDIT FOCUS AREAS	PARAMETERS AND INDICATORS
AUDIT TEAM MANAGEMENT	<ol style="list-style-type: none"> 1. Risk Management 2. Entity Operations and Culture 3. Technology and Cybersecurity 4. Policies and Procedures 5. Engagement Team Communication
AUDIT ENGAGEMENT MANAGEMENT	<ol style="list-style-type: none"> 6. <p>AUDIT PLANNING</p> <ol style="list-style-type: none"> 1. New Ways of Working 2. Risk Identification and Internal Controls 3. Materiality 4. Ethics and Independence 5. People Wellness <p>AUDIT EXECUTION</p> <ol style="list-style-type: none"> 1. Audit Evidence 2. Inventory Observations 3. Documentation 4. Accounting Estimates 5. Engagement Quality Reviews <p>AUDIT REPORTING</p> <ol style="list-style-type: none"> 1. Going Concern Issues 2. Auditor Reports
AUDIT CLIENT COMMUNICATIONS MANAGEMENT	<ol style="list-style-type: none"> 1. Kickoff Meetings 2. Remote Interviews 3. Closing Meetings

Audit team management refers to a local audit firm's ability to administer, coordinate, and provide guidance to a group of individuals performing a remote audit engagement. An effective audit team management is vital in a well-organized workflow and collaboration process of the audit team members during the audit engagement (AICPA, 2020; DeRoche, 2020). **Audit engagement management** deals with the bulk of the work of the auditor in the actual conduct of the remote audit engagement and consists of the sequential stages in the audit cycle: (1) audit planning; (2) audit execution; and (3) audit reporting. **Audit client communications management**, as the last key remote audit focus area, pertains to the formal interaction between an audit team and their audit client. Since the flow of communication is crucial to the success of any audit, communication is also a critical factor in ensuring that clients receive quality audit services and that auditors must be able to

effectively communicate with their clients to allow them to perform their jobs in a satisfactory manner and provide their clients with the necessary and relevant information regarding the audit process. (DeRoche, 2020).

(2) Actual Remote Audit Practices

Research findings pertaining to the actual remote audit practices of the local auditing firms were culled from the pre-collected data obtained by an unpublished previous study or “grey literature”. These secondary data were then restructured, re-categorized, summarized, and re-analyzed using the standard remote audit practices promulgated by the IFAC as a result of the documentary analysis conducted. Table 2 provides a summary of these actual remote audit practices.

Audit Team Management. Results of the study showed that local auditing firms conducted virtual or online assessments which compensated the limited conduct of observation and documentation prior to the conduct of the audit. Focus areas identified remained almost the same even with the ongoing pandemic because these were crucial parts or items that are always emphasized in an audit. Consequently, plans to address existing risks were also in place. The audit teams also made efforts to continue their audit work for their audit clients even when faced with limitations. The audit teams revised strategies, objectives, operational plans, and business continuity plans to work remotely and maintained an effective level of communication in response to the changing environment and disruptions by relying heavily on technology (e-mail) and couriers in sending and receiving documents, using online video and voice calling applications with clients and among the audit team, and utilizing email and software applications to monitor the work done by members. Knowing the increased reliance on technology and greater exposure to cybersecurity risk in performing remote audits, numerous actions and processes were also implemented to protect the privacy and security of the information provided by their audit clients. Remote work manuals highlighting the rules and procedures to be observed by each member of the audit team in their remote audit was also established. Also included in this manual is a set of alternative policies and procedures to address limitations on obtaining audit evidence, conduct of meetings or communication among members and with their clients, and other aspects of the audit that were greatly disrupted by the pandemic. In addition, with the restrictions brought by the pandemic, they resorted to the use of available teleconferencing applications such as Zoom, Messenger, and Viber for their communications and meetings. It is worthwhile to note, however, that not all local audit firms chose to fully transition to a work-from-home setup.

Audit Engagement Management. Results of this study showed that for the **audit planning stage** the local audit firms intensified the incorporation of technology in their new ways of working. Audit teams utilized emails and social media platforms such as Facebook Messenger, Viber, Skype, Google Workspaces, and videoconferencing to communicate with each other and with their clients. Auditors also utilized the use of courier services for sending and receiving documents especially those that need to be physically inspected. They also relied on their years of audit experience to exercise professional judgement in evaluating all audit evidence, including those submitted in electronic form. Results of this study also showed that, for ethics and independence purposes, confidentiality is duly maintained by the audit team despite the remote work setup. More importantly, the local audit firms also placed much importance on the personnel welfare of their employees by incorporating personal wellness practices such as adherence to minimum health protocols, provision of work breaks and relaxation time frames to avoid work exhaustion and screen fatigue, practicing empathy and compassion, and sharing insights and coping strategies to maintain a healthy work-life balance. For the **audit execution stage**, not much has changed in the conduct of an audit during the remote setup.

The only difference is that there is heavier dependence on technology and the internet as compared before. Because the reliance on accounting data alone cannot be considered sufficient evidence, emphasis on collecting corroborative information through bank statements, invoices, and documents stamped as certified true copies were also used to verify authenticity of electronic evidence. As to the audit of inventories, actual practices were inventory observations through attendance to client inventory counts via live feeds or solely through computations. Alternative procedures were also conducted to substantiate inventory figures such as confirmations and recalculations to affirm and validate financial statement assertions. However, the audit firms admittedly conveyed that they did not seek engagement quality review services of their remote audits due to the lack or unavailability thereof in the audit profession in the entire country. In its place, they have resorted to seeking guidance from their senior and most experienced colleague auditors when needed. These audit firms also collectively emphasized that the overall quality and manner of audit execution needs to be maintained regardless of whether a pandemic was happening or not. Finally, in terms of preparing and submitting audit reports for the **audit reporting stage**, the local audit firms committed to comply substantively with audit reporting standards while emphasizing changes in circumstances brought about by the pandemic and the resulting adjustments to specific audit procedures as part of their disclosures in the audit reports.

Audit Client Communications Management. Results of this study showed that for the conduct of kickoff meetings, remote interviews, and closing meetings, the local auditing firms either utilized teleconferencing applications or scheduled face-to-face meetings with their clients who may be in the same area or locality. Reports and updates about the progress of the audit are also communicated through formal emails and scheduled meetings. For remote interviews, the audit firms used virtual meeting platforms and maintained a policy that cameras must always be on in order to fully evaluate its client's reactions and mannerisms during the virtual interaction. In addition, the firms also conducted several rounds of trainings before using these online tools and equipment in order to be familiar with their features and to maximize their efficiency and effectiveness.

(3) Gap Analysis and (4) Audit Effectiveness

Salient differences were gleaned between the actual remote audit practices of the local auditing firms and the standard remote audit practices prescribed by authoritative bodies (Table 2). It is worthwhile to mention that while various academic literature provides an enumeration of ideal remote audit practices following the premise of remote audit effectiveness, these ideal practices were not fully utilized by local audit firms in the actual conduct of their remote audit engagement. It was also found out that while local audit firms may be aware of these promulgated remote audit practices, utilizing them fully is not entirely possible due to key constraints brought about by the size of their operations, the nature of the businesses of their audit clients, limited capital, costs involved, and practicability. Furthermore, while some of the prescribed remote audit practices are not being practiced, local audit firms have established alternative or "compensating practices" intended to mitigate the risks of the identified non-practice.

Audit Team Management. Analyzing the audit effectiveness of identified risk management practices, it can be deduced that failure to practice promulgated remote audit standards may lead to inability of the auditor to ensure completeness regarding risk identification and response and, consequently, to obtain sufficient understanding of the operations and business environment of its audit clients. (AICPA, 2020; International Standards on Auditing, 2021). Auditors engaging directly with the board of directors or owners of the company as a compensating practice may also run the risk of comingling audit work with a differently natured consultancy work (Caringe & Holm, 2017).

Technology and cybersecurity, in contrast, were given significance in the conduct of remote audits. The analysis of remote audit practices for technology and cybersecurity showed that the local audit firms have a clear understanding of the importance of providing adequate safeguards with regards to high reliance on technology in the conduct of their audits. However, unlike big audit firms who can afford automating their systems, the local audit firms did not have enough capital resources to invest on state-of-the-art auditing software and solutions. Thus, they chose to rely on manual input

Table 2
GAP ANALYSIS OF STANDARDS COMPLIANCE AND AUDIT EFFECTIVENESS ANALYSIS OF REMOTE
AUDIT PRACTICES

REMOTE AUDIT STANDARDS		ACTUAL REMOTE AUDIT PRACTICES	GAPS AND CONSTRAINTS	AUDIT EFFECTIVENESS ANALYSIS
(as prescribed by authoritative bodies)		(practice or non-practice)	(identified differences)	(benefits and risks)
AUDIT TEAM MANAGEMENT				
	Risk Management	<ul style="list-style-type: none"> Established plans to address and mitigate risks Conduct of virtual or online risk assessments Communication with audit committees of clients 	<ul style="list-style-type: none"> Non-consideration of significant risks Direct communication with company owners 	<ul style="list-style-type: none"> Inability to obtain significant understanding of client's business environment Comingling of consultancy work with audit work
	Entity Operations and Culture	<ul style="list-style-type: none"> Revision of audit strategies, objectives, operational plans, and business continuity plans Oversight and monitoring of work-from-home tasks 	<ul style="list-style-type: none"> Not all firms fully transitioned to the remote audit setup 	<ul style="list-style-type: none"> NO SIGNIFICANT DETRIMENTAL EFFECTS ON AUDIT EFFECTIVENESS
	Technology and Cybersecurity	<ul style="list-style-type: none"> Heavy reliance on email and couriers for documents logistics Utilization of online and voice applications Data privacy and client information protection 	<ul style="list-style-type: none"> Absence of separate evaluations for internal control and quality reviews Non-utilization of audit management solutions software or data analytics tools 	<ul style="list-style-type: none"> Inability to evaluate internal controls related to technology May have an effect on data management accuracy and procedural convenience
	Policies and Procedures	<ul style="list-style-type: none"> Shift to remote work setup Restructured offices to maintain social distancing 	<ul style="list-style-type: none"> Retention of some pre-pandemic policies in operations manuals 	<ul style="list-style-type: none"> NO SIGNIFICANT DETRIMENTAL EFFECTS ON AUDIT EFFECTIVENESS

		<ul style="list-style-type: none"> • Development of remote work manuals and policies 		
	Engagement Team Communication	<ul style="list-style-type: none"> • Maintained open communication channels • Utilization of teleconferencing applications for meetings 	<ul style="list-style-type: none"> • Reliance on phone calls instead of messaging applications for regular communications 	<ul style="list-style-type: none"> • NO SIGNIFICANT DETRIMENTAL EFFECTS ON AUDIT EFFECTIVENESS
AUDIT ENGAGEMENT MANAGEMENT				
Audit Planning	New Ways of Working	<ul style="list-style-type: none"> • Intensified the incorporation of technology in audit procedures • Utilization of social media platforms for communication with team members and clients • Virtual meetings and observation of client reactions and responses • Prudent exercise of professional judgment in evaluating electronic audit evidence 	<ul style="list-style-type: none"> • Same level of documentation requirements since business operations of most audit clients were unaffected by the pandemic • Utilized alternative methods to obtain electronic evidence as deemed practicable in terms of cost and circumstances 	<ul style="list-style-type: none"> • Continued exercise of professional skepticism amidst the shift to new audit modality
	Risk Identification and Internal Controls	<ul style="list-style-type: none"> • Observed the effects of pandemic on business operations of audit clients • Reviewed client financial reports • Compared financial condition of audit clients before and during the pandemic 	<ul style="list-style-type: none"> • Reliance on familiarity of the business operations of repeat audit clients 	<ul style="list-style-type: none"> • May lead to familiarity threat
	Materiality	<ul style="list-style-type: none"> • Exercise of professional judgment in making reasonable estimates 	<ul style="list-style-type: none"> • No significant adjustments were made to pre-pandemic estimates 	<ul style="list-style-type: none"> • May affect judgment on selection of audit procedures

	Ethics and Independence	<ul style="list-style-type: none"> • Upholding of client confidentiality • Protection of client data privacy and information security 	<ul style="list-style-type: none"> • Lack of new clients during the pandemic 	<ul style="list-style-type: none"> • NO SIGNIFICANT DETRIMENTAL EFFECTS ON AUDIT EFFECTIVENESS
	People Wellness	<ul style="list-style-type: none"> • Compliance to minimum health protocols • Provision of work breaks and relaxation times • Emphasis on work-life balance 	<ul style="list-style-type: none"> • Peak audit season precluded employees from taking regular leaves or holidays 	<ul style="list-style-type: none"> • NO SIGNIFICANT DETRIMENTAL EFFECTS ON AUDIT EFFECTIVENESS
Audit Execution	Audit Evidence	<ul style="list-style-type: none"> • Heavier dependence on technology in obtaining and evaluating evidence • Corroboration of evidence with other relevant external documents 	<ul style="list-style-type: none"> • Procedures under on-site audits were still utilized due to financial and practicability constraints • Failure to communicate with predecessor auditors 	<ul style="list-style-type: none"> • Issues pertaining to client integrity may be overlooked when accepting new clients
	Inventory Observations	<ul style="list-style-type: none"> • Attendance to client inventory counts via live feed video • Performance of substantive calculations • Conduct of alternative procedures 	<ul style="list-style-type: none"> • Failure to perform inventory count observations • No live feed of inventory counts were provided by audit clients 	<ul style="list-style-type: none"> • Significant risks may be overlooked when dealing with inventory-intensive client companies
	Documentation	<ul style="list-style-type: none"> • Increased documentation requirements for significant areas • Timely preparation and submission of documents 	<ul style="list-style-type: none"> • Focus on the manner instead of the quantity of required documentation 	<ul style="list-style-type: none"> • Strengthens the validity and reliability of audit documentation
	Accounting Estimates	<ul style="list-style-type: none"> • Rechecked accuracy of client's estimates and calculations 	<ul style="list-style-type: none"> • Failure to consult other experts on valuation 	<ul style="list-style-type: none"> • May lead to inaccurate calculations

			assumptions made by audit clients	
	Engagement Quality Reviews	<ul style="list-style-type: none"> • Reliance on guidance and expertise of senior and more experienced auditors 	<ul style="list-style-type: none"> • Lack of independent and accredited engagement quality reviewers in the locality 	<ul style="list-style-type: none"> • NO SIGNIFICANT DETRIMENTAL EFFECTS ON AUDIT EFFECTIVENESS
Audit Reporting	Going Concern Issues	<ul style="list-style-type: none"> • Frequent inspections and checks of client financial statements 	<ul style="list-style-type: none"> • Lack of new models or approaches to update estimates resulting from significant uncertainties • Absence of strict and persistent reviews 	<ul style="list-style-type: none"> • May lead to inaccurate calculations
	Auditor Reports	<ul style="list-style-type: none"> • Substantial compliance to audit reporting standards 	<ul style="list-style-type: none"> • NO SIGNIFICANT DEVIATIONS WERE OBSERVED 	<ul style="list-style-type: none"> • AUDIT ASSURANCE • AUDIT EFFECTIVENESS
AUDIT CLIENT COMMUNICATIONS MANAGEMENT				
	Kickoff Meetings Remote Interviews Closing Meetings	<ul style="list-style-type: none"> • Use of teleconferencing applications or face-to-face scheduled meetings • Email submissions of reports and communications • Virtual meetings and observation of client reactions and responses • Trainings on effective and efficient use of technology software and equipment 	<ul style="list-style-type: none"> • Lack of training on effective interviewing skills • Small number of personnel vis-à-vis voluminous audit work 	<ul style="list-style-type: none"> • Potential loss of audit clients • Decrease in audit efficiency

procedures and existing basic software and applications to accompany their audit work. This does not decrease the quality of audit work because auditors are still required to comply with audit standards with or without a pandemic, and hence audit effectiveness – accuracy, consistency, and verifiability of auditors’ work and reports – is likewise ensured. However, non-utilization of audit management solutions software or data analytics tools may have an effect on data management accuracy, lead to inability to effectively evaluate internal controls, and affect procedural convenience in conducting the audit.

Audit Engagement Management. The observed increase in documentation and collection of multiple types of evidence as part of **audit planning** enabled local auditors to adapt to the change in work setup and continue to exercise professional skepticism despite challenges such as human movement restrictions and limited face-to-face interactions with clients. Results further revealed that, rather than relying merely on electronic evidence, local audit firms also verified the authenticity of the hardcopies of documents sent by their audit clients, especially those with utmost significance to the audit. From the point of view of audit effectiveness, these practices enabled local audit firms to ensure that they are able to deliver effective audit procedures and produce quality audits (DeRoche, 2020). In terms of risk identification and materiality estimations, local audit firms placed due reliance on their familiarity with the business operations of their repeat clients and thus dispensed with making significant adjustments to materiality estimates that were made prior to the pandemic. Audit effectiveness analysis of these practices would deduce that these circumstances may lead to familiarity threats to audit independence (Code of Ethics, 2021) as well as affect auditor judgment on selection of audit procedures (Lombardi, 2014). Driven by limitations in costs, time, and practicability, local auditing firms still resorted to implementing audit procedures that were conventionally utilized under on-site audits. This constitutes most of the gaps identified under **audit execution**. While these deviations to ideal remote audit practices were highly observed, audit effectiveness analysis would deduce that such deviations are justifiable especially when accompanied with alternative procedures or mitigating procedures (Promtong, 2018). On a contrasting but interesting note, although the pandemic terminated the operations of a vast majority of small businesses and enterprises, audit engagements persisted and remained essential, especially for businesses that remained operational during the pandemic. It is also worthwhile to note that despite the challenges brought forth by the pandemic to the remote setup of audit work, as well as the relative limitations on the size and extent of operations of local auditing firms, they were still able to substantially comply with the promulgated standards related to the key focus area of **audit reporting**, thereby providing audit assurance and positive outcomes to audit effectiveness.

Audit Client Communications Management. Local audit firms were able to effectively leverage client communications using available teleconferencing applications, emails, and virtual meetings, as well as face-to-face meetings subject to certain restrictions and protocols. Trainings on the effective and efficient use of basic technology software and equipment also proved useful in terms of familiarizing their use and importance in the conduct of audit procedures. However, results from this study also show that some of the local audit firms struggled to find time to improve their interviewing skills due to the lack of human resources and available time to practice. From the point of view of audit effectiveness, this might lead to potential loss of audit clients (Sheng, 2021). It can also lead to substantial decrease in audit efficiency since not paying attention to the nonverbal and body language aspects of their clients can also fail to detect how their clients feel about issues (Thottoli et al, 2019) and thus result in audit procedures and methods being less efficient.

CONCLUSIONS

Based on the research methods and analyses conducted, significant discoveries were obtained that could enrich the available research literature delving on the effects of the pandemic on the operations of auditing firms especially those that are smaller in size, whose nature of operations are limited, and those that are located within localities or provinces. The actual remote audit practices conducted by local auditing firms show that despite the relatively new engagement modality, they were able to uphold and adapt to unprecedented and pandemic-driven changes. Auditing standards remained at the forefront of the auditor's mentality throughout their remote engagements. While not all promulgated standards were practiced and complied with, key aspects pertaining to audit team management, audit engagement management, and audit client communications management remained anchored on established regulations set by authoritative and regulatory bodies. Salient differences or gaps in terms of audit standards compliance owed largely to constraints related to cost, time, nature of operations, and circumstantial practicability. Opting to deviate from standard practices, however, can be justified thru the exercise of professional judgment, practicing due diligence, and conducting alternative or mitigating procedures. Moreover, from the point of view of audit effectiveness, gaps between actual and standard remote audit practices do not inherently suggest detrimental effects or negative consequences to the general welfare of the auditing firms or their pool of clients. Instead, it provides some unique benefits by enabling them to improve the efficiency and flexibility of their remote audit processes, especially for economically challenged small-scale audit firms.

