

**CAREER PLANNING AND PERFORMANCE OF ACADEMIC
PROFESSIONALS OF HIGHER EDUCATION IN BANGLADESH**

*This dissertation is presented to the Institute of Bangladesh Studies, University of
Rajshahi, in partial fulfillment of the requirements for the Degree of Doctor of
Philosophy*

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Declaration

I do hereby affirm that the Doctor of Philosophy dissertation entitled “**CAREER PLANNING AND PERFORMANCE OF ACADEMIC PROFESSIONALS OF HIGHER EDUCATION IN BANGLADESH**” presented to the Institute of Bangladesh Studies at the University of Rajshahi is my own original work. One of the articles entitled “Career planning dimensions of academic professionals: A qualitative investigation” has been submitted to the **Asia Pacific Education Review** for publication and is now under review. Another article entitled “Identification of key performance dimensions of academic professionals: A qualitative exploration” has been published to **i-manager’s Journal on Humanities & Social Sciences (JHSS)** in the volume 4 issue 1. Again, an article entitled “Exploring the influential factors of job satisfaction of academic professionals: A study on science and technology university of Bangladesh” has also been published to **i-manager’s Journal on Management (JMGT)** in the volume 18 issue 2. Additionally, two other articles of this dissertation have been under processed for submission. Besides these instances, to the best of my understanding and absolute faith, neither the entire dissertation nor any substantial portion of it has been previously presented at the Institute of Bangladesh Studies at the University of Rajshahi or anywhere else for credit towards a degree. All relevant materials and sources cited in the dissertation are properly acknowledged.

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Certificate

We are pleased to certify that the dissertation entitled **CAREER PLANNING AND PERFORMANCE OF ACADEMIC PROFESSIONALS OF HIGHER EDUCATION IN BANGLADESH** was submitted by Md. Imran Sheikh, PhD fellow of 2020-2021 session, to the Institute of Bangladesh Studies (IBS), University of Rajshahi, Bangladesh, for the degree of Doctor of Philosophy, is an original research work done under our supervision and guidance. We can infer that this is the candidate's individual effort, rather than the result of a cooperative effort. To the best of our knowledge, this dissertation was not previously submitted for any diploma/degree/fellowship to any other University/Institute. The study-related materials and data acquired from various sources have been appropriately acknowledged in this dissertation.

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Dedication

This thesis is dedicated to my loving parents, Md. Abdul Wahid Sheikh (late) and the Jobeda Begum and especially my son (late) Abdullah Al Muhsineen (I lost him during my PhD Study)

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With the name, blessings, and favors of Almighty Allah, the Most Compassionate, the Most Generous---

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Abstract

Career planning has traditionally been defined as the process of evaluating personal strengths, values, and aspirations, setting up goals and objectives, determining the steps required to achieve them, and compiling this information into a written career plan that will be reviewed and updated on a regular schedule. Since the previous few decades, it has been one of the fastest-growing sectors of human resource management.

The overall objective of the study **was** to examine the **impact of** career planning phenomena on the performance of academic professionals. This study aimed to explore the key dimensions of career planning for academic professionals. Besides, this study **intended** to assess the effect of career planning dimensions on the job satisfaction of academic professionals. Again, another purpose of the study **was** to examine the effect of career planning dimensions on the performance of academic professionals. In addition, this research **wanted** to measure the effect of job satisfaction on the performance of academic professionals. Moreover, this study **was** also designed to assess the mediation effect of job satisfaction between career planning dimensions and the performance of academic professionals. Furthermore, the present study also **tried to** examine the moderating role of motivation on the relationship between job satisfaction and the performance of academic professionals.

The study employed a post-positivist research paradigm to address the issues underlying the career planning and performance of academic professionals in various job satisfaction and performance-related activities after carefully assessing the ontology, epistemology, methodology, and axiology of all four study paradigms. Therefore, this study used a mixed-methods approach as the outcome of one method complementing another method. Thus, this research employed a qual→QUAN-based approach as it belongs to the category of mixed-methods. The planned research was primarily qualitative, but the researcher would supplement its findings with quantitative data. For the qualitative study, the researcher conducted 21 in-depth interviews to collect the data for this study. The qualitative data was processed and analyzed with the help of NVivo 12 Pro software. Then, content analysis was performed for data analysis with the help of an interpretive phenomenological approach. After the completion of the qualitative study, a total of 459 respondents were used to analyze the quantitative data through the help of semi-structured questionnaires. The quantitative data was processed and analyzed by using the IBM SPSS 26 application program; the measurement model and structural relationship were analyzed with the help of SmartPLS version- 3.2.9. Thus, this study used a PLS-based SEM technique for quantitative data analysis.

