

The Moderating Effect of Environmental Factors on the Relationship between Market Orientation and School Performance: Basis for Institutional Enhancement

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

ABSTRACT

The intent of this study was to determine the moderating effect of environmental factors on the relationship between market orientation and school performance of universities and colleges offering business and accountancy program in Region XI. Descriptive-correlation method was utilized involving eight Colleges and Universities with 165 respondents. The findings were drawn utilizing the mean, percentage, Pearson correlation and hierarchical regression analysis. It was found out that there was no relationship between market orientation and school performance except for one pairing which is intelligence dissemination and graduation rate. Through hierarchical regression analysis, it was found out that there was no moderating effect on the relationship between market orientation and school performance. The findings of the study were used in coming up with institutional enhancement particularly on intelligence dissemination as a function of school performance specifically graduation rate.

Keywords: Moderating Effect, Environmental Factors, Market Orientation, School Performance, Institutional Enhancement.

1. INTRODUCTION

Annually, universities and colleges desire to have increase of enrolment and graduates. However, due to environmental factors and competition, school performance is declining. Apparently, it was noted by the different researchers that market orientation is one of the strategy that increases business performance (Jaworski and Kohli, 1993; Dawes, 2000; Guo, 2002; Maydeu-Olivares and Lado, 2003; Kaynak and Kara, 2004; Singh, 2009).

Market orientation is a strategy that entails a process of continuous information gathering where this information helps management to respond market dynamics and turbulence effectively (Taghian, 2010). Thus, it leads the institution to determine the needs of the student through market intelligence, intelligence dissemination & organizational responsiveness (Kohli and Jaworski, 1993).

The market orientation always improves business performance where similarly, the performance of the universities is also dependent on the market orientation (Baldrige Education Criteria, 2005) that effectively creates superior value in order to serve students, parents and stakeholders. Moreover, Kim (2003) strongly said that market orientation performance relationship maybe affected by market environment such as market turbulence, competitive intensity and technological turbulence.

Thus, tertiary education is required like business firms to monitor and adapt to the continuous changes due to major transformation such as changing technology, political, economic, social and globalization that lead to shake the foundations of how an institution is delivering their products (Clark, 1996). These changes have led to concern about the impact of the growing marketization of higher education (Williams,1995). It pushes higher education systems to a more market-oriented and more competitive arenas, where students have multiple and differing choices; colleges and universities face new competitors and students are treated as clients and education becomes a commodity and a private good to be paid for, rather than a public good as it used in the past (Newman, 2001).

In the United States, the market competition has unexpected impacts that increases average college tuition as well as the amount of student subsidy that leads to affect the performance funding which is based upon graduation rates that create additional pressure for student retention (Hoxby, 2001).

While in the Philippines were reinventing their trade. There was a decrease in enrolment which was considered as alarming concern especially in private institutions due to different choices of student, increase in tuition and miscellaneous fee, decrease of scholarship funding, poverty and competition (Dela Cruz, 2006). There was also a big disparity in educational achievements across social groups where education has become a commodity and only the rich people can afford to have access to quality education. Hence, drop out students is an issue to all college and universities (Key issues in Philippine Education, 2008). In Davao region, there were pessimism and issues on school performance due to differing choices as well as new competitors (Convention for Registrar, 2003).

As to significance, Universities and Colleges envision in sustaining its image of being a world-class educational institution with a heart for its students. It puts great importance to creating a culture and environment that promotes market orientation and enhances their awareness as to the current and future needs of the stakeholder that leads the operation of higher education sustain its growth and development as well as attaining a higher level of accomplishment and superior performance. The study would create and become a basis for further institutional enhancement.

Empirical works reveals different factors on the moderating effect of environmental factors on the relationship between market orientation and school performance and has been noted that appropriateness of market orientation for tertiary education is very relevant but it does not appear to have received any attention in the literature nor have been able to find literature linking with market orientation at tertiary institution with any performance measure (Caruana and Ewing, 1998). Thus, this study aims at contributing literature on bridging the gap in the literature by examining the relationship between market orientation and school performance in Region XI, moderated by environmental factors as the basis for enhancement of schools offering business administration and accountancy program. Indeed, it is in this context that the researcher is motivated to conduct this study so that universities and colleges will be inspired to find strategies to the challenge of enhancing and evaluate market orientation as strategic model to determine organizational efficiency of Colleges and Universities. Thus, this study is with relevance.

Specifically, this paper determined (1) the level of the implementation of market orientation in terms of intelligence generation, intelligence dissemination and organizational responsiveness (2) level of school performance in terms of enrolment rate,

graduation rate, CPA licensure examination and level of accreditation (3) level of environmental factors in terms of market turbulence, competitive intensity and technological turbulence (4) the significant relationship between market orientation and performance as indicated by enrolment rate, graduation rate, licensure examination and level of accreditation (5) determine whether environmental factors moderate the relationship between market orientation and school performance and lastly (6) the institutional enhancement development.

2. REVIEW OF RELATED LITERATURE

2.1 Market Orientation and Performance

Market orientation is one of the major research streams in strategic marketing developed during the past ten years. It is the organization-wide generation of market intelligence pertaining both to current and future customer needs, dissemination of intelligence across departments and organization-wide responsiveness (Kohli, Jaworski, 1993) where the viewpoint of Baldrige Education Criteria Excellence (2005) also expressed that performance of the universities is dependent on the market orientation which leads to superior performance. Thus, educational institutions recognize that there is a need to market themselves in a climate of competition and adopt more methodological approaches in order to provide a guarantee of quality products & services through market orientation (Galloway, 1998). Indeed, market orientation impact organization performance.

According to Bugandwa and Akonkwa (2009) that market orientation was operationalised into dimension of customer orientation, competitor orientation, inter-functional coordination and responsiveness until marketing scholars recommended the market orientation strategy to non-profit organization that includes higher educational institutions (Caruana et al, 1998 a.; Keneley and Hellier, 2002; Webster et al.,2006). Thus, the work of Kohli and Jaworski (1990); Jaworski and Kohli, (1993); Narver and Slater (1990) as well as Slater and Narver (1994) have been transposed to higher education where market orientation was recognized by the growing body of research as help to higher educational institutions to face and overcome challenges and pressures of changing environment.

Furthermore, various scholars expressed that market orientation always improves business performance (Jaworski and Kohli, 1993; Dawes, 2000; Guo 2002; Maydeu-Olivares and Lado, 2003; Kaynak and Kara, 2004; Singh, 2009) and was supported by Benneth and Ali-Choudhury, (2009) the importance of marketing in education industry has increased due to the competition for students, faculty and funds among higher education institutions.

However, it was argued by Canterbury (2000) stated that marketing of higher education has been challenge due to some markets and characteristics of higher education which is different from other markets of goods and services. Similarly, on the study of Han, Kim, Srivastava, (1998); Jaworski & Kohli, (1993) it was revealed that there was no direct impact of market orientation on performance and did not support a direct positive relationship between performance and market orientation.

Voss & Voss (2000) said that since its inception of market orientation in the early 1990's, there were also various empirical findings of the market orientation research that

have produced complex and mixed results with respect to the relationship between market orientation and business performance.