RECOMMENDATIONS

The aim of this study is to recommend actions for local auditing firms to improve their existing remote audit practices and provide them with guidance on how to effectively deal with the transition from on-site audits to remote audits. Despite the limitations on the data gathering phase of this study owing largely to restrictions caused by the pandemic, as well as this study being largely exploratory in nature on the plight of local auditing firms, the significant discoveries obtained are considered adequate in order to suggest valuable inputs and practical strategies.

Local auditing firms may choose to invest and use technological solutions such as audit management solutions and data analytics tools to automate their repetitive audit work. This would enable them to adapt more effectively to the remote audit setup which would, in turn, increase their efficiency and flexibility while conducting remote audits. With confidentiality remaining to be one of the main concerns in a remote audit setup, this study also recommends audit teams to continuously assess and consider potential confidentiality issues that could arise, and to develop policies and procedures that would address these potential confidentiality risks. A dedicated staff training program may also be conducted to ensure that all audit employees are adequately trained in remote audit practices and technology and software applications, as well as alternative procedures needed to comply with engagement standards recommended by authoritative and regulatory bodies. Local auditing firms are likewise recommended to continuously evaluate how their risk assessment methodologies will be employed when determining the amount of audit evidence needed in a remote audit thru continuous identification and assessment of specific areas

of concern that represent significant risks brought about by the pandemic. Additional audit evidence and procedures should also be assigned to these areas, ensuring that the required level of audit documentation is provided. Furthermore, since results of this study also showed that auditor's wellness greatly affects their efficiency and effectiveness in conducting remote audit work, it would be helpful for leaders of local auditing firms to include health and wellness programs as part of their priority activities and encourage efficient coping strategies and programs to minimize employee stress levels, avoid work exhaustion, reduce screen fatigue, and promote overall work-life balance.

For future studies and future research, it is also recommended that researchers investigate the engagement standards compliance to remote auditing practices of large firms in more progressive cities or regions and compare them against the status of local auditing firms. This will help establish if there is indeed a difference between small and large auditing firms in terms of engagement standards compliance. Furthermore, it is also recommended that researchers also look into how the pandemic has affected the perceptions of audit clients and users of financial information towards remote audits since this study focused only on the impacts of the said circumstances on the part of auditing firms.

ABOUT THE RESEARCHER

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A Comparative Operating Cash Flow Management Study of Selected Publicly Listed Companies in the Philippines: Pre and Post Merger and Acquisition Analysis

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Abstract – Business combinations such as mergers, acquisitions, and consolidations have been prevalent for the past few years, and there are numerous studies that have assessed the overall implications of these business combinations to several companies. Thus, to contribute to that order, this research aimed to determine the significant difference of operational cash flow management particularly the operating cash index ratio, cash power generating ratio, cash flow liquidity ratio, and cash flow return on assets before and after the commencement of merger and acquisition (M&A) activities of the acquiring corporation of selected Philippine publicly listed companies. The population of this study consisted of several Philippine publicly listed companies in the Philippine Stock Exchange (PSE) Index who underwent M&A activities from 2014 to 2018 once, and panel, quantitative data was obtained from these corporations to primarily aid the data. With these, paired t-test was utilized to confirm if there is a significant difference of the operating cash flow indicators before and after M&A transactions have been instituted. Findings of the study suggest that in an overall perspective, there is no established significant difference of the operating cash index ratio, cash power generating ratio, cash flow liquidity ratio, and cash flow return on assets pre- and post-M&A activities. Thus, this study recommends to purport into exploring the variable of market share for future research. Finally, the research advocates for better decision making to those who plan to initiate M&A activities and invest in companies that could commence these transactions.

Keywords: *mergers, acquisitions, business combination, operating cash flow management*

INTRODUCTION

Background of the Study

For the past few years, rapid advancement in the market has become the prevalent trend, as corporations seek opportunities to gain the competitive advantage over rivaling firms. The current business scene in the Philippines makes it almost impossible for a single company to gain an advantage on its own; leading some companies to choose to engage in business combinations with other firms. Business combination is one proven and tested method by companies wanting to grow and gobble a larger market share (Ferrer, 2012). A business combination employed by a major player in the market can cause a drastic change in the business landscape due to the possible increase in market power and possibly eliminating competition.

Several types of business combinations strategies can enter the minds of top management. The type of business combination strategy these firms will choose depends on what they seem fit to gain an advantage against its competitors. The most notable and prevalent business combination strategy adopted by many firms is mergers. Furthermore, corporations engage in mergers primarily to maintain its influence in the industry. Notable mergers in our country would be the acquisition of Coffee Bean by Jollibee and the partial acquisition of 2GO by SM Investments Corp. On the other hand, a notable acquisition is the acquisition of San Miguel's telecom assets by PLDT, hindering the entrance of a third party in an industry controlled by the mentioned corporations. Another notable merger is Ayala group acquiring nearly half of Zalora to expand their market power. Mergers and acquisitions like the ones mentioned beforehand greatly shape and affect the business landscape in the Philippines.

Business performance also refers to the business success in the market which may have different outcomes. Cash flow from operations is the best method to achieve a stable and positive business and ability to run business activities. Proper cash flow management needs to be constantly done by businesses to maintain a positive cash flow (Belobo & Pelsler, 2014). Moreover, cash flow management is important in achieving operational objectives because it plays a key role in maintaining business efficiently and effectively. Most businesses base their minds on less important issues instead of managing cash flow because no business can survive in today's business landscape without sufficient cash therefore highlighting the importance of cash flow management on a business.

Several researches have been conducted to determine the effect of mergers and acquisition on the financial performance of the acquiring company. Furthermore, mergers and acquisitions do not just change the landscape of the country, but they change the operations of the corporations themselves. This paper studied and identified the significant difference of operating cash flow management before and after a merger and acquisition measured by the operating cash flows primarily through financial ratios related to operating cash flows.

Statement of the Problem

As mergers and acquisitions have become more prevalent, there have been several studies conducted regarding the profitability of mergers and acquisitions by measuring return on equity and return on assets. However, most of these studies show that there is little to no difference and impact once two corporations have merged, and when there is an impact, it normally shows the transaction had an overall negative impact and effect on the profitability of the merged corporation. Given the results of previous studies, there is a certain value in using new metrics to uncover the true impact of mergers and acquisitions on the acquiring corporation. As most studies focus on measuring the corporation as a whole, the idea is to take a look closer to potentially discover the difference between pre and post mergers and acquisitions. Taking off from the synergy theory, the operating cash flow performance seems the best place to start the search for the benefit of mergers and acquisitions. Therefore, this research aimed to answer the question, "What is the significant difference between the operating cash flow management of the acquiring company, pre and post-merger and acquisition?"

Research Framework

The main objective of the study was to determine the significant difference of the acquiring firms' overall operations particularly its operational cash flow management before and after mergers and acquisitions. Despite many studies proving the insignificant effect and impact of

mergers and acquisitions on the profitability of the firm, many firms still opt for a business combination. As the research would measure the significant difference of operating cash flow management before and after M&A activities, its continuous variables would involve operating cash flows represented by the operating cash index ratio, cash power generating ratio, cash flow liquidity ratio, and cash flow return on assets. Operating cash flows are cash flows that arise from the normal operations of the business. To further analyze the operating cash flows of the operations, the research will compare the ratios related to operating cash flows of the corporations as mentioned above.

The *Operating Cash Index Ratio* is the comparison of the entity's net income from continuing operations with its related cash flows for the year (Davis, 2016).

The *Cash Power Generating Ratio* is the ratio which helps investors see how much cash a firm can generate from its normal operations in relation to total cash flows. It is calculated by dividing cash flows from operations divided by total cash flows (Mohan, 2017).

The *Cash Liquidity Ratio* is a ratio that measures the liquidity of a firm. The formula for this ratio is cash flow from operations divided by the total current liabilities. It measures how a firm can handle its short term debts in relation to its cash assets (Jooste, 2004).

The *Cash Flow Return on Assets* evaluates how well a firm handles its cash in relation to total assets. The formula for this ratio is cash flow from operations divided by total assets (Amuzu, 2010).

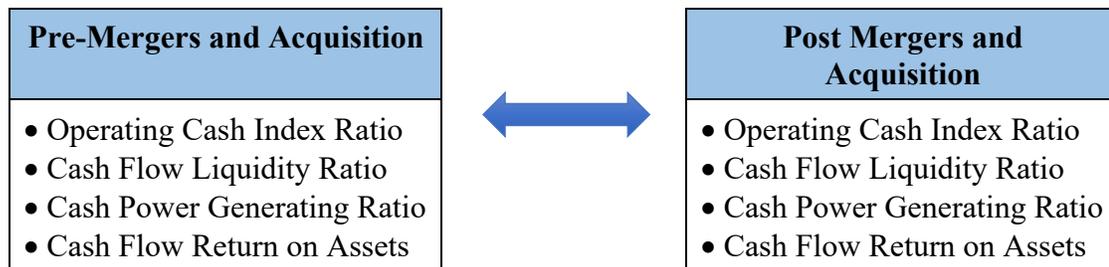


Figure 1
Operational Framework

Table 1
Summary of Variables

Definition	Measure
Operating Cash Index Ratio	Cash Flow from Operations divided by Operating Net Income
Cash Power Generating Ratio	Cash Flow from Operations divided by Total Cash Flows
Cash Flow Liquidity Ratio	Cash Flow from Operations divided by Total Current Liabilities
Cash Flow Return on Assets	Cash Flow from Operations divided by Total Assets

Review of Related Literature

Merger and Acquisition

Merger and acquisition (M&A) activities have been impactful to the economies of industrialized countries as a result of globalization, and these activities have been increasing rapidly since the start of the 21st century. As M&A activities have been prevalent in the global industry, companies can gain further value of its corporate structures as well as of its stakeholders, and the valuation of companies involved rely on long-term profitability since corporate managers primarily work toward the maximization of profits. With these being enacted, it is presumed that it follows the assumption that capital markets exhibit efficiency. In addition, those companies who have resulted from M&A activities can have a wide range of options on how to distribute or use their income (Fan, 2007).

Also, as growth is a major criterion by which the success of a business firm is measured, M&A activities are considered as an important growth strategy in an overall structural perspective to further satisfy the demands of the stakeholders and face competition. Despite the complexity of the analysis and processes conducted for M&A, many companies view it as a way to save the organization from financial distress and, as mentioned, an opportunity for increasing profitability. A number of studies have been conducted to find out the significant difference, effect, and impact of M&A activities on the overall performance of the company. Different studies yield different results, while some authors found negative results while others found positive results. Evidence from previous literature suggests that in the long run, the eventual effect of M&A activities on company performance cannot be reflected due to the presence of some external factors that have influenced the performance of the companies by using various variables such as earnings per share (EPS) and other profitability measures.

Merger and acquisition activities have been prevalent these past decades. In the Philippines, there have been several banking mergers that have commenced. The most notable merger happened between Banco de Oro (BDO) being the acquirer and Equitable PCI Bank being the acquiree, as it continued its process of merging with other banks such as Dao Heng Bank, First e-Bank, and Banco Santander Central Hispano. The primary intention of BDO was to acquire the 29% share of Social Security System (SSS) of the acquiree amounting to Php 8,000,000,000, but a certain group that had government officials eventually wanted to include pension costs into the purchase price (Castillo, 2007).

Among the other countries who have instituted mergers for their banking industries were Thailand and Malaysia as mergers for the banking industry have been prevalent due to the mentioned financial crisis. One of the most known mergers for the banking industry of Thailand is the three (3) way merger between Thai Military Bank Public Company Limited (TMB), DBS Thai Danu Bank Public Company Limited (DTDB), and Industrial Finance Corporation of Thailand (IFCT), and TMB is labeled as the acquirer. With the commencement of the merger, TMB became one of the largest banking companies in Thailand in terms of assets as they had an estimate of 700 billion THB worth of assets. This merger was completed to connote the values of increasing the customer base of the company, increasing its competitive strengths, enhancing substantial revenue, establishing a strategic partnership with DTDB, establishing corporate and small-medium enterprise (SME) relationships with IFCT, and enhancing the returns of all the shareholders (Khaemasunun & Pringsulaka, 2007).

Malaysia, on the other hand, also instituted mergers in the banking industry as the effect of the mentioned Asian financial crisis, with other banks having to merge with non-financial companies as well, and these are incorporated to further establish its direction on the global industry. This is compounded by the effects of a preceding economic recession wherein the banking industry was detrimentally affected by it during the mid-1980s. Economies of scale and efficiency gains also made mergers, as well as consolidations, probable in the country. Notable mergers that involved the banking industry of Malaysia included the merger between Bank of Commerce Berhad and United Asian Bank Berhad, Kwong Yik Bank and DCB Bank, and Chung Khiaw Bank and United Overseas Bank Berhad (Said, 2007).

As several other banks have commenced M&A activities especially mergers, studies have been conducted on how these activities impact the performance of the banks involved that yielded mixed results. For instance, the study of Kumshe et al. (2015) provided evidence that M&A remains one of the viable options for rescuing any bank in financial distress. The study focuses on the effects of mergers and acquisition on profitability and earnings per share of selected banks in Nigeria. Synergistic and wealth effects are few of the many theoretical reasons for Mergers and Acquisition. Financial data of four (4) banks which constitute two old generation banks and two new generation banks. The pre and the post-merger periods were differentiated through a dummy column. The pre-merger dealt with financial statistics before the merger while the post-merger analysis looked at the situation after the merger. Most post-merger profits after tax of the merged banks resulted in an increase while some increase were drastic others had an insignificant change in profits. The study also measures profitability through Earnings per Share (EPS) pre and post-merger. Some banks' EPS went down due to the merger attributing to additional share capital consequently diluting the earnings per share. The possible reason for the fluctuation in the EPS could be attributed to the global financial crisis.

Another study by Akinbuli and Kelilume (2013) measures the effect on corporate growth, profitability and operating efficiency of corporations in the banking industry in Nigeria. The study further observed that post consolidated banks were analyzed further through the profitability ratios namely net profit margin, return on total assets, return on equity, and other ratios. The study resulted in various effects. Some banking corporations were not able to save themselves from the financial distress in the industry while others were able to. Therefore, the results of the merger and acquisition vary on the corporation in various industries.

A study by Leepsa and Mishra (2013) states that the results of a merger and acquisition may have varying consequences depending on the motive of the acquirer whether it is for short run benefits or long run. Leepsa & Mishra took into consideration the M&A event year which is considered apart from post M&A years. The year in which the acquisition occurred can have a significant effect since M&A is done for possible growth because possible investors may view this as a chance of increasing future values. Data was specifically gathered from the manufacturing industry in India. Results suggest the impact of M&A on companies are reflected in the immediate years specifically the event year and one (1) year post M&A year. The study recommends that organizations that opt for a merger and acquisition would extend its market therefore increasing potential for incremental profits. However, results from the tests conducted confirm previous studies stating that mergers perform poorly in the long run.

As to keep up with the nature of this research, the study by Jallow, Masazing and Basit (2017) was assessed, and the paper examined the impact of M&A in the airline industry taking into account the pre and the post-merger Earnings per Share (EPS). The results of the study show that M&A causes an increase in EPS from pre to post merger and acquisition. However, even with

the increase in EPS, there is no significant difference in EPS even before and after although there is a slight increment but the significant is low.

The study of Ferrer (2012) was comprehensively assessed, and it measures the effect of M&A on profitability of a corporation primarily measured through financial ratios namely return on assets (ROA) and return on equity (ROE). Financial data was collected among all publicly listed companies in the Philippines. The research deemed multiple reporting periods panel data appropriate, so the appropriate panel analysis was conducted. The study made use of two linear regressions to analyze the effect of having M&A on the profitability of the companies. The study displayed a significant negative relation with return on equity which implies that M&A would decrease return on equity a significant amount therefore having a negative impact on the profitability of a firm.

Operating Cash Flow Management

Cash flow is considered a leading indicator for financial analysis as it provides information on changes in components of cash values between the beginning and end of a period (Lepadatu, 2017). A company that generates cash from operations or by other means is considered solvent and able to secure growth and development. Greater cash flows within the corporation can improve liquidity and hence gain a competitive advantage against their competitors. According to Moore, Broome and Robinson (2009), effective management of liquid resources specifically, cash plays a significant role in company growth. The relevance of cash flows in the company's operations and performance determines if the firm is solvent or insolvent. A corporation that is earning from operations does not necessarily equate to being solvent.

Predicting future cash flows plays a significant role in making future economic decisions. The study conducted by Takhtaei and Karimi in 2013 investigates the extent by which earnings data and cash flows in predicting future cash flows. The study tests the extent to which the operational cash flows and earning in predicting future cash flows. Included in the data tested were companies listed in the Tehran Stock Exchange. Moreover, they selected companies which had a fiscal year ended on March 19 and did not change the period from 2005 to 2009, and did not include banks because of the nature of their assets. With the limitation set by the researchers, ninety-four (94) companies were tested. The study used a panel data regression model using data year company and ordinary least squares method. The study concluded based on the results from the statistical test, confirms with various previous literatures stating that predicting operating cash flows with the use of historical data is significantly possible.

A study conducted by Ramazani, Salehi, and Laridashtybayaz (2018) tested the relationship of cash flows and financial performance of companies in Tehran. The study concluded that efficient cash flow management has a significant positive relationship with financial performance. The study confirms with other past literatures which explored the favorable effect of efficient working capital management with firm profitability.

To further assess the efficiency of cash flows on the overall growth of a firm, a study on the establishment of a causal relationship between cash flows and profitability *per se* was looked upon. This has been subject to research because as the study of Finger (1994) has forecasted that cash flows are better predictors of short term future cash flows than profitability, the Financial Accounting Standards Board (FASB) exhibits that profitability is a better measure of short term future cash flows than cash flows. To propel the research, the concepts of stationarity, co-integration, and causality were instated to harbor the connection of the two (2) variables. Four (4) profitability measures were used in the research, namely earnings before interest and tax (EBIT),

profit before tax (PBT), profit after tax (PAT), and net earnings. On the other hand, three (3) cash flow measures were utilized: operating cash flows after adjustment from non-cash items, operating cash flows adjusted for investment income and working capital, and operating cash flows after interest and tax. These measures have been tested to establish common essence. As the testing involves stationarity, indemnified regression may exist between cash flows and profitability if the two (2) main variables are not stationary even though there is a high correlation between the primary variables. However, since causality has been the essential moderating aspect of the research, it has concluded that there is a generally established linear relationship between cash flows and profitability (Bezuidenhout, Mlambo, & Hamman 2008).

Cash flows also have short term and long term effects on the financial position of a company. In the short-run, cash savings have been beneficial in the process of obtaining the financial position of a certain firm, and these account for a substantial amount of cash flow use. In the short term and long term, on the other hand, debt reduction has firmly been subject to cash flows as well. In addition, investments in a firm have been investigated in such a way that these are subject to sensitivity of cash flows, or the opportunity to convert certain accounts into cash faster. With the presence of financial constraints as written by Dasgupta, Noe, and Wang (2011), however, there is a smaller portion of cash flows into investments. Thus, companies have instituted that their cash flows have to increase to progress with cash shares and to reduce operating leverage. However, as results show, dwelling into a cash flow shock with eagerness may have short-term detrimental effects as corporate debt may be higher than capital goods especially if financial constraints will be implemented in a stricter fashion (Khurana, Martin & Pereira 2006).