Besides, mediation and moderation effects were analyzed with the assistance of PROCESS macro in IBM SPSS 26. Therefore, the G*Power 3.1.9.2 software is utilized to conduct an analysis of the effectiveness of the research model.

This study found four key dimensions of career planning of academic professionals (i.e., pay structure, promotion system, sound working environment, and faculty development program). The findings of this study also predicted that these dimensions were crucial for determining the career goals of academic professionals. This study also explores four performance dimensions of academic professionals (i.e., teaching, research and publication, administrative, and managing external funds). The quantitative study showed that there is a direct positive and significant relationship between pay structure and job satisfaction, but there is a direct positive but insignificant relationship between pay structure and the performance of academic professionals. Besides, the promotion system has a both direct positive and significant relationship between job satisfaction and the performance of academic professionals. Therefore, there is a direct positive and significant relationship between a sound working environment and job satisfaction, but there is a direct positive and insignificant relationship between a sound working environment and the performance of academic professionals. Moreover, faculty development programs have both a direct positive and significant relationship between job satisfaction and the performance of academic professionals. Furthermore, there is a direct positive and significant relationship found between job satisfaction and the performance of academic professionals. However, this study showed both full and partial mediation effects of job satisfaction between the career planning dimensions and the performance of academic professionals. On the other hand, the quantitative part of this study found an insignificant interaction effect of motivation on the relationship between job satisfaction and the performance of academic professionals.

This study faces some certain limitations apart from substantial merits. At the very outset, this study considers a few sources of literature (i.e., university library, Google Scholar, researchgate, academia, Scopus, and online library) due to the access limitation of different sources of resources. Besides, this study doesn't consider the literature, which is written in many other languages other than English due to the language barriers of the researcher. Again, this study was carried out only in public universities of Bangladesh, but it doesn't take into other categories of universities (i.e., private universities, medical universities, off-campus universities, and other higher educational institutions). This study utilized a cross-sectional design, which is a single-instance approach that may be subject to the inherent limits of observing identical phenomena over time. Besides, among the various qualitative tools, this study only used in-depth interviews to address career planning issues.

Thus, this study is subject to methodological limitations. Therefore, this study solely collects data from academic professionals, but it doesn't consider the other stakeholders associated with career planning. Moreover, the research lacks expertise and knowledge about other data analysis tools (i.e., IBM SPSS Amos, MAXQDA, ATLAS.ti, MonkeyLearn, etc.), which could generate more authentic findings. Furthermore, this study proposed a model which is hybrid type in nature, resulting from the combination of two-factor, SET and the equity; its application and efficacy are subject to testing across various contexts. This study also suffers from personal limitations of the researcher that involve lack of personal knowledge and expertise, family crisis, physical and mental problems, workload, and depression that might affect the execution of the study. Finally, time and budget are the main resource constraints which could influence the execution of the study. In spite of some limitations, this study will contribute to the existing literature both theoretically and methodologically.

This study explores the practical dimensions of career planning and its various sub-dimensions, which can contribute to the existing body of knowledge as well as to society. Besides, this study will contribute to making informed concerned authorities (university administration) in understanding the inherent needs of academic professionals. Therefore, they would be able to provide better facilities to academic professionals through this approach, which will help them improve their university ranking. Moreover, this study informed policymakers (i.e., UGC in BD & Ministry of Education) on the present state of universities, allowing them to formulate national policies and decision-making that will have an impact on the overall education standard of Bangladesh. Furthermore, the findings of the study offer fresh insights into career planning in the field of human resource management, which motivates university faculty to engage in career planning activities to improve their performance as well. Last but not least, this study followed a mixed-methods approach, employing both qualitative and quantitative approaches, which could assist in generalizing the findings of the current study.

