A PATH ANALYTIC STUDY OF PERCEIVED SUPERVISOR/STUDENT VARIABLES AND THESIS COMPLETION EXPECTANCY AMONG POSTGRADUATE STUDENTS IN CROSS RIVER STATE, NIGERIA

BY

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DECLARATION

I, Akpan, Happy Amos with registration number EDR/Ph.D./14/004, hereby declare that this thesis on path analytic study of perceived supervisor/student variables and thesis completion expectancy among postgraduate students in Cross River State, Nigeria; is original and has been written by me. It is a record of my research work and has not been presented before in any previous publication.

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CERTIFICATION

We certify that. this thesis titled "A Path Analytic Study of Perceived Supervisor /Student Variables and Thesis Completion Expectancy among Postgraduate Students in Cross River State, Nigeria by **Akpan. Happy Amos** with Registration Number: **EDR/Ph.D/14/004** carried out under our supervision, has been found to have met the requirements of the University of Calabar, Calabar. We therefore recommend the work for the award of Doctorate Degree (Ph.D) in Educational Research and Statistics.

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ABSTRACT

This study investigated the causal relationship of some perceived supervisor and student variables on thesis completion expectancy among postgraduate students in Cross River State, Nigeria. It particularly examined the extent to which supervisor competence in research, supervisor - student working relationship, supervisor workload and supervisor feedback; students' interest in research, research skills, academic motivation and emotional stability relatively and collectively influence thesis completion expectancy among postgraduate students. The most meaningful causal models as well as direct and indirect effects of the variables in supervisors and students variables on thesis completion expectancy were to be established. Four research questions and three hypotheses were formulated and the survey research design was employed. A sample of 502 was drawn from the population of 1909 subjects using a combination of stratified and random sampling techniques. A well validated instrument with 64 items was used to collect data and statistically analyzed using multiple regression and path analysis. Results obtained show that, of the eight predictor variables hypothesized, only three variables (student's interest in research, student research skills, and students' emotional stability) significantly exerted direct effects on thesis completion expectancy among postgraduate students. The result also indicated that the most meaningful causal model had 21 significant pathways. In all, 55.64% of the total effects of supervisors/students variables were direct, while 44.04% were indirect. It was therefore concluded, that students variables are stronger predictors of thesis completion expectancy among postgraduate students than the supervisor variables. The researcher recommended periodic mounting of research skills or interest advancement seminars, conferences and workshops for students, and that students need to be properly counseled during graduate studies for emotional stability by sorting out stress at workplace, funding and provide an enabling environment for graduate work and research. (Word counts: 287)

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INTRODUCTION

1.1 Background to the study

Universities, all over the world, are recognized as places where knowledge generation, scholarship and innovation are advanced and it includes both the undergraduate level and the graduate (or postgraduate) level. Postgraduate education or programmes are considered conduits through, which universities develop research, capacity and also generate highly skilled manpower needed for a functional economy and in addressing complex issues such as global financial recessions, climate change, and poverty alleviation and so on.

Postgraduate studies include postgraduate diploma, master's degree, master of philosophy, M.Phil. and doctor of philosophy, Ph.D. degrees. The traditional postgraduate qualifications tend to be generic while professional ones reflect a deeper understanding of a discipline (Aina, 2015). Demand for postgraduate education in Nigeria has escalated since the year 2000 and is still growing. This growth in demand for higher education is not limited to Nigeria but to both developing and developed countries of the world (Abdulahi & Evans, 2012). Among the factors highlighted in the escalating demand are; lack of immediate employment after first degree, the desire to acquire higher degree or to achieve individual academic goals and achieve personal independence. Other reasons as pointed out by Olubusoye and Olusoji (2014) are economic motivation and high demand for specialized skills by the public and private sectors.

The provision of postgraduate education takes the form of course work or a combination of course work and thesis writing. In the latter case, students offer courses to satisfy course work requirements before embarking upon research and

thesis writing. The research and thesis writing are critical components of postgraduate studies. Postgraduate research students work with their supervisors on their theses. The main duty of the supervisor is to provide guidance to students by checking every aspect of their work and also making inputs and comments where necessary.

A thesis or dissertation can be defined as the written product of a systematic study that results from a period of supervised research at the university (Jiranek, 2010). The finished product demonstrates originality, critical and independent thinking, appropriate organization and format, and thorough documentation. It generates scientific mindedness and facilitates the learning of how to identify a research topic and problem, how to formulate research questions and objectives, how to design and implement a research, how to manage and interpret data and how to report a research. Thesis, usually described as dissertation is purely an academic exercise that is expected to be the original idea of a postgraduate research student and serves as a core component of the requirements for the award of degree in one's area of study.

Students' thesis is therefore a fundamental component of the university life as it is seen as a means to achieving an end (Buttery, Richter & Filho, 2005). It remains the central piece of graduate education for most universities for a variety of reasons. Thesis completion and graduation has numerous benefits for society and the individual, the effects of which lead to public investment in higher education institutions - the production of skilled workers in the economy which results in higher tax revenue and spending, lower crime rates; lower welfare, medical, and prison costs; and a more stable society and government. Besides, the most immediate and significant benefit is the wage premium associated with degree completion. According to Ekpo (2016), college graduates are earning 70% more than high school

graduates, a number that has increased dramatically since 1970. Not surprisingly, through effective research work, educational attainment is negatively correlated with rates of poverty and unemployment (Abdullah & Evans, 2012). Non- monetary benefits of higher levels of thesis write up include better health of the individual and his or her children; increased longevity; lower infant mortality rates; likelihood of children attending college; happiness; and easier access to more prestigious positions in society.

Also, thesis completion/graduation expectancies are often seen as a measure of the success of the institution, a sign of hard work not only by the student but also by the supervisors and the department involved; and are important indicators, monitoring the stock and flow of students in graduate programmes in a given University, as well as an indicator of country's potential of highly skilled workforce. Low thesis completion expectancy negatively impact public confidence in higher educational institutions and institutional enrollment management and budgetary stability (Baum & Ma. 2007).

Postgraduate students are therefore expected to complete their theses within a stipulated duration of time, mostly two years and three years for masters and PhD regular research students respectively. The duration of postgraduate programme varies from institution to another within the same or/and different jurisdictions, depending on each university's and country's postgraduate regulations. For example, a full time master's degree may last between 9 to 12 months (e.g. UK and South Africa) or up to two years or more (common practice in Africa), while part time master's degree depending on institution or jurisdiction may take four years or even more. For PhD full time study, the duration varies between two and six years with average duration being four years (Duze, 2010).

Previous researches have observed that up to half of the students who begin their graduate studies spend more than the required number of years and some do not complete their studies at all (Blum, 2010). For example, in Trinity Western University (UK), a cohort of Doctor of Philosophy (PhD) students were monitored from their enrolment and after five years of studies, 57 percent and 19 percent of full time and part time respectively had completed. After seven years, the completion rate was 71 percent and 34 percent full time and part time students respectively. Delany (2013) in a study that involved 21 universities provided postgraduate completion expectancies for several institutions. For example at Massachusetts Amherst University, the completion expectancies are 52.1 percent and 45.5 percent for Master or Doctor of Education and Education Psychology respectively. At Illinois University, the completion expectancies improved progressively from 38 percent in the academic year 2000/2001 to 57 percent in 2009/2010. The improvement was attributed to increased number of female candidates completing the programme after intervention policies were put in place to support their candidature. Delany (2013) also indicated that at Texas University, only one out of every three doctoral candidates earn the degree while attrition rate range from 40-50 percent.

On the African continent, postgraduate studies completion expectancies are equally low. Bogelund (2015) reported that the average doctoral completion expectancy in Egypt is 60 percent in life science, 55 percent and 49 percent in social science and humanities respectively. At Makerere University, a follow up of a total of 295 students who registered for doctoral programmes between the years 2000 and 2005 showed that by November 2010, only 89 (39.7 %) had successfully earned the degree (Seidu, 2015). The researcher also reported that postgraduate studies completion expectancies in most South African universities remained below 20

percent until the year 2004 when it began to improve. The improvement was because of implementation of interventions aimed at improving completion rates to about 75 percent. However, the target was not achieved. For example, between the years 2005 to 2010, the completion expectancies staggered between 45-50 percent.

In Nigeria, an analysis of progress report of Masters and Ph.D. students in some selected departments during the 2005/2006 academic session in University of Calabar indicated that out of the 43 Masters students who were enrolled during the period, only 6(14%) completed their programme on schedule, while 37(86%) were at various stages of their research by the year 2010/2011 academic session. Similarly during the same period only 8(16%) Ph.D. students out of 50 completed their studies on schedule. Four (8%) students had to withdraw for various reasons, while 38(76%) could not complete by the end of 2010/2011 session. Postgraduate students in Nigerian Universities encounter many difficulties which unduly prolong the timely completion of their programmes. During postgraduate studies, the challenges encountered by part-time students are often different from those experienced by full-time students, apparently because in most cases, part-time students may be in full-time employment or have other responsibilities and commitments which distract their focus (Ekpoh, 2016).

Graduate students in the University of Calabar come from varied and diverse background in terms of age, experience, ability, marital status and so on. Some have funding or scholarship support while some are self-financing. Some are workers which present the problem of divided interest and low commitment. These background factors inadvertently affect students' ability and achievement. Students offering graduate studies at the University of Calabar are also under increased pressure to complete their programmes within a specified time period. For the

Master's degree programme, full-time students have a minimum completion period of three semesters and a maximum of five semesters, while the Ph.D. programme have a duration of six semesters for full-time students and a maximum of ten semesters. In terms of the part-time students, the minimum programme duration for Ph.D students is 10 semesters and a maximum of 14 semesters, while for the master's programme the duration is four semesters minimum and six semesters maximum (Duze, 2010).

Thesis completion expectancy may be affected owing to different stages and people involved in the postgraduate research process. The stages here include the various levels of thesis examination. For instance, the process where a student passes through the departmental and faculty defense (proposal, pre-field or post - field) stage to the external defense stage before he/she could have a successful thesis completion may pose a challenge where the external examination delays. Each of these stages involves a lot of commitments in terms of time, money and bureaucratic procedures. The people involved in the postgraduate research process include the thesis supervisors, the students as well as other researchers and factors within the university community. Factors supposedly associated with this situation include the nature and quality of supervision, institutional or environmental factors and characteristics of the postgraduate students (Olubusoye & Olusoji, 2014)

Delany (2013) observed that successful completion of thesis by students is due to a combination of factors such as the intelligence, the training received and perseverance of the students, as well as, proper guidance by the research supervisor. Ismail and Abidin (2009) opined that "a successful dissertation experience occurs only through significant efforts by both the adviser and the student." Equally, Duze (2010) noted that postgraduate education in Nigeria is bedeviled with all sorts of problems, ranging from personal, psychological problems to system or procedural

problems. Besides, major contributing factors affecting students' study progress are distractions from thesis research, lack of understanding of thesis writing, difficulties in data collection, students' personal qualities, advisors' personal qualities, lack of external resources, lack of support from peers, family and advisors, scheduling difficulties with an advisory committee, a tensed and uncomfortable environment, too many deadlines and restrictions, external pressures, interpersonal conflicts, financial needs, the length of thesis process, a lack of pressure from the department, negative peer influence and lack of plans (Ho, Wong & Wong, 2010).

However, various supervisors, departments, faculties and institutions have brought up several intervention programmes such as new courses - graduate seminars presentations, where graduate students are expected and encouraged to present papers/seminars on a chosen topic, preparatory to thesis writing; postgraduates students are also encouraged to attend project/thesis defense sessions, and some Faculties organizes annual Faculty conferences where postgraduate students present scientific papers and published them in reputable journals both locally and internationally. Also, postgraduate students have been encouraged to attend seminars, workshops and conferences within and outside the University and the country. All these and more are measures taken to help postgraduate students acquire/improve their needed practical research skills/experience towards ensuring high thesis completion expectancy and graduation (Ekpoh, 2016).

Yet, there are still many cases of low thesis completion expectancy and graduation/abandonment of programs reported among postgraduate students. A study by Olorunisoja (2011) revealed that it took 217 doctoral students of the University of Ibadan 4.5 to 9 years - that is between 2005 and 2009 to complete their programmes. Another striking ease is that of a student who started her master's programme in 2003

finished her course work in the same year and is yet to graduate by year 2018. This means that it is taking her almost 15 years to complete her thesis for an 18 mouths programme. Also, a study conducted by Agu and Oluwatayo (2013) showed that thesis completion expectancy ranges from 43% to 51% among some universities in South Eastern Nigeria. This type of situation is very worrisome as it not only discouraging aspiring candidates for postgraduate programme but putting a lot of burden on both the students, the faculty and significant others. Unfortunately, there are few published data or study involving postgraduate completion expectancy of students in relation to their completion in Nigerian Universities. This is a critical issue and it has not been given much importance among researchers. Besides, the few studies available have been dealing mostly on the factors (univariate) affecting postgraduate studies generally, without focusing on specific factors on thesis completion. Studies on thesis completion expectancy among postgraduate students using path analysis to show causal relationships among specific factors and their relative and collective effects have not been done or sufficiently examined.

There is therefore the need to examine supervisors' and students' variables, using the path analytic approach and determine their relative and collective effects on thesis completion expectancy as well as determine the most significant, meaningful and parsimonious model involving the effects of perceived supervisors variables and students' variables on thesis completion expectancy. The perceived supervisors variables considered here are supervisor competence, supervisor - student relationship, supervisor workload and supervisor timely feedback; while the students' variables are students interest, student research skills, academic achievement motivation, and students' emotional stability.

1.2 Theoretical framework

The following theories were used to explain the networking between perceived supervisor and student variables as they influenced thesis completion expectancy among postgraduate students

i. Formal Systems Theory

ii. Theoretical basis of path analysis

1.2.1 Formal Systems Theory

Formal Systems Theory was propounded by Donald Bertalanffy in 1968. According to the theory, formal organizations are organizations that are established to achieve defined objectives. Their designs specify how goals are subdivided, and reflected in subdivisions of the organization. Divisions, departments, sections, positions, roles and tasks make up the structure of the organization. It is a system theory in which the observed entities and their environment are interpreted through a system view point. The fundamental unit of analysis is a system made up of many interlinked components or structures with the aim of realizing a common goal. Each component represents a recognizable entity with assigned roles, activities and tasks performed in compliance with rules and constraints. The theory proposes that public and private organizations are complex entities that can be understood as systems. Every system identifies several supra- systems and several sub-systems whose contribution in terms of relationships, interaction and exchange of information and services, is fundamental to realization of the organization's goals.

The theory is most appropriate for the current study because universities are organizations with many management levels such as departments and faculties that are rationally constituted, assigned specific roles, objectives and activities performed in compliance with the university rules and norms and within frameworks. The theory

has been used extensively in studies related to organizations in both academia and business related organizations. Although the theory does not specify specific norms and rules, it however recognizes the entities as fundamental units in realization of organizations' goals.

The theory helps to identify the variables and factors (institutional - administrative related factors, supervision process, Teaching/Learning resources, mode of study and student related factors) which influence postgraduate studies completion expectancy and graduation. These are separate but interrelated organs whose roles basically contribute to a timely or untimely completion of postgraduate studies depending on effective and efficient functionality of each organ. The system's functions are guided by certain predetermined policies, rules and norms operating within an empirically designed framework. The key role of the system is to process a raw input and yield a well-refined output. The inputs in this case are students and resources (human, materials and monetary resources. The expected outputs are highly qualified personnel as well as quality research output. Proper coordination and implementation of administrative policies, commitment of supervisors in the supervision of research process, effective use of Teaching/Learning resources, proper integration of students into their academic faculties and student self-commitment leads to a high completion expectancies of doctoral studies presumably there are no serious challenges encountered by either of the parties involved in the research process. In essence, the possibility of high or low thesis completion expectancies depends on the level of commitment and academic integration of the student and the institutional commitment.

However, in a situation where serious challenges that cause threat to the each process are encountered, thesis completion expectancy and graduation will depend on

whether an intervention surfaces or not. Problems may be from the faculty/department or from the student. Possible challenges from the faculty side could include but not limited to departmental polities, resources related issues such as lack of adequate number of supervisors, financial constraints, unfavorable policies, government policies, political stalemate.

Possible source of intervention can be the university management, the government or any other interested and capable third party. A timely intervention will lead to high thesis completion expectancy and vice-versa. Some of the possible challenges students may encounter include life crisis issues either social, health, financial or responsibility related. The possibility of high completion expectancy will depend on whether a timely intervention from friends and family members prevail or not. A timely intervention will overcome the challenges thus leading to a timely completion. Lack of it will lead to prolonged completion or dropout. A timely intervention from either side to address any challenge(s) that may have emerged or threatening the progress of thesis writing process will hopefully restore' the situation - thus enabling students to concentrate on studies using the available resources. In this study, Abstract Systems Theory thus helps the researcher to determine the specific supervisor and student variables influencing postgraduate thesis completion expectancy.

1.2.2 Theoretical basis of path analysis

The theoretical framework for this present study is also based on the concept of Path Analysis. Path analysis was originally developed by geneticist Sewell Wright in the 1920s to examine the effects of hypothesized models in phylogenetic studies. Wrights analysis involved writing a system of equations based on the correlations among variables influencing the outcome and then solving for the unknown

parameters in the model. According to Wright, the path analytic method was intended to measure the direct effect along each separate path in such a system and finding the degree to which variation of a given effect is determined by each particular cause. Wright also acknowledged the fact that often causal relations were uncertain and cautioned that this method was not intended to deduce causal relations simply from correlation coefficients. Rather, the method utilized information provided by the statistical correlations in conjunction with qualitative information regarding the causal relationships to find the consequences of hypothesized structures. Path analysis is a statistical technique used primarily to examine the comparative strength of direct and indirect relationship among variables. Path analysis consists of a family of models that depicts the influence of a set of variables on one another. It is considered closely related to multiple regression analysis.

It is an extension of the regression models, which researchers use to test the fit of a correlation matrix with a causal model that they test. The aim of path analysis is to provide estimate of the magnitude and significance of hypothesized causal connections among sets of variables displayed through the use of path diagram. Since path analysis assesses the comparative strength of different effects on an outcome, the relationship between variables in the path model are expressed in terms of correlations and represent hypotheses proposed by the researcher. However, path models do reflect theories about causation and can inform the researcher as to which hypothesized causal model best fit the pattern of correlations found within the data set.

Path analysis is a subset of structural equation modeling. A multivariate method for establishing the magnitude of influence of multiple presumed independent variables on one dependent variable is structural equation modeling. This method of

analysis is particularly powerful and appropriate when considering non- experimental research. Non- experimental research, does not demonstrate causality, but causal inferences can be made if non- experimental data are analyzed properly. Path analysis is a sub-type of structural equation modeling that uses only measured variables. Path, analysis allows for the investigation of indirect and direct predictors of a. dependent variable and the concept of path analysis can best be explained with the help of a path model (path diagram).

Path analysis, as a model-building technique, uses multiple correlations and multiple regressions as its statistics. Basically, the researcher designs a hypothesized model of his choice consisting of a network, of exogenous and. endogenous variables. An exogenous variable is a variable whose variability is assumed to be determined by causes outside the causal model whereas an endogenous variable, on the other hand, is one whose variation is explained by other variables in the system. In a layman's sense, an exogenous variable is an independent variable - independent of the variables in the system, while an endogenous variable is a dependent variable.

It is the hypothesized model that is to be tested, in terms of significance and meaningfulness. The use of a confirmatory test therefore, requires the selection of a model that is most meaningful, from all other possible ones. To form, a model, path lines are used to link one variable with another to form a network. It is this network that is referred to as path 1 diagram or path model.

The strength of these paths is determined by the values of the correlation and regression coefficient from the multiple correlation and regression analysis. These values are called path coefficients. The symbol for path co-efficient is a P with two subscripts. For example, P_{12} indicates the direct effect of variable *2* on variable 1. Notice that the first subscript is always the dependent variable while the second

subscript is the independent variable. The coefficient for path analysis may' be expressed in either of the two metrics. The first metric is called unstandardized. This uses the measurement scale of the original variables. Under this situation, the paths are unstandardized regression coefficients, covariances link the independent variables and the purpose is to explain variance and covariance. The second metric is called standardized. Literally, this is the result of a path analysis or regression performed on all variables that have been transformed into standardized variables, that is, the data from such variables have been transformed into their standard scores (with means 0 and standard deviations 1.0).

In standardized units the path coefficients equal path standardized regression coefficients. The resulting path coefficients are therefore referred to as beta weights (p-weights). The purpose of using beta weights is to explain the proportion of variance (in terms of direct and indirect variations) and correlations among variables. The advantage of using standardized coefficients is that it is scale free and can therefore be used to compare variables. On the other hand, its disadvantage is that they are population-specific and therefore cannot be used for the purpose of comparisons or generalizations across populations.

The primary rule of path analysis states that the correlation between an independent and a dependent variable is the sum of the direct effect and all the indirect effects (Scheiner. 2000). To this end, the utility of path analysis is the decomposition of the sources of a correlation between an independent and dependent variable into direct and indirect effects. Such decomposition provides in-depth information on such paths that are strong and those that are weak. It could also reveal salient variables that arc responsible for the strength or weakness of the correlation. This gives a more if elaborate understanding, and uncovers some hidden information

for more meaningful explanations.

Basically, the essence of path analytical procedures is to produce a more meaningful and parsimonious model from a chunk, of hypothesized model. In order to arrive at this meaningful model, certain paths are trimmed off from the already hypothesized model. Path trimming is on the basis of statistical significance and the criteria of meaningfulness. Path trimming entails that certain paths with coefficients that are not statistically significant and/or are not meaningful in the explanation of the model be deleted from the diagram. Kerlinger and Pedhazur (2009) suggested that paths with beta coefficients, which are less than 0.05, should be considered statistically insignificant and therefore be deleted. The criterion of meaningfulness is a judgmental criterion based on the topic and on the consequences of decisions to be made on the basis of the resultant model. Once these paths are trimmed off the resultant model is the meaningful or parsimonious model, which is more useful for discussion.

In this study, the concept of path analysis helps the researcher to determine the various models fitted for the variables. Figure 2, 3 and 4 are samples of a path model containing nine variables.

1.3 Statement of the problem

Over the last decade, there has been a general growth in enrollment and interest in graduate studies in Nigerian universities. Prior to now, graduate study was a preserve of very few knowledgeable persons in their subject areas. Now, there is widespread perception that anyone can do it. Graduate studies involve course work and research or research only depending on the University. The research is done after the completion of course work. A student is expected to be guided by the supervisor in writing the research. A supervisor has a major role to play in mentoring and

providing the intellectual support in thesis writing.