To purport to the nature of the study, studies were also assessed on how M&A activities relate to cash flows. For instance, a study has been assessed wherein managers of entities have pondered if engaging in M&A will yield a benefit, and one way to study this is to calculate the firm's value. An interview was done with top investment banks in the US which include Bank of America Merrill Lynch, Barclays Capital, Credit Suisse, Deutsche Bank AG, Evercore Partners, Goldman Sachs & Co, Greenhill & Co, JP Morgan, Lazard, Morgan Stanley, and UBS which all engaged in M&A. The study showed that these investment banks assessed the value of a firm using discounted cash flow (DCF), and the banks were interviewed to know how they apply DCF to enterprise valuation in M&A. The study concluded that the major banks use DCF to value their companies and that the banks use it routinely. Furthermore, the study suggested that it is in line with the view that companies are viewed as systems that generate future cash flows that are then benchmarked against investor return requirements. While for banks, on the other hand, required return is based on estimated discount rates. Furthermore, the use of DCF in M&A valuation, due to the uncertainty of business forecasts, needs the judgement and decision of managers which, as the study also clearly states, DCF does not make decisions but only informs the management about a possibility that could help them decide whether to push through with the M&A or not (Brotherson, Eades, Harris & Higgins 2014).

RESEARCH METHOD

The study was determined to see whether there was change in the standing of a corporation before and after they commenced M&A activities. The research focused on comparing the difference of the operational cash flow ratios pre and post M&A, and the study was executed by using panel and quantitative data gathered from the financial data of the corporations mainly contained in the OSIRIS database.

The population of the study consisted of publicly listed companies in the Philippine Stock Exchange that have commenced M&A activities from 2014 until 2018, and the financial data from 2011 to 2020 was obtained for the operating cash flow management ratios. This research only focused on acquiring corporations that have had M&A activities once according to the indicated time frame. The population included companies from the industrial, holding, mining and oil, property, service, and financial industries. The research was not able to include the majority of the financial industry particularly the banking sector because the database, OSIRIS, did not contain the necessary financial data for the operating cash flow ratios especially the figures of operating cash flows and current liabilities of companies from the said industry. Other sources were considered such as the Philippine Stock Exchange (PSE) Index and company websites, but as the research entailed panel data, several figures of operating cash flows and current liabilities of the said companies were lacking. Overall, with the parameters of the population, there were 36 publicly listed companies that were assessed. The companies, as mentioned, were assessed before and after the business combinations have been implemented. Among these companies, 14 companies are in the service industry. 2 of these companies are involved in transportation services, 1 in media, 1 in education, in casinos and gaming, 1 in hotel and leisure, 2 in retail, and 3 in other services of which all are involved in investment holding. Furthermore, 10 companies that engaged in M&A activities are in the property industry which are involved with real estate or property development. 1 company is a holding firm in which it is mainly engaged in investments. 9 of these companies are in the industrial industry, 2 of which are engaged in electricity, energy, power, and water. Moreover, among those included in the industrial industry, 2 are engaged in food, beverage, and tobacco, 3 in electrical components and equipment, and 2 in construction, infra, and allied services. There is also 1 company in the mining and oil industry that engaged in M&A. Lastly, 1 is a company from the financial industry.

The data for the operating cash flows that correspond to the ratios involved were obtained from the financial statements of the said companies from OSIRIS. To know the relevant details of the corresponding business combinations that would fully assess whether the said companies had M&A activities or not on the said time frame such as the dates of the implementation, the involved acquirers and acquirees, and other necessary and logistical information, M&A details were obtained from the same database mentioned above. The researchers looked into the operating cash flows by consequently computing the operating cash index ratio, cash power generating unit ratio, cash flow liquidity ratio, and cash flow return on assets before and after the corresponding M&A activities. The mean of both pre and post-M&A ratios were used in the data analysis which is further explained below. The data set of the research is virtually summarized through statistical procedures to easily answer the objectives.

This study utilized statistical tools in describing analyzing the data to determine the significant difference of operating cash flow management ratios of involved publicly-listed companies in the Philippines before and after mergers and acquisitions. As per panel data used in the research, operating cash flow ratios consisted of the following: a) pre-M&A ratios that started from three (3) years before the M&A activities commenced; and b) post-M&A ratios from the year of the M&A activities up to two (2) years after the M&A activities. This was necessary because an ample amount of time was needed to measure the true significant difference of pre-M&A and post-M&A data in accordance with related literature. With these, the primary analytical and statistical tool that was used to determine if there is a significant difference between pre and post-M&A operational cash flow management ratios is paired t-test. According to Hedberg & Ayers (2014), numerous researchers have used the paired t-test as a statistical procedure especially if

their studies entail the computation of the mean difference between data points that are matched. Therefore, with these implications, this statistical procedure primarily aided the analysis of the data set inferred. The basis to determine if there is a significant difference is when the two-tailed p-value of a matched data is less than the alpha of 0.05. As the research contained panel data, the means of the pre-M&A and post-M&A ratios per operating cash flow management indicator were computed, and these were the matched data utilized in the conduction of the paired t-test. If, for instance, the two-tailed p-value of the matched data is less than 0.05, then there would be a significant difference between the particular pre-M&A and post-M&A operating cash flow management ratios which negates the corresponding null hypothesis. Otherwise, there would be no significant difference between the particular pre-M&A and post-M&A operating cash flow management ratios which fails to reject the corresponding null hypothesis.

RESULTS AND DISCUSSION

The financial data necessary for the computation of the operational cash flow management ratios were obtained from OSIRIS, and it also contains a summary of merger and acquisition activities of the companies that fit the parameters set by the population of the study. The identification of merger and acquisition activities of acquiring companies is necessary for the research aimed to see the significant difference of operational cash flow management ratios before and after the commencement of the said business combinations. The research set the time period for occurrence of mergers and acquisitions from 2014 to 2018, and as the study checked pre and post-M&A data, the operating cash flow management data that were eventually computed were from 2011 to 2020. In terms of annual data, companies on whether they each employ a calendar or fiscal year was considered in the time periods expressed. Finally, the financial ratios as mentioned were manually computed with the available financial data in the database.

Table 2

Descriptive statistics and paired t-test of pre-M&A and post-M&A ratios

Operational Cash Flow Indicators	Pre-M & A		Post-M & A		Significance (2-tailed)	Interpretation
	Mean	Standard Deviation	Mean	Standard Deviation		
Operating Cash Index Ratio	1.8932	6.8723	7.0126	47.0703	0.5327	Not Significant
Cash Power Generating Ratio	23.2066	134.0292	-61.9500	381.5996	0.2104	Not Significant
Cash Flow Liquidity Ratio	-1.2140	6.1461	0.3160	0.7756	0.1437	Not Significant

Cash Flow Return on Assets	0.0333	0.0868	0.0433	0.0678	0.4259	Not Significant
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Table 2 shows the paired descriptive and analytic statistics of the four (4) operating cash flow indicators' before and after merger and acquisition activities of selected companies have commenced. In terms of the descriptive statistics, the lowest mean with the mean value of -61.95 is found in cash power generating ratio post-test, and this implies that firms who have already commenced a singular M&A activity do not firmly generate an ample amount of cash from its regular operations in relation to total cash flows. On the other hand, it is the cash power generating ratio pre-test that had the highest mean with a value of 23.2066, and this indicates that before the commencement of an M&A transaction, entities generate cash from its normal operations bountifully in terms of the total cash flows of the companies. In addition, it is revealed that the standard deviation for both pre-M&A and post-M&A data of cash power generating ratios are dispersed compared to the standard deviation of the other indicators. This indicates that its corresponding data are not precise from the stated means, while data from other operating cash flow ratios are precise towards their respective overall means.

In terms of the matched data set of operating cash index ratios, the overall means increased from 1.8932 to 7.0126, and this purports to more generated cash from normal operations in relation to earnings before interest and tax as the acquiring firms commenced their respective M&A activities. However, in terms of the paired data set of cash power generating ratios, the overall means decreased from 23.2066 to -61.95 as mentioned which indicates that firms had a drastic downward trend in generating cash from its regular operations in comparison to total cash flows after commencing their respective merger and acquisition activities. Then, in relation to the cash flow liquidity ratios, its overall means before and after mergers and acquisitions have improved from -1.2140 to 0.3160. This explains that after companies have instituted their respective M&A activities, they improved in paying off its current liabilities with the cash that they possess from their normal operations. Lastly, the matched data overall means of cash flow return on asset ratios slightly increased from 0.0333 to 0.0433 as M&A activities commenced. With this, it is inferred that the companies generated further operating cash from its available assets as they commenced their business combinations.

Table 2 then shows the results of the paired t-test conducted for all operational cash flow indicators which was the primary tool in adhering to the objectives of this research. As indicated, the two-tailed p-values of the matched data of all the operational cash flow management indicators are greater than the significance level of 0.05. Thus, all null hypotheses are failed to be rejected, and it can be conclusive that with this analysis, there is not enough evidence to show that there is a significant difference between the operating cash flow management of acquiring firms before and after they have commenced merger and acquisition activities.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study concluded that there is not enough evidence to suggest that there is a significant difference between the operating cash flow management of acquiring firms before and after they have commenced merger and acquisition activities. Hence, in the acceptance of the null hypotheses, there is no significant difference between the operating cash index ratio, cash power generating ratio, cash flow liquidity ratio, and cash flow return on assets before and after acquiring

companies have instituted M&A activities. This result does not conform with the theories the research took into consideration as most of the theories that were instilled beforehand pointed to the outcome that there would be a significant difference between the operating cash flow management of acquiring firms before and after they have commenced merger and acquisition activities. In the end, the major takeaway from the results of the study is that mergers and acquisitions do not necessarily ensure an improvement or a downturn in the operating cash flow management of acquiring firms.

Recommendations

The common notion surrounding mergers and acquisitions is a positive one. For many corporate managers and board of directors a merger or acquisition signals optimism in the future of the entity. It is believed that corporate managers and board members feel that a merger or acquisition yields large rewards, but the study, along with previous studies find that this may not necessarily be the case. Although the study does not warn against or advocate for mergers and acquisitions, what it tells the entities decision makers is to be cautious when considering to merge or acquire. The results provide another basis for considering whether or not to merge or acquire, warning that the aforementioned theories and their tempting promised rewards might not necessarily apply to their entity. This is especially important for operating cash flow management. If operating cash flow management takes a hit, the future of an entity could be put in jeopardy. Operating cash flow management allows growth when done well, but when not, it can lead to the stunting of growth and an eventual decline. This study forces these decision makers to study their moves more carefully as it serves as a cautionary piece of information that could save an entity from jumping into an ill-advised business combination.

Like corporate managers and the board of directors, many investors buy into the promise of great rewards by theories such as the synergy and efficiency theory. When a company is set to merge or acquire, investors are excited and the heads of prospective investors are turned. Based on the theories, it is logical for an investor to think that this only means their stock will rise because the entity will improve, but in reality this may not be the case. The result warns against the allure of the commonly held theories prompting investors and prospective investors to be cautious when predicting whether or not a merger or acquisition will yield positive rewards for the entity and subsequently, themselves. The study helps these people understand that just because an entity is merging or acquiring it is a good bet. This research advocates for smarter, more calculated investments.

In the academe, most institutions teach theories regarding mergers and acquisitions such as the synergy, efficiency, and market power theory. Mergers and acquisitions are more often than not painted in a positive light, but like the previous two stakeholders, our result serves as a caution, to not take these theories as fact. It is in utmost belief that these theories likely hold true in certain instances, but not in all, or even most. This study shows that in many instances these theories do not hold true. The question now becomes what are the variables affecting whether or not these theories hold true. For future researchers, the addition of the market share of the entity as a moderating variable could shine light on the reason behind why in many instances the mergers and acquisitions do not conform to the theories surrounding them. Moreover, it is to be looked upon that by adding the moderating variable of market share, future researchers could determine whether these theories operate with diminishing returns as the entity owns a larger portion of the market. If nothing else, like for the previous two stakeholders, the result serves as a caution not to assume that mergers and acquisitions are necessarily good for an entity.

To synthesize, the study may not be able to determine whether or not mergers and acquisitions would have a significant difference between the operating cash flow management of acquiring firms before and after they have commenced merger and acquisition activities, but the fact that the study cannot confirm is value in itself. For many, mergers and acquisitions signal optimism, but this might not always be best. This research helps parties exercise restraint and forces individuals to analyze further. The study advocates for smarter decision making and calls into question theories that are spoken about as if they were fact.

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Status of the Accountancy Program in the University of Northern Philippines and the Performance of its Graduates in the Certified Public Accountant Licensure Examination

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Abstract – With the intention to offer quality education which dictates producing quality graduates, this study was conducted to assess the status of the Accountancy Program of the University of Northern Philippines along the Ten (10) Areas of its operations and the performance of its graduates in the Certified Public Accountant Licensure Examination (CPALE). This research utilized the descriptive-correlational method of analysis using a survey questionnaire to 263 respondents composed of administrators, faculty in Accountancy, students and alumni from the University of Northern Philippines although. At an overall, there is no significant relationship between the status of the Accountancy program and the CPALE performance of the UNP BSA graduates. However, taken singly, VMGO, Faculty, Curriculum and Instruction are significantly related to the CPALE performance of UNP BSA graduates. There is a need for a more competitive compensation package for Accountancy faculty to encourage them to stay in the UNP academe ideally until retirement and provide them opportunities to undergo continuing professional development to improve their credentials apart from keeping abreast with the fast changing landscape of their profession.

Keywords: *Quality education, Areas of Assessment, Accreditation, Core Faculty, Curriculum and Instruction*

INTRODUCTION

Accounting is considered as the language of business. Because of its importance in the conduct of day to day operations of both public or private entities, profit or non-profit, especially when financial transactions have become voluminous and/or due to reportorial requirements of regulatory agencies, it evolved into one respectable field of specialization. It has developed through the decades a body of knowledge worthy of being formally studied. It has become a profession. The completion of the requirements in its study results in the conferment of a degree in Bachelor of Science in Accountancy. Thereafter, the BSA graduate earns the right to undergo Certified Public Accountant Licensure Examination (CPALE). If he/she passed it, the title Certified Public Accountant (CPA) is added to his/her name.

There are 520 different colleges schools of Accountancy nationwide both in public and private Higher Education Institutions (HEI).

The University of Northern Philippines (UNP) is one of those HEIs offering Accountancy Program. From 1971, Accounting was one of the major fields of the Bachelor of Science in Business Administration (BSBA) offered in the College of Business Administration (CBA). However, in 1990 BSBA Major in Accounting became a separate degree program by virtue of Board Resolution No. 37, Series of 1990. Thus, the Bachelor of Science in Accountancy (BSA) up to the present. Moreover, the CBA was renamed College of Business Administration and

Accountancy (CBAA). As mentioned earlier, the Accountancy Program has a licensure examination called Certified Public Accountant Licensure Examination (CPALE).

Modesty aside, based on the records of the CBAA, the Accountancy Program of UNP has earned a reputation as one of the best schools of Accountancy in the Philippines as evidenced by the following:

- 23rd Top Performing School out of 642 Accountancy Schools in the Philippines (2014-2018 CPALE results);
- Rank 23 in Category 3: Accountancy Schools with 100 or below CPALE examinees – First Takers only (May and October 2016 and 2017 examinations) in the listing of Best CPA Accountancy Schools in the Philippines;
- UNP ranked 6th among the Top 10 High Performing Schools nationwide and ranked 2nd Luzonwide in the CPA Licensure Examination covering six examinations from May 2007-October 2009, according to a study conducted by Mendoza (2009)
- UNP Ranked No. 7 in the Category 100-999 examinees (accumulated number of candidates in the CPA Licensure Examinations within the five-year period covered), UNP is classified as HIGH performing school within that period based on the compilation of statistics of performance in various CPA Licensure Examinations of all schools in the Philippines from 1999-2003 published by the Professional Regulation Commission (PRC);
- Certificates of Commendation were awarded by PRC to UNP for its exemplary performance in the CPA Licensure Examination, to wit:
 - Rank 2 in Category 3 (26-50 examinees) in the October 2001 examination
 - Rank 2 in Category 4 (10-25 examinees) in the May 2001 examination
- UNP has produced three (3) topnotchers in the CPA Licensure Examination:

To ensure quality education, CHED mandates HEIs for accreditation. The Accountancy program of the University of Northern Philippines is no exception.

The accrediting agency for SUCs is the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP). Organized in 1987, its mission is to make the attainment of quality in education an integral part of the higher education systems more particularly among chartered state colleges and universities in the Philippines, through a sustained program of internal and external assessment. The survey instrument used by AACCUP in accrediting programs are divided into areas as follows: Vision, Mission, Goals and Objectives (VMGO), Faculty, Curriculum and Instruction, Support to Students, Research, Extension and Community Involvement, Library, Laboratories, Physical Plant and Facilities, and Administration.

It was on December 7, 1995 that the Program was submitted for accreditation for the first time and accredited Level 1 (Candidate Status) by AACCUP; a milestone because it was the first program that was accredited in the entire country. In December 2018, the Program was awarded Level III Phase II status. In October 2021, the Accountancy Program passed the Phase I of two (2) Phases of Evaluation in the 4th Survey Visit. One more phase and the Program will achieve the highest accredited status – Level IV.

Since the Program started submitting itself for accreditation to AACCUP, there has never been a study relating the aforementioned areas of evaluation to the performance of UNP BSA graduates in the CPALE. Thus, the study.

Statement of the Problems

The study aimed to assess the Status of the Accountancy Program in the University of Northern Philippines and the Performance of Its Graduates in the Certified Public Accountant Licensure Examination (CPALE). Specifically, it sought answers to the following questions:

1. What is the status of the Accountancy Program along the following areas: Vision, Mission, Goals and Objectives (VMGO), Faculty, Curriculum and Instruction, Support to Students, Research, Extension and Community Involvement, Library, Laboratories, Physical Plant and Facilities, and Administration?
2. What is the performance of the BSA graduates in the CPALE?
3. Is there a significant relationship between the status of the Accountancy Program and the performance of the BSA graduates in the CPALE?

Theoretical Underpinnings and Literature Review

This section presents the selected studies/researches conducted in different areas of education, present theories, and concepts which provided the researcher rich insights and justification on the study.

Status of Accountancy Program in the University of Northern Philippines

In the Philippines, before a higher education institution (HEI) can offer a particular academic program, it has to comply with the policies, standards and guidelines set forth in memorandum by the Commission on Higher Education (CHED) being the regulatory and supervisory body authorized by the government. If not complied with, it cannot implement the offering of a program or even if implemented, its graduates may not be conferred the degree sought. (Manual of Regulations for Private Higher Institutions, CHED, 2009)

CHED Policies, Standards and Guidelines

CHED Memorandum order No. 27 Series of 2017 contains the revised policies, standards and guidelines for Bachelor of Science in Accountancy (BSA). The degree program described is called Bachelor of Science in Accountancy (BSA) that provides general accounting education to students wanting to pursue a professional career in Accountancy in general and in Public Accounting, in particular.

It culminates to providing assurance and audit services for statutory financial reporting, tax-related services, management advisory services partnering in management decision-making, devising planning and performance and control systems, and providing expertise in financial reporting and control to assist various stakeholders in making decisions.(CHED MEMO No. 27, Series of 2107)

Accreditation in Public and Private HEIs

The Commission encourages the use of mechanism of voluntary accreditation for higher education institutions to meet the standards of quality and above the minimum required for government recognition and in aid of its regulatory functions. Towards this end, it shall (1) maintain a policy environment which enhances the private and voluntary nature of accreditation and protects its integrity, and (2) establish a scheme of progressive deregulation of qualified higher education institutions or specific programs of such institutions (Manual of Regulations for Private HEIs, CHED, 2009).