This study was conducted on a virgin field of human resource management, which is career planning and performance of academic professionals. Although, a very few studies have been conducted on career planning, but no such study was directly related to the context of this study. So, the context of this study is quite original, which could contribute to the existing body of knowledge both in terms of theory and methodology as well as practically to the concerned authorities, society, and other stakeholders.

Keywords

Career planning, Academic professionals, Public university, Bangladesh, Job satisfaction, Motivation, Performance, Mixed-methods, PLS-SEM, qual→QUAN, Qualitative study, Phenomenological approach, NVivo.

Papers Associated with this Dissertation

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List of Abbreviations

Adm	Administrative
AP	Academic Professionals
BLS	Bureau of Labor Statistics
BLSUSDL	Bureau of Labor Statistics of the United States Department of Labor
CFA	Confirmatory Factor Analysis
CMB	Common Method Bias
CoE	Centres of Excellence
CP	Career Planning
CR	Composite Reliability
EC	Employee Creativity
EFA	Explanatory Factor Analysis
endogenous	dependent
exogenous	independent
FDP	Faculty Development Program
FDPs	Faculty Development Programs
HRM	Human Resource Management
HSC	Higher Secondary Certificate
IBM	International Business Machines
IM	Intrinsic Motivation
JobSat	Job Satisfaction
LISREL	Linear Structural Relations
LLCI	Lower Limit Confidence Interval
MEF	Managing External Fund
Mot	Motivation
NIH&SS	National Institute of Health and Social Sciences
PAP	Performance of Academic Professionals
PaySt	Pay Structure
PCA	Principal Component Analysis

Perf	Performance
PHMI	Partners Harvard Medical International
PLS	Partial Least Square
PRFS	Performance-based Research Funding System
ProSy	Promotion System
qual→QUAN	Qualitative→ Quantitative
RP	Research and Publication
SEM	Structural Equation Modeling
SET	Social Exchange Theory
SLM	Self-learning Material
SLMs	Self-learning Materials
SPSS	Statistical Package for the Social Sciences
SRS	Stratified Random Sample
SRS	Simple Random Sample
STROBE	Strategic Orientation of Business Enterprises
STROBE	Strategic Orientation of Business Enterprises
SWE	Sound Working Environment
Tea	Teaching
TED	The Economics Daily
TL	Transformational Leadership
UGC	University Grants Commissions
ULCI	Upper Limit Confidence Interval
VIF	Variable Influential Factor

CHAPTER 1: INTRODUCTION

This chapter presents a brief discussion on an overview of the study, which is related to the career planning and performance of academic professionals in different public universities in Bangladesh. After that, it proceeds to describe the problem statement, the public universities of Bangladesh as the study site, and its academic professionals. Further, this chapter discusses the research questions and objectives, the significance of the study, the thesis structure, and the thesis statement. Finally, it concludes the overall introduction as the chapter summary.

1.1 OVERVIEW OF THE STUDY

Career planning is the lifelong sequence of jobs, the sequence of posts and positions, and the sequence of benefits and facilities in terms of financial and non-financial that an academic professional receives during his employment. Career Planning (CP) is one of the most desired areas of Human Resource Management (HRM) during the previous few decades (McDonald & Hite, 2023; Mohd Salleh et al., 2020). The concept of “career planning” refers to the systematic procedure by which an individual becomes aware of his or her own unique set of skills, interests, knowledge, motivations, and other characteristics, as well as available opportunities and options, formulates career-related goals, and takes steps towards accomplishing those goals (Dessler, 2013; Gati & Kulcsár, 2021).

Career planning is a lifelong learning process that entails personal growth, the ability to make informed career selections, self-management, and, eventually, ensuring your employability. Careful career preparation is the key to a successful career. Planning is unlikely without a clear understanding of career goals and objectives. Career goals are closely tied to the concept of career planning. There are usually two approaches to career planning. One is personal career planning, and the other is organizational career planning. Several factors influence an individual’s career planning. The organization’s planning includes developing, promoting, and maintaining the program through knowledge and skills (Ahmed, 2017).