It is however observed that graduate students tend to spend more years pursuing their research programmes than the required maximum period. Many students delay or drop-out of their postgraduate studies after they have completed their course works while some finish their course works promptly and take years before completing their thesis.

A delay in thesis/dissertation completion is undesirable for postgraduate students and also detrimental to universities. It could results to attrition which constitute educational wastages in terms of time, energy and financial resources expended by the students during the programmes. It is also a loss of valuable time and resources because of all the training and supervision invested in the candidates. This is a source of worry not only to continuing students, the institution and supervisors but prospective applicants as it breeds apathy on their part of not willing to apply to study at universities for fear of abandoning their programme or not graduating on record time. It creates additional problem of overburdening the supervisors with more students than they can cope, overstretching of existing facilities and problem of funding on the part of the student. There is the added pressure on students to write quality thesis and also finish their programmes within specified time frame or their admission will lapse. This situation also affects the image of the institution and the nation as a whole.

Most previous studies have tended to strictly examine the relationship between thesis completion expectancy among postgraduate students and one or two other supervisor's or student's factors without adequate consideration given to the interactive influence of many others taken together, which also have direct and indirect link with low thesis completion expectancy. To this end, a good

understanding of the causal network through which perceived supervisors' variables such as supervisor competence in research, supervisor - student relationship, supervisor workload and supervisor timely feedback; and students' variables (Students' interest, student research skills, academic achievement motivation and students' emotional stability) that could influence thesis completion expectancy for the purposes of clarity.

It is therefore pertinent to pose the question: What are the influences of perceived supervisor variables such as supervisor competence in research, supervisor - student relationship, supervisor workload and supervisor timely feedback on thesis completion expectancy among postgraduate students? What are the influences of students' variables such as student interest, student research skills, academic achievement motivation and students' emotional stability on thesis completion expectancy among postgraduate students? What are the direct, relative and collective effects of these perceived supervisors' variables and students' variables on thesis completion among postgraduate students?

Research findings on this phenomenon are inconclusive showing that a lot is still needed to be done to fully understand delay in thesis completion expectancy among postgraduate students. It is this vacuum in research that has necessitated this study on a path analysis of perceived supervisor variables, student variables and thesis completion expectancy among postgraduate students.

1.4 Purpose of the study

The purpose of this study was to determine the influence of perceived supervisor and student variables on thesis completion expectancy among postgraduate students, using path analytic approach. Specifically, the study aims at finding out:

i. The relative and collective effects of perceived supervisor variables

(supervisor competence in research, supervisor - student working relationship, supervisor workload and supervisor feedback) on thesis completion expectancy among postgraduate students.

ii. The relative and collective effects of student variables (students interest in research, student research skills, academic achievement motivation and students' emotional stability) on thesis completion expectancy among postgraduate students

iii. The combined relative and collective effects of perceived supervisor and student variables on thesis completion expectancy among postgraduate students

iv. The most significant, meaningful and parsimonious model involving the effects of perceived supervisor variables (supervisor competence in research, supervisor - student relationship, supervisor workload and supervisor timely feedback) on thesis completion expectancy of postgraduate students.

v. The most significant, meaningful and parsimonious model involving the effects of student variables (students interest in research, student research skills, academic achievement motivation and students' emotional stability) on thesis completion of postgraduate students.

vi. The most significant, meaningful and parsimonious model involving the effects of perceived supervisor and student variables on thesis completion expectancy of postgraduate students.

i. The proportion of the model involving perceived supervisor variables (supervisor competence in research, supervisor - student relationship, supervisor workload and supervisor timely feedback) and student variables (students interest in research, student research skills, academic achievement

motivation and students' emotional stability) on thesis completion expectancy among postgraduate students that is direct and indirect

1.5 Research questions

The following research questions guided the study

i. What is the most significant, meaningful and parsimonious model involving the effects of perceived supervisor variables (supervisor competence in research, supervisor - student working relationship, supervisor workload and supervisor feedback) on thesis completion expectancy among postgraduate students?

ii. What is the most significant, meaningful and parsimonious model involving the effects of student variables (students interest in research, student research skills, academic achievement motivation and students' emotional stability) on thesis completion expectancy among postgraduate students?

iii. What is the most significant, meaningful and parsimonious model involving the effects of perceived supervisor and student variables on thesis completion expectancy among postgraduate students?

iv. What is the proportion of the model involving perceived supervisor variables (supervisor competence in research, supervisor - student relationship, supervisor workload and supervisor feedback) and student variables (students interest in research, student research skills, academic achievement motivation and students' emotional stability) on thesis completion expectancy among postgraduate students that is direct and indirect?

1.6 Statement of hypotheses

i. There are no significant relative and collective effects of perceived supervisor variables (supervisor competence in research, supervisor - student relationship, supervisor workload and supervisor feedback) on thesis completion expectancy among postgraduate students.

ii. There are no significant relative and collective effects of student variables (students' interest in research, student research skills, academic achievement motivation and students' emotional stability) on thesis completion among postgraduate students.

iv. There are no significant relative and collective effects of perceived supervisor variables and student variables on thesis completion expectancy among postgraduate students.

1.7 Significance of the study

Findings of this study promises to significantly contribute to existing knowledge in the subject matter. Findings of the study would highlight the most direct, indirect, relative, collective, significant, meaningful and parsimonious model involving the influence of perceived supervisor variables and students variables on thesis completion expectancy; which will go a long way to explaining elaborately and with full understanding of why postgraduate students delay in their thesis work.

Findings of the study therefore would be beneficial, not only to postgraduate students and lecturers, but also to the government, university administrators, policymakers, thesis supervisors/advisors, funding agencies, researchers and the society in general. The research findings will be useful to government and policy makers in the area of enactment and/or review of existing postgraduate studies/programmes policies to improve the research culture/content among

postgraduate students towards ensuring timely completion of thesis and the production of the much needed specialized skilled manpower. The universities' administrators may use the findings to improve development of an efficient and effective postgraduate research environment and provision of research infrastructures such as libraries, internet facilities and human resources.

The findings of the study will hopefully create more awareness to lecturers and thesis supervisors/advisors and the opportunity of knowing the specific factors that directly and indirectly affect thesis completion among postgraduate students, thereby placing them in a better position to offer helps to students already trapped in this situation as well as takes steps towards ensuring that prospective research students complete their thesis on time, through improved supervision of thesis. It will also enhance development of student support programmes from the government, donor agencies and other well- wishers, to ensure timely completion of postgraduate thesis and eventual completion of studies.

The findings will be useful to graduate students pursuing or intending to pursue postgraduate studies as they shall be properly guided to address potential supervisor/students related factors that directly and indirectly influence thesis completion, and possibly change attitude towards the general conduct of the thesis work to ensure postgraduate timely thesis completion and graduation. The findings shall provide valuable data for funding agencies to make informed decisions regarding their sponsorship of graduate students.

Findings of the study shall also serve as a useful source of information or body of knowledge to other students on the subject matter; and provide information that may be useful to future researchers in the same area.

1.8 Assumptions of the study

This research work shall be carried out based on the following assumptions.

i. Postgraduate students are capable of completing their program on time

ii. Some postgraduate students do experience low thesis completion expectancy and this can be attributed to some factors.

iii. Thesis completion expectancy can be measured based on investigation and are normally distributed.

iv. Perceived supervisor/student variables (Supervisor competence in research, Supervisor - Student working relationship, perceived supervisor workload and supervisor feedback; Students interest in research, Student Research Skills, Academic achievement motivation and students' emotional stability) are each measurable. .

1.9 Scope of the study

The present study focused on postgraduate students undergoing various postgraduate programmes in the public universities in Cross River State, who have finished their coursework and were doing their thesis work, as at 2017/2018 academic session. The research centered on the University of Calabar and Cross River University of Technology, Calabar. The study examined perceived supervisor and student variables influencing postgraduate thesis completion expectancy at these universities in Calabar. The perceived supervisor variables are supervisor competence in research, supervisor – student working relationship, supervisor workload and supervisor timely feedback; while the students' variables include students interest in research, students research skills, academic achievement motivation and students' emotional stability.

1.10 Limitations of the study

There are some limitations that were evident in the study. The study was conducted in only public universities in Cross River State; Nigeria thus, the result might not be generalized to students to private universities in the State. The use of only questionnaire for data collection was another major limitation in this study. Observation would have helped the researchers to have first-hand experience of factors that contribute to the delay in students' thesis completion expectancy. The study operationally defined the nine variables in terms of the items to reflect and measure them. Therefore, the researcher's conception of these variables may not be comprehensive enough to integrate all other possible views of the definitions of these variables. In addition, it was challenging for the researcher to access all the postgraduate students who were at various stages of their thesis writing. This is owing to the fact that most of these students do not attend postgraduate seminars and thesis defense sessions coupled with different regulations which differ from one department to another. Furthermore, the study also lacked the perspectives of the supervisors since the result is merely based on postgraduate students' perspectives. However, despite these limitations, this study is deemed to have achieved its purpose as it did not invalidate the findings of the study.

1.11 Definition of terms

Supervisor refers to the university lecturer appointed by the university to provide academic guidance and mentorship to research students assigned to him or her.

Perceived supervisor variables refer to how postgraduate students perceive services like mentorship and structured supervision programmes that are provided by the supervisor; such as supervisor competence in research, supervisor – student working relationship, supervisor workload and supervisor feedback.

Student variables refer to the factors of the students which influence them completing their thesis timely: such as student interest in research, student research skills, academic achievement motivation and students' emotional stability.

Path-analysis is a causal modeling that examines whether a pattern of intercorrelations among variables "fits" the researcher's underlying theory of which variables that are causing others are postulated to be the potential determinants of the effects, and then attempting to isolate the separate contributions of the effects made by each cause or predictor variable. In this study, path-analysis model is designed to shed light on the tenability or otherwise of a theoretical causal model formulated by the researcher on the basis of knowledge and theoretical considerations.

Pathways - these are the routes to the two criteria variables, perceived supervisor/ students variables and thesis completion. They traced out the direct and indirect influence of some selected variables on perception of supervisors and students variables and thesis completion. The method is based on the construction of a diagram in which every included variable, measured or hypothetical, is represented by arrows either as completely determined by certain order or as an ultimate factor having causal connections to the criteria variables. In this study, the method of path-analysis is applied to complete the linear relationships among the variables with the direction of causation taken into account.

Exogenous variable: This is the variable whose variability is assumed to be due to causes outside the causal model. No attempt is made to explain the variability of an exogenous variable or its relation with other exogenous variables. In this study, for instance, variables X_1 (supervisors competence in research) is the exogenous variable.

Endogenous variable: This is the variable in a statistical model that is changed or determined by its relationship with other variables within the causal model. An endogenous variable treated as dependent variable in one set of variables may be conceived as an independent variable in relation to other variables. It is not usually possible to account for the total variance of such a variable.

Direct effect: The direct causal effects of the exogenous variables are the paths in the form of unidirectional arrows which are drawn from the variables taken as causes (independent) to the variables taken as effects (dependent).

Indirect effects: An indirect effect occurs when a variable affects an endogenous variable through its effect on another variable known as an intervening variable. In a path diagram, indirect effects are identified by a chain of two or more straight arrows all going in the same direction. The value of an indirect path coefficient is determined by finding the product of all path coefficients in the chain.

Reproduced correlations - These are the bivariate correlations that would be produced if the causal model is to he correctly specified. If the observed and the reproduced correlations are reasonably close (say. within .05 of each other), it can be assumed that the model is consistent with the empirical data. Larger discrepancies indicate that the model is not consistent with the data and model revisions should be considered. Before the obtained estimates of path coefficients can he used to describe the causal effects among the variables, one should determine whether or not the model is consistent with the observed empirical correlations among the variables. This is typically accomplished by obtaining the reproduced correlations; that is, those logically implied by the hypothetical or theoretical model and comparing them to the empirical correlations.

CHAPTER TWO

LITERATURE REVIEW

This chapter focus is on relevant literatures that have relationship with the present study. The different variables under study are treated, citing both the theoretical and empirical studies that are related. The literature reviewed in the study shall be considered under the following sub-headings.

2.1 Supervisor competence in research and thesis completion expectancy

2.2 Supervisor – student working relationship and thesis completion expectancy

2.3 Supervisor workload and thesis completion expectancy

2.4 Supervisor timely feedback and thesis completion expectancy

2.5 Student interest in research and thesis completion expectancy

2.6 Student research skills and thesis completion expectancy

2.7 Academic achievement motivation and thesis completion expectancy

2.8 Students' emotional stability and thesis completion expectancy

2.9 Summary of literature review

2.1 Supervisor competence in research and thesis completion expectancy

To be able to write a well-researched thesis, the role of a supervisor in guiding the student is of utmost importance and cannot be overlooked (Seidu, 2015). Successful or high completion expectancy of thesis work is heavily depending on the skills of supervisors. Effective supervision is very crucial for a good contribution by the student. Lecturers who are skillful in research work are needed as supervisors to guide postgraduate research students to successfully complete their studies. Without effective supervision of postgraduate studies, it will be difficult to produce new knowledge. Each successful graduate applicant will be assigned a supervisor either during the course work period or after the course work is over; at least one supervisor

for research master's degree and at least two for Ph.D. studies. Where the supervisors are two, the team will be made up of a principal supervisor and a co-supervisor and each must hold at least a PhD degree or be a senior lecturer. Researches on postgraduate completion suggest that, within a discipline, the quality of supervision is the key factor determining the successful and timely completion of a postgraduate (Bourke et al. 2004). At a basic level it is also noted that more frequent supervision is strongly correlated with successful completion.

The work of Delany (2013), as part of a major study earned out at the Australian National University, Canberra, clearly produced a list of the characteristics of a 'good supervisor' as approachable and friendly; supportive, positive attitude: open minded, prepared to acknowledge error; organized and thorough; and stimulating and conveys enthusiasm for research. As provided by Nnebedum and Obuegbe (2021), a good supervisor will play his/her structured supervisory in as a director, facilitator, adviser, guide, critic, teacher, supporter, friend, freedom giver and a manager: director (determining topic and method, providing ideas); facilitator (providing access to resources or expertise, arranging field-work): adviser (helping to resolve technical problems, suggesting alternatives); teacher (of research techniques): Guide (suggesting timetable for writing up, giving feedback on progress, identifying critical path for data collection); critic (of design of enquiry, of draft chapters, of interpretations or data): freedom giver (authorize student to make decisions, supports student's decisions); supporter (gives encouragement, shows interest, and discusses student's ideas): friend (extends interest and concern to non-academic aspects of student's life); and manager (checks progress regularly, monitors study, gives systematic feedback, plans work).

Letagan (2009) asserts that postgraduate supervision is the active engagement by the supervisor through the research process to guide the student to solve a research problem. She explained that the process of supervision starts with identifying a suitable supervisor who can assist the student to identify the research problem, apply correct methodologies to address the research problem and find appropriate solutions to the staled, problem. In some universities, a supervisor is not expected to supervise more than six full time Ph.D. students and six master's students in an academic year, as a regulation. This measure is put in place in order for the supervisor to have at least sufficient time for the students. According to Vilkinas, (2002), some supervisors are not trained on the newest research methods that could help them in guiding their students in the postgraduate studies which results in their inability to apply and transfer the appropriate skills and research expertise to their supervisees. This could be attributed to either inability of some university management to organize seminars for research development of these supervisors or supervisors' lack of intrinsic motivation to develop them.

2.2 Supervisor-student working relationship and thesis completion expectancy

The first and often most influential external factor that affects postgraduate students' experiences in graduate school is their relationship with their supervisor(s). Lovitts (2001) claimed that one's supervisor "influences how the student comes to understand the discipline and the roles and responsibilities of academic professionals, their socialization as a teacher and a researcher, the selection of dissertation topic, the quality of the dissertation, and subsequent job placement". Additionally, supervisors can play a major role in student satisfaction, persistence and academic achievement (Agu & Oluwatayo, 2013).

A good relationship between the advisor and advisee is the primary reason for a high completion expectancy of thesis writing process while a poor relationship between advisor and the advisee can impede timely completion of thesis writing. This is in agreement with earlier findings by Wright (2003) and (Elgar, 2003) that the relationship a student develops with his or her advisor has great impact on the student's research progress. Many students feel that effective supervisor mentorship is a key factor in a timely completion of a graduate programme. Similarly, the nature of advisor-advisee relationship, can greatly impact the students research progress. Araque, Roldand and Salgueroa (2009) argued that poor advisor-student relationship impedes postgraduate completion expectancy rates and time to completion. If a supervisor places the onus entirely on the student, the time to completion is prolonged (Elgar, 2003).

Some of the most successful postgraduate students had supervisors who not only provided guidance but also the freedom and autonomy they needed to grow as scholars (Rodwell & Neumann, 2007). Proper supervision, arrangements, timely feedback to students, advisor-advice meeting frequency, good relationship and early start, are key pointers of a possible high completion expectancy of thesis writing (Wamala & Oonyo, 2011). This buttress the fact that when supervisors and supervisees have good rapport, and work together, the advisee's progress is facilitated and the student would have greater academic success.

Uduak (2016) report that the kind of relationship that a student develops with his or her supervisor can greatly affect the student's academic progress, especially as the student moves closer to and through the thesis stage. However, it is important that there be a match between advisor and advisee regarding topic of interest, expectations about progress and time-lines. At the same time, supervisors can help their

supervisees grow by working from student's individual strengths, demonstrating unconditional positive regard, by teaching resiliency and conflict-resolution skills and by focusing on building students positive self-image.

Studies by Bourke et al. (2004) revealed that it is essential to have positive relationship between students and supervisors because the quality of the interaction and personal quality of the supervisor are important predictors of timely postgraduate thesis completion expectancy. Effective supervision is very crucial for a good contribution by the student. The student-supervision relationship is imperative for successful thesis completion within program duration. Supervisors are assigned to research students in order to give students technical support for writing their theses. Assignment of supervisors is normally based on their competence and their interest in a particular area of study. Where there is no supervisor to be assigned to guide a student in his/her chosen area of research, the student may be required by the awarding the institution to look for a supervisor whose name is forwarded to the Graduate School for consideration (Seidu, 2015). The relationship between a student and a supervisor commences immediately the supervisor is officially assigned to the student. The relationship should be founded on a solid rock of certain principles, rules and regulations in order to successfully complete the thesis work. The researcher further indicated that many graduate students experience low completion expectancy with their theses majorly owing to poor student-supervisor relationships. The relationship therefore needs to be carefully managed to achieve its objectives. The student should be of good behavior and the supervisor should live a life worth emulating.

Research conducted indicated that unclear motives and purposes of supervision, supervisors' preference of some supervisory roles over other roles in

guiding students contribute to the low expectancy in thesis completion (Wallace, 2003). The student-supervisor relationship should be built on honesty and hard work. Honesty requires you to be factual, open and transparent in all that the student says and writes. As Seidu (2015) pointed out, the relationship should not just be "to pass your thesis and go away". He opined that, student-supervisor relationship that travels beyond the end of the thesis, inter alia, often become beneficial in terms of academic progress. Granted that the relationship is positive, it enables the supervisor to assist such student(s) by way of writing a recommendation letter for further studies and guiding in research publication(s) among others.

To De - Valero (2001), the four major problems in the postgraduate experience are: being at cross purposes with supervisors, finding few supporting structures isolation and confusion over resources. Park (2005) reported that 25% of postgraduate research students surveyed were either "dissatisfied" or "very dissatisfied" with their experience. Problems with the supervisory relationship were cited by 31% (i.e. 8% of the total) of this group. Other research suggests that, within a discipline, the quality of supervision is the key factor determining the successful and high completion expectancy of a masters/ PhD (Rooji et al, 2019). At a basic level it has been noted that more frequent supervision is strongly correlated with successful completion. Rooji et al, 2019) showed that important positive characteristics of supervisors according to their postgraduate students were professional, pleasant, and supportive behaviour.

In a study on postgraduate supervision, Lessing and Schulze (2003) observed that students' aspirations were not often met in most aspects of supervision. In another study, Rodwell and Neumann, (2007) explored the experiences of Ph.D. students and found that more than forty percent (40%)of the postgraduate students reported that

they would pick a different topic if they could start all over again, while thirty six percent(36%) stated that they would chose a different supervisor if they were given the opportunity to do so, and about a third of the respondents said that they would select another field of study if they had to re-do their postgraduate studies.

2.3 Supervisor workload and thesis completion expectancy

Ndayambaje (2018) found in his research that common complaints from students concerned irregular contact with supervisors who most of the time are preoccupied with teaching or administrative duties, have too many supervisees or have to be away from the University frequently for external examination or conferences. Lategan (2008) argued that students were not getting enough time with their supervisors because the supervisors were overworked and there was acute shortage of qualified supervisors. Another dimension noted by Lebcir, Wells and Bond (2008) was that senior faculty members were under increasing pressure to teach, publish and to attract income to their universities.

Bolli, Agasisti and Johnes (2015) in their study of factors contributing to student's persistence at the University of Nebraska-Lincoln, observed that the factors influencing thesis completion rates can be broadly grouped into external and internal factors. The external factors include the nature of programme, student support services and the faculty while the internal factors include student self- motivation and quality of academic experience.

The influence of these factors to thesis completion can be positive or negative depending on how the student encounters and interacts with them. A study conducted by Bound, Lovenheim & Turner (2009) to determine the impact of University in Kenya on quality of education, found out that generally, Kenyan universities are understaffed. It does not only affect the quality of education but it also impedes thesis

completion rates. The report noted that because of the poor faculty salaries benefits, and teaching conditions many senior professors have shifted over to externally and relatively well and more flexibly funded, project-oriented, research institutions. This means minimizing their teaching activities. Others get caught up in well-paying project development or evaluation consultancies for national and international donors, agencies, and NGOs operating locally or elsewhere. Others have simply joined the international brain drain to Europe, UK, US, or in recent years, to the Middle East- in some cases taking their best students with them. As a result, crucial and widely desired courses in theory, methods, proposal writing, agenda setting, philosophy, the ethics and politics of research are not getting taught to the depth required.