Since the CHED Memorandum Order for Bachelor of Science in Accountancy spells out the revised policies, standards and guidelines for its implementation, the criteria for evaluation are culled from it and embodied in the survey instrument for program accreditation by the Accrediting Agency for Chartered Colleges and Universities in the Philippines (AACCUP). The areas of evaluation are: a) vision, mission, goals and objectives; c) faculty; d) curriculum and instruction; e) support to students; f) research; g) extension and community involvement; h) library; i) physical plant and facilities; j) laboratories; and k) administration.

On Vision, Mission, Goals and Objectives

While the mission statement focuses on more tactical aspects of the business, the vision statement provides the direction in the which the company wants to go. Together with the mission statement, it helps to create the organizational strategy for the business. (Ahmed, 2019).

HEIs are no exception in formulating their vision and mission.

The Vision is the state the Institution hopes to become in the future. The Mission, Goals and Objectives represent the hierarchy of aims of the Institution. The Mission reflects the mandate/aim of the whole university or college. The Goals are the aims at the hierarchical structure below the Institutional level (the academic Unit/Institute/School; and the Objectives are the aims at the program level.. (AACCUP BS Accountancy Survey Instrument).

In the study of Lopez and Lopez (2013), for the accreditation to be awarded to universities, they must establish clear institutional purposes and objectives and define policies and formal mechanisms according to the purposes declared in their institutional mission.

On Faculty

The standard or quality of an institution or program is greatly measured by the qualifications of its faculty. For the BSA Program, the faculty should possess the educational qualifications, professional experience, classroom teaching ability, computer literacy, scholarly research productivity, and other attributes essential for the successful conduct of the undergraduate accounting program. (AACCUP BS Accountancy Survey Instrument)

Buenafe (2009) in her study said that the influence of a teacher in the teaching-learning situation is far-reaching and wide. Quoting Prescott, she said that the teacher is the agent that can wield genuine influence of shaping character or in giving insights into life. In the study of Tailab (2013), improving the effectiveness of accounting instructors will enhance student's achievements since they play a significant role in any educational system.

On Curriculum and Instruction

Curriculum has two mutually exclusive components, the “curriculum” per se which is the blueprint or master plan of selected and organized learning content and “instruction” which is the actual implementation of this plan through contrived experiences in the classroom. (Palma, 2012).

Curriculum and Instruction occupy center stage in any educational program. These seek to research, develop, and implement curriculum changes that enhance students' achievement within and outside of institutions. They determine primarily the prestige and strength of the Institution. (AACCUP BS Accountancy Survey Instrument). One of the findings of Tailab (2013) in his study, showed that poorly chosen accounting textbooks have a major negative influence on academic performance.

On Support to Students

Students are the *raison d'être* for the establishment of learning Institutions. The school has the responsibility for their holistic development. Thus, a program of support services to complement the academic program be designed and implemented to harness their full potential and become a worthy contributor in his/her social environment.(AACCUP BS Accountancy Survey Instrument). In the study of Ciobanua (2013), she said that effective student support and services contribute to the quality of their learning experience and their academic success. That students are more likely to give up their studies since academic, emotional and social connection with the institution at cultural level is wanting.

On Research

Research is a basic requirement for an educational institution to have a firmly established research and development program. Its thrusts and priorities should be congruent with those identified in the development plans of regional and national R and D-oriented agencies such as NEDA, DOST, CHED, etc. (AACCUP BS Accountancy Survey Instrument). The International Accreditation Council for Business Education (IACBE, 2016) provides in its accreditation manual that each faculty member should establish credentials as a researcher since basic research is essential in higher education as one of the means in achieving excellence in teaching and learning.

However, Nagle, Menk and Rau (2018) had a finding in their study that research ranking was not significantly associated with the passing rate in the CPA Examination. Moreover, institution's educational success is more important than research productivity according to the study of Fogarty, Zimmerman and Richardson (2016).

On Extension and Community Development

With all the budgetary and resource allocation, the extension function makes the Institution's presence felt in the community for this purpose. It involves the application of existing and new knowledge and technology and those generated in the Institution to improve the quality of life of the people. The faculty members may serve as experts, consultants, organizers, facilitators, coordinators, service providers, and change agents in the community as forms of extension and community development. (AACCUP Survey Instrument)

Fagela (2015) citing Quario (2004) identified some ingredients of an effective University extension programs which are: a) a clear-cut statement of the University's extension incorporating dimensions, methods and priorities; b) a sense of significance of the mission and upgrading commitment to do it on the part of the entire University from the chief administrative officer to each individual faculty; c) A direct, consistent two-way channel between extension personnel and all the appropriate departments in the University.

On Library

The library of the institution must maintain a collection of updated and appropriate/suitable textbooks and references to complement curriculum delivery. Thus, optimizing the achievement of the program outcomes for the BS Accountancy program. (CHED Memo No. 27, s. 2017).The library is the heart of any learning institution. It is a synergy of people, hardware, and software whose purpose is to assist clients in using knowledge and technology to transform and improve their lives. (AACCUP BS Accountancy Survey Instrument).

According to IACBE (2016), it is expected that the institution will provide comprehensive learning resources to faculty and students to achieve excellence in accounting education. Akenbor and Ibanichuka (2014) recommended in their study that the National Universities Commission (NUC) in Nigeria should carryout inspection of facilities in universities' library to ensure that there is functional e-library and availability of modern and contemporary textbooks in principles of accounting. Fagela (2015) pointed out a finding of Barroga (2013) that another major weakness of a program is the poor library facilities.

On Physical Plant and Facilities

The physical plant and facilities include school campus, buildings, and other physical infrastructures, equipment and services that complement institutional and program effectiveness. (AACUP BS Accountancy Survey Instrument). In the access to a Safe and Healthy Environment Students, there is a need to learn in an environment that is physically and emotionally safe and educationally supportive. (Carr and Harris, 2001)

Arzadon (1988) as cited by Adviento (2016) concluded that physical facilities in a school context are significantly associated with teachers' behavior as well as their effectiveness in teaching in relation to their students' achievement. Barroga (2013) as mentioned by Piano (2014) said that teaching and learning can be facilitated with a favorable environment, which includes adequate facilities, equipment and other instructional materials and aides.

On Laboratories

Laboratories, as broadly defined, include science laboratories, speech laboratories, demonstration farms, shops, and other facilities for practicum activities essential to the successful implementation of curricular programs inclusive of their use and functions. (AACUP BS Accountancy Survey Instrument). According to the CHED Memo on Laboratory and Physical Facilities, the school must also provide for computer laboratories required for hands on training of the students. Tailab (2013) concluded in his study that lack of computer laboratories and computer applications are obstacles to learning and the source of negative perceptions students have toward accounting courses.

On Administration

The administration is the engine of the Institution in the attainment of its vision, mission, goals and objectives. It is concerned with the general affairs of the Institution and its organizational performance that should to institutional processes and ensures that said processes are satisfactorily implemented. (AACUP BS Accountancy Survey Instrument).CHED Memo provided the policy that the BSA program shall be administered by a full-time Dean/Chair/Director,.(CHED Memo No.27, s. 2017)

Boonsri (2017) concluded in his work that there was significant influence of the level of administration and the personal/professional-related and school-related factors since there is a significant relationship between the performance and the administration of a school.

On Studies on Status of a Program

This study focused in the status of Accountancy Program in the University of Northern Philippines. which has similarities to that of Quario (2004) and Fagela (2015) since they all looked into the status of a curricular offering; Architecture Program in Region I for Quario both

in public and private and Fine Arts Education of the University of Northern Philippines, a state University.

Fagela (2015) concluded in her study that the status of the Bachelor of Fine Arts (BFA) Education Program of UNP is “High” in all ten (10) areas of assessment.

Quario (2004) concluded in her study on the status of Architecture Program in Region I that the respondents (alumni, students, faculty and administrators) assessed the status of Architecture schools “Very Good” in the following areas: Mission, Goals and Objectives, Administration, Faculty, Curriculum and Instruction, Students, Extension and Community Involvement, Production and Physical Plant and Facilities. This implies that Architecture colleges and universities of Region I are extensive and functioning well. That as a whole, the status of Architecture education is assessed as “Very Good”.

On the Certified Public Accountant Licensure Examination (CPALE)

Republic Act No. 9298, otherwise known the Revised Accountancy Law, provides the Admission and practice of Accountancy in the Philippines. Its objectives shall be to provide for and govern: (a) The standardization and regulation of accounting education; (b) The examination for registration of certified public accountants; and (c) The supervision, control, and regulation of the practice of accountancy in the Philippines.

The regulatory body of the Accountancy profession is the Professional Regulatory Board of Accountancy under the supervision and administrative control of the Professional Regulation Commission. That two of the powers and functions of the Board are: a) to supervise the registration, licensure and practice of accountancy in the Philippines. Thus, before one can be admitted and practice Accountancy, he/she has to undergo the licensing process called the Certified Public Accountant License Examinations (CPALE); b) To ensure, in coordination with the Commission on Higher Education (CHED) or other authorized government offices that all higher educational instruction and offering of accountancy comply with the policies, standards and requirements of the course prescribed by CHED or other authorized government offices in the areas of curriculum, faculty, library and facilities. Thus, the administration in the offering of an Accountancy program is lodged to the Commission on Higher Education.

Rita Keller, a CPA firm management consultant, says, ‘Having the Certified Public Accountant designation is one of the most prestigious things you can accomplish in your professional life. Nothing worthwhile is easy.’ (<https://www.getcanopy.com/blog/everything-graduating-students-need-to-know-about-the-cpa-exam>)

In the study of Perez (2015) he cited Basaen, Bejar & Bambao (2005) that becoming a Certified Public Accountant (CPA) is not an easy task in the Philippines—one has to graduate with a Bachelor’s Degree in Accountancy and pass the CPA board examination. He said Philippine CPALE is one of the most difficult board examinations in the entire history of the Philippine career professionalism.

In the CPALE in the Philippines, the lowest passing rate is 20% between 2003 and 2013. The highest passing rate is October 2010 at 48.36%. In addition, ten years before that, it was only 17% in 1993. (<https://memoentry.com/cpa-board-exam-results-and-numbers-for-the-past-decade/>)

Pilapil (2019), a columnist in The Manila Times, wrote an article about the results of CPALE in October 2019 saying that observers believe that the poor CPA board exam results show the declining capacity of accounting schools in preparing their students for the board exam. He quoted Joel Tan Torres, former chairman of the Professional Regulatory Board of Accountancy

and a board topnotcher in 1979, decrying the declining number of CPA board exam passers which should serve as a wake up call to all shareholders — accountants, the PRC and schools.

Ballado-Tan (2014) in his study claimed that the quality of education offered by an institution is often determined by the graduates it produces. In like manner, performance in licensure examinations determines the quality of graduates it produces.

Nagle, Menk and Rau (2018), in their study, concluded that institutional variables which are school's accreditations, selectivity in admissions, faculty credentials, are significantly associated with CPA exam pass rates.

Lee, Khan, Quazi, and Vetter (2010) found that the *pre-college* preparation of the students they admit not the educational quality (as measured by faculty salary, AACSB accreditation in accounting and accounting programme size) seems to predetermine to a great extent the CPA exam pass rate among the universities in Texas.

Conceptual Framework

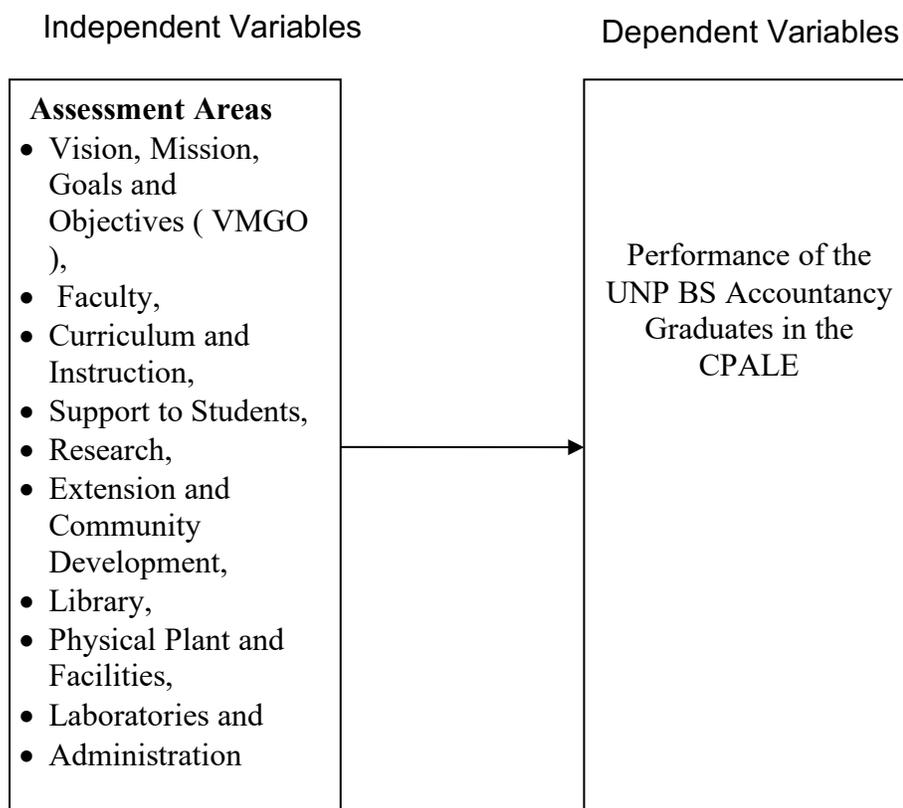


Figure 1. The Research Paradigm

As shown in the paradigm, the Accountancy Program of the University of Northern Philippines was assessed along Vision, Mission, Goals and Objectives (VMGO), Faculty, Curriculum and Instruction, Support to Students, Research, Extension and Community Development, Library, Physical Plant and Facilities, Laboratories and Administration which were correlated, in turn, to the performance of its graduates in the CPALE.

METHODOLOGY

The study employed a descriptive-correlational method of research. A total enumeration was used in all groups of respondents except the graduates/alumni where convenience sampling was employed by considering only one-third of the total number of graduates from SY 2016-2017 to 2018-2019 regardless of the batch they came from as shown in the table of distribution of respondents. The total number of respondents was 263.

Table 1
Distribution of Respondents

Respondents	N	n
Administrators	3	3
Faculty	11	11
Students	192	192
Graduates/Alumni	130	57
TOTAL	348	263

The questionnaires for data collection in the study were adopted from the outcomes-based survey instrument for program accreditation for state universities and colleges as provided by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACUP). Part I gathered data on the personal profile of the respondents. Part II elicited information along the ten areas of assessment which are the : Vision, Mission, Goals and Objectives, Faculty, Curriculum and Instruction, Support to Students, Research, Extension and Community Involvement, Library, Physical Plant Facilities, Laboratories, and Administration

The instrument made use of a 5-point Likert scale in measuring the responses which is in conformity with the scoring of responses. The norms of interpretations were used to describe the status of the Accountancy Program in the University of Northern Philippines as shown below:

Statistical Range	Item Descriptive Rating	Overall Descriptive Rating
4.21– 5.00	Outstanding	Very High
3.41 – 4.20	Very Good	High
2.61– 3.40	Good	Moderate
1.81 – 2.60	Poor	Low
1.00 – 1.80	Very Poor	Very Low

Procedures were followed before questionnaires were floated to respondents. Due to the pandemic restrictions, online gathering of data through google forms was used for students and alumni. For the Administrator and Faculty respondents, hard copies of the questionnaires were distributed to them personally by the researcher and once gathered back.

The statistical tools used for the analysis of data gathered were: Mean to determine the status of the Program along the following areas: vision, mission, goals and objectives, faculty, curriculum and instruction, support to students, research, extension and community development, library, physical plant and facilities, and administration; Simple correlation analysis to determine

the relationship between the status of the Accountancy Program in the University of Northern Philippines and the performance of its graduates in the Certified Public Accountant Licensure Examination.

Ethical Considerations

Approval from Ethics Review Committee were (ERC) was sought and accordingly ERC certification was issued with an Approval Number: A-21-025. In the gathering of data, codes were used for anonymity, passwords were used for the gathered data and locked in the computer file encrypted with password to protect them from unauthorized retrieval. Printed data were properly kept and to be discarded only after publication and presentation.

RESULTS AND DISCUSSIONS

Status of the Accountancy Program in the University of Northern Philippines

As shown in Table 1, the overall status of the Accountancy Program in the UNP obtained a mean rating of 3.92 described as “High” which means that the delivery of Accounting education in this University as evaluated in ten (10) dimensions (areas) is well-implemented. It further signifies that the UNP administration provides sufficiently the much needed support for the Accountancy Program to become one of the most competitive programs in the University.

Table 1. Status of the Accountancy Program in University of Northern Philippines

Areas	Administration		Faculty		Students		Alumni		As A Whole	
	Mean	DR	Mean	DR	Mean	DR	Mean	DR	Mean	DR
1. Vision, Mission, Goals and Objectives	4.80	O	4.13	VG	4.08	VG	4.04	VG	4.08	VG
2. Faculty	4.67	O	3.82	VG	3.99	VG	3.95	VG	3.98	VG
3. Curriculum and Instruction	4.94	O	4.13	VG	4.09	VG	4.08	VG	4.10	VG
4. Support to Students	4.79	O	4.06	VG	3.84	VG	3.79	VG	3.85	VG
5. Research	4.91	O	3.84	VG	3.92	VG	3.65	VG	3.87	VG
6. Extension and Community Involvement	4.85	O	3.91	VG	3.82	VG	3.78	VG	3.83	VG
7. Library	4.53	O	3.91	VG	3.89	VG	3.74	VG	3.87	VG
8. Laboratories	4.88	O	3.57	VG	3.88	VG	3.75	VG	3.85	VG

9. Physical and Facilities	5.00	O	3.27	G	3.73	VG	3.57	VG	3.69	VG
10. Administration	4.94	O	4.02	VG	4.08	VG	4.06	VG	4.08	VG
OVERALL	4.83	Very High	3.87	High	3.93	High	3.84	High	3.92	High

As a whole, all assessment areas obtained a descriptive rating of “Very Good”. This implies that the Program was able to meet more than adequate the demands of each area. Area on “curriculum and instruction” has the highest mean at 4.10 described as “Very Good” while “physical plant and facilities” is rated the lowest with a mean rating 3.69 described as “Very Good” though. The dimension with the highest mean rating indicates that the ability of the Accountancy Program to deliver a competitive Accounting education is dependent to a well-designed curriculum and quality of instruction while the area with the lowest mean rating implies that the growing demand of users on physical plant and facilities particularly from the students being the main clientele of the University is yet to fully met maybe because of budgetary constraints.

The results of assessment along the ten (10) areas are consistent with that of the study of Fagela (2015) where she concluded that the status of the Bachelor of Fine Arts (BFA) Education Program of UNP is “High” in terms of its mission, goals and objectives, faculty, curriculum and instruction, support to students, research, extension and community involvement, library, physical set-up and facilities, laboratories, and administration.

The assessment results of the present study is also in congruence with that of Quario (2004) where her respondents (alumni, students, faculty and administrators) assessed, as a whole, the status of Architecture Programs in Region I “Very Good” in the following areas: Mission, Goals and Objectives, Administration, Faculty, Curriculum and Instruction, Students, Extension and Community Involvement, Production and Physical Plant and Facilities. This implies that Architecture colleges and universities of Region I are extensive and functioning well.