Moreover, according to Wrenn (1997) despite of the mixed results, the findings showed to be consistent and indicate the desirability for profit and non-profit organization to have a market orientation. Hence, market orientation is regarded as a necessity for contemporary organizations to become successful because a market orientation leads to a higher level of performance for organization. Meaning, a management imperative is to create an organization-wide market orientation (Hayes, 1989). Thus, the marketing literature is replete with suggestions that a necessary prerequisite of achieving a competitive advantage and providing superior value for customers is the development of a market orientation (Kohli & Jaworski, 1990; Pitt, Caruana, & Berthon, 1996).

Finally, Berry & Allen, (1977); Blackburn, (1980); Kotler & Fox, (1985) & Stewart, (1991) came to a certain consensus among marketers that most nontraditional organizations such as universities, hospitals and churches may engage in marketing activities and procedures that are similar to the marketing activities of traditional business organization. Thus, many scholars believe that a market orientation should be used to attract and retain desired students in an increasingly competitive education and maintains marketing principles and theories developed for business organizations that can be applied to a higher educational setting. Therefore, the greater is the extent of market orientation, the greater the degree of performance of School of Business Administration.

In accordance with the above literature, the author developed first hypothesis; *H1. Market orientation indicated by intelligence generation, intelligence dissemination and organizational responsiveness is significantly related to school performance.*

2.2 Environment as Moderator of Market Orientation Performance

The topic of market orientation performance relationship moderated by environment is an issue that different authors discussed with it. Rapid changes came in due to globalization that results to competition in all businesses, profit or non-profit institution. One of which is the tertiary education who witnessed the significant changes where the issues came in such as performance and accountability (Clark, 1996)

There were different investigations of environmental factors and the effects or influences on organizational variables. According to Varadarafan and Pride (1989), the effectiveness of a particular strategic orientation is dependent on the dynamics of the market.

Scholars have suggested that a competitive environment could play a moderating role in the relationship between market orientation and performance (Kohli & Jaworski 1993). However, study of Jaworski and Kohli (1993) did not lend support to the hypothesized effects for any of the three moderator variables: market turbulence, competitive intensity and technological turbulence. Slater and Narver (1994) also examined how the competitive environment influences the form and effectiveness of an organizations market orientation. The results provide limited support for competitive environment on this relationship.

Moreover, many of the authors also concluded that the relationship between market orientations appeared to be consistent across situations characterized by varying levels of market turbulence, competitive intensity and technological turbulence. One of the authors who examined was Greenley (1995) who found that market turbulence weakens the

relationship between market orientation and business performance and technological turbulence weakens the relationship between market orientation and performance, when performance is assessed using new product success.

Kumar, Subramanian, Yauger (1998) found also that there was a positive relationship between market orientation performance & the competitive hostility and market turbulence. Thus, the relationship between market orientation & performance is strengthened when market turbulence is high & vice versa. In whole sense, it is hypothesize that environmental moderators affect the relationship between market orientation and business performance.

Furthermore, the factors of market environment moderator variable may make weakly or strongly the strength of market orientation-performance relationship (Greenly, 1995; Jaworski & Kohli, 1993; Slater & Narver, 1994a), but other studies showed that the factors of market environment does not influence market orientation performance relationship (Narver & Slater, 1990; Jaworski & Kohli, 1993).

Similarly, in the study of Guo (2002), the journey from market orientation to business performance is quite lengthy resulting to lost insights of manager. It means that there is a need to understand how market orientation is related to performance. However, it was argued that superior performance is not explicitly embedded in the definition of market orientation. Thus, it is possible for looking mediating variables connecting to market orientation and performance. Hence, to explore the mechanisms, there should be mediating constructs to support the superior performance.

Finally, when being considered market orientation as organizational culture, most of the studies on organizational culture classified environment factors as the moderating conditions (Lusch & Lacznik, 1987). In this study, it considers market environment such as market turbulence, competitive intensity & technology turbulence as the moderator variable of market orientation-performance relationship.

In accordance with the above literature, the author developed second hypothesis;
H2 Environmental factors have moderating effect on the relationship between market orientation and school performance offering Business Administration and Accountancy program.

2.3 School Performance

Performance indicators have been defined in a multiplicity of ways. Dunnell and O'Loughlin (1987) expressed that it is statistically valid information related to significant aspects of the education system that represents policy issues, easily interpreted, reliable and not subject to response errors. Thus, it is an evaluation or assessment of a certain performance derived from several factors.

As stated by Atkinson-Grosjean & Grosjean, (2000) traditional concept of quality in education is converted to market driven. Thus, it includes the need to demonstrate accountability, productivity and performance. In other words, to be demonstrable is to be measurable and to be justified must be quantified and this leads to change the way universities are assessed.

Similarly, the federal government's Review of Efficiency and Effectiveness in Higher Education said that performance indicators in terms of internal performance indicators (enrollment rates and graduation rates), operating indicators (class size and research publications) external performance indicators (employment destinations) is

authoritative measures in quantitative form that became an attribute of the activity of a higher education institution (Cave, 1988).

Burke, Rosen, Minassians & Lessard, (2000) stated that in United States of America, the commonly used performance indicators include graduation rate, transfer rate, faculty workload, research, licensure examination, enrollment rate, placement of graduates and admission standards and measures.

While in the Philippines, per report on the quality of higher education in 1995, the most commonly used indicators of quality of higher education programs in the country are performance of graduates, licensure examinations, accreditation programs, and employability of graduates. There were also factors which are perceived to affect the quality of education which are the qualification of faculty and staff, quality of students entering the program, instructional facilities and other resources, laboratory and library facilities, curriculum and budget.

Therefore, in this study, the researcher used the enrolment rate, graduation rate, licensure examination and the number or level of accreditation as performance indicators.

In general, this study is conducted to examine the moderating effect of Environmental Factors on the Relationship between Market Orientation and School Performance: Basis for Institutional Enhancement as conceptualized in Figure 1.