Equally problematic is the fact that postgraduate students and thus potential junior faculty lose the essential apprenticeships, mentoring, supervision, and role models that they need and want. Consequently, students' works take weeks to months before they are looked at and responded to by an overworked faculty member. Green and Powell (2005) noted that overwhelming workload and lack of competence among some lecturers could be affecting the quality of education in Kenyan universities thus partly contributing to low thesis completion expectancy in graduate studies. Ives and Rowley (2007) noted that in order to survive the heavy workload, faculties should consider adopting survival mechanisms. In a four-fold survival mechanism notably: assigning tutorial fellows full time teaching responsibilities such that they teach both junior and senior classes, assigning tutorial fellows students' advisory responsibilities including assessment of students in the field, assigning junior faculty members to supervise, and appointing supervisors from other disciplines. While these recommendations may seem to be a quick mitigation to the challenge of inadequate number of supervisors, the question is 'are tutorial fellows able to deliver quality

teaching and supervisory responsibilities to senior classes? This is so because the quality of education might be compromised (Phillips & Pugh 2010).

2.4 Supervisor timely feedback and thesis completion expectancy

To fully appreciate the significance of the role of the supervisor in the postgraduate studies thesis completion, it is essential to consider how students and their supervisors are matched, the types of relationship patterns they develop, and how aspects of these categories (i.e, match and relationship patterns) can hinder or facilitate student success. Quality supervision, according to Latona and Browne (2001) can be characterized as involving precise and timely feedback, frequent meetings that include open discussion about roles and responsibilities, a supportive and collegial relationship, and encouragement to begin working on topics of interest early in the program in order to maintain the flow of work throughout the program.

In an investigation into the most salient criteria in supervisor selection, Vladimir (2010) conducted a mixed-method study of 23 junior and senior doctoral students. Controlling for education level, he identified ten key elements affecting the choice of a research supervisor. These supervisory elements, organized by decreasing importance, are as follows: (a) committed and involvement: (b) the extent to which the supervisor will defend their students' stance in contentious situations (if that stance was agreed upon previously): (c) reputation/productivity; (d) respect for timelines; (e) convergence of interests: (f) ability to help students obtain job opportunities: (g) openness to different research approaches; (h) personal relationship (e.g, how easily the pair gets along): (i) the supervisor's relationships with other academics (both inside and outside the institution): and (j) the number of theses supervised. From this list, it is evident that doctoral students are not only concerned with guidance on subject matter and methodology, but to a large extent value

productivity or feedback, partnership, and commitment on the part of their supervisor.

From Wrightt and Cochrane (2000) 'dialogue with supervisors', student views were elicited on perceived levels of supervisor interest in their studies, levels of constructive criticism, degree to which their supervisor engaged the student in discussions of methodological, theoretical general subject area issues, and the student's future career plans. Findings revealed that overall Irish students appear to fare slightly better than the sampled European average. For example, about one third of Irish students reported that they received inadequate constructive criticism from their supervisor compared to approximately 35% for Catalonian students and just over 50% for Finnish postgraduates. Furthermore, of this sample, Irish students were the most satisfied that their supervisor displayed sufficient interest in their studies. In a study by Styles and Radloff in 2001, as part of a major study carried out at the Australian National University, Canberra, the characteristics of a 'good supervisor' are as follows: approachable and friendly: expertise in the research area, supportive, positive attitude; open minded, prepared to acknowledge error; organized and thorough; and stimulating, conveys enthusiasm for research and balancing creativity and criticism. Apart from that, the quality of postgraduate depends not only on supervision methodology but also other elements which include policies, infrastructure, finding, library, computing, office space, conferences, travels, fieldwork and so on (Buttery et al, 2005). Furthermore, interactions, quality, style of supervision, role expectations of students and supervisors are collectively important (Kiley, 2011).

Still on the influence of supervisors' feedback on thesis completion expectancy, Olorunisola (2011) suggested eleven practices of effective supervisors. These are: ensuring the partnership is right for the project; getting to know the

students and carefully assess their needs; establishing reasonable, agreed expectations; working with students to establish a strong conceptual structure and research plan; encouraging students to write early and often; initiating regular contact and provide high quality feedback; getting students involved in the life of the department; inspiring and motivating students; helping if academic and personal crises crop up; taking an active interest in students' future careers; and carefully monitoring the final production and presentation of the research. Sharif, Abidin, Ramii and Ahmad (2015) observed that postgraduate students feel that mentoring and structured supervision, systems such as weekly deadlines and weekly monitoring, can facilitate high completion expectancy of thesis writing.

2.5 Student interest in research and thesis completion expectancy

According to Isangedighi, Joshua, Asim and Ekuri (2004), postgraduate degree programs with research components goes through five stages (1) course work (2) finding a dissertation topic and writing a research proposal (3) assigning a supervisor (4) Doing research (5) Report writing. Many students move through each stage smoothly but some students experience a serious interruption in their progress. For the majority of students, this takes place after course work in stage two. Finding a thesis topic and completion of a thesis involve tremendous work. Writing more than 100 pages is a painful task. Writing the dissertation is generally affected by various factors. One key factor in completing a postgraduate degree is interest/persistence. Carter (2008) developed a model of graduate student persistence that induces the degree of involvement in one's graduate program and the relationship with the faculty advisor, the quality of the relationship between the advisor and student, and the departmental characteristics.

Maher and Thompson (2004) describe the student persistence with three types of graduate students, the "direct current," the "alternating current," and the "weak battery." The direct current graduate student is one who maintains a constant level of effort throughout the dissertation process, leading to rapid degree completion. This student seeks immediate help when any problem arises. The alternating current graduate student begins the dissertation process with a high degree of effort and then fluctuates between high and low activity. Much motivation is not necessary for this type of student. Although these students start their dissertation work strongly, however, they experience delay during the research process. This type of students begins their research topic with high confidence and face ups and down in the study process. However, during the dissertation process, short or long delays interrupt the student's progress. Although this student generally sets no specific completion date but has a general idea of a completion time. The weak battery type of graduate student start their work strong, but gradually reducing in their effort towards completion. They need outside intervention or reinforcement to get a jump start. Such a student's "battery" is, at times, strong, and he progresses toward completion of the dissertation, at other times, the "battery" is weak and requires assistance from an external source. The "battery" may even die, and the candidate may leave the program altogether if their battery is not re-charged.

Postgraduate students need an interesting and conducive environment where they can freely concentrate in their studies and research work. Some other studies found various reasons for the non-completion (Lebeir et al. 2008). They are financial difficulties, poor working relationship with advisor and/or committee, substantive problems with the dissertation research, personal or emotional problems, receipt of an attractive job offer, interference of paid work with dissertation work, family demands,

lack of peer support, and loss of interest in earning a Master/Ph.D. Manathunga (2005) found that many students dropped out of graduate school because of academic problems. This study has cited many reasons such, as lost interest in the field, disillusioned with graduate work, poor relationship with their advisor, tired of studying, and lack of faculty interest in students. Further, some other authors - Pyhato and Keskan (2012) found four factors, selection of an appropriate dissertation topic, and extensive fieldwork during the data-gathering, difference in expectations between the advisor and student, and feeling of isolation.

Some students are willing to take a break between the completions of course works and the commencement of the dissertation. Depending on the research title students have to go outside for extensive fieldwork during the data-gathering phase of the dissertation process. This situation causes the students to take longer period to complete, sometime non-completion. Owler (2010) cited another factor, which may impede the completion of dissertation as students' commitment. Problems may arise including difference in expectations between the supervisor and student, unavailability of the supervisor, and lack of regular contact between the student and the supervisor. Schoot et al (2013) found four predictors of dissertation completion expectancy: (1) failure to set a writing schedule, (2) inadequate computer skills, (3) the candidate's job demands, and (4) committee membership changes. Olunkwa and Nwokolo (2018) state that one of the major reasons for some students fail to finish their dissertation is the level of stress involved. Blum (2010) cited that the personality of the student and the supervisor must match on the levels of (a) dependence versus independence, (b) nurturance versus distance, and (c) epistemological preference. Duze (2010) stated that non-completion is possible because of lack of quality interaction between student and their supervisors. Furthermore, Olibie, Agu and

Uzoechina (2015) claimed that the dissertation writing phase is not collaborative, and during this time students are often off campus, some students experience isolation. A study conducted by Mohamed, Ismail, Mustaffa and Mohd (2011) found nine problems associated with non-completion such as insufficient information provided to students, feeling of isolation, no opportunity for lively interaction with fellow graduate students, limited access of professors, engagement of studies which does not enhance the capabilities of the students and so on.

Postgraduate students spend long hours in the libraries, reading materials, searching and repeated writing the dissertation draft which separate them from spending time with their family and friends, experience lonely and isolation. In support of this argument, Santi et al (2020) claimed that during the dissertation development stage postgraduate may find themselves disconnected from institutional support systems in the form of classes, and structured faculty student interaction; finding themselves alone, a sense of anomic may develop. The anomic may intensify when it is recognized that previous course work has not prepare the candidate to conduct a dissertation.

A study conducted by Humphrey. Marshall and Lernardo (2012) on higher education in the third world countries found out that, the absence of an adequate policy and the programming of research work in the universities, the reluctance to allocate funds for research, inadequate resources, the failure to allocate staff time for research, the lack of commitment and the inadequate preparedness of students as major impediments to research. Divsar (2018) have identified three major types of theoretical models related to drop-outs, i.e., the student international fit model which stresses that institutional variables are more influential on from out decisions, the student environmental fit model which stresses that home and environment variables

it variables are more influential on drop-out decisions and individual-congruence model where drop-out and the participation depend on how individual variables interact with environmental and institutional variables. Divsar (2018) identified economic background variables, the demographic variables, the variables related to student behavior of the student support system and the variables related to distance from the home to the institution were more significantly influential on dropouts, and strong relationship found of drop-out and quality of the support system and the student satisfaction with the support system provided by the institution.

Another study by Orella, Darden Perez and Salinas (2016) on drop -outs of Open University of Sri Lanka, classified factors which cause students' drop-out under two major categories; students based and course based. This study revealed that the major factors responsible for the delay or drop-outs are mainly student based. Personal, social and economic reasons appear to have influenced the drop out too. Many studies exploring the factors influence either the candidates' completion or attrition of their study showed several factors that influence student persistence in postgraduate education in five specific areas: recruitment/admissions: financial aid; mentoring and socialization; research productivity; health and wellness (Carter, 2008; Rodwell & Newman, 2005). Bourke et al. (2004) found that organizational cultural of the graduate school may also affect students' candidature of their study. According to Pyhalto and Helsinki (2012), students in a department whose culture and practices facilitate academic and personal integration are more likely to increase and boast student's interest in research to complete a postgraduate compared to students in a department whose culture is hostile and laissez faire.

2.6 Student research skills and thesis completion expectancy

Positing here, Bogelund (2015) clearly established that major reasons for research students' low expectancy in thesis completion/attrition are the lack of hand-on skills in the research process especially in the research definition and design stages. He further stated that another challenging task for research students is translating the defined and designed components in the framework into an acceptable and well-written proposal. Additionally, other research skills identified are an ability to think critically, the skills necessary to plan and undertake independent study and research, and the development of the latest knowledge and skills (Grebennikov & Shah, 2007). Based on Ssegawa, and Rwelamila (2009), other skills required for high PhD completion expectancy are incoming skills which refers to the research and management skills of the student as the time of enrolment such as time management skills, discipline expertise, English writing and mathematics. To Latona and Browne (2001), getting started early on the thesis topic largely contributes to success. Therefore the requirement to prepare research proposal before enrolment can reduce uncertainty and help students to progress at a faster speed. Latona and Browne (2001) also suggested keeping same topic and supervisor because evidence has shown that students are significantly slowed down by changes in topics and arrangements.

Despite disciplinary differences in organizing doctoral education, Pyhalto and Helsinki (2012) found no difference in the students' sense of relational agency between faculties. Relational agency refers to candidates' capacity to work with others in order to better respond to complex research problems. It is research group status that is related to sense of relational agency. Students who carried out their thesis as part of a research group perceived themselves as an active relational agent. This suggests that a sense of an active relational agency frequently occurred in group

bases setting. Ho, Wong, and Wong. (2010) highlighted some other factors such as poor knowledge of data related processes, lack of understanding of the thesis writing process and student-supervisor personal qualities as major hindrances to thesis completion.

Ekpoh (2016) identified lack of a clear and realistic research topic and a perfectionist tendency as major predictive factors contributing to the low expectancy in completing thesis. Thesis completion delays as a result of student's skill in research conduct and students' lack of capacity and preparedness for research and postgraduate study. Student's personal challenges that could delay thesis completion include lack of knowledge, frustration and loss of interest, negative feedback and insecurity from the supervisor and lack of dependence related to mastery of research skills (Buttery et al, 2005). They also noted that the problems which prevent graduate students from completing studies are three fold and mostly revolve around research design, data collection and processing and writing of the research report. These problems as observed by Seidu (2015) could be caused by student's inexperience, poor supervision or an inefficient system. From the submission of Olunkwa and Nwokolo (2018), student's completion of thesis could be affected by students insufficient research knowledge resulting from personal concepts (job, family, insufficient training of students and problem with the supervisors) and the administrative bureaucracy involved and therefore identified difficulties with balancing between personal and academic lives as a hindering factor in students' ability to complete their theses.

Other identified factors by Ho et al. (2010) are: poor knowledge of data related processes, lack of understanding of the thesis writing process, and student-supervisor personal qualities as major hindrances to thesis completion. Also, lack of hands-on-skills in the research process on the part of students especially in the early stages

(research definition and design) is a contributive factor to the low expectancy in graduating. Lack of a clear and realistic research topic and a perfectionist tendency were found to be major predictive factors contributing to the low expectancy in completing thesis (Jinarek, 2010).

2.7 Academic achievement motivation and thesis completion expectancy

Students' academic achievement motivation is often cited by both faculty and students as a major reason underlying premature departure or delay from graduate school. Some qualitative research suggests that lack of structure in programs (relative to undergraduate programs) requires students to be self-motivated throughout their postgraduate program, particularly during the final dissertation phase which involves increased independence and knowledge creation (Olubusoye & Olussoji, 2014). Although students who rely on external guidance and motivators can succeed at course work, they often exhibit difficulties mastering necessary research skills and coping with emotions during independent scholarly work. De Valero (2001) examined the difference between completers (N=8) and non-completers (N=13) of Belgian postgraduate programmes across disciplines, with semi-structured interviews showing students who perceived themselves as steadily moving forward on research projects (as opposed to "stuckness") to best differentiate the groups. Although other factors (supervisors support, financial freedom, and so on.) did contribute to students' progress in their personal narratives of completion or attrition.

Studies have consistently shown motivation to succeed as being a salient predictor of achievement and persistence in postgraduate education (Council of Graduate Schools, 2008). Research on motivation in graduate education further shows motivational variables to be correlated with individual differences such as age and encompass constructs such as interest and personal goals. Postgraduate students'

motivation has also been found to be affected by external factors such as family support, socialization, collaborative learning, and fit with supervisor (Jiranek, 2010).

Ezebilo (2012) identified two broad classes of "survival strategies" used by postgraduate students to maintain their motivation throughout their degree. The first set of internal survival strategies included self-reliance (reminding yourself that you can overcome obstacles), interest (for example, reflecting on whether personal interests are aligned with scholarly activities), and achievement (for example, focusing on the desire to achieve a doctoral degree): these strategies are shown in further research to correlated positively with satisfaction and persistence despite student obstacles (Humphery et al. 2012). In contrast, external survival strategies involved motivating oneself through discussion (that is, purposeful social support with peers, supervisors, or other faculty, such as advice seeking), as well as application, with the latter involving students applying relevant literatures (trying a new teaching strategy based on peer-reviewed research) or gaining confidence by engaging in scholarly activities (presenting or publishing personal research). Building on past research on the role of motivation in scholarly productivity and persistence, Ezebilo (2012) similarly found this relationship to be bi-directional in nature, with students purposefully engaging in scholarly activities as a means of increasing their motivation.

In addition to exploring the quantity of motivation to succeed in academic studies, researchers have examined the specific qualities of student motivation in postgraduate education by investigating the reasons student pursue their degrees. With respect to internal motivational variables, various factors have been explored including intellectual development, interest in the field, gaining research experience, the need to make a lift- change, and "drift" (i.e. gradually transitioning into graduate

education through avoidance of more effortful alternatives (Wallace, 2003). Additionally, external reasons motivating postgraduate studies have been examined in existing research, such as employability prospects, and the prestige associated with a postgraduate degree (Olorunnisola, 2011)

In a study of 89 alumni of education programmes (Ph. D, and M. Ed.), Mohammad and Mohammad (2017) investigated the reasons students pursued a postgraduate degree and whether they now believed it was worthwhile. Findings demonstrated that the vast majority of participants pursued the degree for internal reasons, with those pursuing their postgraduate- for vocational reasons being most dissatisfied with both the process and the outcome of their postgraduate studies. Similarly, Seidu (2015) found students who valued the postgraduate process (completing coursework, conceptualizing and conducting a dissertation) rather than the product (receiving a postgraduate degree) to report better well-being. Moreover, this study found process-related values to be more commonly reported by social sciences students, with product-related values more commonly mentioned by natural science students. Taken together, studies on motivation in postgraduate students suggest that those who are self-motivated and focus on the value of the postgraduate process report higher satisfaction, well-being, and academic success during the degree process.

A large number of studies have examined the economic returns to education in order to provide evidence on the motivations that drive the individual's choice of continuing to study, especially after undergraduate studies. According to the rational-behavioural model, people acquire more education only if their lifetime earnings expectations increase (Stock, Finegan & Siegfried, 2009). In fact, it has been proven that people who invest in education, especially in post graduate research studies, have

more job opportunities, and thereby a reduced probability of being unemployed, and they earn more during their entire working life than those who have spent less time in education. It appears that human capital influences directly both the profile and the dynamics of the total work career of each individual as well as his/her income profile. At large, more educated people face low probability of being unemployed and at the same time have more chances of facing better labour market conditions from the start. As US data indicates, an additional year of schooling typically raises an individual's earnings power (Trostel et al., 2002). Thus, a person decides to invest in postgraduate education because of the greater expected monetary and non-monetary returns. Higher earnings prospects are the most obvious benefit and the consensus estimate is that the return to education is quite substantial as the thesis work contributes immensely to the development of a country.

According to Bourke et al. (2004), postgraduate students need a motivated atmosphere environment where they can freely concentrate in their studies and research work and posited that absence of this leads to financial difficulties, poor working relationship with advisor and/or committee, substantive problems with the dissertation research, personal or emotional problems, receipt of an attractive job offer, interference of paid work with dissertation work, family demands, lack of peer support, and loss of interest in earning a postgraduate degree are the various reasons for thesis low completion expectancy.

2.8 Students' emotional stability and thesis completion expectancy

Green and Powell (2005) strongly posited that frustration, and/or depression can also be a big barrier to the postgraduate degree completion. The frustration, negative feedback, difficult relationship with the supervisor, or a change of interest, could easily make the student lose the initial enthusiasm he or she had for the project.

In some comparative studies on effects of frustration and depression on postgraduate studies, male students were found to complete their thesis faster than their female counterparts ant be less likely to discontinue their studies, though some of these effects are small (Shariff, Ramli, &Ahmad (2015). While Ndayambje (2018) argued that stress of writing a dissertation resulting in frustration and emotional instability does not cause low thesis completion or non-completion of dissertation, some other authors argue that pressure extensively cause for delay. Wallace (2003) stated that engaging in dissertation may be the cause for stress in two ways: stress in the social sense and stress in the task sense: stress in the social sense is generated when the student is unable to socialize and relax with family, friends, and significant others without feeling guilty that time is being wasted that could be spent working on the dissertation, stress in the task sense is generated because the amount of time spent working on the dissertation makes the researcher feel negligent in terms of time away from family, friends and significant others. Agu and Oluwatayo (2013) found that students' moods (excitement, despair, boredom and confidence) had predictable stages as they moved through the degree and thesis writing.

Duze (2010) undertook an analysis of problems encountered by postgraduate students in Nigerian universities. The result showed that the most highly identified problem areas were in the order given as follows: (1) problem of lack of equipment; (2) academic problem: (3) financial problem; (4) problem of data collection; (5) problem of supervision; (6) problems related to university administration; (7) accommodation problem; (8) family background; (9) external examiner's problem and (10) personal problems. Igun (2010) in a study on difficulties experienced by postgraduate students in some Nigerian universities found that majority of respondents were encountering challenges. The most commonly cited problem was

that of elongated durations caused by strike action. This was followed by lack of research materials and research topic challenges. In the study more than one-third of respondents (35%) had problems in selecting good topics as well as having access to research materials, resulting in stress and disappointment. Seventy percent (70%) had difficulties in research interaction, and over half of the respondents identified institutional factors as having the most negative effect on them (Hofman & Berg (2000).

Besides, Divsar (2018) identified economic background variables, the demographic variables, the variables related to student behavior of the student support system and the variables related to distance from the home to the institution were more significantly influential on low thesis completion expectancy, and strong relationship found of thesis completion expectancy and quality of the support system and the student satisfaction with the support system provided by the institution. Duze (2010) posited that in addition to student factors such as students' skill in conducting research, students' lack of capacity and lack of preparedness for research and postgraduate study, the post graduate student's emotional and. psychological problems, social and intellectual isolation, students' personal difficulties (financing, family issues), sexual harassment and gender issues in supervision, and. organizational factors (work space, facilities) have also been identified as major hindrances. Moreover, students' personal qualities such as lack of knowledge, frustration, loss of interest negative feedback and insecurity from the supervisor, lack of dependence related to mastery of research skills could cause emotional instability and also be as hindrance to complete. Akprep et al (2017) highlighted that student's ability in balancing between personal and academic lives can be an important factor to complete thesis work; personal concepts such as job, family, insufficient training of

students and problem with the supervisor and the administrative bureaucracy involved affect the thesis completion.

According to Ezebilo (2012), towards the end of students' coursework, they might have a change of career plans, values or priorities, which could distract them, from completing their theses. He further suggested that fear arising from the "lack of knowledge and from their own insecurity" may hinder thesis completion expectancy. Furthermore, in a research conducted by Santi et al (2013), it was found that lack of understanding of the thesis writing process, frustration and/or loss of interest were major hindrances in thesis completion expectancy and that most of the participants for the study stated that family or other personal obligations like paid jobs or professional responsibilities took time away from working on their dissertation. The frustrations, negative feedback, difficult relationship with the supervisor, or a change of interest were the reasons frequently highlighted by the students for the losing the initial enthusiasm students had for the thesis.