Career development and planning, in particular, are gaining popularity among practitioners and academic researchers. Several authors have emphasized the importance of career planning for different professionals (Bolles, 1972; Hall, 1976; Hirschi & Koen, 2021; Jennings, 1971). In this connection several graduate schools, departments or institutions have introduced career development courses and programs. These programs include various activities that aim to improve self-awareness, self-efficacy, and career advancement (Blackford, 2013). It is

worthwhile to argued that “career planning is an important aspect of career development (Awino & Kipsang, 2020).”

Studies posited that career planning is the process of identifying needs, aspirations, and opportunities and establishing human resource development programs (Trăistaru, 2020). According to the literature on careers, career planning aims to identify people’s professional needs, aspirations, and opportunities and establish human resource programs to support those careers (Gulzar, 2017). In addition, career planning recognizes requirements, desires, and individual goals and the implementation of evolving human resource plans to keep that career going. Individual and organizational responsibilities are both involved in the career planning process which is an essential feature of career planning (Antoniou, 2010; Gati & Kulcsár, 2021; Tabiu et al., 2020).

A well-functioning career planning system may inspire individuals to take greater responsibility for their organization (Doyle, 1997; Gadzali, 2022). Employees are more motivated when they have a well-planned career development framework and internal promotion prospects based on merit. This has an impact on organizational performance (Enitilo, 2020). Career planning is the process by which an individual systematically assesses their current situation in terms of their skills, interests, knowledge, motivations, and other characteristics; investigates available options; sets career-related goals; and creates strategies for achieving those goals (Abdulkadir et al., 2012).

Similar to other professions, academic professionals have particular requirements that must be met, including autonomy, new experiences, recognition, job happiness, reasonable compensation, and a training link with colleagues and management. Conversely, a lack of understanding of these components’ effects might have disastrous consequences. Discontent among academic staff is undesirable and dangerous to the profession; hence, any occurrence of dissatisfaction with demands, as indicated above, must be addressed by identifying the factors that contribute to dissatisfaction and diminishing or modifying those factors (Sharma & Jyoti, 2009; Yean et al., 2022).

Determining an employee’s job outcomes is known as performance appraisal. It looks at ways to establish acceptable work circumstances, locate competent management teams, and successfully develop personnel rather than only focusing on performance results and compensation. This ensures high motivation and work satisfaction among employees (Türk, 2008).

Higher education plays a crucial role in the formation of expertise and serves as a center of excellence for creating knowledge and developing the human resources

required for a country's development (Sukirno & Siengthai, 2011). Higher education is the economy's major engine and a vaccine against globalization's worst effects (Jessop, 2016). Higher education helps to reorganize the economy by producing new monetized activities and assisting the economic reconceptualization of activities unrelated to material production (Schofer et al., 2021). In Bangladesh, higher education begins after completing 12 years of schooling and passing the higher secondary certificate (HSC) examination (Quddus, 1999). Students enroll in colleges or universities to get a bachelor's degree, after which they can pursue master's and PhD degrees. Entrance examination exist for universities and other tertiary institutions (Chauhan, 2008). Job satisfaction, promotions, rewards, compensation, and training are essential determinants of organizational performance, including universities.

Despite the importance of career planning in fostering productive employees, employees of the public sector in Nigeria are plagued by non-performance variables like inefficiency, ineffectiveness, and a negative outlook on the workplace (Suleiman, 2013), all of which are linked to insufficient HRM practices, including career planning (Inyang & Akaegbu, 2014).

Current study tries to determine the extent of the relationship between career planning and the performance of academic professionals because the researcher tries to explore to what extent career paths matter for higher performance of academic professionals. Besides, there are many other reasons behind the selection of the current research area. First of all, the researcher can help others to understand the role of defined career paths for higher performance of Academicians. Secondly, the researcher can help others determine how to change the education program and structure to enhance academic performance. Last but not least, researcher can help the university administration and concerned authorities formulate need-based and timely policies to ensure the productivity of academic professionals.

As a result, it is critical to look at the factors that influence academic professionals' job satisfaction and provide recommendations and suggestions that might help university administration motivate academic staff to achieve high levels of motivation, job satisfaction, and enhanced performance.