Performance of the BSA graduates in CPALE

As shown in the Table 2, the Average Institutional Passing Rate of UNP is 51.74% whereas the Average National Passing Rate is 25.08%. It means that UNP as a school of Accountancy performed higher than the national passing rate for the years 2017, 2018 and 2019. The average institutional passing rate even doubled the average national passing rate.

It can be gleaned that there is a decreasing trend in the Institutional Passing Rate and that of the National Passing Rate from 2017 to 2019, that is, from 80.00% to 17.96% and from 35.14% to 14.32%, respectively.

Table 2. Performance of Bachelor of Science in Accountancy graduates from the University of Northern Philippines

Year	Month of Examination	Number of Examinees	Number of Passers	Institutional Passing Rate	National Passing Rate
2019	October	39	7	17.96%	14.32%
	May	30	14	46.67%	16.46%

2018	October	28	13	46.43%	25.19%
	May	22	16	72.73%	28.92%
2017	October	45	21	46.67%	30.45%
	May	5	4	80.00%	35.14%
Average Passing Rate				51.74%	25.08%

Be that as it may, it is noticeable that UNP in the Institutional Passing Rate always exceeded that of the National Passing Rate inspite of the declining institutional passing and national passing rates. Moreover, in each of the results of the bi-annual CPALE results, UNP Passing Rate was higher than the National Passing rate in all the three-year period covered by the study. Ballado-Tan (2014) in his study claimed that the quality of education offered by an institution is often determined by the graduates it produces. In like manner, the quality of graduates produced by an institution is measured by their performance in licensure examinations.

Perez (2015) in his study cited Basaen, Bejar & Bambao (2005) which claimed that the performance of the graduates in licensure examination is a positive measure of the quality and standard of education a particular school provides.

The low national passing rates in the three-year period further affirmed the results of the study of Perez (2015) citing Basaen, Bejar & Bambao (2005) that CPALE is indeed one of the most difficult board examinations in the entire history of the Philippine career professionalism.

Perez in the same study cited Buenaobra and Medallon (2013) which also corroborated that the true measure of any board program is passing the ultimate test, the board exams.

Based on the performance of the UNP BS Accountancy graduates in the CPALE in years 2017, 2018 and 2019, it appears that the University has the capacity to produce quality graduates in the BS Accountancy Program if CPALE is the yardstick.

Relationship Between the Status of the Accountancy Education and the performance of the BSA graduates in CPALE

Table 3 reveals that there is a significant relationship on the assessment of the four respondents on the areas of “vision, mission, goals and objectives” (r-value=0.2480, r-prob p<.05), “faculty”(r-value=0.3289, r-prob p<.05) and “curriculum and instruction” (r-value = 0.2702, r-prob p<.05). Such results caused the researcher to not to accept the null hypothesis stating that there is no significant relationship on the status of the Status of the Accountancy Program in UNP and the level of performance of the graduates in the Bachelor of Science in Accountancy Program CPALE.

Table 3. Correlation Coefficient Showing the Relationship Between the Status of the Accountancy Education and the performance of the BSA graduates in the CPALE

Variables	r-value	r-prob	Decision
Vision, Mission, Goals and Objectives	0.2480*	p < .05	Reject Ho
Faculty	0.3289*	p < .05	Reject Ho
Curriculum and Instruction	0.2702*	p < .05	Reject Ho
Support to Students	0.1373	p > .05	Do not Reject Ho
Research	-0.1254	p > .05	Do not Reject Ho
Extension and Community Involvement	0.1065	p > .05	Do not Reject Ho

Library	0.1180	p > .05	Do not Reject Ho
Laboratories	-0.1008	p > .05	Do not Reject Ho
Physical Plant and Facilities	0.2094	p > .05	Do not Reject Ho
Administration	0.1322	p > .05	Do not Reject Ho
OVERALL	0.1800	p > .05	Do not Reject Ho

* - significant at .05 probability level

However, the table further shows that there is no significant relationship between the Status of the Accountancy Program in UNP and the performance of the graduates in the Bachelor of Science in Accountancy Program in CPALE in the assessment of four groups of respondents in “support to students” (r-value= 0.1373, r-prob p>.05), “research” (r-value = -0.1254, r-prob p>.05), “extension and community involvement (r-value =0.1065, r-prob p>.05), “library” (r-value=0.1180, r-prob p>.05), “laboratories” (r-value= -0.1008, r-prob p>.05), “physical plant and facilities” (r-value=0.2094, r-prob p>.05), “administration” (r-value = 0.1322, r-prob p>.05). The above statement prompted the researcher not to reject the null hypothesis stating that there is no significant relationship on the status of the Status of the Accountancy Program in the UNP and the level of performance of the graduates in the Bachelor of Science in Accountancy Program in CPALE.

On the overall, the null hypothesis is not rejected (r-value = 0.1800; r-prob p>.05). Thus, the hypothesis stating that there is no significant relationship between the Status of the Accountancy Program in UNP and the performance of its graduates in CPALE is accepted.

However, when taken singly, “vision, mission, goals and objectives” “faculty” and “curriculum and instruction” are areas of assessment with a significant relationship between the status of Accountancy Program in UNP and the performance of its graduates in the CPALE. This result of the study has congruence to that of Nagle, Menk and Rau (2018) where faculty credentials is significantly associated with CPA exam pass rates when it was taken as one of the institutional variables in determining accounting program characteristics that contribute to CPA exam pass rates.

Moreover, Perez (2015) quoting Basaen et al. (2005) in their study said that the CPALE passing rate is a key factor in measuring the kind of students and quality of instruction the faculty provided. Moreover, the performance of the graduates reveals to a certain extent how well equipped they are which could also be attributed to the instructional materials provided by the institution.

CONCLUSIONS

1. The status of the Accountancy Program along the ten areas, namely: vision, mission, goals and objectives, faculty, curriculum and instruction, support to students, research, extension and community involvement, library, physical plant and facilities, laboratories, and administrations meets the standards of a quality offering of the Program as indicated in the results of the assessment.
2. The performance rating of UNP BS Accountancy graduates in CPALE is consistently higher than the National Passing Rate be it on an annual basis or bi-annual results within that three-year period covered by the study.
3. There is no significant relationship between the status of the Accountancy program in UNP and the performance of its graduates in the CPALE in the overall assessment along the ten areas.

However, VMGO, faculty and curriculum and instruction are significantly related to the performance of the graduates in CPALE when taken singly.

RECOMMENDATIONS

1. There is a need to improve the ten (10) areas of assessment to its highest level to ensure that the Accountancy Program can truly achieve excellence in all respects of its curricular offering. In doing so, there is a need to determine the root causes contributing to the not so welcomed results of the assessment and accordingly address their inadequacies, if any. Foremost of the areas that need to be thoroughly looked into is on Physical Plant and Facilities. The Program should make an inventory of the existing physical plant and facilities, evaluate their functionality and adequacy vis-à-vis the standards set forth by accrediting agencies and by CHED. Continuous submission of the to Program to accreditation and/or certification bodies should be sought.
2. To improve further the performance UNP BS Accountancy graduates in the CPALE, the Program may consider revisiting the present methodologies in delivering accounting education with the end goal of standardizing them aside from developing innovations therefrom. Another is establishing a partnership with a reliable CPA review school where the UNP BSA students can already undergo a comprehensive undergraduate CPA review program patterned to that of the CPALE syllabus to further strengthen preparation for the CPALE.
3. **On VMGO**
The University, in general, and the College/Program, in particular, should maintain a clear direction in the discharge of its core functions by revisiting at an acceptable interval its VMGO to keep abreast with the ever changing academic landscape.
On Faculty
Encourage the faculty of Accountancy to pursue relevant graduate programs and/ post-graduate studies as pre-requisite to enjoy permanent position in the University and for individual career development and advancement. Improve the compensation package of the faculty of Accountancy in terms of rank and security of employment to avoid high turnover of faculty in the Program.
On Curriculum and Instruction
Curriculum being the blue print in the delivery of instruction should be regularly updated to conform with the statutory requirements and to meet adequately industry requirements teaching methodologies have to be consistently and carefully evaluated to produce primarily graduates capable of passing the CPALE.
4. Conduct a study on the performance of UNP BSA graduates in each of the subject areas in the CPALE for 3-5 years and correlating them with their individual ratings in their accounting education courses, entry requirements, selection and retention criteria of the Program.

ABOUT THE RESEARCHER

The researcher is a faculty member of the College of Business Administration and Accountancy of the University of Northern Philippines, Vigan City, Ilocos Sur. At present, he is the Program Head of the BS Accountancy. A former PICPA President-Ilocos Sur Chapter. A former member of the UNP Board of Regents in his capacity as President of the UNP Faculty Union. A Bachelor of Laws Graduate and finished his Master in Business Administration. Also a part-time practitioner in Accountancy. An accredited member of AACCUP.

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An Empirical Investigation on the Effects of Perceptual and Non-Perceptual Measures on Career Advancement among Managers, Directors and Partners of the Top 6 Auditing Firms in the Philippines

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Abstract – Advancement in one’s career has become a significant expectation for every career-minded professional. The unquenchable thirst for career advancement has led researchers to extensively analyze the issues related to career advancement including the factors affecting it. Literature, conducted in various contexts, shows interesting and diverged results. From here, the study was drawn to determine the effects of perceptual and non-perceptual measures on career advancement among managers, directors, and partners of the top 6 auditing firms in the Philippines. To understand career advancement, two measures were used in the study, namely: objective measures (total cash compensation and number of levels away from the managing partner) and subjective measure which is perceived career satisfaction. On the other hand, the factors used to explain career advancement include perceptual measures (supervisory support, developmental experience, perceived organization support, role conflict, role ambiguity, procedural justice and distributive justice) and non-perceptual measures (demographic, human capital, organizational and interpersonal factors). With the data collected from 212 accountants, quantitative analyses were conducted using Partial Least Squares-Structural Equation Modelling (PLS-SEM). The results of the study clearly show that career advancement of a professional accountant depends on the actions of both the organization and the individual. The common predictors among the measures of career advancement are role ambiguity and educational attainment.

Keywords: *Career Advancement, Perceptual Measures, Non-perceptual Measures, Objective Career Advancement, Subjective Career Advancement, Professional Accountants*

INTRODUCTION

Background of the Study

Career advancement is referred to as the upward movement of job level, position and title in an organizational hierarchy and an increase in earnings or income (Jauhar & Lau, 2018). Career success is defined by Shockley, Ureksoy, Rodopman, Poteat & Dullaghan (2015) as the accomplishment of desirable work-related outcomes at any point in a person’s work experiences over time. In this study, the two concepts – career advancement and career success may be used interchangeably.

Researchers often operationalize career advancement in two ways. The first includes variables that measure objective or extrinsic career advancement. These are indicators that can be seen, observed, and evaluated objectively by others (Ng, Eby, Sorensen & Feldman, 2005).

Several researchers used total compensation, number of promotions, rank and current pay grade as objective measures. Career advancement extends beyond traditional objective factors, several studies have applied the concept of subjective career advancement (Shockley, Ureksoy, Rodopman, Poteat & Dullaghan, 2015). Subjective or intrinsic career advancement measures capture individuals' subjective judgments about their career attainments (Ng, Eby, Sorensen & Feldman, 2005). Studies on subjective career advancement used measures such as career satisfaction, job satisfaction, advancement satisfaction and perceived career success (Supangco, 2011).

What factors lead some individuals to be successful in their careers? Every professional is probably focused on wanting to know the “recipe” or the factors that would make them successful in their own fields. The interest in career advancement could be related to the theory of evolution or the “survival of the fittest” in which professionals try to thrive to be the fittest, or at least to be the fittest, to compete in the corporate jungle (Thurasamy, Lo, Amri & Noor, 2011). Because of these, several studies have been done to determine career advancement factors. These factors include perceptual and non-perceptual measures. Perceptual measures include supervisory support, developmental experience, perceived organization support, role conflict, role ambiguity, procedural justice, and distributive justice. Non-perceptual measures include demographics, human capital factors, organizational factors, and interpersonal processes.

While there have been studies exploring the effects of various perceptual and non-perceptual measures on objective and subjective career advancement, some studies showed different results. Additionally, they were conducted in various contexts which may have changed over time. None of the previous studies have tried to determine career advancement factors of professional accountants in the Philippines. Thus, this motivated the researcher to conduct this study.

The study generally aimed to determine the effects of perceptual and non-perceptual measures on objective and subjective career advancement among managers, directors and partners of the top 6 auditing firms in the Philippines. This study has progressed incorporating all related studies to contribute meaningful insights about career advancement of professional accountants with evidences from the Philippines.

Statement of the Problem

The study asked the general question, “What are the effects of perceptual and non-perceptual measures on career advancement among managers, directors and partners of the top 6 auditing firms in the Philippines?”

Specifically, it sought answers to the following questions:

1. What are the effects of perceived (a) supervisory support, (b) developmental experience, (c) organizational support, (d) role conflict, (e) role ambiguity, (f) procedural justice, and (g) distributive justice on the objective and subjective measures of career advancement among managers, directors and partners?
2. What are the effects of (a) demographic, (b) human capital, (c) organizational factors, and (d) interpersonal processes on the objective and subjective measures of career advancement among managers, directors and partners?

Framework of the Study

Conceptual/Theoretical Framework

The interest in career advancement could be related to the theory of “survival of the fittest.” Every career-minded individual is believed to be focused on wanting to know the “recipe” or factors that would allow him or her to be the fittest, or at least be among the fittest, to compete in the corporate jungle. The thirst for career advancement is unquenchable and thus has led to many researchers spending time and effort analyzing career advancement factors (Thurasamy, Lo, Amri and Noor, 2011). As stated by Garavan, et al. (2006) as cited in Thurasamy, Lo, Amri and Noor (2011), research on career advancement has focused on how the shape of traditional career paths has changed due to increasing environmental uncertainty.

The theory of human capital holds that education directly augments individual productivity and therefore earnings. By forgoing current earnings and investing in education, individuals can improve the quality of their labor services in such a way as to raise their future market value. According to this view, human capital is akin to physical capital, the acquisition of which entails a present cost but a future benefit (Aracil and Albert, 2018). Furthermore, as students (future workers) accumulate human capital, their value in the marketplace increases as they bring more expertise and effectiveness to their job tasks. If human capital increases with additional education, a worker’s market value should theoretically increase in proportion to the amount of education he or she receives, often captured by the total number of credits accumulated (Xu and Fletcher, 2017).

In signaling theory, education acts as a signaling or screening device for unobservable ability. Merwe (2010) also added that screening theory posits that the value of higher education credentials flows primarily from their value as signals to potential employers of the abilities of the holders of such qualifications. This is confirmed by Page (2010) when he highlights that as employers cannot observe potential workers’ actual productivity, they instead use educational qualifications to predict productivity, make hiring decisions, and set wages, based on the assumption that individuals who have more years of education are more productive.

The theory of career choice maintains that in choosing a career, people prefer jobs where they can be around others who are like them. They search for environments that will let them use their skills and abilities, and express their attitudes and values, while taking on enjoyable problems and roles (New Zealand Government Careers, n.d.).

From career point of view, the Expectancy Theory suggests that effective learning is most likely to occur when professionals have confidence in themselves if they work hard. They are also likely to work and do their jobs better when the job is linked to desired outcomes like improved work performance, better pay, peer recognition, possibility of promotion, etc. (Mugisha, 2015).

Operational Framework

Figure 1 shows the graphical presentation of the operational framework which gives the overview of what the study intends to determine. It provides the variables used in the study. The independent variables used in the study include both perceptual and non-perceptual measures. Perceptual measures include Supervisory Support (SS), Developmental Experience (DE), Organizational Support (OS), Role Conflict (RC), Role Ambiguity (RA), Procedural Justice, (PJ) and Distributive Justice (DJ). On one hand, non-perceptual measures include demographic variables – Gender (G) and Marital Status (MS), human capital factors – Educational Attainment (EA), Work Experience (WE), Tenure in the Organization (TO), Tenure in the Position (TP),

Number of Organizations Worked For (NO), Licenses (L) and Certifications (C), organizational factor measured by Number of Employees in the Organization (NE), and interpersonal processes measured by Mentoring (M).

The dependent variable used in the study is career advancement which is operationalized in two ways. The first includes variables that measure objective or extrinsic career advancement. These are indicators that can be seen, observed, and evaluated objectively by others (Ng, Eby, Sorensen & Feldman, 2005). Objective measures of career advancement in this study include Total Cash Compensation (TCC) and Number of Levels from the Managing Partner (LMP). Career advancement extends beyond traditional objective factors. Several studies have applied the concept of subjective career advancement (Shockley, Ureksoy, Rodopman, Poteat & Dullaghan, 2015). Subjective or intrinsic career advancement measures capture individuals' subjective judgments about their career attainments (Ng, Eby, Sorensen & Feldman, 2005). The subjective measure in this study is Career Satisfaction (CS) scales developed by Greenhaus, Parasuraman and Worley (1990) and Turban and Dougherty (1994).

Model 1 which shows the effects of perceptual measures on career advancement is presented in Figure 2. Model 2 which shows the effects of non-perceptual measures on career advancement is presented in Figure 3.