Green and Powell (2005) argued that the nature of work commitment also influence thesis completion expectancy. Generally, part time students have more commitment than the full time students, therefore, full time students are able to complete early than part time students. They also identified individual factors such as gender, age, ethnicity, social background and structural factors as contributing to the low expectancy in completing thesis. Some of these researchers (Jinarek, 2010; Olorunnisola, 2011) highlighted that many post graduate students are being faced with non- completion due to the challenges in completion of thesis work such, as funding, academic previous experience and the type of research being undertaken) and environmental (supervision, mentoring, progress review and academic culture) factors as major reasons for thesis completion delay. Furthermore, student's age and

nationality were also reported to predict low expectancy in the thesis completion (Buttery et al. 2003). This fact is supported by the fact that the older students do not defer because of intrinsic reasons they have for attending universities and thus complete their thesis earlier. Some other researchers found certain human activities – examples: recreational activities, life events, family, children, friends, pregnancy, giving birth and caring for a baby could also lead to delay in thesis completion (Ho, et al, 2010).

According to Kearns, Gardiner and Marshall (2008), sell-handicapping behaviour makes postgraduate such a difficult process and prevents candidates from completing on time. Self-handicapping behaviour or sell-sabotage can be defined as the process of creating obstacles to your goals for reasoning if failure occurs. The process could be real or imagined. Self-handicapping behaviours commonly displayed by postgraduate students are overcommitting, busyness, perfectionism, procrastination, disorganization, not putting in effort, and choosing performance-debilitating circumstances. Overcommitting can be described as taking on so many things such as part-time job or other responsibilities that completing postgraduate, the high priority goals suffer. Busyness refers to looking very busy getting less important things such as attending many seminars done but hardly has the time for more important tasks such as writing a draft of the first chapter.

2.9 Summary of literature review

In this chapter, the researcher collated relevant literatures associated with the topic of the study - A path analytic study of perceived supervisors variables, student's variables and thesis completion expectancy by postgraduate students. The review of these related literatures revealed that researchers affirmed that many post graduate students have low thesis completion expectancy due to many factors.

In the view of some scholars, the reasons for the low thesis completion expectancy may be grouped into three major themes namely: student deficiencies, inappropriate supervision process and inappropriate research environment. Supervision process related factors include inadequate number of supervisors, supervisor /student contact time and frequency and supervisor/supervisee rapport. Student related factors included personal attributes, academic abilities, financial support, peer collaboration, motivation and career progression - as factors associated with high thesis completion expectancy while lack of such factors leads to delayed or low completion expectancy. Some of the external factors noted include job opportunities and market requirements; progression verses stagnation, incentive and legal/ethical requirements for research. Studies have also examined factors ranging from personal, academic and financial with no standard findings of which seems to influence thesis completion ahead of the others. The reasons for research students' low thesis completion expectancy and graduation seem to be diverse and may not be attributed to a single factor.

The literature presented for universities in Europe, America, Asia and some parts of Africa, despite supporting association of thesis completion expectancy by candidate and candidature characteristics as well as institutional factors, may not precisely explain the situation in Nigeria's institutions and particularly at Cross River State's universities. Perhaps, this has to do with differentials in academic cultures and contexts. That notwithstanding, a disparity observed regarding the choice of statistical methods and tools adopted at the univariate, bivariate and multivariate levels of analysis (for example, mean vs. median, elapsed time and/or parametric vs. non-parametric methods), presents a challenge in evaluating statistical significance of associations suggested in the results.

Studies on thesis completion expectancy among postgraduate students seems to be sparse as far as the published literature is concerned; has not been documented or studied much, especially in Nigerian. Even the systematic data available are not enough. Therefore, not much work of this magnitude has been done in this part of the world especially those on causal network of supervisor's variables influence such as supervisor's competence, supervisor-students relationship, supervisor's workload and supervisor's timely feedback; students' variables influence such as students interest, student research skills, academic achievement motivation and students' emotional stability; on thesis completion.

This study - the path analysis procedure therefore, is the most appropriate statistical technique for modeling causal relationships among variables. It is a statistical tool for finding out direct and indirect relationships among variables. Path analysis determines the strength of effects of exogenous on endogenous variables in any hypothesized causal model; a causal model for understanding relationships between variables. The study- seeks to highlight the extent to which the factors such as supervisor/students variables responsible for low expectancy in thesis completion as well as find out the magnitude, proportion, relative and collective effects of these variables and finding a model involving these variables.

CHAPTER THREE

RESEARCH METHODOLOGY

In this chapter, the methodology utilized in the course of the study was examined and was discussed specifically under the following subheadings:

3.1 Research design

The survey research design was adopted for this study. According to Isangedghi, Joshua, Asim, and Ekuri (2004), survey research design involves the collection of data to accurately and objectively describe existing phenomena. In real life situation, survey design is applicable in studies that are designed to obtain a picture of the present condition of a particular phenomenon. It is also a type of research that studies large and small population through sample to discover the relative incidence, distribution, inter-relation of sociological and psychological variation as they exist at the time of investigation. The present study finds survey

research design suitable because the design is very useful for opinion and attitude studies, and depends basically on questionnaires and interviews as means of data collection. However, with the understanding that the variables under study have already occurred, survey design becomes most appropriate. This research design permits the researcher to make inferences about the population under study by selecting and studying sample drawn from the population.

3.2 Area of the study

The area covered by this study was the entire Cross River State. Cross River State is one of the six (6) States in the South-South region of Nigeria, with capital at Calabar. The state is in the tropical rainforest of Nigeria and it lies between latitudes $5°32^{1}$ and $4° 27^{1}$ North of the equator and longitudes $7°50^{1}$and $9°28^{1}$ East of the Meridian. Cross River State is bounded in the North, by Benue State, in the South by Akwa Ibom State, in the West by Abia and Ebonyi State in the South Atlantic Ocean, and in the East by the Republic of Cameroon.

Cross River State occupies a total of landmass of 23,074,425 square kilometers with a population of 2.88 million people (National census, 2006). The state has eighteen (18) Local Government Areas, Namely: Abi, Akpabuyo, Akamkpa, Bakkassi, Biase, Bekwarra, Boki, Calabar Municipality, Clabar South, Etung, Ikom, Obubra, Obanliku, Obudu, Odukpani, Ogoja, Yakkur and Yala. There are various languages and dialect spoken by the people of this state, but the major languages are Efik, Bekwarra and Ejagham. Others include pidgin English, Mbembe, Lokaa, Bahumono, Bette and Ishibori, etc.

The major river in the state is Cross River, from where the name of the state was derived. The river covers an. area of 39,000 square kilometers. The Atlantic coastline is 1.29km with the coastal area of 10,00km. cross River is a land with

natural beauty and numerous historical sites, and very unique in tourism potentials such as Mary Slessor's residence in Akpap Okoyong, spectacular Nkarasi, monolith, stones carvings, national wildlife parks at Akamkpa and Boki, Agbokim waterfalls, Qua falls near Oban at Akamkpa., Etankpine and Aqwagune caves, Mary Slessors tomb, Tinapa Resort at Adiabo, Marina Resort in Calabar, Old residence museum among others. In. the northern parts of the states exist the famous Obudu plateau (popularly called Obudu Cattle Ranch) with an altitude of 1,575.76 meters above sea level. This plateau enjoys temperature climate like other temperature region of the world. This natural richness of the state offers a great deal of tourist's attraction to visitors. Cross River State also has festivals which bring in tourists from different parts of the world to enjoy themselves in the state. These include Cross River State Christmas festival. Cross River State carnival float and the Yakurr Leboku (New Yam Festival).

The people of the state are mostly public/civil servants, business men and women, farmers, traders and fishermen. The northern people of the state produce cassava, yams, rice, groundnut, palm produce, rubber, cocoa, melon, maize and vegetables. The southern and central people produce fish, crayfish, palm oil, plantain, seafood, etc. Others are. The state is generally very peaceful and her people are very hospitable.

Educationally, Cross River State has many primary, secondary and higher institutions. Tertiary educational institutions in the State includes University of Calabar, Cross River State University of Technology and College of Health Technology located in the state capital Calabar, Ibrahim Babangida College of Agriculture located in Obubra Local Government Area, Cross River State College of Education located in Akamkpa Local Government Area, Federal College of Education

located in Obudu, Federal Polytenic, Ugep located in Yakurr Local Government Area and Arthur Jarvis University located in Akpabuyo Local Government Area.

3.3 Population of the study

The population of this study consists of 1909 postgraduate students in the public universities in Cross River State, Nigeria (Registry, University of Calabar and Cross River University of Technology, Calabar, 2019) Masters and PhD students, who had completed their course work and were writing their thesis, as at the 2018/2019 academic session. These two universities were studied because they offer a diversity of postgraduate programmes, are the oldest in the state and are well established in terms of their postgraduate programmes. Also, Masters and PhD students were used for the study because they have been exposed to various researches training during their coursework. The population distribution is presented in Table 1.

3.4 Sampling techniques

The sampling technique adopted to select the sample size for this study was stratified sampling technique. This enabled the researcher to identify and address heterogeneity in the population, hence reducing sampling error. First, the area was divided into two strata according to type of universities (Federal and State) in the study area. University of Calabar was stratum 1 while Cross River State University of Technology was stratum 2. The University of Calabar - that is stratum 1 was further divided into 13 strata according to the number of faculties in the institution and Cross River State University of Technology - stratum 2 was divided into eight strata according to the number of faculties. Five faculties were then randomly sampled from the University of Calabar and three faculties from Cross River University of Technology, Calabar. Hence, a total of eight faculties were sampled for the study.

TABLE 1

Population distribution of post graduate students in the faculties in University of Calabar, Calabar and Cross River University of Technology, Calabar

		UNICAL		CRUTECH	
		No. of Depts.	No. of students	No. of Depts.	No. of students
1.	Agriculture	5	88	6	24
2.	Allied Medical	5	67	-	-
3.	Arts	11	12	-	-
4.	Basic medical Science	9	95	3	32
5.	Basic Sciences	-	-	5	101
6.	Biological Science	6	89	-	-
7.	Clinical Sciences	4	89	-	-
8.	Communication Technology	-	-	2	17
9.	Education	13	553	3	153
10.	Engineering	-	-	7	21
11.	Environmental Science	-	-	5	45
12.	Law	11	12	-	-
13	Management Science	3	211	4	89
14.	Oceanography	4	51	-	-
15.	Physical Science	4	24	-	-
16	Social Science	5	134	-	-
	Total	79	1427	35	482

(Source: Registry, University of Calabar, Calabar and Cross River University of Technology, Calabar 2018/2019 session)

Finally, simple random sampling technique was employed to select 502 students from all departments of the eight faculties selected for the study in the two Universities. The researcher used his judgment and the assistance of the Deans/HODs of those faculties/Departments to select the respondents whose characteristics are known – students who were at various stages of their thesis work (Table 2).

3.5 Sample

The sample for the study consisted of 502 postgraduate students which constitute of postgraduate students from the two universities in the study area. The scientific/statistical basis for this number is informed by the minimum sample required for a study of this nature.

Taro Yamane, as reported by Ekpoh (2016) provided some scientific basis for computing the minimum sample size for a study of known population. According to him, in a normally distributed population of size (N), the confidence interval/level within which conclusions could be ensured and the margin/level of error (e); the minimum sample size (n) needed to justify the precision of any study could be determined using the formula:

$$N = N/1+ N (e^2)$$

Based on this scientific background, the required minimum sample size for this study at 95% confidence and 5% error level with a population of 1909 is approximately 331. However, considering research evidences and authorities, Joshua (2005) have shown that increase in the sample statistics tend towards the population parameters. It is this understanding that the researcher used, rather than using the estimated minimum sample size of the minimum sample requirement in order to boast the potency of the research results.

In explaining the sample demographically, it had 389(77.5%) postgraduate students from University of Calabar (UNICAL) and 113(22.5%) from Cross River University of Technology, Calabar (CRUTECH). The sample also consisted of 202(40.2%) males and 300(59.8%) females. Similarly, 322(64.1%) were master's degree students while, 180(35.9%) were doctoral degree students. Further breakdown of the sample showed that 71(14.1%) had spent more than three years on their programme while a significant majority 431(85.9%) were in their third year of the postgraduate studies. A great majority of the respondents 402(80.1%) were undertaking their postgraduate studies on full time basis while 100(19.9%) of them were part-time students.

3.4 Instrumentation

The research instrument used for this study was a 64 item questionnaire titled 'Perceived Supervisor/Students Variables and Thesis Completion Expectancy Questionnaire' (PSSVTCEQ). The instrument composed of three sections A, B and C. Section A sought to elicit demographic information of respondents which are gender, age, length of programme, marital status, higher degree in view and nature of programme. Section 'B' contained items 1- 48 which elicited responses on the perceived supervisor and student variables which are the variables of the independent variables. There are eight sub variables in the independent variables in eight sub-sections which are perceived supervisor competence in research, supervisor-student relationship, supervisor workload, and supervisor's provision of feedback; as well as student interest in research, students' research skills, students' academic motivation and students' emotional stability. Each variable was measured with six items and a total of 48 items were outlined this section.

Section 'C' contained 16 items designed to measure the dependent variable - thesis completion expectancy of the students in terms of writing and presenting the thesis work, in an interval scale. Sections B to C were constructed using the modified four-point Likert-type scale from which the respondents were to make responses. The modified four- point Likert-type response categories ranged from Strongly Agreed (SA), Agreed (A), Disagree (D) to Strongly Disagree (SD). The weighting of the options were SD = 1, D = 2, A = 3, and SA = 4 for positively worded items and SD = 4, D = 3, A = 2, and SA = 1 for negatively worded items. The respondents were expected to tick (√) the option that best answer the question to them against any of the items (see Appendix).

3.6.1 Validity of the instrument

The instrument used for data collection in this study as constructed by the researcher was given to two experts in Measurement and Evaluation for validation. This was to ensure that the items in this instrument measured what they were designed to measure, and that the items conformed to the objectives of the study. The purpose of the study and the research questions were typed and given to these experts for validation. The experts evaluated the adequacy of the items, appropriateness of wording, clarity of sentences and representativeness of the instrument. Items considered ambiguous were revised in order that the instrument was adjudged by all concerned as having construct validity. An initial draft of questionnaire with 70 items was reduced to sixty four (64) items considering the various experts corrections. These 64 items were used in the instrument for data collection for the study.

TABLE 2

Sample distribution of post graduate students in the faculties in University of Calabar, Calabar and Cross River University of Technology, Calabar

University	Faculties	No. of Depts.	No. of Students	Sample selected Males	Females	Total
UNICAL						
	Agriculture	5	88	15	22	37
	Allied Medical	5	67	12	16	28
	Biological Science	6	89	14	23	37
	Education	13	553	93	138	231
	Social Science	5	134	23	33	56
CRUTECH						
	Agriculture	6	24	4	6	10
	Education	3	153	24	38	62
	Sciences	5	101	17	24	41
Total				**202**	**300**	**502**

3.6.2 Reliability of the instrument

To establish the reliability of this research instrument a trial test was carried out using 50 respondents from University of Calabar and Cross River University of technology who were not part of the study. Cronbach Alpha reliability method was used to determine the internal consistency of the instrument (PSSVTCEQ). The coefficient indices of the sub variables ranged from .71 to .86. The reliability estimate is presented in Table 3.

3.7 Procedure for data collection

The instrument was administered to the post graduate students of both University of Calabar (UNICAL) and Cross River University of Technology (CRUTECH) by the researcher and two research assistants. The researcher introduced himself with a letter of introduction from the head of department, with his research assistants to the HODs and Deans of each faculty. The purpose of the visitation was explained and permission sought to collect the data from the students. Permission was granted and the administration of the instrument carried out with the researcher and the two research assistants. The Deans and HODs of the selected faculties and departments in the two universities assisted in identifying students needed for the study. The whole exercise took two weeks to administer the 504 copies of the questionnaire; and 502 correctly filled copies were retrieved - that is 99.6% retrieval rate.

3.8 Procedure for data preparation/ scoring

A coding schedule was developed in which the variables in the instrument were assigned numbers (coded) and scored accordingly. The coding schedule reflected all the items in the questionnaire as well as their response options. The responses were assigned numerals and the coding sheet is presented in Table 4.

TABLE 3

Cronbach Alpha Reliability estimates of the variable (N=502)

Variables	No. of items	X	SD	Cronbach alpha
Supervisor competence in research	6	14.04	6.79	0.71
Supervisor-students' relationship	6	13.66	5.62	0.76
Supervisor workload	6	12.33	6.41	0.72
Supervisor timely feedback	6	12.96	6.98	0.82
Students' interest towards research	6	13.59	7.01	0.70
Students' research skills	6	13.02	6.97	0.81
Academic achievement motivation	6	13.53	7.11	0.86
Students emotional stability	6	15.001	6.78	0.82
Thesis completion expectancy	16	40.98	8.63	0.75

TABLE 4
Coding schedule for the variables of the study

S/N	Variable	Item/Code
1.	Gender	Male - 1 Female – 2
2.	Age	20 - 29 years – 1 30 - 39 years - 2 40 - 49 years - 3 50years and above – 4
3.	Length of programme	1-2 years – 1 3-4 years - 2 5 years and above – 3
4.	Marital status	Single – 1 Married – 2 Separated – 3 Divorced - 4 Widowed – 5
5.	Higher degree in view	Masters - 1 Doctoral – 2
6.	Nature of programme	Full time – 1 Part time – 2
	Section B (Psychological Factors)	
1.	Supervisor competence	Add scores on items 1 -6
2.	Supervisor/student relationship	Add scores on items 7-12
3.	Supervision workload	Add scores on items 13-18
4.	Supervisor timely feedback	Add scores on items 19-24
5.	Students interest in research	Add scores on items 25-30
6.	Student Research Skills	Add scores on items 31-36
7.	Academic achievement motivation	Add scores on items 37-42
8.	Students' emotional stability	Add scores on items 43-48
9.	Thesis Completion expectancy	Add scores on items 49-64

Source: Researcher's survey. 2019

3.9 Procedure for data analysis

For data analysis, the hypotheses and research questions were restated and the appropriate statistical technique used for analysis as shown below:

(i) Hypothesis one

There are no significant relative and collective effects of perceived supervisor variables on thesis completion expectancy among postgraduate students.

Independent variable: perceived supervisor variables (supervisory competence in research, supervisors' students' relationship, supervisors' workload, supervisor timely feedback)

Dependent variable: thesis completion expectancy

Statistical technique: multiple regressions analysis

(ii) Hypothesis two

There are no significant relative and collective effects of student variables on thesis completion expectancy among postgraduate students

Independent variable: Student variables (research skills, academic achievement motivation, interest in research, emotional stability)

Dependent variable: thesis completion expectancy

Statistical technique: multiple regressions analysis

(iii) Hypothesis three

There are no significant relative and collective effects of perceived supervisor variables and student variables on thesis completion expectancy among postgraduate students

Independent variable: perceived supervisors variables and students variables (supervisory competence in research, supervisors'- students' relationship, supervisors' workload, supervisor timely feedback, students' research skills, academic

achievement motivation, students' interest in research, student emotional stability)

Dependent variable: thesis completion expectancy

Statistical technique: multiple regressions analysis

(iv) Research question one

What is the most significant, meaningful and parsimonious model involving the effects of perceived supervisor variables (supervisor competence in research, supervisor - student working relationship, supervisor workload and supervisor feedback) on thesis completion expectancy among postgraduate students?

Statistical techniques: path analytical technique

(v) Research question two

What is the most significant, meaningful and parsimonious model involving the effects of student variables (students interest in research, student research skills, academic achievement motivation and students' emotional stability) on thesis completion expectancy among postgraduate students ?

Statistical techniques: path analytical technique

(vi) Research question three

What is the most significant, meaningful and parsimonious model involving the effects of the supervisor and student variables on thesis completion expectancy among postgraduate students?

Statistical techniques: path analytical technique

(vii) Research question four

What is the proportion of the model involving perceived supervisor variables (supervisor competence in research, supervisor - student relationship, supervisor workload and supervisor feedback) and student variables (students interest in research, student research skills, academic achievement motivation and students'

emotional stability) on thesis completion expectancy among postgraduate students that is direct and indirect?

Statistical techniques: simple percentages

3.10 Operational definition of variables

The variables in this study are operationally defined in. order to depict their context of application.

i. Supervisor's competence in research: this is the ability of the supervisor to understand the work and provide necessary direction for the research work. It is measured with item 1-6 of the instrument in section B.

ii. Supervisors-students relationship: this is the type of relationship: either cordial, mutual or alien that exist, between a supervisee and his/her supervisor. It is measured with item 7-12 of the instrument in section B.

iii. Supervisor's workload: this refers to the number of course work, and other academic/non-academic activities that are saddled on the supervisor by the school to be carried out. It is measured with item 13-18 of the instrument in section B

iv. Supervisor provision of feedback: this is referred to as the ability of the supervisor to help the student or supervisee to receive responses on the work as well as next line of action. It is measured with item 19-24 of the instrument in section B.

v. Student research skills: this is a conglomerate of abilities that the student is supposed to possess in order to carry out his or her work smoothly. It is measured with item 25-30 of the instrument in section B.

vi. Academic achievement motivation: this is what propels the students into trying to do the work the way it is done. It is measured with item 31-36 of

the instrument in section B.

vii. Student Interest in research: this is likes and dislikes of the students in terms of what is done in the study. It is measured with item 37-42 of the instrument in section B.

viii. Emotional stability: it is the psychological state of the person as at the time this work is carried out which could be calm state or tumultuous state. It is measured with item 43-48 of the instrument in section B.

ix. Thesis Completion expectancy: this refers to the successful conduct, defense and submission of a post graduate research project by postgraduate students. It can be timely or delay/untimely (prolonged). It is measured with item 49-64 of the instrument in section C

3.11 Conceptual framework of path analysis

3.11.1 Construction of path diagram

Figure 1, 2, 3, 4, 5, 6, and 7 show the causal linkage among the eight independent variables and the dependent variables. The nine variables are:

X_1 = supervisors' competence in research

X_2 = supervisor - student relationship

X_3 = supervisor's work load

X_4 = supervisor's feedback

X_5 = student's interest in research

X_6 = student's research skills

X_7 = academic achievement motivation

X_8 = student emotional stability

X_9 = thesis completion expectancy

The linear relationship among some supervisor's variables of postgraduates and some student's variables used in the study, and the thesis completion expectancy among the postgraduate students formed the basis for hypothesizing a theoretical causal model involving the independent variables under consideration.