1.2 The Public Universities of Bangladesh— The Study Area

The university plays a significant role in the social, political, environmental, and economic development of a country's population (Albulescu & Albulescu, 2014; Islam & Salma, 2016; Rahnuma, 2020). It contributes to society by creating knowledge and awareness among the people of the society. It has significantly contributed to the country by producing human capital through educating a large number of students every year. Thus, it plays a significant role in creating

employment opportunities, resulting in economic development. So, the university also plays an important role in supplying quality human resources to any country in the world (Gary & Varkkey, 2011; Hultberg et al., 2017). Besides, the university provides an opportunity for the social development of a country by contributing to education, research, and community engagement. This development is possible through the creation of access to higher education, the development of a skilled workforce, research and innovation, community engagement, the creation of social awareness, and the promotion of gender equality (Gibb et al., 2013; Stephens et al., 2008).

Besides, the university also contributes to the political development of a country by creating political values among the students and general masses, training political leaders, creating awareness among the people, etc. In Bangladesh, universities played a crucial role in most of the political movements (i.e., 1952, 1956, 1961, 1966, 1969, 1971, etc.) of this country (Alam, 1991; Karim & Akter, 2021; Ranjan, 2016). Moreover, the university also plays a crucial role in environmental development by providing environmental education, environmental policy advocacy, natural resource management, awareness campaigns, environmental impact assessment, etc. Furthermore, the university also contributes to the economic development of a country through education, research, innovation, and community engagement with regard to entrepreneurship development, technology transfer, infrastructural development, trade and export promotion, tourism and cultural promotion, etc.

However, the researcher of this study only considers the public universities as their study site (see Figure 1.1), as these public universities played a focal role in the development of the country. At the same time, the number of public universities is increasing rapidly in this country, like a spider net. There are a good number of public universities in Bangladesh, and this number is increasing day by day.