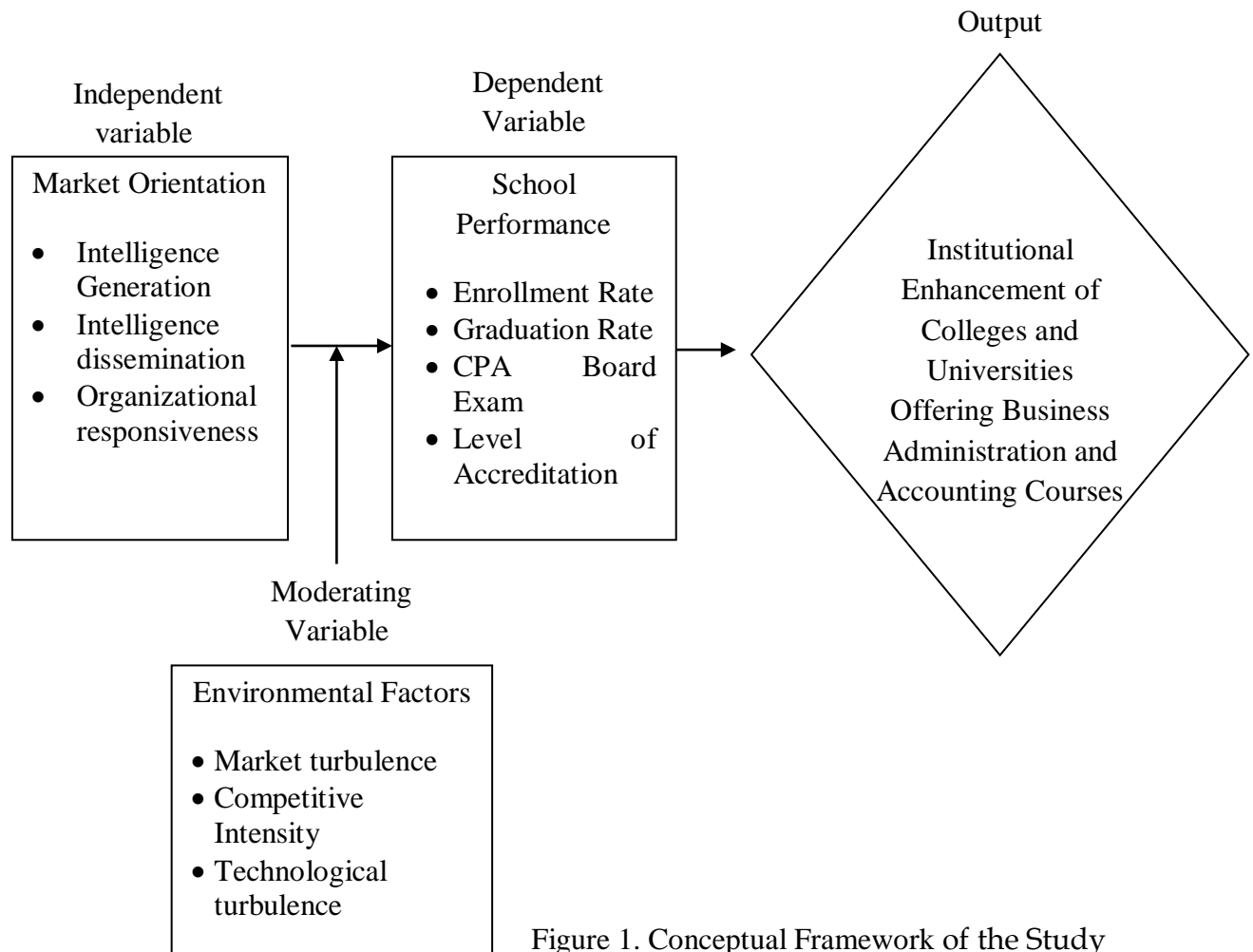


Figure 1. Conceptual Framework of the Study

3. METHODOLOGY

3.1 Research Design

Descriptive-correlation method was used in the investigation to establish statistical between variables (VanderWelle, 2008). The research was conducted in Davao Region. It is located in Southern Mindanao.

3.2 Research Respondents

There were 165 respondents composed of administrators, faculty and non-teaching staff involving eight Colleges and Universities in Davao Region: Ateneo de Davao University, Assumption College of Nabunturan, CorJesu College, Holy Cross of Davao College, St. Mary's College, University of Immaculate Conception, UM Tagum College and University of Mindanao.

Universal sampling method was used in the identification of the respondents for the study since it is focusing only on the Colleges and Universities offering business administration and accountancy program.

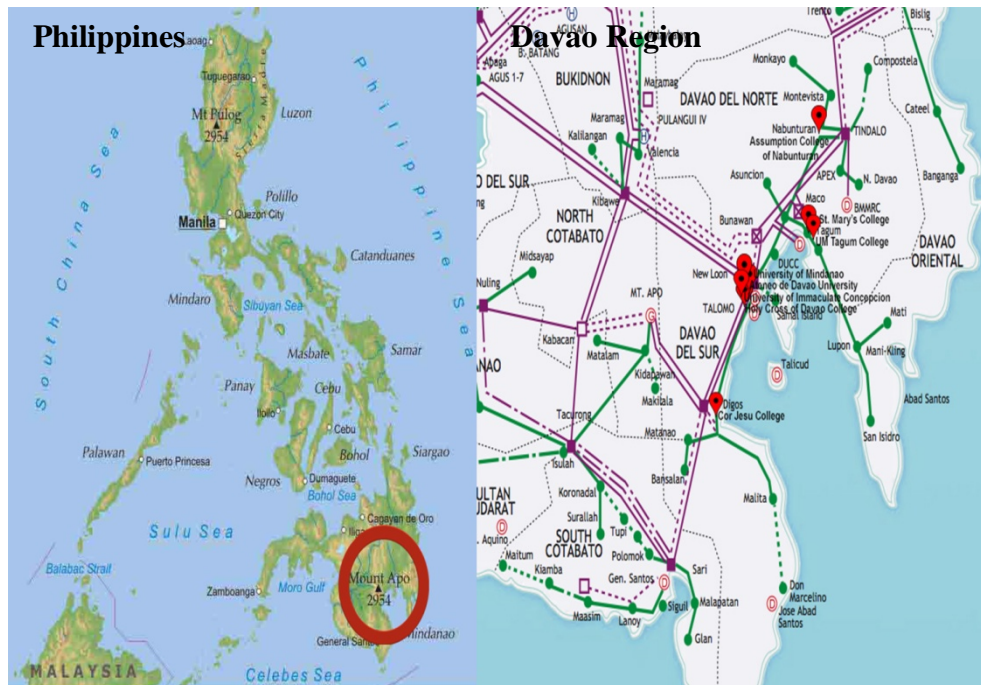


Figure 2. Research Site

3.3 Research Instrument

The researcher adapted MARKOR Scale in the context of business environment where it has been reworded to fit into the higher education model. This instrument was developed by Kohli, Jaworski and Kumar in 1993. Thus, prior to the conduct of the study, pretest was done to examine the modified survey. Based on the examination, it reveals that the reworded scales reliably and validly measure market orientation as well as the moderator variable in the context of colleges and universities. The Cronbach alpha values were above the .70 threshold which was recommended by Nunally, (1978). It surpasses the

commonly accepted threshold values of 0.7 and 0.5 respectively (Hair et al, 1998). Therefore, the reworded scale of Jaworski and Kohli (1993) market orientation scale performs very well in this study. Based on a five-point scale with 1=strongly disagree and 5=strongly agree. Participants rated their degree of agreement towards market orientation and environmental factors.

3.4 Data Gathering Procedure

The principles of research ethics were highly observed in the study. The researcher asked endorsement letter from the Director of Commission on Higher Education Region XI for a pre-survey as well as determining the total number of respondents to respective respondent Colleges and Universities offering Business Administration and Accountancy Program. After the endorsement was acquired, letter was personally forwarded to the University President through the Head of Human Resource, Deans with attached endorsements from CHED Regional Director asking for approval to conduct the study followed by distribution of survey questionnaires and follow up was made after second week of distribution as well as the retrieval.

Finally, details of the participant personal and business information were kept confidential and their participation in the research was voluntary.

3.5 Statistical Tools

The findings were drawn utilizing the Mean which was used in describing the level of implementation of market orientation, environmental factors and school performance. Next is Percentage in determining the enrolment rate, graduation rate and licensure examination rate (CPA), third is Pearson product-moment correlation which was used in measuring the strength of relationships between variables. The probability of correlation coefficients is calculated in case of very low probability (less than .05) indicates that relationship is statistically significant and in case of greater probability (greater than .05) the relationship is not statistically significant and lastly was the Hierarchical Regression analysis. It was conducted to test the hypothesis of the study regarding the moderating effect of environmental factors on the relationship between market orientation and school performance.

4. ANALYSIS AND RESULTS

This section presents the analysis and interpretation of the data obtained. The discussion flow is according to the order of the specific objectives of the study.

4.1 Level of the Implementation of Market Orientation Among Colleges and Universities offering Business Administration and Accountancy Program

The level of the implementation of market orientation is measured in terms of intelligence generation, intelligence dissemination and organizational responsiveness.