Figure 1 is a sample of a path model containing three variables X_1, X_2, and X_3. The model as indicated by the direction of the arrows shows that supervisor's competence has direct effect on supervisors students relationship and supervisors work load. Figure 2 is a sample of a path model containing four variables X_1, X_2, X_3 and X_9. The model as indicated by the direction of the arrows shows that supervisor's competence has direct and indirect effect on supervisor - student relationship, supervisors work load and thesis completion expectancy. Figure 3 is a path model containing six variables X_1, X_2, X_3, X_4, X_5 and X_9. The model as indicated by the direction of the arrows shows that supervisor's competence has direct/indirect effect on supervisor's - student's relationship, supervisors work load, provision of feedback, student research skills and thesis completion expectancy. Figure 4 is a path model containing seven variables X_1, X_2, X_5, X_6, X_7, X_8 and X_9. The model as indicated by the direction of the arrows shows that supervisor's competence has direct/indirect effect on supervisors - student's relationship, student research skills, academic achievement motivation, students' interest in research, students' emotional stability and thesis completion expectancy.

Figure 5 is a hypothesized model of perceived supervisor's variables and thesis completion; with the structural equations shown. The model as indicated by the direction of the arrows shows that supervisor's competence in research (X_1) has direct and indirect effect on supervisors - student's relationship, supervisors work load, provision of feedback and thesis completion expectancy.

Similarly, figure 6 is a hypothesized model of students' variables and thesis completion expectancy; with the structural equations shown. The model as indicated by the direction of the arrows shows that students interest in research (X_5) has direct and indirect effect on supervisors - student's relationship, student research skills, academic achievement motivation, students' interest in research, students' emotional stability and thesis completion expectancy.

3.11.2 Building of the hypothesized recursive path model

This began with a comprehensive path models broken down into sub-units of the original model for interpretation purpose. The theoretical consideration for the development of the hypothesized path model is shown in Figs 1 to 4. A combination of figures 1, 2, 3, 4, 5 and 6 gave rise to Figure 7. Thus, figure 7 is the hypothesized recursive path model. This was done in agreement with Blalock (1964) as quoted by Kerlinger and Pedhazur (2009) which stated that there are two factors necessary for generating a causal model, these are: temporal order, research findings and theoretical grounds.

The path model shown in figure 7 is a recursive model in which the direction of the causal flow is one way. The model as indicated by the direction of the arrows shows that supervisor's variables has direct effect on students' variables and the dependent variable - thesis completion expectancy. The model also shows that supervisor's variables have direct effect on thesis completion. The circles with letter e' represent error variables not included in the work but assume to be present. The letter 'p' with two subscripts as indicated in the model is a symbol for path coefficients. The first subscripts represent the dependent (criterion) variable while the second subscripts represent the independent (predictor) variables. Path diagram shows the presumed causal relationships between three or more variables. The variables are

usually ordered from left to right or from top to bottom in terms of their causal sequence, a unidirectional causal relationship being indicated by a straight, single right- pointing arrow. So variables to the left of other variables are assumed to influence variables to their right.

The path diagrams show how the supervisor's variables and students' variables influence postgraduate students' thesis completion expectancy. However, supervisor's variables are made up of four variables namely: supervisor competence in research, supervisor/students' relationship, supervisor workload, and supervisor timely feedback. These variables also influence thesis completion expectancy separately either directly or indirectly as shown in Fig. 1 - 4. The path diagram also shows that student's variables - students' interest in research, students' research skills, academic achievement motivation and students emotional stability influence thesis completion of postgraduate students separately either directly or indirectly. From these path diagrams, the researcher intend to estimate the influence of supervisor competence in research, supervisor/students' relationship, supervisor workload, and supervisor timely feedback on thesis completion expectancy of postgraduate students. The same thing will be done to students' interest in research, students' research skills, academic achievement motivation and students emotional stability. These eight variables constitute supervisor variables/student variables that the researchers intend to investigate.

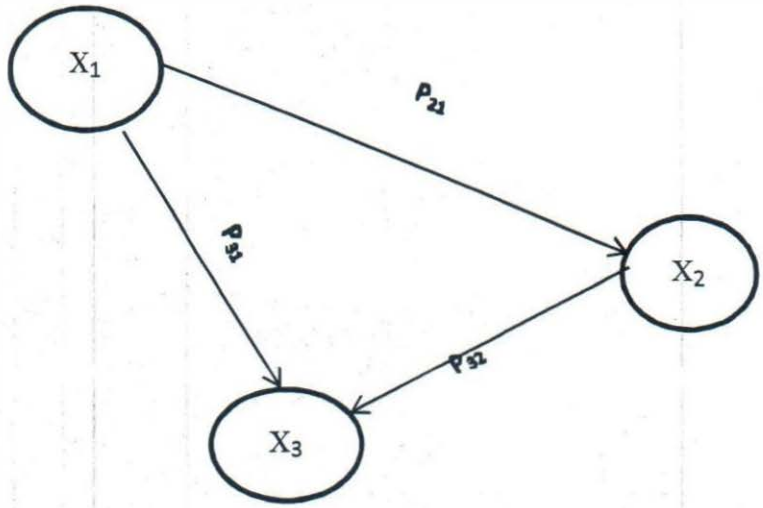

Fig. 1 Causal model for variable X_x; X_2 and X_3

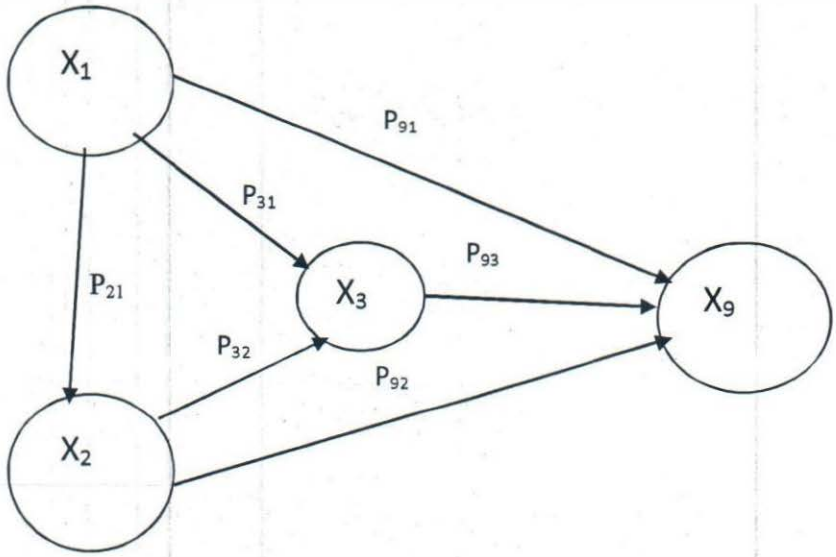

Fig. 2 Causal model for variable X_x; X_2; X_3; and X_9

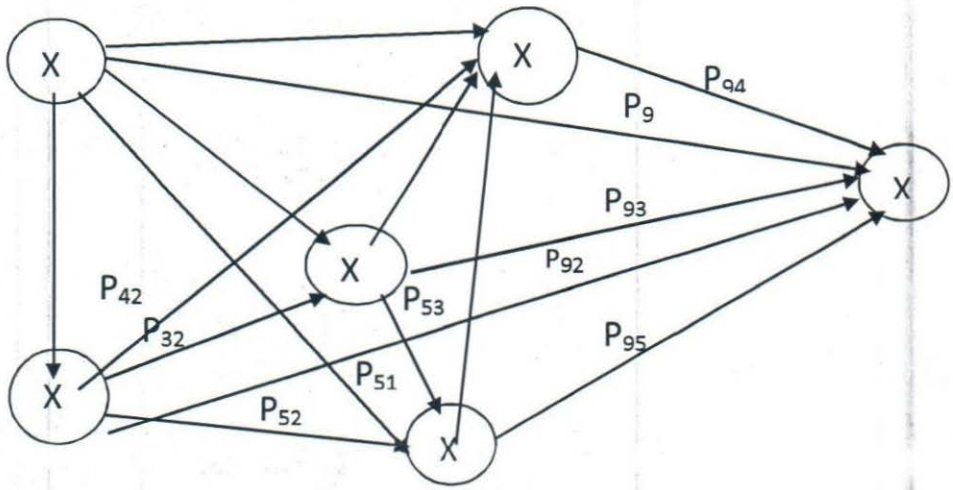

Fig. 3: Causal path model for variable X_1; X_2; X_3; X_4; X_5; and X_9

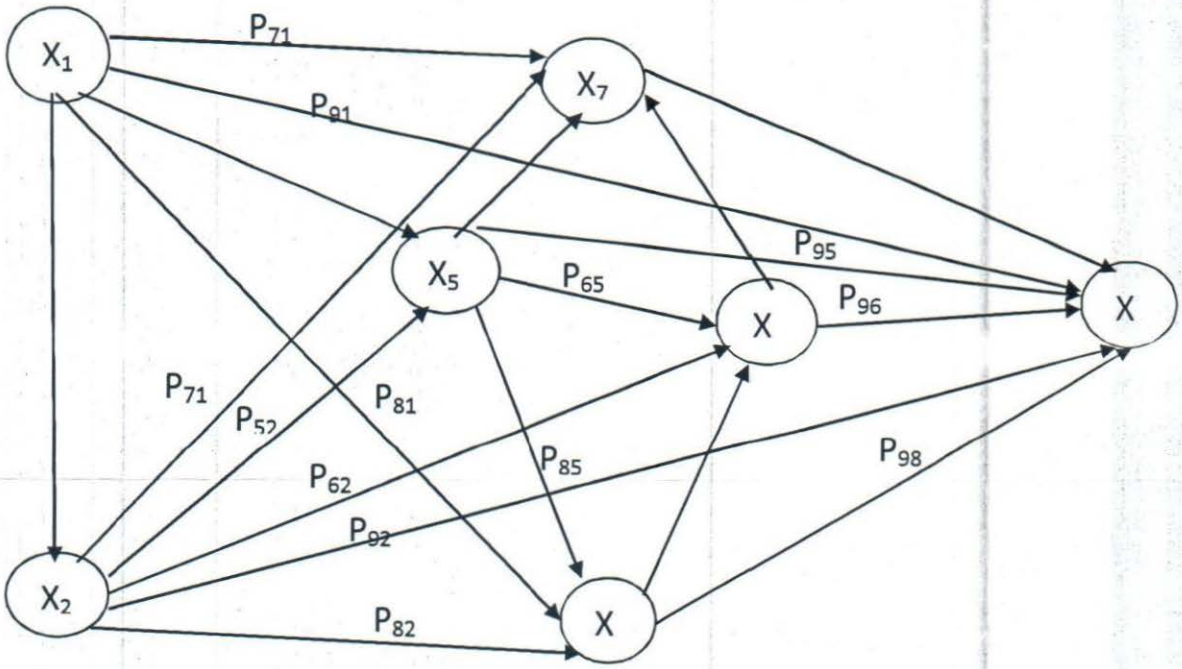

Fig.4: Causal Path model for variable X_1; X_2; X_5; X_6; X_7; X_8; X_9

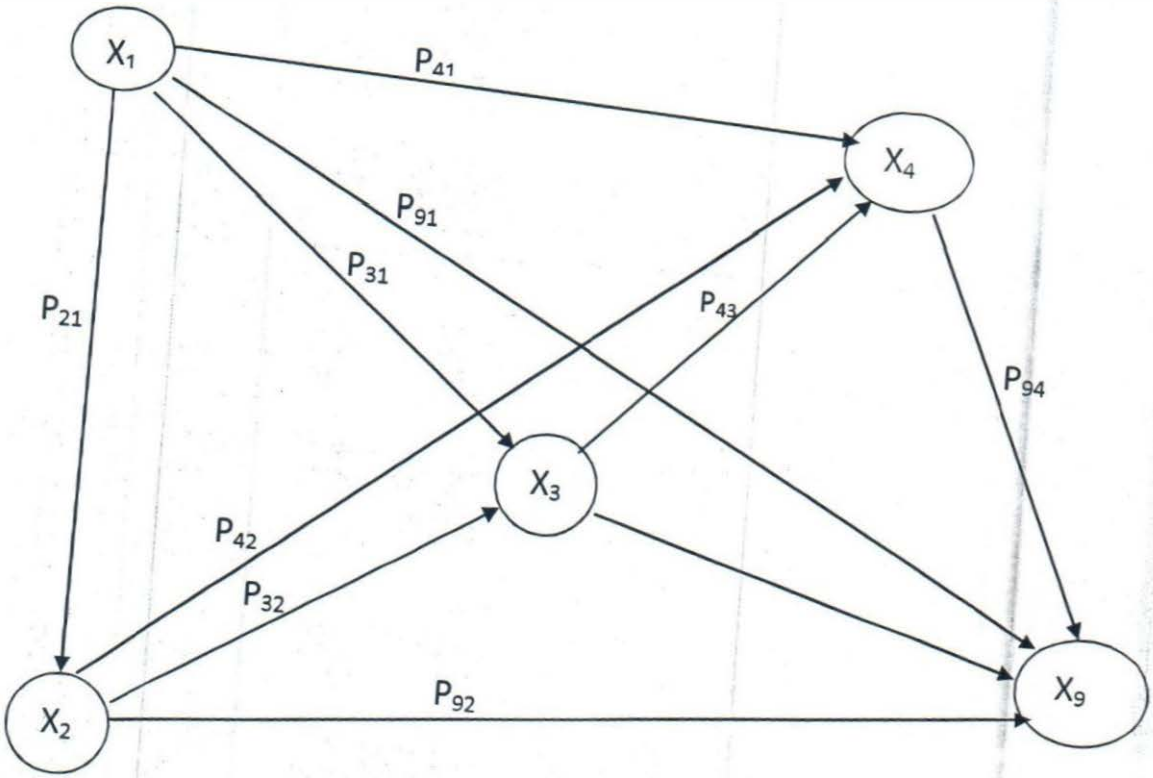

Fig. 5 Hypothesised model of supervisors' variables and thesis completion expectancy

$$X_1 = e_1 \quad (1)$$

$$X_2 = P_{21}X_1 + e_2 \quad (2)$$

$$X_3 = P_{31}X_1 + P_{32}X_2 + e_3 \quad (3)$$

$$X_4 = P_{41}X_1 + P_{42}X_2 + P_{43}X_3 + e_4 \quad (4)$$

$$X_9 = P_{91}X_1 + P_{92}X_2 + P_{93}X_3 + P_{94}X_4 + e_5 \quad (5)$$

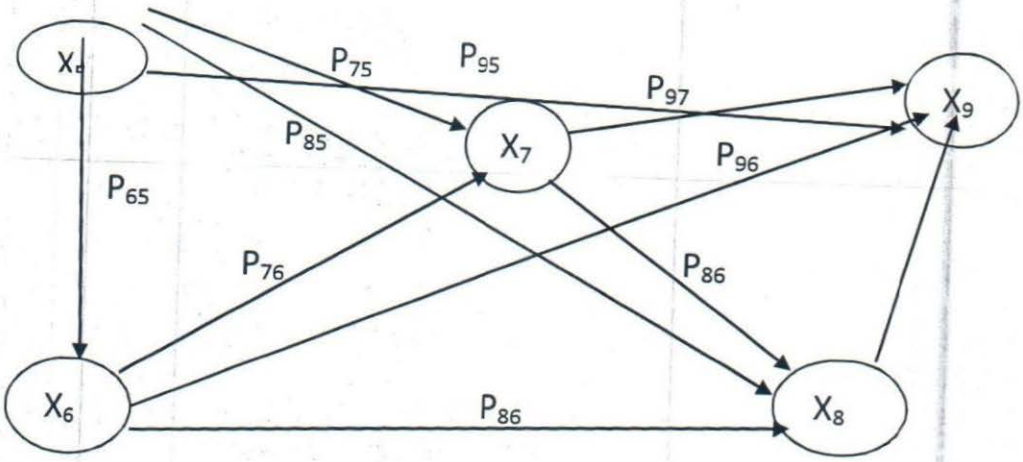

Fig. 6: Hypothesized model of students variables and thesis completion expectancy

$$X_5 = e_5 \quad (1)$$

$$X_6 = P_{65}X_5 + e_6 \quad (2)$$

$$X_7 = P_{75}X_7 + P_{76}X_6 + e_7 \quad (3)$$

$$X_8 = P_{85}X_5 + P_{86}X_6 + P_{87}X_7 + e_8 \quad (4)$$

$$X_9 = P_{95}X_5 + P_{96}X_6 + P_{97}X_7 + P_{98}X_8 + e_9 \quad (5)$$

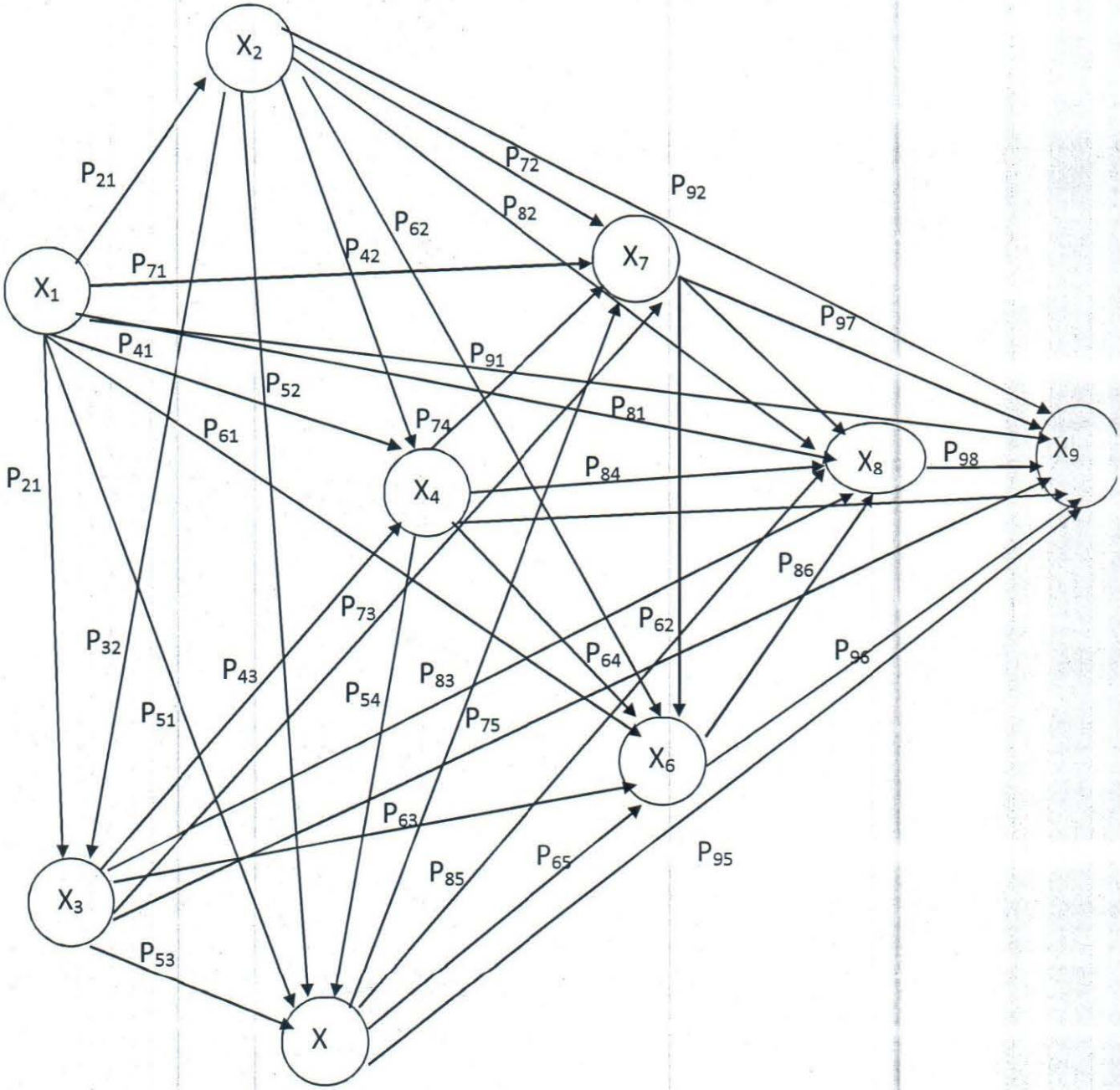

Figure 7: Hypothesized Model of supervisors and Student variables on thesis completion expectancy

The Structural équations models are

$X_1 = e_1$ (1)

$X_2 = P_{21}X_1 + e_2$ (2)

$X_3 = P_{31}X_1 + P_{32}X_2 + e_3$ (3)

$X_4 = P_{41}X_1 + P_{42}X_2 + P_{43}X_3 + e_4$ (4)

$X_5 = P_{51}X_1 + P_{52}X_2 + P_{53}X_3 + P_{54}X_4 + e_5$ (5)

$X_6 = P_{61}X_1 + P_{62}X_2 + P_{63}X_3 + P_{64}X_4 + P_{65}X_5 + e_6$ (6)

$X_7 = P_{71}X_1 + P_{72}X_2 + P_{73}X_3 + P_{74}X_4 + P_{75}X_7 + P_{76}X_6 + e_7$ (7)

$X_8 = P_{81}X_1 + P_{82}X_2 + P_{83}X_3 + P_{84}X_4 + P_{85}X_5 + P_{86}X_6 + P_{87}X_7 + e_8$ (8)

$X_9 = P_{91}X_1 + P_{92}X_2 + P_{93}X_3 + P_{94}X_4 + P_{95}X_5 + P_{96}X_6 + P_{97}X_7 + P_{98}X_8 + e_9$ (9)

3.11.3 Construction of path model diagrams

The nine variables are:

X_1 = supervisor competence in research

X_2 = supervisor - student relationship

X_3 = supervisor's work load

X_4 = Supervisor timely feedback

X_5 = student's interest in research

X_6 = student's research skills

X_7 = academic achievement motivation

X_8 = student emotional stability

X_9 = thesis completion expectancy

CHAPTER FOUR

RESULTS AND DISCUSSION

The main purpose of this chapter is to present the results of analyses of the data, interpret as well as discuss the findings of the results. The results are presented in the order in which the research questions and null hypotheses were stated in chapter one of this study:

4.1 General description of research variables

4.2 Presentation of results

4.3 Discussion of findings

4.1 General description of research variables

There are nine (9) variables in this study. These are eight (8) predictor variables which are supervisor's competence in research, supervisor-student relationship, supervisor's work load and supervisor's timely feedback - for the supervisor's variables ; and student's interest in research, academic achievement motivation, research skills and emotional stability for the student's variables while the criterion variables is thesis completion expectancy. Table 5 shows the mean scores and standard deviations of the variables. Table 5 also shows the description of data on the basis of the variables identified and used for this study.