Figure 1
Operational Framework

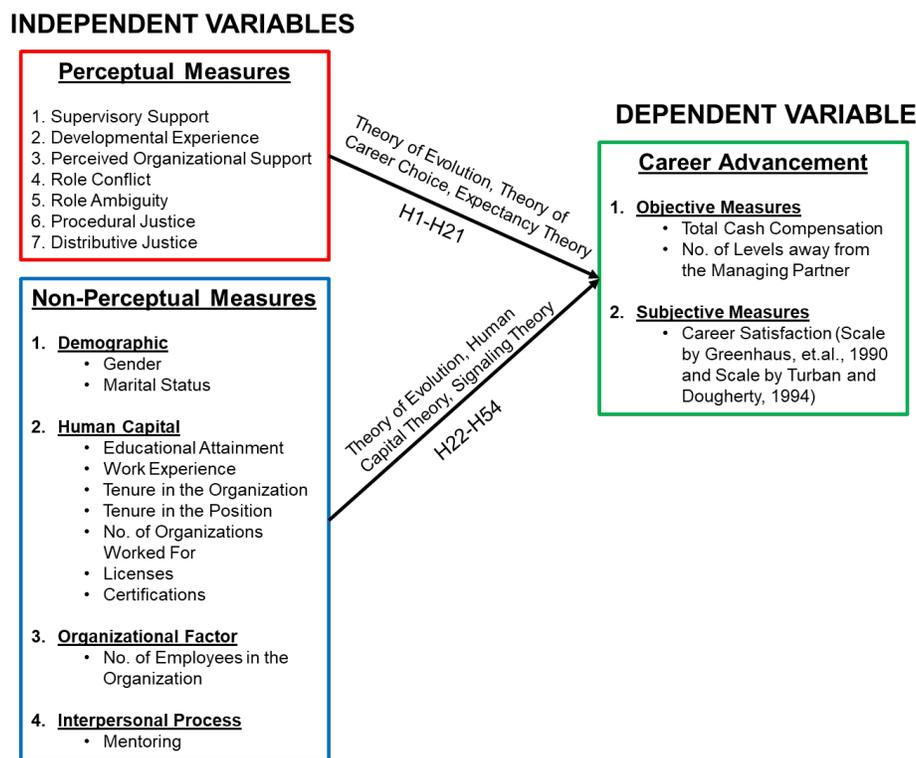


Figure 2
Effects of Perceptual Measures on Career Advancement Model

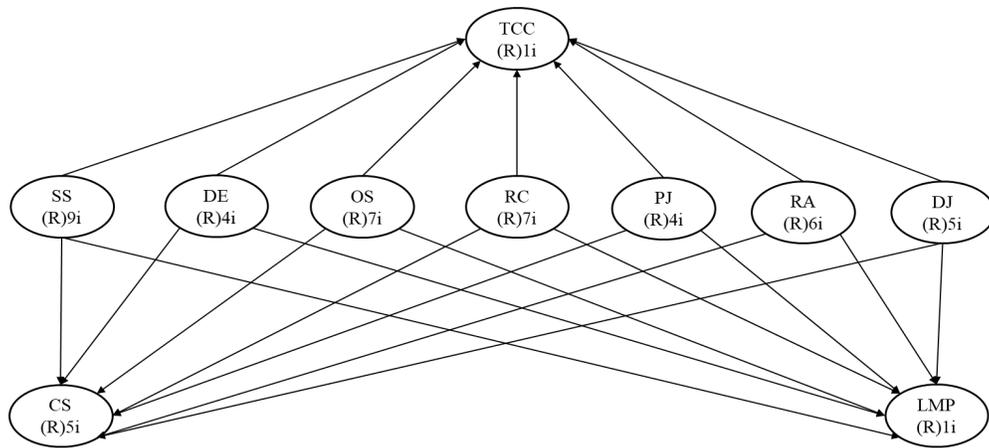
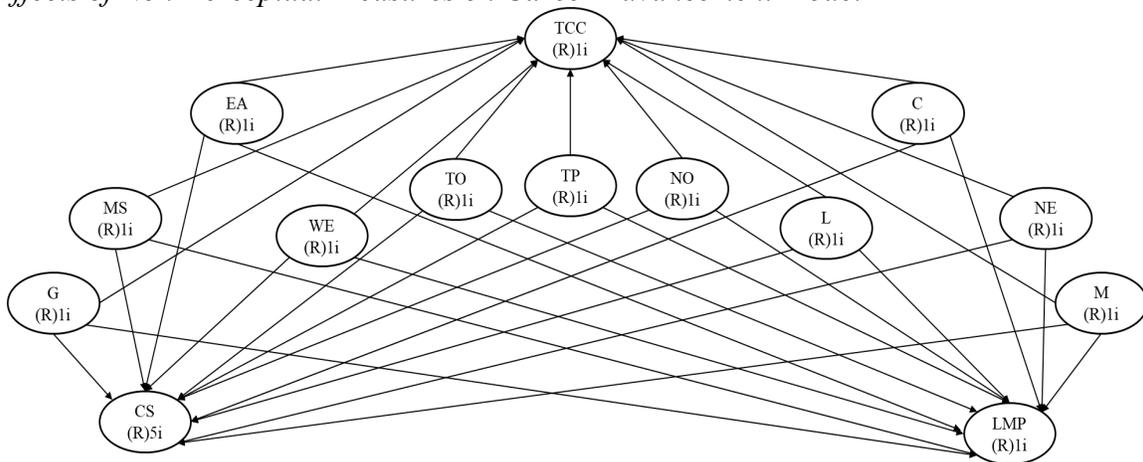


Figure 3
Effects of Non-Perceptual Measures on Career Advancement Model



Review of Related Literature

Several studies have been conducted on the effects of various factors on career advancement resulting to consistent and/or contradicting findings. The studies found focused primarily on the effects on salaries and perceived career satisfaction, with limited information on the effects on the number of levels away from the managing partner. Table 1 presents the a-priori expectations in the study based on previous literature gathered and results of studies previously documented.

For the effects of perceptual measures on career advancement, the results of previous studies show the same and consistent results even if the studies are done in various contexts. For the effects of non-perceptual measures on career advancement, studies reveal different results. This study, however, aimed to contribute insights on the effects of perceptual measures on career advancement with evidences from the accountancy practice in the Philippines.

Table 1
A-priori Expectations

Effect of	A-priori Expectations	Supporting Studies
Supervisory Support on Career Advancement	+	Greenhaus, Parasumaran & Wormely (1990), Ng, Eby, Sorensen & Feldman (2005), Thurasamy, Lo, Amri & Noor (2011)
Developmental Experience on Career Advancement	+	Ng, Eby, Sorensen & Feldman (2005), Supangco (2011)
Perceived Organizational Support on Career Advancement	+	Jawahar & Hemmasi (2006), Karatepe (2011), Loi & Ngo (2008)
Role Conflict on Career Advancement	-	Bedeian & Armenakis (1981), Igbaria & Guimaraes (1999)
Role Ambiguity on Career Advancement	-	Bedeian & Armenakis (1981), Igbaria & Guimaraes (1999), Supangco (2011)
Procedural Justice on Career Advancement	+	Loi & Ngo (2008), Saraih, Ali & Khalid (2015), Supangco (2011)
Distributive Justice on Career Advancement	+	Kim (2017), Saraih, Ali & Khalid (2015)
Demographics on Career Advancement		
<i>Gender</i>	+/-	Supangco (2011), Thurasamy, Lo, Amri & Noor (2011), Gerson, et.al. (2007), Windsor & Auyeung (2004)
<i>Marital Status</i>	+/-	Judge, Cable, Boudreau & Bretz (1994), Ng, Eby, Sorensen & Feldman (2005), Pfeffer & Ross (1982), Supangco (2011), Thurasamy, Lo, Amri & Noor (2011)
Human Capital on Career Advancement		
<i>Educational Attainment</i>	+	Judge, Cable, Boudreau & Bretz (1994), Ng, Eby, Sorensen & Feldman (2005)
<i>Work Experience</i>	+/-	Ng, Eby, Sorensen & Feldman (2005), Supangco (2001), Supangco (2011), Whitely, Dougherty & Dreher (1991)

<i>Tenure in the Organization</i>	+	Ng, Eby, Sorensen & Feldman (2005), Supangco (2011), Thurasamy, Lo, Amri & Noor (2011)
<i>Tenure in the Position</i>	+/-	Ng, Eby, Sorensen & Feldman (2005), Supangco (2011)
<i>No. of Organizations Worked For</i>	-	Supangco (2011)
<i>Licenses and Certifications</i>	-	
Organizational Factor (No. of Employees in the Organization) on Career Advancement	+/-	Judge, Cable, Boudreau & Bretz (1994), Ng, Eby, Sorensen & Feldman (2005), Supangco (2001), Supangco (2011)
Interpersonal Process (Mentoring) on Career Advancement	+	DeCastro, Griffith, Ubel, Steward & Jagsi (2014), Ismali (2007), Whitely, Dougherty & Dreher (1991)

The study primarily focused on the factors affecting career advancement of managers, directors and partners of the top 6 auditing firms in the country. While there have been studies exploring the effects of various perceptual and non-perceptual measures on objective and subjective career advancement, some studies show different results. Additionally, they were conducted in various contexts which may have changed over time.

None of the previous studies have tried to determine factors affecting objective and subjective career advancement of CPAs in the Philippines using the perceptual and non-perceptual measures as used in the study. This study progressed incorporating all related studies to contribute meaningful insights about career advancement of professional accountants with evidences from the Philippines.

Methodology

Research Design

The study utilized the descriptive-quantitative type of research and causal-explanatory method. It used primary data which are gathered directly from the survey questionnaires that the respondents answered. The survey questionnaire includes scales and statements developed by various researchers. To ensure that the research instrument is valid and applicable to the current study, the researcher submitted the questionnaire to the Institutional Testing and Evaluation Office (ITEO) of DLSU for validation. Moreover, to measure the reliability of the scale used in the survey questionnaire, the Cronbach's alpha for each of the variables was computed.

Population and Sampling Design

The population in the study was limited to CPAs who are managers, directors, and partners in the top 6 auditing firms in the Philippines. These are the top 6 most sought-after auditing firms by the country's leading companies included in the 2015 and 2016 edition of BusinessWorld's Top 1000 corporations in the Philippines. There are a total of 11,635 professionals working in said

firms and a total of 1,636 managers, directors, and partners. The study used the GPower software in conducting the power analysis. It yielded a conservative sample size of 208. This means that the present study requires a minimum sample of 208 to achieve a statistical power of 80% for detecting a small to medium effect size of .085, with a 5% level of significance. The sample size per firm was proportionally determined.

Data Analysis

Descriptive statistics presented the coefficients summary of the data set using mean, standard deviation and frequency distribution for all variables used in the study. It was utilized in order to summarize and provide a comprehensive description of the data collected. The researcher used the data analysis function in Excel.

Structural equation modeling (SEM) employing the partial least squares (PLS) method or PLS-SEM is being used extensively in various fields. The present study employed PLS-SEM to investigate the relationship among the variables under consideration, specifically in testing the following hypotheses: H₁ to H₂₁: Effects of the perceptual measures on total cash compensation, number of levels away from the managing partner and career satisfaction and H₂₂ to H₅₄: Effects of the non-perceptual measures on total cash compensation, number of levels away from the managing partner and career satisfaction. Internal Consistency and Reliability, Convergent Validity, Discriminant Validity, Multicollinearity, Coefficient of Determination and Effect size using Cohen's F² Model were also examined.

Results and Discussion

Descriptive Statistics

The researcher was able to gather 212 responses from the online survey questionnaire distributed to managers, directors, and partners of the top 6 auditing firms in the Philippines. Table 2 shows the demographic profile of the respondents. Almost half of the respondents (103) are from Firm A, 31 are from Firm B, 22 each from Firm E and Firm F, 19 are from Firm C and 15 are from Firm D. The sample size per firm was proportionally determined based on the total number of managers, directors, and partners in the said firm. Majority of the respondents (165) are managers, 42 are directors and 5 are partners. Out of the 212 respondents, 117 of them are females and 95 are males. Majority of the respondents (137) are single, 72 are married, 2 are widowed and 1 is separated.

Table 2
Demographic Profile of the Respondents

Variable	Frequency	Percent	Rank
<i>Company/Organization</i>			
Firm A	103	48.58	1
Firm B	31	14.62	2
Firm C	19	8.96	5
Firm D	15	7.08	6
Firm E	22	10.38	3.5
Firm F	22	10.38	3.5

Total	212	100.00	
Job Level			
Manager	165	77.83	1
Director	42	19.81	2
Partner	5	2.36	3
Total	212	100	
Gender			
Male	95	44.81	2
Female	117	55.19	1
Marital Status			
Single	137	64.62	1
Married	72	33.96	2
Divorced	0	0.00	5
Separated	1	0.47	4
Widowed	2	0.94	3
Total	212	100.00	

Table 3 shows that the highest educational attainment of the 140 respondents is bachelor's degree, 63 have master's degrees and only a small percentage of the respondents have doctorate degrees and diploma (post-baccalaureate).

Table 3

Profile of the Respondents on Human Capital Measures

Variable	Frequency	Percent	Rank
Highest Educational Attainment			
Bachelor's Degree	140	66.04	1
Diploma (Post-baccalaureate)	2	0.94	4
Master's Degree	63	29.72	2
Doctorate Degree	7	3.30	3
Length of Work Experience			
1 to 5 years	38	17.92	3
6 to 14 years	126	59.43	1
15 to 20 years	40	18.87	2
Above 20 years	8	3.77	4
Tenure in the Present Organization			
1 to 5 years	81	38.21	2
6 to 14 years	118	55.66	1
15 to 20 years	9	4.25	3
Above 20 years	4	1.89	4
Total	212	100.00	

Tenure in the Present Position

1 to 5 years	187	88.21	1
6 to 14 years	22	10.38	2
15 to 20 years	2	0.94	3
Above 20 years	1	0.47	4
Total	212	100.00	

Number of Organizations Worked For Since Graduation

1 to 2	121	57.08	1
3 to 4	78	36.79	2
5 to 6	12	5.66	3
More than 6	1	0.47	4
Total	212	100.00	

Holder of other professional licenses aside from CPA license

Yes	27	12.74	2
No	185	87.26	1
Total	212	100.00	

Holder of other professional certifications

Yes	71	33.49	2
No	141	66.51	1
Total	212	100.00	

Almost 60% (126) of the respondents have 6 to 14 years of work experience while only few have been in the professional service for more than 20 years. Moreover, 118 of the respondents have been in their present organization for 6 to 14 years and 187 have been in their present position for 1 to 5 years. In addition, 121 of the respondents have worked for 1 to 2 organizations since graduation. Only 27 respondents are holders of other professional licenses and 71 are holders of other professional certifications.

Table 4*Profile of the Respondents on Organizational and Interpersonal Process Factors*

Variable	Frequency	Percent	Rank
Career Mentor			
Yes	140	66.04	1
No	72	33.96	2
Total	212	100.00	
Number of Employees in the Present Organization			
Less than 1,000	48	22.64	3
1,000 to 2,000	53	25.00	2
2,001 to 3,000	4	1.89	6
3,001 to 4,000	5	2.36	5
4,001 to 5,000	22	10.38	4
More than 5,000	80	37.74	1

Total	212	100.00
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Table 4 reveals that 140 of the respondents indicated that they have career mentor. In addition, about half of the respondents indicated that there are more than 3,000 employees in their present organization.

Table 5

Summary of Responses on the Objective Measures of Career Advancement

Variable	Frequency	Percent	Rank
Monthly Gross Salary or Income			
Below P20,000	1	0.47	7
P20,000-P39,999	21	9.91	4
P40,000-P59,999	64	30.19	2
P60,000-P79,999	71	33.49	1
P80,000-P99,999	36	16.98	3
P100,000-P150,000	13	6.13	5
Above P150,000	6	2.83	6
Total	212	100.00	
Number of Levels Away from the Managing Partner			
0	2	0.94	7
1	9	4.25	6
2	47	22.17	2
3	52	24.53	1
4	45	21.23	3
5	31	14.62	4
More than 5	26	12.26	5
Total	212	100.00	

Table 5 shows the two objective measures of career advancement: total cash compensation and number of levels away from the managing partner. As shown in the table, 71 of the respondents are earning P60,000-P79,999 and 64 are earning P40,000-P59,999. Most of the respondents indicated that they are 2 to 4 levels away from the managing partner. Since majority of the respondents are managers, it can be inferred that their average cash compensation is P40,000-P79,999 with 2 to 4 levels away from the managing partner.

Table 6

Summary of the Respondents' Perceptions on the Latent Variables

Variable	Min	Max	Std. Dev.	Mean	Verbal Interpretation
Career Satisfaction (CS)	1	5	0.54	4.12	Agree
	1	5	0.80	3.75	Successful
	1	3	0.54	1.97	On Schedule
Supervisory Support (SS)	1	5	0.49	4.11	Agree
Developmental Experience (DE)	1	5	0.54	4.25	Agree

	1	5	0.70	3.89	To a Large Extent
Organizational Support (OS)	1	5	0.50	3.67	Agree
Role Conflict (RC)	1	5	0.94	2.52	Neither Agree nor Disagree
Role Ambiguity (RA)	1	5	0.48	4.14	Agree
Procedural Justice (PJ)	1	5	0.46	4.18	Agree
Distributive Justice (DJ)	1	5	0.82	3.76	Agree

To summarize, results show that most of the respondents agree on the question-statements on perceived supervisory support, organizational support, role ambiguity, procedural justice, and distributive justice. For role conflict, most of the respondents are neutral while for developmental experience, the respondents indicated that they agree and to a large extent on the given statements. For career satisfaction, most of the respondents agree that they are satisfied and successful in their careers and they are on schedule.

Figure 4
Effects of Perceptual Measures on Career Advancement Model with Path Coefficients

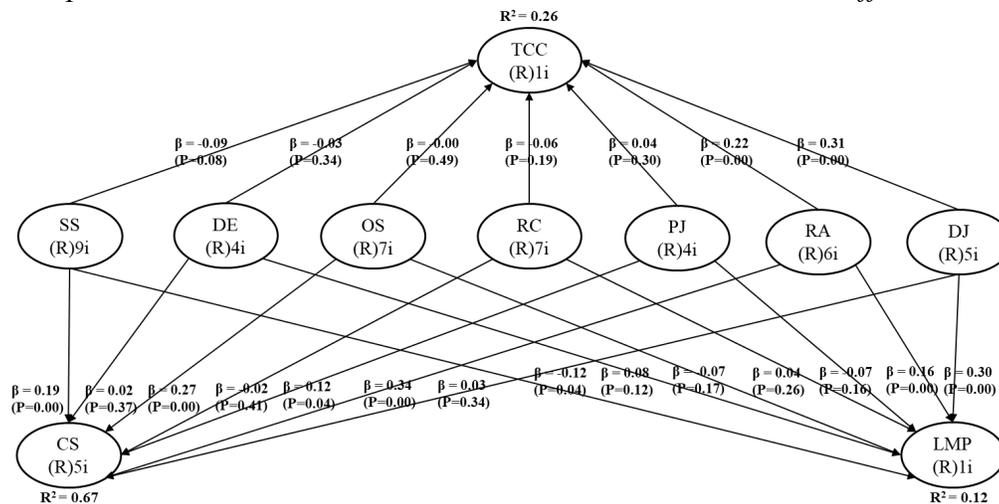


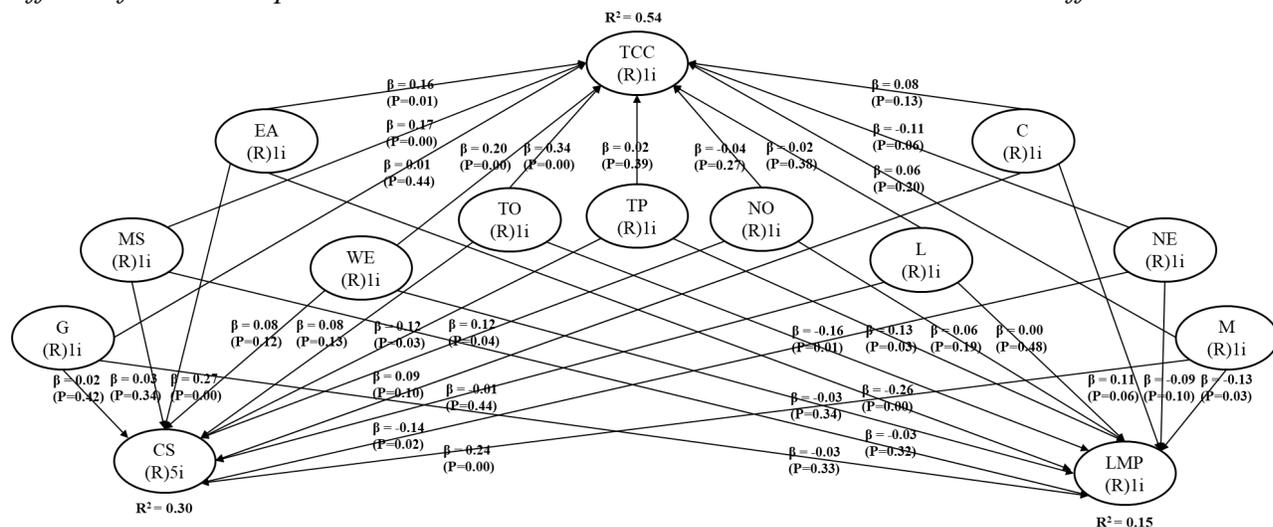
Table 7
Summary of the Effects of Perceptual Measures on Career Advancement

Model 1			
Independent Variable	TCC	LMP	CS
Supervisory Support (SS)		-0.121*	0.192**
Developmental Experience (DE)			
Organizational Support (OS)			0.270**
Role Conflict (RC)			
Role Ambiguity (RA)	0.219**	0.161**	0.343**
Procedural Justice (PJ)			0.120*
Distributive Justice (DJ)	0.305**	0.301**	
R ²	0.260	0.120	0.670

Note: * $p < 0.05$, ** $p < 0.01$

To summarize, Model 1 explains 26% of the variation in total cash compensation, 12% in the number of levels away from the managing partner and 67% in career satisfaction. R² or the coefficient of determination is a measure of predictive accuracy. Role ambiguity and distributive justice significantly explain the differences in total cash compensation. The distance from the managing partner is inversely related to supervisory support but positively related to role ambiguity and distributive justice. Supervisory support, organizational support, role ambiguity and procedural justice are all positively related to career satisfaction.