Displayed in Table 1 is the level of the implementation of market orientation in which the names of the schools are not indicated for the purpose of confidentiality. In the schools under study, the overall mean is 3.73 rated as high which means that the implementation of market orientation is often practiced in the school. Hence, it indicates that the schools under study have knowledge of their customer needs which are

continuously communicated and discussed by school members that leads them to become competitive in translating into superior customer value.

Table 1: Level of Market Orientation among Colleges and Universities offering Business Administration and Accountancy Programs

School	Market Orientation							
	Intelligence Generation		Intelligence Dissemination		Organizational Responsiveness		Overall	
	Mean	Descriptive Equivalent	Mean	Descriptive Equivalent	Mean	Descriptive Equivalent	Mean	Descriptive Equivalent
School A	3.39	Moderate	3.23	Moderate	3.78	High	3.47	Moderate
School B	3.56	High	3.59	High	3.81	High	3.65	High
School C	3.83	High	3.61	High	4.03	High	3.82	High
School D	3.49	Moderate	3.46	Moderate	3.83	High	3.59	High
School E	3.74	High	3.78	High	4.08	High	3.87	High
School F	3.81	High	3.31	Moderate	3.93	High	3.68	High
School G	3.83	High	3.70	High	4.06	High	3.86	High
School H	4.14	High	4.03	High	4.29	High	4.15	High
Overall	3.68	High	3.55	High	3.96	High	3.73	High

Further, as reflected in Table 1, *intelligence generation* is rated as high with an overall mean of 3.68 described as high. This means that the implementation of market orientation of the school is often practiced. It implies that the school can anticipate customers' needs and fill them. The result is congruent to the view of Kohli and Jaworski (1999) that intelligence generation not only looks at the current needs but also the future needs of the market. Consequently, this leads them on the analysis of information to different markets.

The second indicator is *intelligence dissemination* with the overall mean of 3.55 described as high where market intelligence is often practice. It shows that the school often communicates to all relevant individuals in order to productively respond to the needs of the market. The result is aligned with the view point of Slater and Narver (1994) that in order for market orientation to function efficiently, information developed in the intelligence generation stage must be shared with other functional units of higher education.

Lastly is the *organizational responsiveness* with the mean of 3.96 rated as high. It means that the implementation of organizational responsiveness is often practiced in the school. It indicates that the school is responsive to the needs of the students. As expressed by Kotler and Fox (1995) responsive educational institutions should meet the need and wants of their customers because customers are the best promoters of the institution.

4.2 Level of School Performance

Presented in Table 2 is the level of School Performance among colleges and universities offering business administration and accountancy programs as indicated by Enrolment rate, Graduation rate, Licensure Examination (CPA) and Level of Accreditation.

Table 2: Level of School Performance Among Colleges and Universities Offering Business and Accountancy Programs in Davao Region

Item	Mean	Descriptive Equivalent
Enrollment Rate	7.24	Average
Graduation Rate	12.59	Average
Licensure Board Examination (CPA)	16.78	Average
Level of Accreditation		
Overall Mean		

Looking at the indicators on school performance as measured in terms of enrolment rate, graduation rate and licensure examination (CPA) have a mean of 7.24, 12.59 and 16.78 respectively with the descriptive equivalent of average. This means that the school performance is relatively fair. It shows that the performance is fair enough but the need to improve is apparent, in recognition of the statement of Cave(1988) who emphasized that school performance indicators can be used to assess the impact of educational reforms, informing decision making, explaining causes and changes and defining educational objectives.

As Dannel and O' Loughlin (1987) pronounced, school performance measures are statistically valid information related to significant aspects of education system, benchmark for measuring progress of the school such as graduation rate, enrolment rate, licensure board examination and accreditation status of the school.

It could be noted in the table that no summary is provided for the level of accreditation since it is not tenable to summarize this item in one description. The accreditation status is unique to every school.

4.3 Level of Environmental Factors

In the schools under study, the overall mean of environmental factors as indicated by *market turbulence, competitive intensity and technological turbulence* is 3.62 described as high. This means that the environmental factors present in the school is often observed. It indicates that the school offering business administration and accountancy program is aware of the environmental factors that affect their respective performance. As expressed by Varadarafan (1989), determining environmental factors is essential to the effectiveness of the firms or schools in terms of the market.

Shown in Table 3, *market turbulence* has an overall mean of 3.37 described as moderate. This means that environmental factors present in the school is sometimes observed. The school under study did not pay attention always to the changing degree of customers' needs and preference. However, as cited in the literature, the firm does not have the necessity to adjust marketing mix strategy in order to respond to consumers' behavior efficiently when consumers' needs and preferences are stable (Kim, 2003). On the

Table 3: Level of Environmental Factors Among Colleges and Universities in Davao Region

School	Market Orientation							
	Market Turbulence		Competitive Intensity		Technological Turbulence		Overall	
	Mean	Descriptive Equivalent	Mean	Descriptive Equivalent	Mean	Descriptive Equivalent	Mean	Descriptive Equivalent
A	3.14	Moderate	3.05	Moderate	4.01	High	3.40	Moderate
B	3.42	Moderate	3.25	Moderate	3.62	High	3.43	Moderate
C	3.36	Moderate	3.36	Moderate	3.75	High	3.49	Moderate
D	3.19	Moderate	3.47	Moderate	3.94	High	3.53	High
E	3.55	High	3.13	Moderate	4.20	High	3.63	High
F	3.07	Moderate	3.25	Moderate	4.11	High	3.48	Moderate
G	3.87	High	3.99	High	4.07	High	3.98	High
H	3.58	High	4.21	High	4.39	High	4.06	High
Overall	3.37	Moderate	3.48	Moderate	4.01	High	3.62	High

contrary, Jaworski and Kohli (1993) expressed that if the degree of consumers' preference is unstable and the school does not respond to consumers' needs timely, performance may be decreased that leads the school to become market oriented organization when consumers' preference is variable.

Further, *competitive intensity* has a moderate rating of 3.48 which implies that environmental factors present in the school are sometimes observed. It indicates that the school did not give so much importance on the factors of competitive intensity that failed them of having full information pertaining to competition as well as competitors. Meaning the school could not easily have a flexible approach in managing. This makes the school not to be adaptive as well as improving their services to customers. Zuniga-Vicente (2006) suggested that school that possesses the flexibility to respond to new competitive behaviors is at definite advantage and use the diversity of options available to them in order to compete effectively.

While *technological turbulence* has a high rating of 4.01 which means that environmental factors present is the school is often observed. It implies that their awareness is high as to technology that makes their school updated and more opportunities of developing their strategies. As cited in the literature, technological change can affect school capabilities because it introduces new scientific knowledge and generates new alternatives for configuring, capabilities, alters the intensity of competition and structural conditions such as barriers to demand conditions and customer preferences (Grewal and Tansuj, 2001; Judge and Elekov, 2005; Smith, Collins and Clark, 2005).

4.4 Significance of the Relationship between Market Orientation and School Performance

Shown in Table 4 is the correlation between market orientation and school performance. The over-all r-value is negative 0.31 absolute value of which is lesser than .707 hence not significant. This leads to the acceptance of the null hypothesis. It can be

stated therefore that there is no significant relationship between market orientation and school performance.

Examining closely the data, it can be seen that the indicator of market orientation which is *intelligence dissemination* has significant relationship with graduation rate. This implies that the higher the level of intelligence dissemination the greater is the possibility in the positive increase of graduation rate in a particular school.