4.2 Presentation of results

The presentation of results was done in two fold. First, the three hypotheses were tested using regression analysis and then the research questions were answered. They are shown as follows:

TABLE 5

Summaries of means and standard deviation of the supervisor and student variables

Variables	N	Mean	Std. Deviation
Supervisor competence in research (X_1)	502	13.8207	2.32656
Supervisor- student relationship (X_2)	502	12.3386	2.68820
Supervisor workload (X_3)	502	11.8725	2.93027
Supervisor feedback (X_4)	502	11.7590	3.03928
Student interest in research (X_5)	502	12.7072	3.06156
Student research skills (X_6)	502	12.8845	2.55373
Student academic motivation (X_7)	502	12.1096	2.78683
Student emotional stability (X_8)	502	14.0339	6.68964
Thesis completion expectancy (X_9)	502	30.4471	8.56526

4.2.1 Testing of hypotheses

4.2.1.1 Hypothesis one

There are no significant relative and collective effects of supervisor variables on thesis completion expectancy. The independent or predictor variables are supervisor variables with four sub-variables which are supervisor competence in research, supervisor- student relationship, supervisor work load and supervisor feedback while the dependent (criterion) variable is thesis completion expectancy. To test the hypothesis, the data collected were analyzed using bivariate correlation and multiple regression techniques. The results are presented in Tables 6 and 7.

The results presented in Table 6 show the inter-correlation matrix of the four supervisors' variables and academic thesis completion expectancy. The table shows that the least correlation coefficient of .044 and that is the correlation between supervisor's competence in research and thesis completion expectancy. The highest correlation coefficient of .942 was obtained for the relationship between supervisors work load and supervisors provision of timely feedback. Some of the correlations were found to be significant at .05 level - correlations involving supervisors workload, supervisors - students relationship and supervisor provision of feedback; and thesis completion expectancy.

Using regression analysis, Table 7 reveals the collective contributions of the four supervisors factors in predicting thesis completion expectancy among postgraduate students which yielded multiple R of .182, a coefficient of multiple correlation of $R^2 = .033$ and an adjusted $R^2 = .022$. From these results, it can be inferred that 3.3% of the total variance of thesis completion among students is explained by the four supervisors' factors. Although, the percentage of the joint contribution of the supervisors' factors to the variance in thesis is low, the analysis of

variance (ANOVA) results for the prediction produced an F-value of 3.773 which is significant at .05 level. This significant value of F-ratio means that the four supervisors factors used in the study when combined have a significant effect and can be used to predict or explain thesis completion expectancy among postgraduate students.

Further result reveals the strength of the individual four supervisor factors in predicting thesis completion, as still shown in Table 7. The result shows that the standard beta weight (β) ranged from .021 for supervisor competence to - .138 for supervisor timely feedback provision. Beta weights generally indicate the strength of each prediction. The analysis of theses beta weights shows that, out of the four variables, two variables : supervisor –students relationship (β = .118) and supervisor work load (β = .269) were all significant predictors of thesis completion expectancy among postgraduate students except for supervisor competence in research and supervisor feedback provision that has a beta value of .021 and -.138 respectively. A close inspection of these beta weight values show that when reporting in absolute terms, supervisor work load is the strongest predictor, followed closely by supervisor-student relationship. The null hypothesis which states that the supervisor variables individually and collectively combined do not significantly predict thesis completion expectancy is rejected. This implies that supervisor competence in research, supervisor- student relationship, supervisor work load and supervisor feedback individually and collectively influence and have effects on thesis completion expectancy among post graduate students.

TABLE 6

Inter-correlation matrix of supervisors' variables and thesis completion expectancy

Variables	SCR	SSR	SWL	SPF	THESIS
SCR	1	.054*	-.339*	-.361*	.044
SSR		1	.210	-.184	.099
SWL			1	.942	.109
SPF				1	.086
THESIS					1

* = Correlation is significant at .05

SCR = Supervisor competence in research

SSR = Supervisor- student relationship

SWL = Supervisor work load

SPF = Supervisor provision of feedback

THESIS = Thesis completion expectancy

TABLE 7

Summary of multiple regression analysis of the relative and collective effects of the supervisor variables on thesis completion expectancy

Multiple R	=	.182
Multiple R Square (R^2)	=	.033
Adjusted Multiple R Square	=	.022
Standard Error of estimate	=	3.433

Sum of squares	SS	Df	MS	F	Sig.
Regression	1083.038	4	270.760	3.773	.005[b]
Residual	35598.810	496	71.772		
Total	36681.848	500			

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	19.949	3.433		5.811	.000
Competence (X_1)	.079	.204	.021	.386	.699
Relationship (X_2)	.377	.169	.118	2.232	.026
Workload (X_3)	.787	.389	.269	2.020	.044
Feedback (X_4)	-.390	.378	-.138	-1.030	.303

THESIS = 19.49 + .021 X_1 + .118X_2 + .269X_3 + (-.138) X_4

4.2.1.2 Hypothesis two

There are no significant relative and collective effects of student variables on thesis completion expectancy. The independent or predictor variables are student variables with four sub variables which are students' interest in research, research skills, academic achievement motivation and emotional stability while the dependent (criterion) variable is thesis completion expectancy. To test the hypothesis, the data collected were analyzed using bivariate correlation and multiple regression techniques. The results are presented in Tables 8 and 9.

The results presented in Table 8 show the inter-correlation matrix of the four student variables and thesis completion expectancy. The table shows the least correlation coefficient of .015 and that is the correlation between student interest and research skills on thesis completion. The highest correlation coefficient of .161 was obtained for the relationship between emotional stability and thesis completion. However, most of the correlations were found to be significant at .05 levels; - students' interest in research, research skills, and emotional stability, except for correlation involving achievement motivation and thesis completion expectancy.

Using regression analysis, Table 9 reveals the collective contributions of the four students variables in predicting thesis completion expectancy among postgraduate students which yielded a multiple R of .235, a coefficient of multiple correlation of $R^2 = .055$ and an adjusted $R^2 = .047$. From these results, it can be inferred that 5.5% of the total variance of thesis completion among students is explained by the four students' variables. Although, the percentage of the joint contribution of the students' variable to the variance in thesis is low, the analysis of variance (ANOVA) results for the prediction produced an F-value of 7.209 which is significant at .05 level. This significant value of F-ratio means that the four students factors used in the study when combined have a significant effect and can be used to

predict or explain thesis completion among postgraduate students. Further result reveals the strength of the individual student variables in predicting thesis completion, as still shown in Table 9. The result shows that the standard beta weight (β) ranged from .049 for student achievement motivation to -.125 for students research skills.

Beta weights generally indicate the strength of each prediction. The analysis of theses beta weights shows that, out of the four student variables, three variables: student interest ($\beta = .107$), student research skills ($\beta = -.125$) and student emotional stability ($\beta = -.170$) were all significant predictors of thesis completion expectancy among postgraduate students except for student achievement motivation that has a beta value of .049. A close inspection of these beta weight values show that when reporting in absolute terms, emotional stability is the strongest predictor, followed closely by student research skills and interest. The null hypothesis which states that the student variables individually and collectively combined do not significantly predict thesis completion expectancy is rejected. It was therefore affirmed that student interest in research, research skills, achievement motivation and emotional stability have individual and collective effects on thesis completion expectancy among postgraduate students.

4.2.1.2 Hypothesis three

There are no significant relative and collective effects of supervisor and student variables on thesis completion expectancy. The independent or predictor variables are supervisors and student variables with eight sub variables which are supervisor competence, supervisors student relationship, supervisors work load and provision of timely feedback student interest in research, research skills, achievement motivation and emotional stability while the dependent (criterion) variable is thesis completion expectancy .

TABLE 8

elation matrix of student's variables and thesis completion expectancy

SIR	SRS	SAM	SES	THESIS
1	.015	.134*	-.135	.090
	1	.114*	-.025*	-.122*
		1	.028	.054
			1	.161*

TABLE 8

Inter-correlation matrix of student's variables and thesis completion expectancy

Variables	SIR	SRS	SAM	SES	THESIS
SIR	1	.015	.134*	-.135	.090
SRS		1	.114*	-.025*	-.122*
SAM			1	.028	.054
SES				1	.161*
THESIS					1

* = Correlation is significant at .05

SIR = Students interest in research

SRS = Students research skills

SAM = Students academic motivation

SES = Students emotional stability

THESIS = Thesis completion expectancy

TABLE 9

Summary of multiple regression analysis of the relative and collective effects of the student's variables on thesis completion expectancy

Multiple R	=	.235
Multiple R Square (R^2)	=	.055
Adjusted Multiple R Square	=	.047
Standard Error of estimate	=	2.928

Source of variation	SS	df	MS	F	Sig.
Regression	2015.288	4	503.822	7.209	.000[b]
Residual	34666.560	496	69.892		
Total	36681.848	500			

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	27.158	2.928		9.274	.000
Interest (X_5)	.301	.125	.107	2.414	.016
Skills (X_6)	-.420	.148	-.125	-2.833	.005
Academic motivation(X_7)	.150	.136	.049	1.099	.272
Emotional stability(X_8)	.218	.056	.170	3.861	.000

THESIS = 27.18 + .107 X_5 + (-.125) X_6 + 049X_7 + .170X_8

To test the hypothesis, the data collected were analyzed using bivariate correlation and multiple regression techniques. The results are presented in Tables 10 and 11.

The results presented in Table 10 show the inter-correlation matrix of the four student's variables and academic thesis completion expectancy. The table shows that the least correlation coefficient of .015 and that is the correlation student's interest and research skills and thesis completion. The highest correlation coefficient of .540 was obtained for the relationship between supervisor's competence and supervisors/ students' relationship However, most of the variables were found to correlate with thesis completion expectancy (significant at .05 levels) except correlations involving supervisor's competence, supervisor's provision of timely feedback and students achievement motivation.

Using regression analysis, Table 11 reveals the collective contributions of the eight supervisors and students variables in predicting thesis completion expectancy among postgraduate students which yielded a multiple R of .265, a coefficient of multiple correlation of $R^2 = .070$ and an adjusted $R^2 = .055$. From these results, it can be inferred 7.0% of the total variance of thesis completion among students is explained by the eight supervisor and students variables. Although, the percentage of the joint contribution of the supervisor and students variables to the variance in thesis is low, the analysis of variance (ANOVA) results for the prediction produced an F-value of 4.628 which is significant at .05 level. This significant value of F-ratio means that the four supervisor and students variables used in the study when combined have a significant effect and can be used to predict or explain thesis completion expectancy among postgraduate students.

Further result reveals the strength of the individual supervisor and students variables in predicting thesis completion, as still shown in Table 11. The result shows

that the standard beta weight (β) ranged from .001 for students achievement motivation to .165 for students emotional stability .Beta weights generally indicate the strength of each prediction. The analysis of theses beta weights shows that, out of the eight supervisor and students variables., three variables : students interest (β = .090), students research skills (β = -.127) and students emotional stability (β =-.165) were all significant predictors of thesis completion expectancy among postgraduates students except for supervisors competence , students relationship , work load and feedback provision as well as students achievement motivation that has a beta value of that have no significant values . A close inspection of these beta weight values show that when reporting in absolute terms, emotional stability is the strongest predictor, followed closely by students' research skills and interest. The null hypothesis which states that the supervisor and students variables individually and collectively combined do not significantly predict thesis completion expectancy is rejected. This implies that the supervisor and students variables individually and collectively have effects on thesis completion expectancy among post graduate students.

4.2.2.1 Research question one

What is the most significant meaningful and parsimonious model involving the effects of the perceived supervisor variables (supervisors competence, supervisor-students relationship, supervisors work load and supervisor feedback provision) on thesis completion expectancy? To answer this question, the data collected from the respondents were analyzed to obtain the original correlation coefficients of the variables in the study. In addition, the paths coefficient for each of the hypothesized pathways in the recursive model was determined.

TABLE 10

Inter correlation matrix of supervisors and student's variables and thesis completion expectancy

Variables	SCR	SSR	SWL	SPF	SIR	SRS	SAM	SES	THESIS
SCR	1	.540*	-.339*	-.361*	.027	.310*	.363*	-.030	.044
SSR		1	-.210*	-.184*	.124*	.012	.595*	-.005	.095*
SWL			1	.942*	,145*	-.202*	-.145*	.093*	.107*
SPF				1	.125*	-.177*	.183*	.015*	.086
SIR					1	.015	.134*	-.135*	.090*
SRS						1	.144*	-.026	.-123*
SAM							1	0.28	.054
SES								1	.161*
THESIS									1

* = Correlation is significant at .05

SCR = Supervisors competence in research

SSR = Supervisors students relationship

SWL = Supervisors work load

SPF = Supervisors provision of feedback

SIR = Students interest in research

SRS = Students research skills

SAM = Students' academic motivation

SES = Students emotional stability

THESIS = Thesis completion expectancy

TABLE 11

Summary of multiple regression analysis of the relative and collective effects of the supervisors and student's variables on thesis completion expectancy

Multiple R	=	.265
Multiple R Square (R^2)	=	.070
Adjusted Multiple R Square	=	.055
Standard Error of estimate	=	4.017

Source of variation	SS	Df	MS	F	Sig.
Regression	2567.044	8	320.880	4.628	.000[b]
Residual	34114.805	492	69.339		
Total	36681.848	500			

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	19.724	4.017		4.910	.000
Supervisors Competence in research (X_1)	.311	.214	.085	1.456	.146
Supervisors/student relationship (X_2)	.206	.200	.065	1.029	.304
Supervisors workload (X_3)	.210	.409	.072	.514	.607
Supervisors feedback (X_4)	.067	.393	.024	.170	.865
Student interest in research (X_5)	.251	.127	.090	1.973	.049
Students research skills X_6)	-.428	.161	-.127	-2.663	.008
Academic motivation (X_7)	-.002	.168	-.001	-.013	.990
Students emotional stability (X_8)	.211	.058	.165	3.628	.000

THESIS = $19.72 + 0.085X_1 + 0.065X_2 + 0.072X_3 + 0.024X_4 + 0.090X_5 + (-0.127)X_6 + (-0.001)X_7 + 0.165X_8$

Out of the 10 pathways, only 7 met the criteria for significance and none for meaningfulness. Criteria for significance means that the p-values of the path ways must be less than .05 while meaningfulness means that, the path whose value is above .50 can be considered. Fig 8 shows a more parsimonious causal model with 7 surviving paths for supervisors' variables and thesis completion expectancy among postgraduate students.

Figure 8 shows that after trimming using significance as criterion, seven (7) out of ten (10) hypothesized paths were retained. The values in the path ways indicate the original correlation coefficient and beta weights (β) in the brackets. A further analysis of Figure 9 reveals that out of the 7 significant path ways, 2 pathways are direct, while others are indirect. From the new model, a new set of structural equations are obtained, they are presented as followed;

$X_1 = e_1$

$X_2 = P_{21} X_1 + e_2$

$X_3 = P_{31} X_1 + e_3$

$X_4 = P_{41} X_1 + P_{42} X_2 + P_{43} X_3 + e_4$

$X_9 = P_{92} X_2 + P_{93} X_3 + e_9$

Keys

X_1 = Supervisors competence

X_2 = Supervisors –students relationship

X_3 = supervisors work load

X_4 = supervisors feedback provision

X_9 = Thesis completion

P_{21}-P_{94} = are obtained by regressing variables 2, 3, 4, , taken as the dependent variables on their predictor variables using the structural equation models (S.E.M.) developed in Fig. 8

TABLE 12

Significant paths through which the supervisor variables determine thesis completion expectancy

Paths	Path coefficients	p-values
P_{21}	.540*	.000
P_{31}	-.319*	.000
P_{32}	-.038	.450
P_{41}	-.073*	.000
P_{42}	.050*	.004
P_{43}	.928*	.000
P_{91}	.021	.699
P_{92}	.118*	.026
P_{93}	.269*	.004
P_{94}	-.138	.303

* = Significant at .05

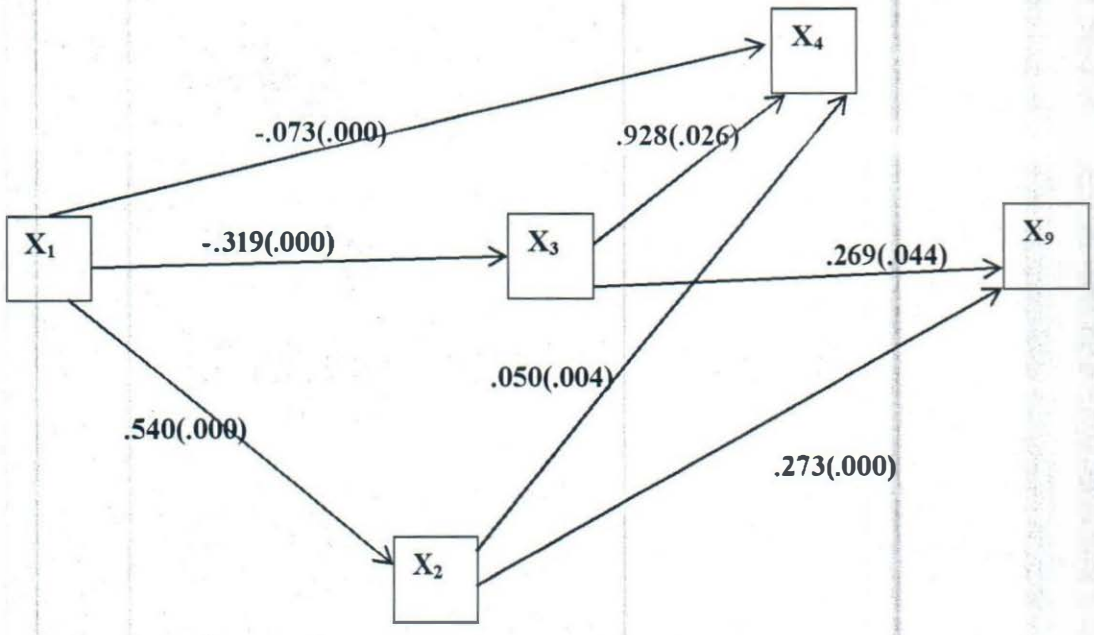

Fig. 8 Parsimonious causal model of supervisor variables on thesis completion expectancy

4.2.2.1.1 Validation of the parsimonious model

To validate the parsimonious model shown in Fig 8, the original correlation matrix of the four supervisors' variables were reproduced. Table 13 shows the original correlation coefficients as presented in the upper half of the matrix and the reproduced ones are indicated at the lower half of the matrix. Table 14 shows the discrepancies between the original and reproduced correlations. The discrepancies between the original and reproduced correlation as shown in Table 14 are negligible. These discrepancies could be due to error arising from the sampling techniques and error from the instrument as a result of its inability to accommodate all the items that are supposed to be covered. Despite these, the values are small enough to justify the acceptance of the model as good, consistent and reliable for explaining the causal influence of the four supervisors' variables on thesis completion.

Hence, it can be concluded here that, Fig. 8 can be used to explain the causal linkages among the criterion variable and the predictor variables. Figure 8 is therefore the most significant, meaningful and parsimonious casual model involving supervisor variables and thesis completion expectancy.

4.2.2.2 Research question two

What is the most significant meaningful and parsimonious model involving the effects of the student variables (students interest, research skills, achievement motivation and emotional stability) on thesis completion expectancy? To answer this question, the data collected from the respondents were analyzed to obtain the original correlation coefficients of the variables in the study. In addition, the paths coefficient for each of the hypothesized pathways in the recursive model was determined. Out of the 10 pathways, only 6 met the criteria for significance and one for meaningfulness. Criteria for significance means that the p-values of the path ways must be less than .05 while

meaningfulness means that, the path whose value is above .50 can be considered. Fig 10 shows a more parsimonious causal model with 6 surviving paths for students' variables and thesis completion expectancy among postgraduate students.

Figure 9 shows that after trimming using significance as criterion, six (6) out of ten (10) hypothesized paths were retained. The values in the pathways indicate the original correlation coefficient and beta weights (β) in the brackets. A further analysis of Figure 6 reveals that out of the 6 significant path ways, 3 pathways are direct, while others are indirect. From the new model, a new set of structural equations are obtained, they are presented as followed;

$X_5 = e_5$

$X_6 = e_6$

$X_7 = P_{75} X_5 + P_{76} X_6 + e_7$

$X_8 = P_{85} X_5 + e_8$

$X_9 = P_{95} X_5 + P_{96} X_6 + P_{98} X_8 + e_9$

Keys: X_5 = students interest in research

X_6 = students research skills

X_7 = students' academic achievement motivation

X_8 = students emotional stability

X_9 = Thesis completion expectancy

P_{65}-P_{95} = are obtained by regressing variables 6, 7, 8, taken as the dependent variables on their predictor variables using the structural equation models earlier (S.E.M.) developed in Fig. 9

TABLE 13

The original and reproduced correlation matrix of supervisor variables and thesis completion expectancy

Variables	SCR	SSR	SWL	SPF	THESIS
SCR	1	.054*	-.339*	-.361*	.044
SSR	0.55*	1	.210	-.184	.099
SWL	.340*	-.210	1	.942	.109
SPF	-.361*	-.186	.943	1	.086
THESIS	.044	.098	.109	.088	1

* = Correlation is significant at .05

SCR = Supervisors competence

SSR = Supervisors students relationship

SWL = Supervisors work load

SPF = Supervisors provision of feedback

THESIS = Thesis completion expectancy

TABLE 14

Discrepancies between the original and reproduced correlation coefficients of supervisors variables factors and thesis completion expectancy

Variables	SCR	SSR	SWL	SPF	THESIS
SCR	1				
SSR	.001	1			
SWL	.001	.000	1		
SPF	.000	.002	.001	1	
THESIS	.000	-.001	.000	.002	1

4.2.2.1.1 Validation of the parsimonious model

To validate the parsimonious model shown in Fig 9, the original correlation matrix of the four student variables were reproduced. Table 16 shows the original correlation coefficients as presented in the upper half of the matrix and the reproduced ones are indicated at the lower half of the matrix. Table 17 shows the discrepancies between the original and reproduced correlations. The discrepancies between the original and reproduced correlation as shown in Table 17 are negligible. These discrepancies could be due to error arising from the sampling techniques and error from the instrument as a result of its inability to accommodate all the items that are supposed to be covered. Despite these, the values are small enough to justify the acceptance of the model as good, consistent and reliable for explaining the causal influence of the four students' variables on thesis completion.