Figure 5
Effects of Non-Perceptual Measures on Career Advancement Model with Path Coefficients



To summarize, Model 2 explains 54% of the variation in total cash compensation, 15% in the number of levels away from the managing partner and 30% in career satisfaction. Educational attainment, work experience, and tenure in the organization positively influence total cash compensation, while single employees earn less than married, separated, and widowed employees

in the sample. The distance from the managing partner is inversely related to educational attainment, tenure in the organization, and mentoring but is directly related to tenure in the organization. Educational attainment, tenure in the position, number of organizations worked for since graduation, and mentoring are all positively related to career satisfaction, while the number of employees in the organization is negatively related.

Table 8
Summary of the Effects of Non-Perceptual Measures on Career Advancement

Model 2			
Independent Variable	TCC	LMP	CS
Gender (G)			
Marital Status (MS)	0.167**		
Educational Attainment (EA)	0.155*	-0.255**	0.270**
Work Experience (WE)	0.204**		
Tenure in the Position (TP)		0.127*	0.123*
Tenure in the Organization (TO)	0.341**	-0.163**	
No. of Organizations Worked For (NO)			0.120*
Licenses (L)			
Certifications (C)			
No. of Employees in the Organization (NE)			-0.137*
Mentoring (M)		-0.132*	0.238**
R ²	0.54	0.15	0.30

*Note: *p<0.05, **p<0.01*

Conclusions

The study clearly shows that career advancement of a professional accountant depends on the actions of both the organization and the individual. The study also identified various perceptual and non-perceptual measures that determine career advancement.

Perceptual measures that account for difference in total cash compensation include role ambiguity, which signifies that clarity on one's role job responsibility and authority affect one's salary level; and distributive justice, which indicates that employees who perceive that their work schedule, level of pay, workload, rewards received, and job responsibilities are fair tend to receive higher cash compensation. Non-perceptual measures that positively influence total cash compensation are marital status, work experience, and tenure in the organization. CPAs who are married, with longer work experience, and with longer tenure in the organization tend to receive higher compensation. The added responsibility of being married gives an additional motivation and reason for employees to work harder and accept more challenging assignments. Both work experience and tenure in the organization are human capital factors. As employees accumulate human capital, their value in the marketplace increases as they bring more expertise and effectiveness to their job tasks, thus the employees with longer work experience and service tenure enjoy a higher compensation.

Number of levels away from the managing partner is explained by supervisory support, role ambiguity, and distributive justice. Employees who have good assessment on the perceived

support that they get from their supervisors in doing their jobs are positioned nearer to the level of the managing partner. Interestingly, employees who have clear understanding of their role and authority and those who perceive that their work schedule, level of pay, workload, rewards received, and job responsibilities are fair tend to be in a job level that is farther of that of the managing partner. The model explaining the number of levels away from the managing partner shows that tenure in the organization and mentoring are inversely related while tenure in the position is directly related. The results indicate that CPAs who stay in their present position for so long are positioned farther away from the managing partner but those who have stayed longer in their present organization and those who have career mentors would have job levels that are nearer to that of the managing partner. The length of stay in the present position and the present organization has an effect on one's job level. Staying in a position for too long creates a feeling of stagnation in one's career. But staying in the present organization for too long may mean that one is satisfied with the present work environment and may also mean loyalty to the organization which is being reciprocated with promotions leading to a job level that is nearer to the managing partner. Moreover, based on the result, career mentoring is related to promotion rate which leads also to a job level that is nearer to the managing partner. The mentor imparts knowledge and skills to the protégé. As these accumulate, they become part of human capital that contribute to one's productivity which may lead to promotions.

Perceived career satisfaction is influenced by four perceptual measures namely supervisory support, organizational support, role ambiguity, and procedural justice. This means that supervisor's and organization's support are critical to an employee's career satisfaction. The more the supervisors and the organization, as a whole, support their employees considering their career goals and values, care about their well-being and general satisfaction as well as extend themselves in order to help their employees perform their jobs to the best of their abilities, the more that they feel satisfied with the success they have achieved in their career. Moreover, employees feel satisfied with the progress they have made toward meeting their overall career goals including goals for income, advancement, and development of new skills. When employees are involved in making decisions that directly affect their work and in implementing such decisions, they also feel satisfied at work. Other factors that positively influence career satisfaction are tenure in the position, number of organizations worked for after graduation and mentoring. Number of employees in the organization is indirectly related. CPAs who have stayed longer in their current position, who worked for more organizations after graduation and with career mentors tend to be more satisfied in their careers while employees in large organizations feel less satisfied. Employees who have worked in many organizations bring more expertise and effectiveness to their job tasks which may lead them to feel satisfied with their career progress. The presence of a career mentor is also critical in one's perception to career satisfaction as the mentor helps the protégé with workplace learning and leadership principles in career advancement. Other things being equal, those in larger organizations may feel less satisfied as to their career progress as larger organizations have more complex work set-up.

Recommendations

In the light of the conclusions of the study, the researcher strongly recommends the following:

Professional Accountants. It is recommended that professional accountants consider pursuing diploma courses, master's and doctorate degrees that are related to their jobs in order to

develop their knowledge and skills. In addition, professional accountants must establish a relationship with a more experienced person who can be their career mentor who can impart learning and leadership principles which the protégé can utilize. Furthermore, professional accountants must also undertake different examinations to earn additional licenses and certifications. In doing so, new knowledge and skills can be gained and as they accumulate, their value in the marketplace will definitely increase. Career plans and strategies may be derived directly from the variables that turned out to be significant in explaining career advancement. The results should give the professional accountants insights in making sound decisions about what path to take, goals to pursue and how to achieve them. Developing effective career strategies is important, especially now that RA 10912 or the PQF Act has been approved, in evaluating one's career progression.

Auditing Firms. Firms must encourage and support their employees in their attempts to acquire additional training or education to develop their skills and knowledge for their personal and professional growth. The firms must offer scholarships for their employees who want to take their master's and doctorate degrees. In addition, firms should use the results as a baseline data on their assessment of the company's current practices, policies and the company culture as a whole in ensuring that their employees are supported well, feel satisfied and have continuous development. The firms must continue to look for ways on how to support their employees, to care about the well-being and general satisfaction at work and to always extend themselves to help their employees progress in their careers.

PRBOA, PICPA and ACPAPP. The Professional Regulatory Board of Accountancy (PRBOA) should utilize the findings of the study for them to have an overview of the current profile of the professional accountants working in the top 6 auditing firms in the Philippines. Specifically, they use the results as an additional input in the formulation and implementation of the career progression and specialization program for accountants. It is further recommended that PICPA and ACPAPP should consider conducting needs assessment on what particular trainings and seminars are needed to develop the knowledge and skills of the professional accountants working in the public practice sector. In doing so, they will be helping the professionals in their career progression. PRBOA, PICPA and ACPAPP must make sure that roles and responsibilities of professional accountants have predictability, clarity, and certainty especially in dealing with clients. They must provide continuous assistance to practitioners in improving the quality of their audit works and in determining the level of compliance with the requirements of the Philippine Standard on Quality Control or PSQC.

Future Researchers. The researcher recommends the academic community to utilize the current study as a future reference for academic discussions on topics related to career advancement and the different measures and variable used. Moreover, future researchers can explore into other measures that can indicate the variables at hand, especially on licenses and certifications, and can also explore on the possible effect of job ranks in career advancement. A similar study can also be conducted utilizing the 2nd tier firms and the professional accountants from other sectors (Commerce and Industry, Government and Academe) in the accountancy practice.

About the Lead Researcher



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Accounting Information System of Selected Private Schools

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Abstract – At present, majority of private schools are dying due to inability to meet finances. Failure to have proper reports on time lead the decisions to fail. Generated reports from AIS will be used by decision makers such as school directors, finance officers and the like in order to have a good judgment and decisions in present situation. Once basis of decisions is ineffective, decisions made will be ineffective and may harm sustainability of the schools. Utilized the descriptive method of research. Respondents of study were all users of AIS in selected private schools. Instrument used was a survey questionnaire by which data were gathered. Weighted mean and percentage were computed to determine extent of effectiveness of AIS. Findings revealed General Ledger System (GL Sys) is most effective in terms of timeliness and other aspects of AIS, Customized AIS for accuracy, and QuickBooks for efficiency, reliability and completeness. Likewise, respondent's assessment of school's AIS in terms of timeliness, validity, accuracy, efficiency, reliability, completeness and other aspects is effective for all AIS under study- Quickbooks, GL Sys and Customized AIS. In conclusion, respondents' assessment on the effectiveness of school's AIS in terms of timeliness, validity, accuracy, efficiency, reliability, completeness and other aspects was effective for Quickbooks, GL Sys and Customized AIS. Respondents' perceptions on effectiveness of AIS when grouped by profile were effective. Biggest problems encountered by users include AIS failure and internal control (Quickbooks), internal control (GL Sys) and data accuracy (Customized AIS).

Keywords: *AIS, Accounting Information System, Effectiveness, GL Sys, Quickbooks, Private Schools*

Accounting is the language of business. It is a means of reporting the financial information of business activities, whether in public or in private sector to the relevant direct and indirect users. It is for this reason that users of the information must understand the financial reports either manually or electronically done. Accounting reports are communications usually in writing, bringing attention of the recipient information which is substantially financial in nature to enable the latter to make informed judgment and effective decisions according to Arganda (1984). This study believes that sound decision making can be derived from effective reporting financial information which will be used by the decision makers when they plan, organize, decide, and manage their business. Over the years, private schools mushroomed making it difficult to survive the competition. The economic crisis such as brought about by pandemic COVID-19 prevents the parents from sending their children to private schools. With these problems confronting the private schools, the school administration needs decision makers who have the immediate answers to the problems that arise in the management and financial administration. This can only be done if the school has an effective Accounting Information System (AIS) that provides accurate, valid, efficient, complete, reliable, and timely financial information. In this way, the decision makers may produce precise decisions.

Over the past 50 years, a number of different approaches or models have represented accounting information systems. Each new model evolved because of the shortcomings and limitations of its predecessor. An interesting feature in this evolution is that the newest technique does not immediately replace older models. Thus, at any point in time, various generations of systems exist across different organizations and may even coexist within a single enterprise. The modern auditor needs to be familiar with the operational features of all AIS approaches that he or she is likely to encounter.

Theoretical Framework

According to Nicolaou (2000), the contingency theory examines the requirements for entity coordination and control, which will have an impact on the accounting information system's integration. Information interdependence among functional domains, as well as interorganizational information sharing and electronic data interchange links, are examined as part of the requirements, depending on the degree of organizational formalization. The fit of a system's integration with its requirements is a significant general concept that influences perceptions of its efficacy.

Conceptual Framework

The study was posited on the concept that accounting information systems and operational procedures can be improved through the analysis of the effectiveness of the AIS and procedures, identification of problems in the operation of AIS, analysis of AIS and procedures which need improvement and recommendations for improvement (See Figure1).

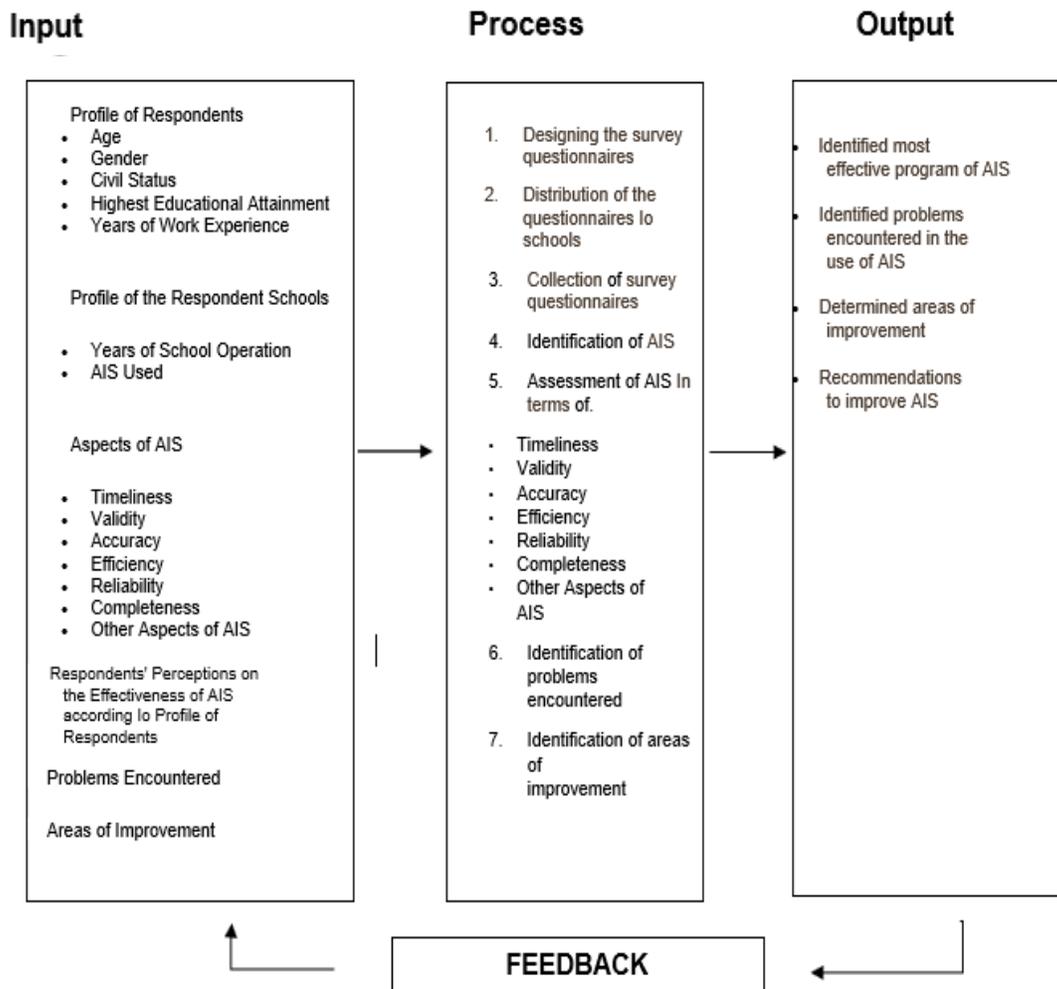


Figure 1
Research Paradigm

The independent variables of this study included the age, gender, civil status, highest educational attainment, and years of experience of the respondents. The profile of the respondent-schools was also included in the independent variables and these include the years of school operation and the AIS used. On the other hand, the dependent variables consisted of the efficiency, timeliness, accuracy, completeness, validity, reliability, and other aspects of AIS, problems encountered in the use of AIS and the areas of improvement.

The researchers designed the survey questionnaires then distributed them. After this, the survey questionnaires were collected. The data gathered tabulated, analyzed, and interpreted. After

these were the assessment of the aspects of AIS and the different problems and areas for improvement and the presentation, analysis, and interpretation of the data.

The program of AIS of the respondents and the problems encountered in the use of AIS, the areas of improvement were identified. In the end, the study came up with recommendations to ensure effective AIS.

Statement of the Problem

This study aimed to assess the effectiveness of accounting information system of selected private schools. More specifically, this study sought answers to the following questions: (1)What is the profile of the respondents in terms of :Age, Gender, Civil Status, Highest Educational Attainment, Years of Work Experience (2)What is the profile of the respondent-schools in terms of: Year of School Operation and Accounting Information System(AIS) used (3)what is the respondents' assessment on the effectiveness of the schools' AIS in terms of the following aspects: Timeliness, Validity, Accuracy, Efficiency, Reliability, Completeness, and Other aspects of AIS (4)What are the respondents' perceptions on the effectiveness of AIS when they are grouped according to the profile of the respondents? (5) What are the problems encountered by the respondents in the use of AIS? (6) What are the areas of AIS that needs improvement as perceived by the users?

Review of Related Literature and Studies

Related literature and studies under review indicated the indispensability of an operating accounting information system to speed up the operation as efficiently and accurately as possible that would fit the need of any entity. In this present age, an accountant who goes beyond his expertise in financial accounting area must be computer literate and must have workable knowledge of accounting information systems, for how can an accountant interpret and analyze outputs of a system and aid in the design of user format reports to cater to the decision makers' needs if he does not have an overview of AIS. With that knowledge, he can adopt an accounting system that is appropriate in a given industry and company as well.

Accounting Information System

As per Indeed Editorial Team (2021), “An accounting information system (AIS) is an essential tool that companies use to monitor their finances and make decisions for the company’s overall health. AIS ensures the highest level of accuracy with the company's financial transactions and record-keeping. It also allows specific employees to access the information they need while limiting sensitive information to others and protecting the overall security of company data. An AIS increases a company's ability to detect fraud and helps it ensure that its finances are running smoothly. A well-designed AIS allows everyone within the company to access the same system and retrieve the same information.”

Efficiency

As per Ndungutse (2020), in the study Impact of Accounting Information System on Effectiveness of Adventist Secondary School. Case Study of Gisenyi, the final results indicate that there is a significant contribution of accounting information system on effectiveness of secondary school. all accounting information system variables jointly have positive and significant effect on School fees recovery in Gisenyi Adventist Secondary School However; some weaknesses were

found and the researcher has provided recommendations to Gisenyi Adventist Secondary School to train the users of accounting information system and other related activities which include data collection, data processing and information production in order to retain better effectiveness of secondary schools.

Timeliness

Studies included of the same subject matter but in different industries or entities or of topics as to the parts of the whole accounting system. Like, the study conducted by Matias (2007) and Agerfalk (2003), related in the manner of using the software (electronic or automated system) of accounting and utilization of internet to speed up the process. Such advanced information technology (IT) will improve the accounting information system of selected private school.

Reliability

According to Nguyen (2021) that there is an intimate relationship between system content and user's satisfaction. Likewise, says that effectiveness of the tools introduced into the website is just as important as their presence. A system must do more than just allow users to use it; it must also support them. The user should have the impression that the system is coherent, compact, sequential, and logical when using tools on a website.

Completeness

Robles and Empleo (2006) discussed the importance of AIS in business. They claim in the Intermediate Accounting Volume 3 that the primary objective of financial reporting is to provide information that is useful to current and potential investors and creditors and other users in making rational investment, credit, and similar decisions. This study also believes as they do that financial report provides quantitative information, primarily financial in nature, about economic entities that is intended to be useful in making business decision.

Accounting information systems within the entity are described by Meiryani, Suzan, Tsudrajat, Daud (2020) as an instrument to improve the quality and efficiency of the entity, increase its worth in terms of correctness, timeliness, and completeness.

Accuracy

According to Fontinelle (2022), the major purpose for using the AIS is to provide the highest level of accuracy in a company's financial reporting and bookkeeping, as well as to make financial reports generated easily and such data is in-tact and safe.

Validity

According to Go (2009) of Entrepreneur magazine, management decisions are vital and need to be guided by a valid financial information found in the Books of Accounts.

Electronic commerce, or e-commerce, is gaining wide acceptance with the unceasing improvement in cyber-technology, according to Libre (1998) in his column "Notes entitled Meeting Constant Change" of Accountants Journal. Transactions can now be completed without the use of a single piece of paper. Analysis is easier with all the available tools that come with each computer. Dependence on this form of technology, such as Accounting Information System, has even raised the scepter of panic. In the field of Accountancy, traditional bookkeeping and the manual preparation of financial statements may soon become things of the past.