Table 4: Significance of the Relationship between Market Orientation and School Performance

<i>Independent Variable</i> (Market Orientation)	<i>Dependent Variable</i> (School Performance)				
	<i>Enrollment</i>	<i>Graduation</i>	<i>Licensure</i>	<i>Accred – BA</i>	<i>Accred-Acctcy</i>
Intelligence Generation	0.21	0.52	0.11	-0.08	-0.33
Intelligence Dissemination	-0.33	0.77*	-0.45	-0.34	-0.33
Organizational Responsiveness	0.07	0.65	-0.04	-0.12	-0.20
Overall	-0.04	0.69	-0.15	-0.20	-0.31

*Significant (Decision on $H_0 = \text{Reject}$)

Critical value at alpha 0.05 = 0.70

Other correlations among the indicators of market orientation and school performance have no significance in terms of their inter relationships. This supports substantially the result of no relationship between market orientation and school performance except for one pairing which is intelligence dissemination and graduation rate.

The overall result of the correlation did not support the viewpoint of Baldrige Education (2005) expressed in this study which states that the performance of the universities is dependent on the market orientation.

4.5. Moderating Effect of Environmental Factors in the Relationship Between Market Orientation and School Performance

On Enrolment Rate as Outcome. Hierarchical regression analysis was conducted to test the hypothesis of the study regarding the moderating effect of environmental factors on the relationship between market orientation and enrolment rate as one of the indicators of school performance.

The proposed moderator model for environmental factors with enrolment as outcome is presented in Figure 3. The corresponding regression analysis is displayed in Table 5. To avoid confounding effect, the control variable school type (sectarian or non-sectarian) was entered into the hierarchical procedure as step one, market orientation as step 2, environmental factors as step 3 and the interaction between market orientation and environmental factors as step 4.

Table 5: Hierarchical Regression Analysis of Environmental Factors on Market Orientation with Enrolment Rate as Outcome

Predictor	β Standardized	R ² change	Sig.
<i>Step 1</i> School Type	.008	.000	.985
<i>Step 2</i> School Type Market Orientation	-.041 -.068	.002	.994
<i>Step 3</i> School Type Market Orientation Environmental Factors	-.896 .268 -1.142	.049	.972
<i>Step 4</i> School Type Market Orientation Environmental Factors Market Orientation X Environmental Factors	-.870 -.063 -1.534 .715	.000	.995

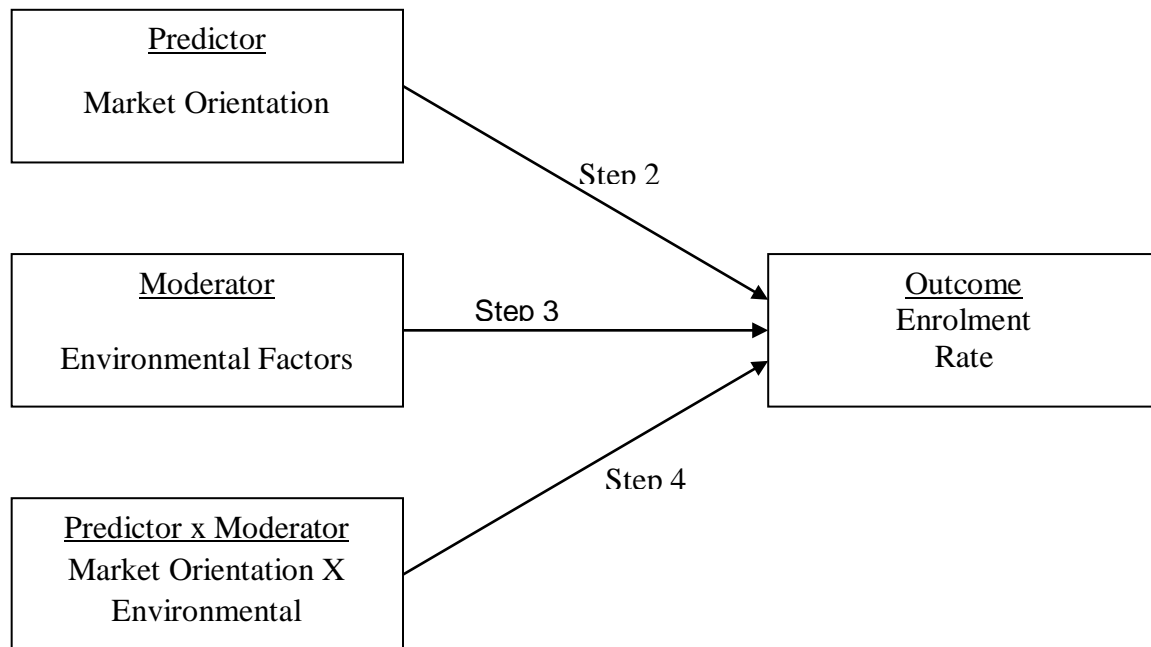


Figure 3. Moderating Effect of Environmental Factors on the Relationship Between Market Orientation and Enrolment Rate

A moderating effect would be indicated by a p -value of less than 0.05 for the R square change at step 4 of each model. As indicated in Table 5, the change in R square of the interaction between market orientation and environmental factors is not significant with

p-value of .995 which is very much higher than 0.05 set in this study. The proposed model in Figure 2 is not supported on the basis of the findings. The result of the regression suggests that the interaction effect was not a contributor to the model variance. It can be stated therefore that environmental factors have no moderating effect on the relationship between market orientation and enrolment rate.

On Graduation Rate as Outcome. The proposed moderator model for environmental factors on the relationship between market orientation and graduation rate as indicator of school performance is displayed in Figure 4. The corresponding regression analysis is displayed in Table 5. Similarly to avoid possible confounding effect, the control variable school type (sectarian or non-sectarian) was entered into the hierarchical procedure as step one, followed by market orientation as step 2, followed by environmental factors as step 3 and followed by the interaction between market orientation and environmental factors as step 4. A moderating effect would be indicated by a p value of less than 0.05 for the change of R square at step 4 of each model.

As shown in Table 6, the change in R square of the interaction between market orientation and environmental factors is not significant with p-value of .311 which is greater than 0.05 set in this study.

Table 6: Hierarchical Regression Analysis of Environmental Factor on Market Orientation with Graduation Rate as Outcome

Predictor	β Standardized	R ² change	Sig.
<i>Step 1</i> School Type	-.674	.454	.067
<i>Step 2</i> School Type Market Orientation	-.373 .418	.085	.144
<i>Step 3</i> School Type Market Orientation Environmental Factors	.297 .155 .895	.030	.293
<i>Step 4</i> School Type Market Orientation Environmental Factors Market Orientation X Environmental Factors	.680 -4.723 -4.855 10.546	.067	.311