Hence, it can be concluded here that, Fig. 9 can be used to explain the causal linkages among the criterion variable and the predictor variables. Figure 9 is therefore the most significant, meaningful and parsimonious casual model involving student variables and thesis completion expectancy. The variables are students interest, research skills, achievement motivation and emotional stability.

4.2.2. 3 Research question three

What is the most significant meaningful and parsimonious model involving the effects of the perceived supervisor and student variables (supervisors competence, students relationship, workload provision of feedback, students interest, research skills, achievement motivation and emotional stability) on thesis completion expectancy ? To answer this question, the data collected from the respondents were analyzed to obtain the original correlation coefficients of the variables in the study. In addition, the paths coefficient for each of the hypothesized pathways in the recursive model was determined. Out of the 36 pathways, only 21 met the criteria for

TABLE 15

Significant paths through which the student variables determine thesis completion expectancy

Paths	Path coefficients	p-values
P_{65}	.015	.732
P_{75}	.133*	.003
P_{76}	.112*	.011
P_{85}	-.141*	.002
P_{86}	-.030	.506
P_{87}	.051	.261
P_{95}	.107*	.016
P_{96}	-.125*	.005
P_{97}	.049	.272
P_{98}	.170*	.000

* = Significant at .05

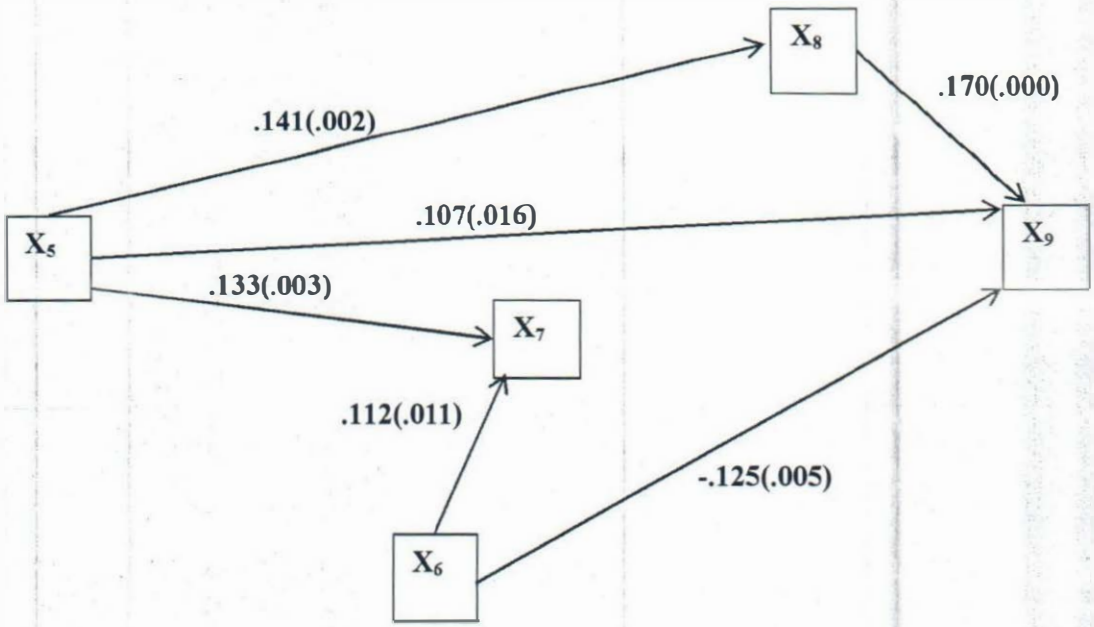

Fig. 9 Parsimonious causal model of student variables on thesis completion expectancy

significance and 5 for meaningfulness. Criteria for significance means that the p-values of the path ways must be less than .05 while meaningfulness means that, the path whose value is above .50 can be considered. Fig 10 shows a more parsimonious causal model with 21 surviving paths for supervisors and students variables on thesis completion expectancy among postgraduate students

Fig. 10 shows that, after trimming using significance as criterion, twenty-one (21) out of thirty six (36) hypothesized paths were retained. The values in the path ways indicate the original correlation coefficient and beta weights (β) in the brackets. A further analysis of Figure 7 reveals that out of the 21 significant path ways, 3 pathways are direct, while others are indirect. From the new model, a new set of structural equations are obtained, they are presented as followed;

$X_1 = e_1$

$X_2 = P_{21}X_1 + e_2$

$X_3 = P_{31}X_1 + e_3$

$X_4 = P_{41}X_1 + P_{42}X_2 + P_{43}X_3 + e_4$

$X_5 = P_{52}X_2 + P_{53}X_3 + e_5$

$X_6 = P_{61}X_1 + P_{62}X_2 + P_{63}X_3 + P_{64}X_4 + e_6$

$X_7 = P_{72}X_2 + P_{73}X_3 + P_{74}X_4 + P_{76}X_6 + e_7$

$X_8 = P_{83}X_3 + P_{84}X_4 + P_{85}X_5 + e_8$

$X_9 = P_{95}X_5 + P_{96}X_6 + P_{98}X_8 + e_9$

Keys: X_1 = supervisor competence in research

X_2 = supervisor - student relationship

X_3 = supervisor's work load

X_4 = Supervisor timely feedback

X_5 = student's interest in research

X_6 = student's research skills

X_7 = academic achievement motivation

X_8 = student emotional stability

X_9 = thesis completion expectancy

4.2.2.3.1 Validation of the parsimonious model

To validate the parsimonious model drawn from fig. 11, the original correlation matrix of the supervisor and student variables were reproduced. Table 19 shows that the original correlations are presented in the upper half of the matrix and the reproduced ones are indicated at the lower half of the matrix respectively. The discrepancies between the original and reproduced correlation coefficients are presented in Tables 20. The discrepancies between the original and reproduced correlation as shown in Table 20 are negligible. These discrepancies could be due to error arising from the sampling techniques and error from the instrument as a result of its inability to accommodate all the items that are supposed to be covered. Nevertheless, the values are small enough to justify the acceptance of the model as good, consistent and reliable for explaining the casual influence of the supervisor and students variables on thesis completion of the postgraduate students.

Hence, it can be concluded here that, Fig 10 could be used to explain the causal linkages among the criterion variable and the predictor variables. Figure 11 is therefore the most significant, meaningful and parsimonious casual model involving supervisor/student variables and thesis completion expectancy among postgraduate students.

4.2.2.4 Research question four

What is the proportion of the model involving perceived supervisor and student variables that is direct and indirect? The data in Tables 21, 22 and Table 23

TABLE 16

The original and reproduced correlation matrix of student variables and thesis completion expectancy

Variables	SIR	SRS	SAM	SES	THESIS
SIR	1	.015	.134*	-.135	.090
SRS	.015	1	.114*	-.025*	-.122*
SAM	.133	-.135	1	.028	.054
SES	.136	-.025	-.029	1	.161*
THESIS	.090	-.122	.055	.161	1

* = Correlation is significant at .05

SIR = Students interest

SRS = Students research skills

SAM = Students' academic achievement motivation

SES = Students emotional stability

THESIS = Thesis completion expectancy

TABLE 17

Discrepancies between the original and reproduced correlation coefficients of student variables/factors and thesis completion expectancy

Variables	SCR	SSR	SWL	SPF	THESIS
SCR	1				
SSR	.000	1			
SWL	.001	.000	1		
SPF	.001	.001	.001	1	
THESIS	.000	-.000	.001	.000	1

were used for verifying this research question for the thesis completion. A variable is said to have a direct effect on another variable when it stretches from the main independent/predictor variable to the criterion dependent variable without having to go through another variable. On the other hand, where the variable goes through another variable before relating to the criterion dependent variable, it is said to be exerting indirect effect. The results are clearly presented in Tables 21, 22 and 23. Whereas, the information in Table 21 indicates the variables effects, Table 22 indicates the variables whose effects are significant and those that are not, using the beta weights However, Table 21 shows that, out of the eight direct paths, only 3 had significant direct effects on thesis completion expectancy among postgraduate students. The variables are: students' interest, students' research skills and emotional stability. It is important to note that students' emotional stability has the most effective direct causal effect on thesis completion among students. From the analysis, it was found that there are direct and indirect path ways of the supervisors and students variables on thesis completion.

The results of multiple correlation and series of multiple regressions were used to obtain information on the total effect, direct and indirect effects of the predictor variables on the criterion variable. The direct effect is the value of the standardized regression weight between the predictor variable and the criterion variable (Z_9). The difference between total effect and direct effect gave the indirect effect (a-b). From the output (the data), the direct and indirect effects of the various predictor variables; on the criterion variable, the percentage of the direct and indirect effects relative to the total direct and indirect effects were determined respectively. The result showed that the proportion of direct effect is 55.64 while the proportion of indirect effect is 44.04. This showed that the variables selected for the supervisors and students' variable when taken directly influenced more of thesis completion than when taken indirectly.

TABLE 18

Significant paths through which the supervisor and student variables determine thesis completion expectancy

Paths	Path coefficients	p-values
P_{21}	.540*	.000
P_{31}	-.318*	.000
P_{32}	-.038	.450
P_{41}	-.073*	.000
P_{42}	.050*	.004
P_{43}	-.928*	.000
P_{51}	-.010	.859
P_{52}	.169*	.001
P_{53}	.305*	.021
P_{54}	-.135	.305
P_{61}	.413*	.000
P_{62}	-.248*	.000
P_{63}	-.413*	.001
P_{64}	.308*	.014
P_{65}	.057	.180
P_{71}	-.022	.643
P_{72}	.581*	.000
P_{73}	.450*	.000
P_{74}	-.494*	.000
P_{75}	.037	..119
P_{76}	.116*	.003
P_{81}	-.072	.207
P_{82}	.084	.177
P_{83}	.783*	.000
P_{84}	-.705*	.000
P_{85}	-.171*	.000
P_{86}	.030	.522
P_{87}	.011	.845
P_{91}	.085	.146
P_{92}	.065	.304
P_{93}	.072	.607
P_{94}	.024	.865
P_{95}	.090*	.049
P_{96}	-.127*	.008
P_{97}	-.001	.990
P_{98}	.168*	.000

* = Significant at .05

TABLE 19

The original and reproduced correlation matrix of supervisor and student variables and thesis completion expectancy

Variables	SCR	SSR	SWL	SPF	SIR	SRS	SAM	SES	THESIS
SCR	1	.540*	-.339*	-.361*	.027	.310*	.363*	-.030	.044
SSR	.540	1	-.210*	-.184*	.124*	.012	.595*	-.005	.095*
SWL	.339	-.210	1	.942*	.145*	-.202*	-.145*	.093*	1.07*
SPF	.338	-.184	.942	1	.125*	-.177*	.183*	.015*	.086
SIR	.027	.122	.145	.125	1	.015	.134*	-.135*	.090*
SRS	.310	.010	-.202	-.177	.015	1	.144*	-.026	-.123*
SAM	.360	.560	-.145	.189	.139	.145	1	0.28	.054
SES	-.030	-.005	.093	.015	.136	-.026	.029	1	.161*
THESIS	.045	.096	1.07	.088	.090	-.123	.055	.161	1

* = Correlation is significant at .05

SCR = Supervisors competence in research

SSR = Supervisors students relationship

SWL = Supervisors work load

SPF = Supervisors provision of feedback

SIR = Students interest in research

SRS = Students research skills

SAM = Students' academic achievement motivation

SES = Students emotional stability

THESIS = Thesis completion expectancy

TABLE 20

Discrepancies between the original and reproduced correlation coefficients of supervisor variable and student variables on thesis completion expectancy

Variables	SCR	SSR	SWL	SPF	SIR	SRS	SAM	SES	THESIS
SCR	1								
SSR	.000	1							
SWL	.000	-.000	1						
SPF	.002	-.000	.000	1					
SIR	.000	.002	.000	.000	1				
SRS	.000	.002	-.000	-.000	.000	1			
SAM	.003	.005	-.000	.001	.005	.001	1		
SES	-.000	-.000	.000	.000	.000	-.000	.000	1	
THESIS	.001	.001	000	.002	.000	-.000	.001	.000	1

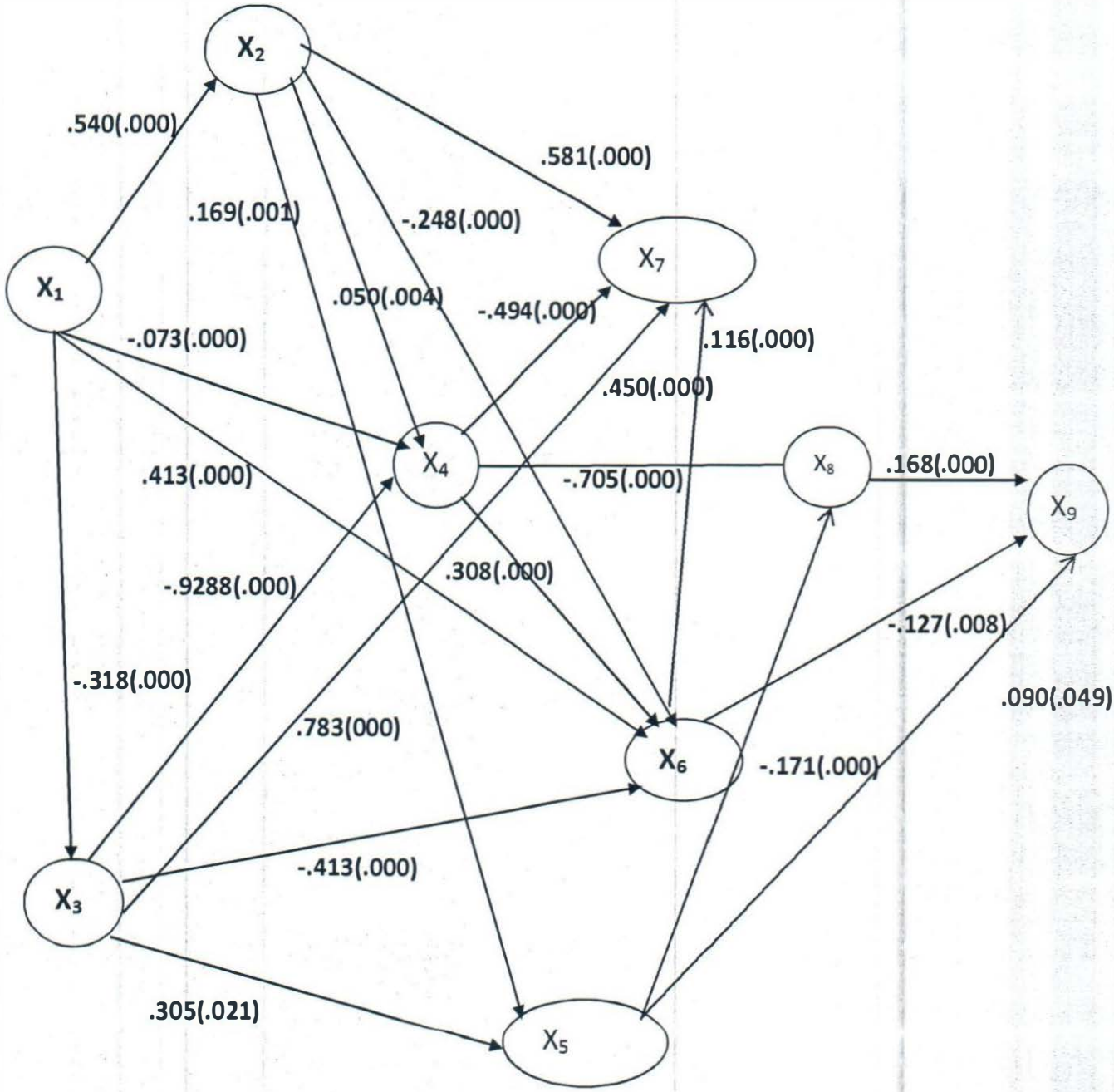

Figure 10. Parsimonious model of supervisor and student variables on thesis completion expectancy

TABLES 21

Significant pathways of the supervisor and student variables on thesis completion expectancy

Paths	Path coefficients	Nature of paths	Remarks
P_{21}	.540*	Indirect	S
P_{31}	-.318*	Indirect	S
P_{32}	-.038	Indirect	NS
P_{41}	-.073*	Indirect	S
P_{42}	.050*	Indirect	S
P_{43}	-.928*	Indirect	S
P_{51}	-.010	Indirect	.NS
P_{52}	.169*	Indirect	S
P_{53}	.305*	-	S
P_{54}	-.135	-	NS
P_{61}	.413*	-	S
P_{62}	-.248*	-	S
P_{63}	-.413*	-	S
P_{64}	.308*	-	S
P_{65}	.057	Indirect	NS
P_{71}	-.022	Indirect	NS
P_{72}	.581*	Indirect	S
P_{73}	.450*	Indirect	S
P_{74}	-.494*	-	S
P_{75}	.037	-	NS
P_{76}	.116*	-	S
P_{81}	-.072	-	NS
P_{82}	.084	-	NS
P_{83}	.783*	Indirect	S
P_{84}	-.705*	Indirect	S
P_{85}	-.171*	Indirect	S
P_{86}	.030	Indirect	NS
P_{87}	.011	-	NS
P_{91}	.085	Direct	NS
P_{92}	.065	-	NS
P_{93}	.072	-	NS
P_{94}	.024	-	NS
P_{95}	.090*	Direct	S
P_{96}	-.127*	Direct	S
P_{97}	-.001	-	NS
P_{98}	.168*	-	S

TABLE 22

Variables with direct effects on thesis completion expectancy

S/n	Variables	Beta weights	Significance	Remarks
1	Supervisors competence	.085	.146	NS
2	Supervisors students relationship	.065	.304	NS
3	Supervisors workload	.072	.607	NS
4	Supervisors feedback	.024	.865	NS
5	Students interest	.090	.049	S
6	Students research skills	-.127	.008	S
7	Students achievement motivation	-.001	.990	NS
8	Students emotional stability	.165	.000	S

TABLE 23

Decomposition of the total effects of student and supervisor variables on thesis completion expectancy into proportion of direct and indirect effects

Predictor variables	A total effect	% of T.E rel to Overall T. E.	B Direct effect	% of D.E to Overall T. E.	(a-b) I.E	% of I. E. rel. to Overall T. E.
SCR	.044	6.55	.085	12.69	-.041	-6.11
SSR	.095	14.17	.065	9.70	0.03	4.47
SWL	.107	15.97	.072	10.75	0.03	4.47
SPF	.086	12.83	.024	3.58	0.06	18.96
SIR	.090	13.43	.090	13.43	0.00	0.00
SRS	.-123	8.241	-.127	-18.95	-0.25	-3.73
SAM	.054	8.06	-.001	0.14	0.05	17.46
SES	.161	24.03	.165	24.62	0.004	0.59
Total	0.67			55.96		44.04

Proportion of total direct effect = 55.96

Proportion of indirect effect = 44.04

4.3 Discussion of findings

The discussion of the findings of this work was carried out by research questions and hypotheses.

4.3.1 Relative and collective effects of perceived supervisor variables on thesis completion expectancy

The findings of hypothesis one showed that all the four supervisor variables - supervisor competence in research, supervisor-student relationship, supervisor's work load and supervisor's timely feedback are really effective in predicting thesis completion expectancy among postgraduate students. This implies that the effectiveness of the individual (relative) and joint (collective) contributions of the supervisor variables in predicting thesis completion expectancy among postgraduate students could not have occurred by chance. The findings equally show that all the supervisor variables when taken together affected each of the total variances of postgraduate students thesis completion expectancy.

The finding of this study indicated that supervisor variables contribute to the delay of postgraduate student completion of their thesis/dissertation in federal and state universities in Nigeria. This implies that low thesis completion expectancy can be attributed to supervisor insufficient research skills, inaccessibility when needed, delay in reading submitted works, imposing of topics on supervisees, poor knowledge of topics undertaken by students, frequent changes of the research topics, failure to keep to time scheduled for discussion of research work, poor interpersonal relationship with the supervisees and improper guideline on written works. This is in line with the result of Ndayambaje (2018) which revealed that supervisors are contributing factor to students' completion of thesis/dissertation. This is also supported by the finding of Rooij, Fokkens-Bruinsma and Jansen (2019) which

indicated that supervisors' characteristics, academic support, personal support, autonomy support, availability, high expectations and relationship are supervisors' related factors that influence students' thesis/dissertation completion. The agreement between the findings could be due to the fact that the supervisors in different geographical locations display similar attitude. Some supervisors in federal and state universities, in Nigeria have numerous workloads and insufficient research skills to guide the students during their writing of their work. After reading the supervisees' works, some supervisors make comments such as revisit and recast instead of explaining to the students what they are required to do to enhance the completion of their thesis/dissertation. The supervisors have numerous works such as teaching conducting exams and marking the scripts of both postgraduate and undergraduate students. Due to these numerous tasks, they have insufficient time to guide and provide prompt feedback on students' works. It also makes it difficult for supervisors to have face-to-face meetings with supervisees to discuss way forward in their research work. These insufficient skills make it difficult for them to help and guide students on how to identify researchable topics and search related literature to timely complete their studies.

Also, the findings of the study show the contributions made by each supervisor variable to the prediction of thesis completion expectancy among postgraduate students. The values of t-ratios associated with each supervisor variables against thesis completion expectancy showed that out of four supervisor predictor variables, two supervisor variables – supervisor workload (X_3) and supervisor-student relationship (X_2), contributed significantly higher to the prediction of postgraduate students' thesis completion expectancy. This is collaborated by Ekoh (2016) who found that the most common complaint from research students concern irregular

contact with supervisors, who most of the time are preoccupied with teaching or administrative duties, have too many supervisees or have to be away from the university frequently for conferences or external examinations; and these affect thesis completion expectancy among postgraduate students. Similarly, Duze, (2010) studied the relationship between supervisor-related factors and delay in thesis completion among graduate students and the result showed that thesis completion was greatly influenced by lack of supervisor commitment, supervisor not being up-to-date in the field, incompatibility with supervisees, lack of expertise on students' topic and poor interpersonal relationships.

4.3.2 Relative and collective effects of student variables on thesis completion expectancy

The findings of hypothesis two showed that all the four student variables – student's interest in research, academic achievement motivation, research skills and emotional stability are really effective in predicting thesis completion expectancy among postgraduate students. This implies that the effectiveness of the individual and joint contributions of the student variables in predicting thesis completion expectancy among postgraduate students could not have occurred by chance. The findings equally show that all the four students variables when taken together affected each of the total variances of postgraduate students thesis completion expectancy.