Other Aspects of AIS

According to Aragon, Pestano, Lawas, Villanueva, and Reboton (2002), like the books of accounts, the accounting cycle is a helpful tool in determining the completeness of accounting information generated. This accounting cycle is the set of functions or operations a business enterprise performs within one accounting period to keep the accounting books and records in a systematic and orderly manner. At the end of the accounting period, determine which of the general ledger accounts require adjustments. It is necessary to understand why adjustments are made when no apparent errors are committed in the books. The output of accounting cycle, in order to be useful, requires validity, timeliness and accuracy. To do this, it is imperative that a business organization chooses the applicable accounting systems to achieve its mission and vision through reliable financial information. This study believes that sound choice of accounting systems will lead to business stability.

Literatures well-reviewed included were all related to this study on accounting information system. They talked about the basic definition of accounting system, accounting information system, types of information system as well as other subsystems that helped the researcher for in-depth understanding of the subject matter.

Research Method

Since this is a fact-finding study that describes the current situation in the Accounting/Finance Department relative to accounting information systems and procedures of selected private school, the descriptive method of research was utilized. Observation, interview, survey with the use of questionnaire and documentary analysis were also utilized in data collection. Manuel and Medel (1976) define descriptive research as the research describes what is. It involves the description, recording, analysis, and interpretation of the present nature, composition of processes of phenomena.

In the preparation of this study, the researcher employed the survey method in the use of questionnaire in gathering the data. Since the study was centered on accounting information systems and procedures, the researcher made observations of the existing accounting information systems (AIS) in the Accounting/Finance Department. The officers and actual users of the system were interviewed and the problems and their suggested enhancements of the systems were considered. The researcher utilized the use of questionnaires as the easiest and fastest ways to collect data because the respondents were all from the Accounting/Finance Department. Those who were not actual users of accounting information systems were not included.

Population

The population of the study consisted of personnel from Accounting/Finance Department such as Accountants, Auditors, Finance Officers and staff. Other respondents were School Directors, Principals, Registrar's and users of AIS from different departments. No sampling technique was used since all the users of AIS were respondents. The respondents of this study, including the Private Schools that are members of Manila Archdiocesan Parochial School Association (MAPSA) and Diocese of Antipolo Catholic School Association (DACSA) in the Diocese of Antipolo, located at Rizal Province and some part of Marikina City, Metro Manila, were: San Francisco Parish School — Cardona, Rizal, Binangonan Catholic College - Binangonan, Rizal, St. Jerome's Academy — Morong, Rizal, St. Joseph Parish School — Baras, Rizal, San

Ildelfonso College — Tanay, Rizal, St. Michael Parish School — Jala-jala, Rizal, Colegio de San Clemente — Angono, Rizal, St John De Baptist Parish School — Taytay, Rizal, Cainta Catholic College — Cainta, Rizal, Sacred Heart Parish School — Cainta, Rizal, Marikina Catholic School — Marikina City, Manila, Nativity of Our Lady Parochial School — Marikina City, Manila, Nuestra Senora de Aranzazu — San Mateo, Rizal, Sta.Cecilia Parochial School — San Mateo, Rizal, and Our Lady of Pea. School — Antipolo City. Out of fifteen (15) schools mentioned, only ten (10) schools were selected respondents since they were the ones who are currently using the AIS.

Research Instrument

The instrument used to collect data was the questionnaire. This was used because it gathers data faster than any other method. Besides, the respondents were Finance Officers, finance/accounting staff, and other users of AIS so they could read, understand, and answer appropriately the questionnaire. For validation purposes, the set of questionnaires were given to five (5) personnel for a dry run to see if the questions were clear and unbiased and to see if the questions would draw out interest for the reader's to cooperate. These five (5) personnel were excluded in the tally of responses. The respondents for this dry run found the questions clear and interesting to answer because it was the first time for them to evaluate their AIS. However, there was one (1) question or statement that needed to be recast to make it more clearly to the respondents. These were the questions on the ranking of problems encountered in Problem 4 wherein it was not indicated before the choices of possible answers. Another change made was on the respondents' name and position and school's name. Majority including the officers insisted that no name, position, and school should be indicated. Thus, the researcher added the statement that the respondents and school may or may not state their names, positions, and schools.

The first part of the questionnaire refers to the profile of the respondents. The information needed were the name of the respondent, position, age, gender, civil status and highest educational attainment. This informed the researcher about the status of the respondents who assessed the effectiveness of AIS. The status of the respondents affected the assessment made to the AIS. In addition, the first part of the questionnaire also included the profile of the respondent school such as the Year of operation of the school, AIS used and the name of the school. In this question, the researcher became aware of the AIS used in the schools to help her properly analyze and interpret the data gathered.

The second part of the questionnaire referred to the assessment of the AIS based on the aspects of AIS: timeliness, validity, accuracy, efficiency, reliability, completeness, and others. Other aspects included the AIS support group, AIS Internal control, user-desired format, report generation, AIS response time, AIS facility, AIS Failure, AIS accounting procedures, and users of AIS.

The third part of the questionnaire referred to the ranking of the problems encountered in the used of AIS and the strongest area that needed improvement. This helped the researcher gather information about the current problems the AIS users encountered in their respective AIS. Likewise, the improvements needed as viewed by the users of AIS gave pieces of evidence on pursuing the change in the strongest area of improvements.

Data-Gathering Procedure

The researcher personally gathered and handled the collection of data. The data were gathered on the day the recipients received the questionnaires and the day after receiving the said questionnaires. No special teams were involved, only the assistant who helped in the collection of the questionnaires. Difficulties encountered were the availability of time, emergency activities, health, family matters, and workload of the recipients. Also, the schools are far from one another and located within Marikina City, Manila. The researcher gathered the data in a week with a continuous follow — up. This was to remind the respondents of the importance of the said questionnaires. Phone calls, emails, text messages, and visit were a big help in speeding up the data collection. Once two or three schools were ready with the said questionnaires at the same time but at different location, an, person who assisted the researcher did the data collection.

Permission was requested from the School Director to conduct interviews and sow, responses from respondents by way of questionnaires. Copies of the revised questionnaires were distributed to respondents in the main office. Although it was mentioned to the respondents that the questionnaire would be collected as soon as possible due to time constraints, the researcher had to remind them about their responses. Also taken into account was the General Ledger System (GL Sys) User's Manual. As an actual user of the GL Sys, the researcher did not have a hard time comparing the system with the program menu as seen in the monitor. The Chart of Accounts and Manual of Operations provided sources of data and information relevant to the accounting procedures. Table 1 presents the summary of respondents in this study.

Table 1
Summary of Respondents

Types of AIS used	Number of Respondents
Customized AIS	32
QuickBooks	15
GL Sys	53
Total	100

Statistical Treatment of Data

With the advent of the computer age, statistics is now playing an indispensable role in research and so with this study. Statistical treatments give meaning and interpretation to data gathered. Statistical techniques help the researcher in determining the validity and reliability of research instruments. Statistical tools used in the analysis of data gathered included the weighted mean and percentage. Weighted mean statistics is defined as the summation of the observed values multiplied with the allocated weights which is divided by the summation of observed values. This is called as the statistics weighted mean.

The formula for weighted mean is below.

$$X = \frac{\sum w_i x_i}{\sum w_i}$$

Where as : x_w - weighted mean variable, w_i - allocated weighted value for the given data, x_i - observed values for the given data

The arbitrary scales in the questionnaires were 4.50 — 5.00 Very Effective, 3.50 — 4.49 Effective, 2.50 — 3.49 Neither Effective nor Ineffective, 1.50 — 2.49 Ineffective & 1.00 — 1.49 Very Ineffective

Percentage is a way of expressing a number as a fraction of 100 (per cent meaning “per hundred” in Latin). It is often denoted using the percent sign, “%”, or the abbreviation “pct”. The formula for percentage is below.

$$\frac{N}{1} x \frac{\%}{100}$$

Where as:

N – given amount

Results

Response Rates

Response rates are presented in Table 1. The AIS used by the respondents were categorized into three (3) namely: GL Sys, QuickBooks, and Customize AIS. Ten schools were using AIS, five (5) schools were using GL Sys with the total respondents of 53; two (2) schools were using QuickBooks with 15 respondents, and three (3) schools were using customized AIS with 32 respondents. The total respondents were 100. All the respondents came from the Private schools who are members of MAPSA and DACSA.

Evaluation Ratings

The study employed Likert's five-point scale in measuring the respondents' insight. Statements of opinions were presented to respondents and they were asked to indicate their degree of agreement or disagreement through a check mark. Statistical tools used in the analysis of data gathered included the weighted mean and percentage.

Discussion

This study was conducted for the purpose of evaluating the current AIS used such as Customized AIS, Quickbooks, and GL Sys of the selected private schools in Rizal Province and other parts of Marikina City that were a member schools of Manila Archdiocesan Parochial Schools Association (MAPSA) and Diocese of Antipolo Catholic School Association (DACSA) respectively. According to Go (2009) of Entrepreneur magazine, management decisions are vital and need to be guided by a reliable and timely Books of Accounts.

Profile of the respondents

After conducting the surveys through the questionnaires, one of the noted findings is that the profile of the respondents in terms of age, gender, civil status, highest educational attainment and years of work experience. Among the users in the Customized AIS, 28% or 9 respondents were in the age range 41 to 50 years old. Likewise, 40% belonged to respondents with the age range to 21 to 30 years old. The highest percentages for the three (3) AIS were all the same for the

female respondents. Customized AIS had 78% or 25 female respondents, Quickbooks for female respondents had 60% or 9 respondents, and GL Sys respondents had 79% or 42. Overall the percentage rate of female respondents was 6%. The highest percentage among the three (3) AIS came from the married respondents with overall percentage rate of 68%. Customized AIS got 63% or 20 married respondents. Quickbooks got 73% or 11 married respondents and GL Sys got 70% or 37 married respondents. Accordingly, 90% of the respondents consist of graduates with Bachelor degree. Schools with Customized AIS and Quickbooks got 100% of the respondents with Bachelor degree. GL sys 81% or 43 respondents with Bachelor degree and 19% or 10 respondents were with Masters' degree. Under Customized AIS, the highest percentage rate was attributed to 12 respondents with 21 to 30 years of work experience. Quickbooks attributed its highest percentage to respondents with work experience of less than ten (10) years. GL Sys got the highest percentage to respondents with work experience of less than ten (10) years. GL Sys got the highest percentage rate among 11-20 years of work experience.

Profile of the respondent-schools

The profile of the respondent-schools in terms of years of operation Accounting Information System Used. Quickbooks school users consisted of one (1) school that operated for less than 25 years and another one (1) school operating between 26 to 50 years. GL Sys school users consisted of 60% or three (3) schools for schools that operated between 26 to 50 years and both with one (1) school for the years of operation between 51 to 75 years and 76 to 100 years. Out of ten (10) respondent-schools, five (5) have been using GL Sys, three (3)-Customized AIS and two (2) Quickbooks.

Respondents' assessment on the effectiveness of the School's AIS

The respondents' assessment on the effectiveness of the School's AIS in terms of timeliness, validity, accuracy, efficiency, reliability, completeness, and other aspects of AIS. GL Sys got the highest grand mean of 4.54 among the three (3) AIS in terms of timeliness and Customized AIS got the lowest with weighted mean of 3.9. GL Sys got the highest score with 4.9 weighted mean in terms of submission on time of the "Daily Cash Collection Report" to the School Director. It was said that the GL Sys is full- featured accounting software that processes data quickly. The least is the customized AIS. Customized AIS depends its functions on the user desired program but not on the promptness of report generation. The "Daily Cash Collection Report", monthly summary of cash collections and disbursements, "Daily Cash Position Report", and financial report submitted to internal and external auditors and to government bodies are the reports which a certain Finance Officer meets each day. Likewise, these are the reports required under the financial management manual of MAPSA.

Respondents' perceptions on the effectiveness of AIS when grouped according to profile

The respondents' perceptions on the effectiveness of AIS when grouped according to age, gender, civil status, highest educational attainment and years of work experience. Under the Customized AIS, age of their respondents or users ranged from 21 to above 60 years old. Respondents with the age of 51 to 60 years old viewed their Customized AIS as effective with the highest grand mean of 4.20 among the age range of respondents. All respondents under Customized AIS viewed their AIS as effective with the grand mean between 3.67 to 4.18. Respondents under the age 21 to 30 years old and above 60 years old got the lowest grand

mean of 3.66 and 3.67 under the Customized AIS. Respondents under the Quickbooks consisted of AIS users with the age range from 21 to 50 years old from which the highest grand mean was attributed to the respondents with the age between 21 to 30 years old.

Problems encountered by the respondents in the Use of AIS

The schools that use the Customized AIS ranked data accuracy as the biggest problem. Quickbooks users perceived that the AIS Failure and Internal Control are the number 1 problem. GL Sys users view Internal Control as their biggest problems and least was the report generation.

Areas of AIS that needs improvement as perceived by the users

The results per AIS in the areas of improvement were the same. The number one that needs improvement was the facility. Each AIS such as Quickbooks, GL Sys and Customized AIS differs in their system requirements before operating the AIS. Such as minimum size of memory of hard drive disk, operating system installed in the computers, accessories, and the like.

Conclusion

In general, most respondents for Quickbooks and GL Sys were under the age range 21 to 30 years. For Customized AIS, respondents mostly were between 41 to 50 years old. In terms of gender, civil status and highest educational attainment, the respondents of the three (3) AIS were mostly females, married, and graduated had a Bachelor Degree. The working experience of respondents varied in each AIS. Quickbooks respondents mostly had with less than ten (10) years of working experience. GL Sys consisted of respondents mostly with 11 to 20 years of working experience. And Customized AIS' respondents mostly composed of 21 to 30 years of working experience. Accounting information systems within the entity are described by Meiryani, Suzan, Tsudrajat, Daud (2020) as an instrument to improve the quality and efficiency of the entity, increase its worth in terms of correctness, timeliness, and completeness.

The profile of the respondent-schools, in terms of AIS used, showed that using Quickbooks with the initial year of operation under 1960 to 1984 and in 1985 and above. GL Sys respondent-schools were five (5) with the initial year of operation under 1934 and below (one school), 1935 to 1959 (one school) and 1960 to 1984 (three schools).

The respondents' assessment on the effectiveness of school's AIS in terms of timeliness, validity, accuracy, efficiency, reliability, completeness and other aspects was effective for Quickbooks, GL Sys and Customized AIS. Quickbooks got the highest grand mean for the four (4) aspects namely validity, efficiency, reliability, and completeness. GL Sys got the three (3) aspects: timeliness, validity and other aspects of AIS with the highest grand mean among the three (3) AIS. For Customized AIS, accuracy was the aspect of AIS that got the highest grand mean. Timeliness under GL Sys was very effective.

The respondents' perceptions on effectiveness of AIS when grouped according to age, gender, civil status, highest educational attainment, and years of work experience were effective for Quickbooks, GL Sys and Customized AIS.

The biggest problems encountered by Quickbooks, GL Sys and Customized AIS users include AIS failure and internal control (Quickbooks), internal control (GL Sys) and data accuracy (Customized AIS).

On areas of improvement from Quickbooks, GL Sys and Customized AIS, facility needs the most improvement, followed by accounting procedures, AIS or programs, qualification of user and internal control.

Recommendations

Quickbooks and GL Sys users shall employ much older individuals in order to run such programs effectively. Older individuals take their work seriously and will contribute more to the improvement of AIS used. For Customized AIS, younger individuals must be employed since almost all of the current users are old to duplicate their jobs and prepare the school in its Customized AIS effective operation when the time of their retirement came. For Quickbooks, GL Sys and Customized AIS, male users shall be added to reduce the hours used for chatting, single individuals and Master's degree holders shall also be added. Single individuals can focus well on their work since they have less accountability in life. Master's degree holders can help the school in the interpretation and understanding of reports generated by system. The school shall evaluate well the AIS used such as Quickbooks, GL Sys and Customized AIS not only its benefits but also the cost of acquisition and maintenance. The schools may evaluate their existing system every other year through a system audit where an auditor who knows the entire AIS used will reconcile the system generated reports with the manual computation to check its effectiveness. The MAPSA and DACSA member schools that aim for the uniformity of accounting system used shall study and shall apply the effective features of Quickbooks to the GL Sys for improvement. Most respondents in MAPSA and DACSA School are using GL Sys and encourage other school members as well as to apply the same AIS. In this light, GL Sys users shall be educated well as to the features and usefulness of GL Sys to appreciate it better and to become more effective other than the other system used. Comprehensive training shall be undergone by the users of GL Sys. Like the system audit, personnel shall also be evaluated to check the proper alignment as to the abilities and their job functions for the three (3) AIS: Quickbooks, GL Sys and Customized AIS. Quickbooks users shall check with their in-house or outside support staff the reason for the frequent AIS failure to improve its accounting system applications. Likewise, Quickbooks users shall study the work flow in terms of accounting control in accordance with the proper accounting procedures. GL Sys shall improve its internal control not only the system audit but more importantly the work flow in accordance with the accounting procedures. Customized AIS shall position in the posting of data as job function young individuals to strengthen data accuracy. Quickbooks, GL Sys and Customized AIS users shall study the minimum system requirements of each AIS to improve its current facility as well as its accounting operation. Further studies may be on account relating to the technical aspect of Quickbooks, GL Sys and Customized AIS.

About the Researcher



Dr. Velissa Castañeda Rubaya or simply "Dr.Yzah" is a Doctor in Business Administration. Accredited Certified Public Accountant in Public Practice, Commerce and Industry, and in Teaching Accounting by Professional Regulation Commission – Board of Accountancy in the Philippines. She is also a TESDA Certified Bookkeeper or a holder of National Certificate III in Bookkeeping, National TVET Trainer Certificate Level I in Bookkeeping NCIII and Trainers Methodology Certificate I by Technical Education and Skills Development Authority (TESDA). She used to work as a Diocesan School Internal Auditor for all member schools under DACSA. Author of 7 technical eBooks majority in the topic of Bookkeeping, "The Secrets of Successful Bookkeeping" and the Great Bookkeeping Amid Covid19 pandemic to name a few. Author of the physical book entitled "Rejection a Success Avenue". 2020 Awardee in International Business and Academic Excellence 2020 as Resilient Entrepreneur of the Year held virtually on Dec 26,2020 at India organized by GISR Foundation. and 2020 Awardee in International Academics and Research Excellence 2020 as Best Senior Researcher (Female Category More than 40 years old & Overseas Category) Award Ceremony held virtually on Oct 3,2020 at Goa, India. One of 2017 Entraprofessional Awardee given by Moores Rowland Professionals of the Future, in recognition of being an inspirational leader who made a difference and extraordinary contribution and performance in 2017. She is also a peer reviewer for International Journal of Computing Sciences Research, Puissant-A Multidisciplinary Research. Finally, she is a business consultant, online bookkeeping coach, founder of VSPS Bookkeeping Services, and Bookkeeper's Association of the Philippines, an online community that helps the aspiring bookkeepers in its continuing quest for knowledge by providing FREE online seminars on bookkeeping. Currently, she is a college faculty, speaker and trainer in bookkeeping, accounting and accounting research. Orally presented and published in international journal all her research works. But above all things, she enjoys being a solo parent to her daughter with always full of gratefulness to God. Her key advice to learners and researchers of today, "Success comes out when you surpass failures and rejections with a Happy Heart."

Author Note

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