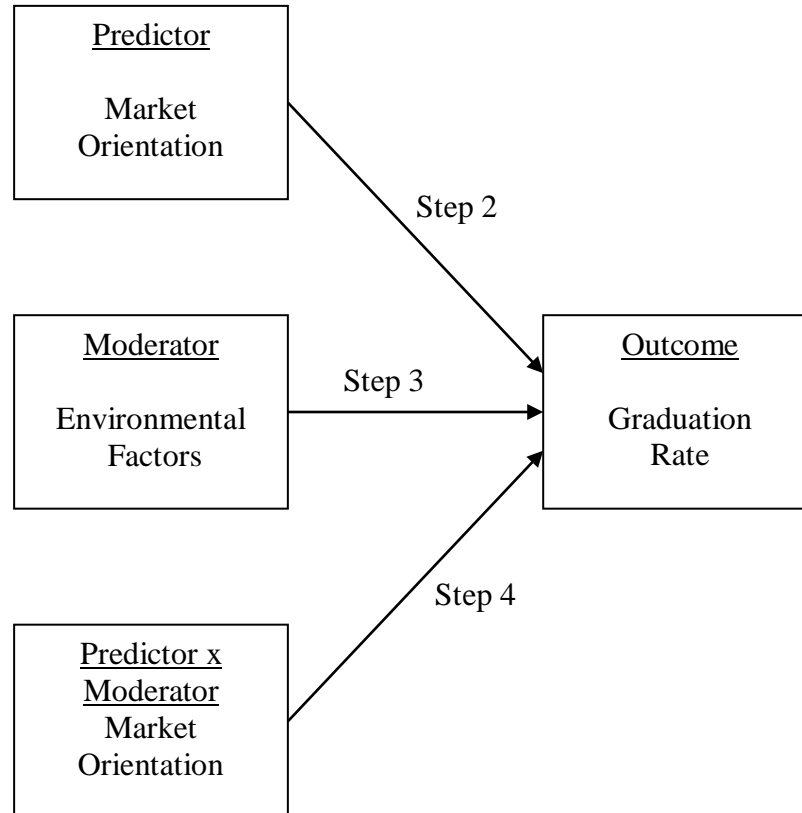


Figure 4: Moderating Effect of Environmental Factors on the Relationship Between Market Orientation and Graduation Rate

The proposed model in Figure 4 is not supported on the basis of the findings. The result of the regression suggests that the interaction effect was not a contributor to the model variance. Therefore, it can be stated environmental factors have no moderating effect on the relationship between market orientation and graduation rate.

CPA Licensure Exam Rate as Outcome. Shown in Figure 5 is the proposed moderator model for environmental factors with CPA Licensure Exam Rate as outcome. The corresponding regression analysis is displayed in Table 7. However, to avoid possible confounding effect, the control variable school type (sectarian or non-sectarian) was entered into the hierarchical procedure as step one, followed by market orientation as step 2, followed by environmental factors as step 3 and followed by the interaction between market orientation and environmental factors as step 4. A moderating effect would be indicated by a p-value of less than 0.05 for the change in R square at step 4 of each model.

As reflected in Table 7, the change in R square of the interaction between market orientation and environmental factors is not significant with p-value of .828 which is very much higher than 0.05 set in this study.

The proposed model in Figure 5 is not supported on the basis of the findings. The interaction effect of the result of the regression was not a contributor to the model variance. Thus, it can be concluded that environmental factors have no moderating effect on the relationship between market orientation and CPA Licensure exam rate.

Table 7: Hierarchical Regression Analysis of Environmental Factor on Market Orientation with CPA Licensure Exam Rate as Outcome

Predictor	β Standardized	R ² change	Sig.
<i>Step 1</i> School Type	-.240	.058	.567
<i>Step 2</i> School Type Market Orientation	-.724 -.674	.220	.444
<i>Step 3</i> School Type Market Orientation Environmental Factors	-1.336 -.434 -.817	.025	.660
<i>Step 4</i> School Type Market Orientation Environmental Factors Market Orientation X Environmental Factors	1.512 2.188 2.289	.019	.828

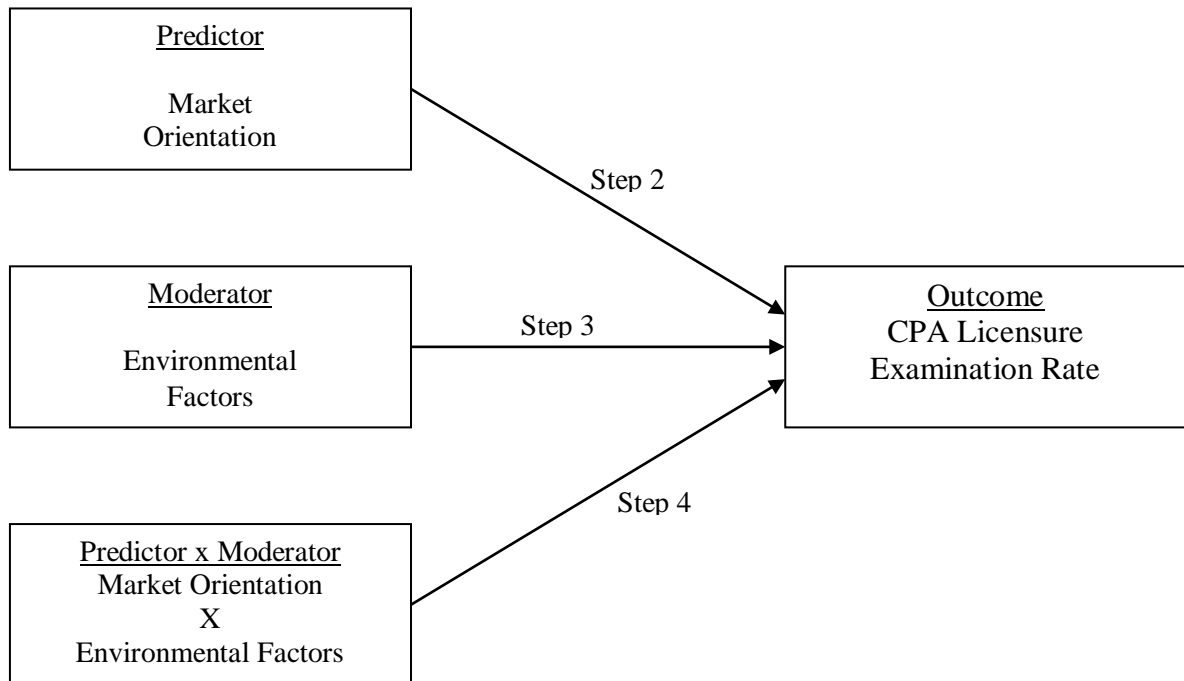


Figure 5: Moderating Effect of Environmental Factors on the Relationship Between

Market Orientation and CPA Licensure Examination Rate

Accreditation Status of Business Administration Program as Outcome. The test pertaining to the moderating effect of environmental factors in the relationship between market orientation and accreditation status of Business Administration Program was conducted through hierarchical regression analysis.

The proposed moderator variable for environmental factors with accreditation status of business administration program as outcome is reflected in Figure 6 with the corresponding regression analysis as presented in Table 8. Similarly, to avoid confounding effect, the control variable school type (sectarian or non-sectarian) was entered into the hierarchical procedure as step 1, followed by market orientation as step 2, followed by environmental factors as Step 3 and followed by the interaction between market orientation and environmental factors as step 4. A moderating effect would be indicated by a p-value of less than 0.05 for the change in R square at step 4 of each model.

As can be gleaned in Table 8 the change in R square of the interaction between market orientation and environmental factors is not significant with p-value of .418 which is greater than 0.05 set in this study.

On the basis of the findings, the proposed model in Figure 6 is not supported. Hence, the result of the regression suggests that the interaction effect was not a contributor to the model variance. It can be stated therefore that environmental factors have no moderating effect on the relationship between market orientation and accreditation status of business administration program.