This finding implies that the student variables that contribute to the delay of or low postgraduate students thesis completion included poor interest in research works, untimely submission of corrections, difficulty in getting research topic, poor research skills, difficulty in combining work and research, insufficient funds to conduct a research and insufficient access to literature. This agreed with the finding of Akparep et al (2017) which reported that students contributed almost equally to the

delay in the completion of thesis. The finding supported that of Mohammad and Mohammad (2017) which revealed that inadequate knowledge and experience in research, insufficient time and financial resources to conduct a study contribute to challenges in students' thesis/dissertation completion. This also corroborated the finding of Agu and Oluwatayo (2013) which showed that job, family, lack of training; personal and academic problems with supervisor, lack of funds, lack of discipline, inadequate knowledge of the field and the type of research, difficulties in consulting with the supervisor and progress review, academic culture, low self-esteem and knowledge, dislike for the writing process, difficulty in concentrating, and fear of the evaluation of their work are students variables that contribute to the delay in completion of their thesis. The possible explanation for the agreement between the findings is that the two studies were conducted in the same country. Some postgraduate students have the impression that research work is very difficult and time consuming. This impression discourages them from taking up the challenges of completing their research work on time.

Also, the findings show the contributions made by each student variable to the prediction of thesis completion expectancy among postgraduate students. The values of t-ratios associated with each student variables against thesis completion expectancy showed that out of four student predictor variables, that three variables (student's emotional stability, X_8; students' research skills, X_6 and students' interest in research, X_5) jointly contributed significantly to the prediction of thesis completion expectancy among postgraduate students. These findings are in consonance with those of Green & Powell (2005); Duze (2010); Ezebilo (2012), and Ramli & Admad (2015). Green & Powell (2005) strongly posited that frustration, and/or depression can also be a big barrier to the postgraduate degree completion. The frustration, negative feedback,

difficult relationship with the supervisor, or a change of interest, could easily make the student lose the initial enthusiasm he or she had for the project. Also, Uduak (2016) found that students' moods (excitement, despair, boredom and confidence) had predictable stages as they moved through the degree and thesis writing.

4.3.3 Relative and collective effects of perceived supervisor and student variables (combined) on thesis completion expectancy.

The findings of hypothesis three showed that all the eight supervisor/students variables combined - supervisor's competence in research, supervisor-student relationship, supervisor's work load, supervisor's timely feedback, student's interest in research, academic achievement motivation, research skills and emotional stability are really effective in predicting thesis completion expectancy among postgraduate students. This implies that the effectiveness of the joint contributions of the supervisor and students variables in predicting thesis completion expectancy among postgraduate students could not have occurred by chance. The findings equally show that all the supervisor/student variables when taken together affected each of the total variances of postgraduate students' thesis completion expectancy

Also, the findings show the contributions made by each supervisor/student variables combined to the prediction of thesis completion expectancy among postgraduate students. The values of t-ratios associated with each supervisor/ student variables against thesis completion expectancy showed that out of eight predictor variables, two supervisor variables – supervisor workload (X_3) and supervisor-student relationship (X_2), contributed significantly higher to the prediction of postgraduate students' thesis completion expectancy. The results also show that three variables (student's emotional stability, X_8; students' research skills, X_6 and students' interest in research, X_5) out of eight supervisor/students variables (joint) contributed

significantly to the prediction of thesis completion expectancy among postgraduate students.

The weak predictive effect of some of the supervisors variables on thesis completion as revealed in the study, is in consonance with the findings of Ekpoh (2016) who posited that supervisor – related factors do not posed any significant challenge to postgraduate studies research work. This finding of this present study which showed that supervisor competence in research does not directly influence thesis completion expectancy may be attributed to the sampling techniques used in the study and the instrument as a result of its inability to accommodate all the items that are supposed to be covered. This finding may also be attributed to the fact that students may have consulted other experts, aside from their supervisors, who help provide them with needed research skills and materials for thesis completion. So, even though their supervisors may not be strong in research, this does not affect their thesis completion expectancy.

4.3.4 Meaningful and parsimonious model involving the effects of the perceived supervisor variables on thesis completion expectancy

Findings from research question one showed the most meaningful causal model for discussing the effects of the four supervisor variables ($X_1 - X_4$) on thesis completion expectancy among postgraduate students (X_9). It shows that only two of the four supervisors' variables were directly effective in predicting thesis completion expectancy among postgraduate students – and these were supervisor workload and supervisor-student relationship, while the other two – supervisor competence and provision of feedback had indirect effects. This is so because thesis completion expectancy is dependent on the mentorship of supervisors as evident in their relationship with supervisees. Supervisors may be competent, but they may not be

readily available for students due to numerous other teaching and non – teaching functions or responsibilities; and poor relationship with supervisees.

These findings are in line with earlier researches. For supervisor workload (X_3), supervisor-student relationship, (X_2), for instance, Lategan (2009) asserted that postgraduate supervision is the active engagement by the supervisor through the research process to guide the students to solve research problems; explaining that the process of supervision starts with creating time in the midst of tight schedules and creating a cordial relationship with supervisees to assist students through their thesis work. Also, Agu & Oluwatayo (2013) maintained that the first and most important external factor affecting postgraduate students' experiences in graduate research is their relationship with their supervisors, as this play a major role in students' satisfaction, persistence and timely completion of their thesis. Seidu (2015) emphasized that advisor-advisee relationship can have a strong influence (both positive and negative) on advisee research work in addressing conflict openly and ensuring a good research process. Besides, Olorunnsisola (2011) argued that students were not getting enough time with their supervisors because the supervisors were overworked and there was acute shortage of qualified supervisors.

This present result also agrees with Deane and Peterson (2011) who noted that a very basic factor in supervision is the supervisor's availability, where availability does not only refer to frequent physical presence, but also to having frequent meetings with the postgraduate student, and providing timely answers to questions and feedback on the student's written work. However, some supervisors are inaccessible to their supervisees. Some supervisors are rarely seen on campus; they instructed their supervisees never to call them on phone and could only meet on appointment. It seems that some supervisors are overloaded with much works that limit the available

time to supervise the students' research work. Therefore in the model, seven (7) out of ten paths were retained; and two pathways are direct while others are indirect.

4.3.5 Meaningful and parsimonious model involving the effects of the student variables on thesis completion expectancy

Findings from research question two showed the most meaningful causal models for discussing the effects of the four student variables (X_5 – X_8) on thesis completion expectancy among postgraduate students (X_9). It indicated that three student's variables had strong direct predictive effect on thesis completion expectancy among postgraduate students and these were student interest in research (X_5), student research skills (X_6) and students' emotional stability (X_7) while student academic achievement motivation (X_8) had indirect effects. Six (6) out of ten paths were retained - 3 direct and others are indirect. This implies that student interest in research (X_5) has direct and indirect effect on supervisors - student's relationship, student research skills, academic achievement motivation, students' interest in research, students' emotional stability and thesis completion expectancy.

This finding is in consonance with Duze (2010) who posited that in addition to student factors such as students' skill in conducting research, students' lack of capacity and lack of preparedness for research and postgraduate study, the post graduate student's emotional and psychological problems, social and intellectual isolation, students' personal difficulties (e.g. financing, family issues), sexual harassment and gender issues in supervision, and. organizational factors (e.g. work space, facilities) have also been identified as major hindrances. According to Ezebilo (2012), towards the end of students' coursework, they might have a change of career plans, values or priorities, which could distract them, from completing their theses. He

further suggested that fear arising from the "lack of knowledge and from their own insecurity" may hinder thesis completion.

4.3.6 Meaningful and parsimonious model involving the effects of the perceived supervisor and student variables (combined) on thesis completion expectancy

Findings from research question three showed the most meaningful causal models for discussing the effects of the eight supervisors/students variables (combined) on thesis completion expectancy among postgraduate students. It showed that three out of eight supervisors/students variables- student interest in research, student research skills and students' emotional stability had strong direct causal effects on thesis completion expectancy, while the other five - supervisor competence, supervisors- student relationship, supervisors work load and provision of timely feedback achievement motivation had indirect effects. Out of 21 significant pathways, 3 pathways are, while others are indirect.

This finding revealed that thesis completion expectancy depends much on the students, while the supervisor is there just as a mentor. The student must have the required research interest and skills, and must be emotionally stable so as to gain from the supervisor competence in research and supervising prowess for him/her to have high thesis completion expectancy. This agrees with Abdul- Rauf (2016) who found a direct causal link between students interest and thesis completion expectancy. Also, student research skills, interest in research and students emotional stability were directly related to thesis completion in the findings of Delany (2013) and Ekpo (2016). Generally, supervisor competence in research, supervisor - student relationship, supervisor workload and supervisor feedback, students interest in research, student research skills, academic achievement motivation and students' emotional stability have been found by a wide range of studies to have strong direct

causal links with thesis completion expectancy among postgraduate students (e.g. Seidu, 2016; Bolli, Agasisti & Johnes, 2015; Vladimir, 2010 and Bogelund, 2015).

4.3.7 Proportion of the model involving perceived supervisor and student variables on thesis completion expectancy that is direct and indirect

The modeling of postgraduate students' variables and their perceived supervisors' variables helps us to examine students' affects towards thesis completion expectancy in terms of direct and indirect causation. Findings from research question four showed that the direct explanation of causal changes in thesis completion expectancy (X_9) accounted for 55.96%. The indirect causation for the dependent variable accounted for 44.04%. These percentages indicate that the eight supervisors/students variables used in the study collectively exert more of direct effect than indirect effect on thesis completion expectancy among postgraduate students.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of the researcher's investigations of the influence of perceived supervisors and students' variables on thesis completion expectancy among postgraduate students in Cross River State, Nigeria. The chapter also has sub-headings of conclusion, recommendation and suggestions for further researches.

5.1 Summary of the study

This research was conceived out of the need to provide a better understanding of perceived supervisor and student variables that influence thesis completion expectancy among postgraduate students. It undertook a modeling of the supervisor and student variables using four (4) supervisor and four (4) student variables in determining postgraduate students' thesis completion expectancy in public Universities in Cross River State, Nigeria.

Specifically, the study examined (i) The relative and collective effects of perceived supervisor variables (supervisor competence in research, supervisor - student working relationship, supervisor workload and supervisor feedback) and student variables (students interest in research, student research skills, academic achievement motivation and students' emotional stability) on thesis completion expectancy among postgraduate students. (ii) The most significant, meaningful and parsimonious model involving the effects of perceived supervisor variables: supervisor competence in research, supervisor - student relationship, supervisor workload and supervisor feedback and student variables (students interest in research, student research skills, academic achievement motivation and students' emotional stability) on thesis completion expectancy among postgraduate students. (iii) The

proportion of the model involving perceived supervisor variables (supervisor competence in research, supervisor - student working relationship, supervisor workload and supervisor feedback) and student variables (students interest in research, student research Skills, Academic achievement motivation and students' emotional stability) on thesis completion expectancy by postgraduate students that is direct and indirect.

To guide the study, four research questions and three hypotheses were formulated, tested and analyzed. The survey research design was adopted for this study and the sample for the study consisted of 502 postgraduate students drawn using the stratified sampling and simple random sampling techniques. These students selected were those who had completed their postgraduate course work and were writing/doing their thesis work. They were drawn from eight faculties of the University of Calabar (five faculties) and the Cross River University of Technology, Calabar (three faculties).

A well validated instrument named 'Perceived Supervisor/Student Variables and Thesis Completion Expectancy Questionnaire (PSSVTCEQ) consisting of three sections with 64 items was administered on the sample to collect data and statistically analyzed using multiple regressions and path analysis. Based on the data analysis and interpretations, the following findings emerged (i) All the four supervisor variables (supervisor competence in research, supervisor - student relationship, supervisor workload and supervisor feedback) individually and collectively were significantly effective in predicting thesis completion expectancy among postgraduate students; with supervisor work load being the strongest predictor, followed closely by supervisors- students' relationship. (ii) All the four student predictor variables (student interest in research, student research skills, academic achievement motivation

and students' emotional stability) individually and collectively were significant direct predictors on thesis completion expectancy among postgraduate students; with emotional stability as the strongest predictor, followed closely by students' research skills and interest. (iii) The significant paths in the hypothesized casual network involving the effects of the perceived supervisor and student variables on thesis completion expectancy among postgraduate students were 21 out of 36 for the model. A new path model involving the listed supervisor and students variables with 21 pathways was produced. The pattern of the original correlation was found to be consistent with the new model.

Another interesting outcome from the study was that a higher percentage or proportions (55.64%) of the total effects of supervisor and student variables are direct. Student emotional stability (X_8) contributes the highest direct effect, followed closely by Supervisor work load (X_3), supervisors- students' relationship (X_2), and student's research skills/interest. This showed that the variables selected for the supervisors and students' variable when taken directly influenced more of thesis completion expectancy than when taken indirectly. To this end, it would be more spontaneous and less stressful to adopt direct measures to effect changes on thesis completion expectancy among postgraduate students.

5.2 Conclusion

Based on the findings, it was concluded that supervisor and student related factors contribute to the delay of postgraduate students' completion of their thesis/dissertation in federal and state universities in Nigeria. It is regrettable to acknowledge that students are discouraged to enroll for postgraduates studies due to these factors. If these supervisors and students related factors are inadequately managed, it can undermine the universities efforts in producing world first class and

independent scholar that can research and proffer solution to the pandemic, poverty and economic recession in the world

The study revealed that of the eight variables - supervisor/student: supervisor competence in research, supervisor - student working relationship, supervisor workload and supervisor feedback, students interest in research, student research skills, academic achievement motivation and students' emotional stability) hypothesized to have direct and indirect causal effects on thesis completion expectancy among postgraduate students, only three of the eight variables (students interest in research, student research skills and students' emotional stability) had direct and indirect effect. The other students' variable - academic achievement motivation and all the supervisor variables considered in the study (supervisor competence in research, supervisor - student working relationship, supervisor workload and supervisor feedback) had only indirect effects.

In all, 55.64% of the total effects of supervisor and students variables on thesis completion expectancy among postgraduate students are direct, while 44.04% are indirect. The relative order of importance of these supervisor/students variables as determinants of thesis completion expectancy among postgraduate students are students' emotional stability (X_8); student research skills (X_6); students interest in research (X_5); supervisor competence in research(X_1); supervisor workload (X_3); supervisor - student working relationship(X_2); supervisor feedback(X_4) and students' academic achievement motivation (X_7).

It is also concluded that some of the students' variables influence thesis completion expectancy directly and indirectly, while others as well as all the supervisors variables influences thesis completion expectancy only indirectly, and that

some of the supervisor/students variables are more important than others in determining thesis completion expectancy among postgraduate students.

5.3 Recommendations

Based on the findings of the study, it implies that some of the supervisor/students variables actually determine thesis completion expectancy among postgraduate students directly, while others influence thesis completion expectancy among postgraduate students indirectly. The following were therefore recommended:

i. The various Departments, Faculties and the Graduate school should organize periodic and mandatory skill advancement seminars and workshops on graduate theses, research methodology and theses writing for students, to enhance the much needed research skills and interest among graduate students

ii. University management should organize annual workshops on research for lecturers to enable them exchange ideas and acquire requisite competency that will promote student research skills and interest for high thesis completion expectancy among postgraduate students.

iii. The relevant agencies of the University should design an operational policy that mandate supervisors to read and return supervisees' thesis/dissertation within two weeks of submission.

iv. The management of postgraduate studies should ensure supervisors/supervisee adhere strictly to policy of thesis/dissertation supervision through proper monitoring and reinforcement mechanism.

v. Quality assurance unit on research affairs should be established in all federal and state universities to handle all complains related to delay in completion of postgraduate students' thesis/dissertation.

vi. Postgraduate students should be properly trained on research methods that could help the students in caring out research with minimal assistance. This will reduce the time it will take a supervisor to communicate with students on technical areas in his or her study.

vii. To ensure emotional stability of students for postgraduate studies, there is the need for proper counseling, sorting out of stress at workplace, funding and family so as to provide an enabling environment for graduate work and research.

viii. Postgraduate students need to develop and have a sense of passion, intrinsic interest and motivation for pursuing and completing postgraduate education. This implies having a clear direction of life goal and determination.

ix. To overcome the problem of supervisor workload, the government should allow public Universities to recruit qualified academic staff to enable the Universities attain their Student-Staff ratios in all the disciplines especially doctoral degree holders for postgraduate level. There is also the need to motivate the few supervisors with attractive remuneration to put in extra effort to supervise students.

x. Efforts should be made to prevent or resolve seeming poor relationships or conflicts between supervisors and students, and intervention or remediation for students trapped in one form of problem or another involving delay in thesis completion.

xi. Periodic progress report on each postgraduate student should be submitted every semester to the department and faculty as a feedback and tracking tool to enhance students' thesis completion at scheduled time. In addition, functional research schedules should be put in place for postgraduate studies.

xii. The school should try as much as possible to make available research support services as well as enhancing knowledge and skills of postgraduate students in research and thesis writing through regular workshops and seminars. This will go a long way in reducing inefficiency, delay and frustration on the part of the students and supervisors.

5.4 Suggestions for further research

As a follow up to this study, more research studies could be conducted in the following areas;

i. A study involving the construction and verification of a hypothesized model involving institutional variables as a determinate of thesis completion expectancy among postgraduate students.

ii. The present study should be replicated in other States or geographical zones of Nigeria, or with other samples in Nigeria and beyond.

iii. Construction of a causal model involving other variables (like nature/type of graduate programme, etc.) and thesis completion expectancy among postgraduate students.

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APPENDIX

PERCEIVED SUPERVISOR/STUDENT VARIABLES AND THESIS COMPLETION EXPECTANCY QUESTIONNAIRE (PSSVTCEQ)

Dear Sir/Madam,

1 am a postgraduate student of the University of Calabar, Calabar; carrying out a study on perceived supervisor and student variables influencing thesis completion expectancy among postgraduate students in Cross River State, Nigeria. The data to be collected is solely for academic purpose. Your identity will be kept confidential. You are, therefore, kindly requested to fill it honestly.

Thanks

Researcher

Section A - Demographic data of respondents

Please tick (√) in the boxes where appropriate

1. Gender; Male ( ) Female ( )
2. Age: 20 - 29 years ( ) 30 - 39 years ( ) 40 - 49 years ( ) 50years and above ( )
3. Length of programme: 1 - 2 years ( ), 3 - 4 years ( ), 5 years and above ( )
4. Marital status: Single ( ), married ( ), separated ( ). divorced ( ), widowed ( )
5. Higher degree in view: Master's degree ( ) Doctoral degree ( )
6. Nature of programme: Full time ( ). Part time ( )

Section B

Please respond to the following items by ticking (√) in the appropriate column, using the key below to indicate whether you strongly agree (SA), Agree (A), Disagree (D) or strongly disagree (SD) with the statements.

S/N	STATEMENTS	SA	A	D	SD
	Perceived supervisor's competence in research: my supervisor				
	Is thorough in research.				
	Is well-known in research.				
	Does not seem to be knowledgeable in research.				
	Helps to resolve technical problems.				
	Is not helping as I would wish.				
	Is always referring me to other lecturers				

	Supervisor-Student working relationship: my supervisor -	SA	A	D	SD
7.	Is always available to give needed attention				
8.	Makes real effort to understand difficulties I face in my study.				
9.	Does not give me clear guidance.				
10.	Is not friendly with me				
11.	Provides me with needed encouragement.				
12	Has a positive attitude towards me.				
	Perceived supervisor workload: my supervisor	SA	A	D	SD
13.	Is too busy with extensive commitment.				
14.	Lacks adequate contact time with me.				
15.	Has many research students.				
16.	Devotes sufficient time for me.				
17.	Has other non-teaching responsilities which consumes a lot of time.				
18.	Has time to check my progress in the thesis regularly				
	Provision of timely feedback: my supervisor	SA	A	D	SD
19.	Provides timely feedback on my progress.				
20.	Provides detailed commentary on all my written work submitted.				
21.	Encourages me to timely do the corrections of my work.				
22.	Always explains comprehensibly when I ask something.				
23.	Is critically constructive in providing feedback to me.				
24.	Provides additional information relevant to my work.				
	Student interest in research	SA	A	D	SD
25.	I am deeply interested in my thesis topic.				
26.	My research work would be useful to others.				
27.	I do not like the thesis part of my programme.				
28.	My thesis work is not imposed on me by my supervisor.				
29.	Research work is time consuming.				

30.	The research work is very interesting to me.				
	Student research skills	SA	A	D	SD
31.	I have good knowledge of problem indentification in research.				
32.	I am unable to develop my thesis instrument.				
33.	I am good in data analysis.				
34.	I lack skills in adequate presentation of literature review.				
35.	I need a good knowledge of choosing appropriate research design.				
36.	I can arrange my thesis idea logically.				
	Academic achievement motivation	SA	A	D	SD
37.	I am motivated intrinsically in my thesis.				
38.	My family supports me morally in my thesis.				
39.	I am motivated to complete my studies for my self-fulfillment desire.				
40.	I need this qualification for carrier progress.				
41.	My thesis provides me with opportunities to develop professional connections outside the university.				
42.	I am motivated to finish up my studies due to financial prospects.				
	Student's emotional stability	SA	A	D	SD
43.	My supervisor is patient with me.				
44.	I am confident with my thesis work.				
45.	I experience stress due to the difficulty of my studies.				
46.	I have problems getting the needed materials for my research work.				
47.	Pressures of work do not affect my studies.				
48.	I always have difficulty with statistical analysis.				
	Section C				
	Thesis completion expectancy	SA	A	D	SD
49	I am sure I will finish this thesis on time.				
50.	I need extra year to complete my thesis.				
51.	I am confused about my thesis work.				

52.	The duration of the research work is too short.				
53.	I wish thesis is not part of the programme.				
54.	Nobody can complete his/her thesis within the specified period.				
55.	I have problems getting enough resources for my thesis work.				
56.	It is difficult for me to complete my thesis work in time.				
57.	I am struggling with my research proposal defense.				
58.	My examiners are not satisfied with my thesis work.				
59.	I find the various thesis examination stages very frightening				
60.	I have done my post field defense within a short period.				

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56.	It is difficult for me to complete my thesis work in time.				
57.	I am struggling with my research proposal defense.				
58.	My examiners are not satisfied with my thesis work.				
59.	I find the various thesis examination stages very frightening				
60.	I have done my post field defense within a short period.				
61.	I have done my final (external) defense within schedule.				
62	I have satisfactorily completed my thesis final corrections before others.				
63.	I have submitted my thesis for vetting.				
64.	I am satisfied with the thesis examination process				