Table 8: Hierarchical Regression Analysis of Environmental Factor on the Relationship between Market Orientation with Accreditation Status of Business Administration Program as Outcome

Predictor	β Standardized	R ² change	Sig.
<i>Step 1</i> School Type	0.00	.000	1.00
<i>Step 2</i> School Type Market Orientation	-.296 -.412	.082	.807
<i>Step 3</i> School Type Market Orientation Environmental Factors	.401 -.685 .931	.032	.910
<i>Step 4</i> School Type Market Orientation Environmental Factors Market Orientation X Environmental Factors	1.476 -14.377 -15.292 29.603	.530	.418

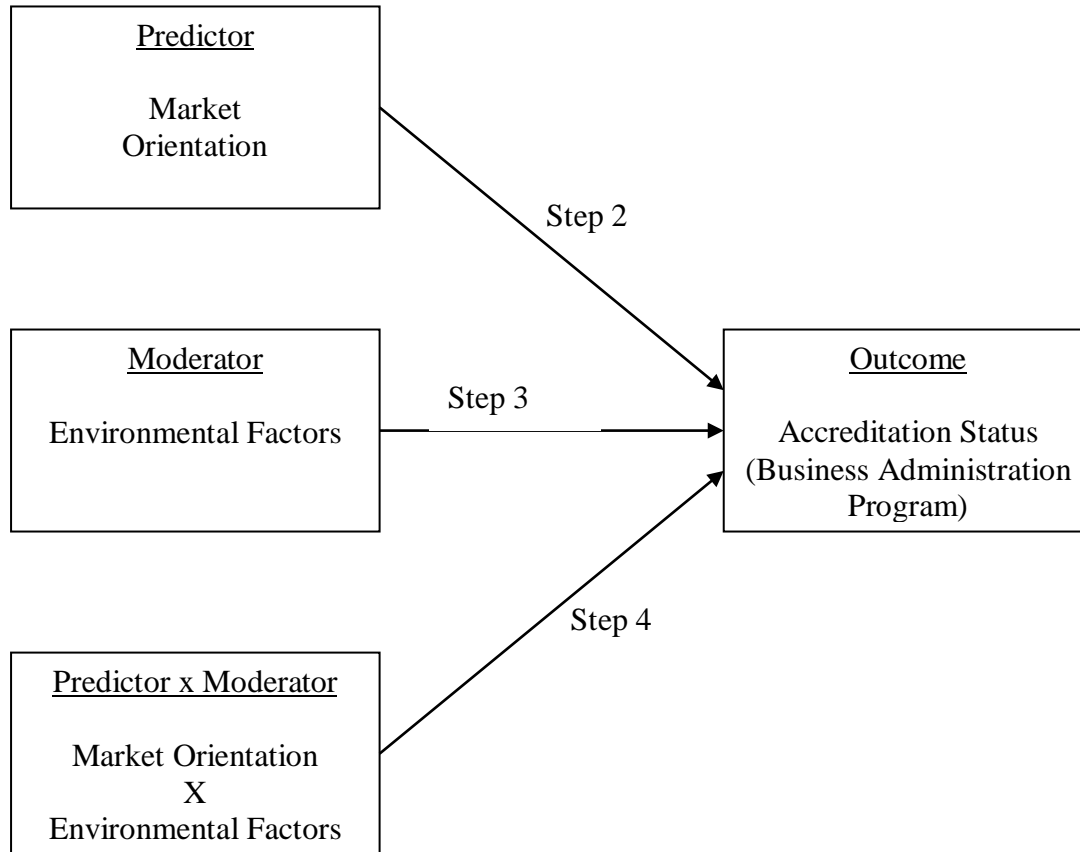


Figure 6: Moderating Effect of Environmental Factors on the Relationship Between Market Orientation and Accreditation Status of Business Administration

Accreditation Status of Accountancy Program As Outcome. The proposed moderator model for environmental factors on the relationship between market orientation and accreditation status of accountancy program as indicator of school performance is presented in Figure 7. The corresponding regression analysis is shown in Table 9. Further, to avoid confounding effect, the control variable school type (sectarian or non-sectarian) was entered into the hierarchical procedure as step 1, followed by market orientation as step 2, followed by environmental factors as Step 3 and followed by the interaction between market orientation and environmental factors as step 4. A moderating effect would be indicated by a p-value of less than 0.05 for the change in R square at step 4 of each model.

The change in R square of the interaction between market orientation and environmental factors shown in Table 9 is not significant with p-value of .352 which is more than 0.05 set in this study.

The proposed model in Figure 7 is not supported on the basis of the findings. Hence, the result of the regression suggests that the interaction effect was not a contributor to the model variance. It can be stated therefore that environmental factors have no moderating effect on the relationship between market orientation and accreditation status of business accountancy program.

Table 9
Hierarchical Regression Analysis of Environmental Factor on Market Orientation with Accreditation Status of Accountancy Program as Outcome

Predictor	β Standardized	R ² change	Sig.
<i>Step 1</i> School Type	.000	.000	1.000
<i>Step 2</i> School Type Market Orientation	-.465 -.648	.203	.567
<i>Step 3</i> School Type Market Orientation Environmental Factors	-1.079 -.407 -.819	.025	.765
<i>Step 4</i> School Type Market Orientation Environmental Factors Market Orientation X Environmental Factors	-.076 -13.182 -15.955 27.619	.461	.352

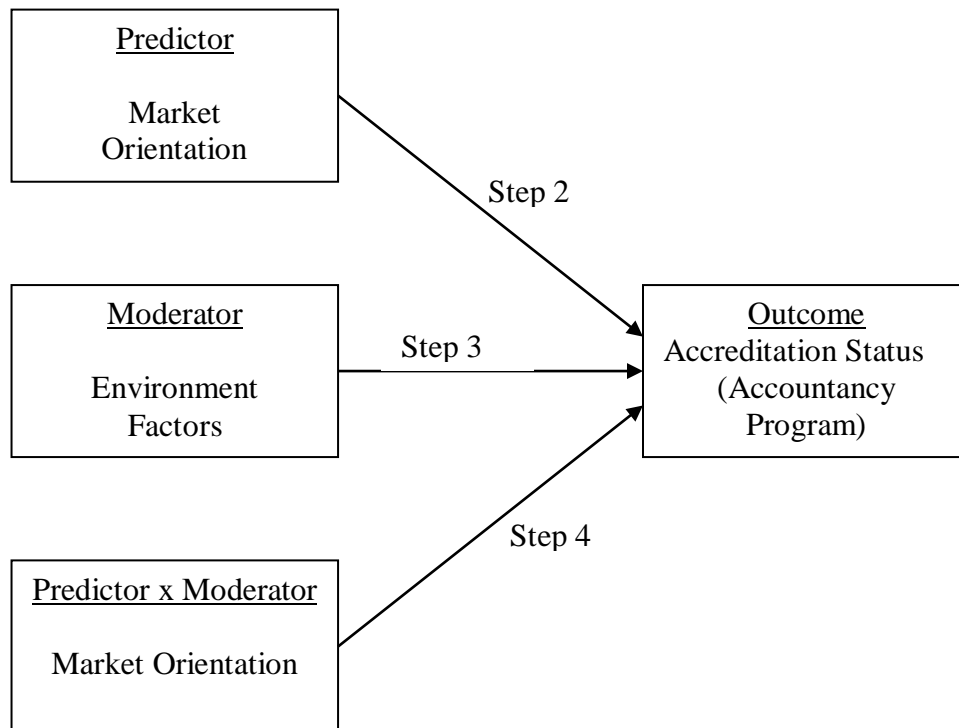


Figure 7: Moderating Effect of Environmental Factors on the Relationship Between Market Orientation and Accreditation Status of Accountancy Program

4.6 Summary of Hierarchical Regression Analysis of Environmental Factor on Market Orientation

Based on the findings of the Hierarchical Regression Analysis in each presentation, the result suggests that the interaction effect was not a contributor to the model variance. This leads to the acceptance of null hypothesis. Hence, it reveals statistically that environmental factors have no moderating effect on the relationship between market orientation and school performance as indicated by enrolment rate, graduation rate, CPA licensure exam, accreditation status of business administration and accountancy program with *p-value* of .995, .311, .828, .418, and .352 respectively in which the *p-value* is very much higher than 0.05 set in this study.

The above findings are not consistent with the model of market orientation that is believed to be positively related to performance (Matsuno&Mentzer, 2000; Pelham, 2000; Jaworski & Kohli, 1993; Narver& Slater, 1990). Further, these findings are supported with Noble, Sinha and Kumar (2002) that there were companies with high market orientation have not performed well and vice versa.

The overall result of the moderator effect of environmental factors on market orientation with school performance indicators did not support the viewpoint of Kim (2003) expressed in this study that environmental factors can influence on the relationship between market orientation and school performance.

5. Institutional Enhancement of Universities and Colleges offering Business and Accountancy Program

This section discusses the proposals on how to enhance the market orientation of colleges and universities offering business and accountancy programs.

5.1 Background

This proposal is an institutional enhancement of this study which is based on the outcome of the rating of the three variables. The implementation of market orientation and environmental factors is high while school performance is average. This implies that there is still a chance to increase to highest level. It also appeared that intelligence dissemination has a significant correlation with graduation rate, suggesting dependence of graduation rate to intelligence dissemination which is under market orientation.

It is also found in this study that the environmental factors have no moderating effect on the market orientation performance relationship. It indicates that it depends on the school of how they interact with their customers that may lead to have a long-term relationship. Therefore, no matter what would be the environmental factors that the school encountered, school performance is not affected. To recognize the importance of the findings on this study, the researcher proposes to have an Enhancement Program of Market Orientation to Business Education Program. This shall be addressed to all concerned individuals, specifically the Deans, Program Heads, coordinator and Faculty.

The enhancement program will focus on Intelligence Dissemination since there is a significant correlation with school performance, specifically the graduation rate. Increasing

the level of intelligence dissemination could contribute to the positive increase of graduation rate as determined in this study.

5.2 Program Description:

This design entitled Enhancement Program of Market Orientation for intelligence dissemination towards Business Education is formulated as a continuing education for improving, synchronizing and strengthening the strategies of marketing the program. This program is envisioned to enhance the schools' skills of retaining the students until graduation.

5.3 Program Objectives:

1. To enhance the knowledge-base of employees, specifically the importance of the relationship between market orientation for intelligence dissemination and graduation rate;
2. To inform students of significant events related to the course for them to be directed and have appropriate information on the importance of their respective programs;
3. Sharing of student and industry satisfaction results to the entire school and concerned department heads in order for them to be aware of their strategies in terms of services and
4. To develop strategies of employees in disseminating information to their respective departments in order for them to be alert of any situation.

5.4 Program Contents:

The program includes intelligence dissemination under market orientation as a function of school performance, specifically graduation rate.

Financial Resources:

Budget Requirements for the first enhancement program for 2 days.

Meals and snacks	
50 participants x Php 230 x 2 days	Php23,000.00
Speakers' Honorarium	
2 speakers at Php 5,000 each	10,000.00
Speakers' Fare	
2 speakers at Php 7,000 each (rounding tickets)	14,000.00
Speakers' Hotel Accommodations	
2 speakers 1,500 each x 2 days	6,000.00
Speakers' Meals	
2 speakers 400 each x 2 days	1,600.00
Hand-outs, certificates and other materials	
50 participants at Php30 each x 2 days	3,000.00
Incidental Expenses	<u>5,000.00</u>
Total	<u>62,600.00</u>

This is an in house seminar-workshop, an activity which falls under faculty development of the Business Education Program.

Evaluation Tools:

1. Evaluation form shall be accomplished at the end of the seminar workshop.
2. Feedback by the participants shall be needed after the seminar workshop.

5.5 Time Schedule

The enhancement activities will be a continuing program. This will be sponsored by the Business Education Program of the University.

The first day will commence on the overview of the concept of market orientation of the universities and colleges emphasizing the variable of intelligence dissemination and school performance specifically graduation rate. Initial discussions of the identified indicators in the study that need improvement will be taken up. The tentative schedule will be held in May before the classes begin.

5.6 Working Committees:

This is formed under the leadership of the Dean. Members of the committees will come from the non-teaching staff and some are from the faculty.

Secretarial/Documentation Committee shall be responsible for:

- a. Designing the program
- b. Preparing hand-outs and etc.
- c. Certificates of Appreciation and plaque of appreciation
- d. Accommodation arrangement
- e. Escorting the speakers from hotel to venue and
- f. Distributes and gather evaluation form

Invitation Committee

- a. Responsible for giving of invitations to speakers and participant.
- b. Confirms the speakers' acceptance of the invitation.

Food Committee

- a. Contacts canteen for meals and snacks
- b. Check food services.

Staff Requirements

Program Coordinator.....	1
Asst. Program Coordinator.....	1
Committees Chairs and members.....	1

6. CONCLUSION AND DISCUSSION/RECOMMENDATION

It has been affirmed that studies on market orientation in terms of intelligence generation, intelligence dissemination and organizational responsiveness are major determinants for superior performance. As expressed by the viewpoint of Baldrige Education Criteria Excellence (2005) that performance of the universities is dependent on the market orientation which leads to superior performance.

However, per findings out of three determinants, it shows that there is only one pair which is significantly related to one another: the intelligence dissemination for market orientation and graduation rate for school performance. This implies that intelligence dissemination is very essential. Therefore, the higher level of intelligence dissemination, the greater is the possibility in the positive increase of graduation rate in a particular school.

Thus, the findings of this study were used in coming up with institutional enhancement particularly on intelligence dissemination as a function of school performance specifically graduation rate. Therefore, the overall result did not support the viewpoint of Baldrige Education Excellence (2005) that performance of the universities is dependent on the market orientation.

Further, through hierarchical regression analysis, it was found out that there was no moderating effect on the relationship between market orientation and school performance. It implies that environmental factors could not affect the market orientation performance relationship. Therefore, it depends on how the tertiary education strategizes in sustaining the needs of school. Like intelligence dissemination, all relevant matters should be disseminated by the academic affairs to teaching and non-teaching staff on the needs of the customer/students in order to retain and increase the graduation rate.

Likewise, there is a need for the school to continually seek to strengthen their relationship to stakeholders through training, seminars and workshop focused on market orientation with emphasis on intelligence dissemination.

The study may be replicated and enriched by adding possible variables to find out ways to raise implementation of market orientation and the school performance to a superlative level.

Lastly, further study on market orientation is suggested to be conducted to all Universities and Colleges and explore additional methods of measuring long-term effects of market orientation such as the external measure of performance like client/customer satisfaction could be used as a potential measure to investigate the relationship.

APPENDIX

Sample of questionnaire is available from the author

ACKNOWLEDGEMENTS

With sincere appreciation, I would like to extend my heartfelt thanks to all the persons and institutions whose contributions made this study a reality.

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