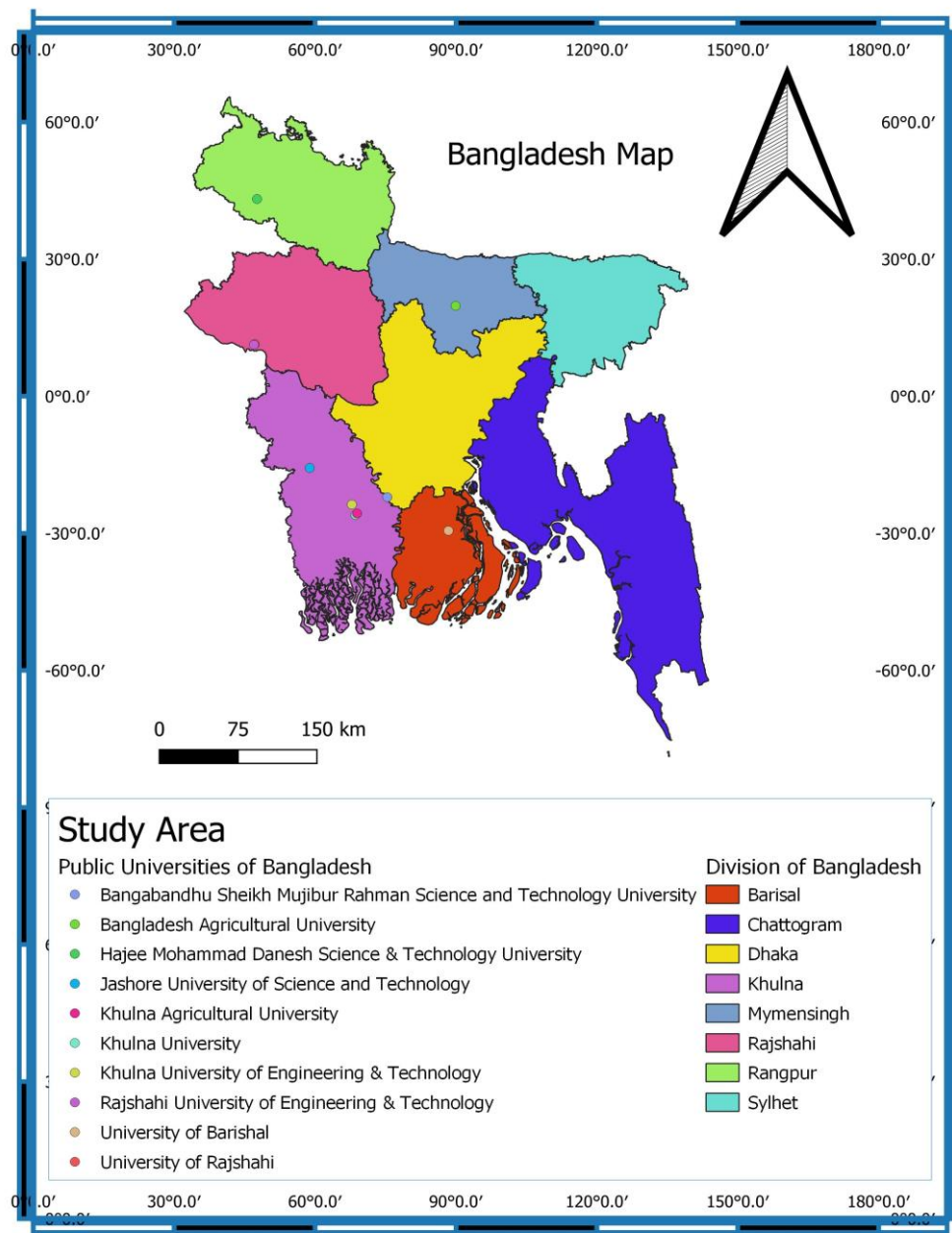


Figure 1. 1: Map of the Study Area. Source: Author Generation by Using (QGIS-3.28)

1.2.1 The Academic Professionals

In this study, the term “Academic Professionals” means public university faculties of Bangladesh (i.e., professor, associate professor, assistant professor, and lecturer). There are fifteen thousand four hundred twenty-six teachers (15426) working in public universities in Bangladesh (UGC, 2021). Among the faculties, 4537 are professors, 2650 are associate professors, 5235 are assistant professors, 2718 are lecturers, and the other teachers are 286 in number (UGC, 2021). Again, the phrase “academic professionals” describes a wide range of people who operate in the academic and higher education sectors (Jongbloed et al., 2008; UIC, 2023). These experts often work for educational institutions such as universities, colleges, and research organizations. Although academic professionals’ day-to-day tasks may differ significantly, they are committed to improving education and research. Academic professionals of the university are briefly discussed in the following section of this study.

1.2.1.1 Professor

A “Professor” is a distinguished academic title most often found in universities and other higher education institutes (Feng, 2019; Said & Refaat, 2021). Professors are specialists in their subjects and play important roles in teaching, research, and academic leadership. The exact requirements and responsibilities of Professors may vary by institution and country. To be promoted to the level of Professor, you may need to demonstrate a track record of achievement in research, teaching, and service to the university. Overall, professors play a crucial role in the academic world by expanding knowledge, educating future generations, and influencing the course of research and scholarship.

1.2.1.2 Associate professor

An “Associate Professor” is an academic position and position that is commonly seen at universities and other institutes of higher education (Bégin-Caouette et al., 2021; Kirkness & Barnhardt, 1991). It is a mid-level academic position frequently regarded as a steppingstone to the higher rank of “Professor.” The precise criteria and duties associated with the position of Associate Professor may exhibit variation across different institutions and countries. In certain instances, disparities in expectations may arise among universities that adhere to distinct academic traditions and systems. Associate Professors play a significant role in the academic community as a whole, making significant contributions to teaching, research, and service while striving toward promotion to the rank of full Professor.

1.2.1.3 Assistant professor

An “Assistant Professor” is a popular academic designation and position in universities and other higher education institutions (Cadez et al., 2017a; Kwiek, 2018; Song, 2018). It is often a crucial step in an academic career and leads to a

faculty position. The particular criteria and responsibilities of Assistant Professors may differ by institution and country, and the path to tenure can be difficult and demanding. Successful Assistant Professors frequently work hard to establish themselves as specialists in their subject and build a solid foundation for a long and profitable academic career. With sustained competence in teaching, research, and service, they may advance to higher faculty levels such as Associate Professor and, subsequently, Professor.

1.2.1.4 Lecturer

A “Lecturer” is a well-known academic rank and post that can be found in universities and other institutes of higher education all around the world (Docampo, 2013; Fauzi et al., 2020). Teaching is often required of those who hold the position of Lecturer, in addition to, to a lesser extent, other academic tasks. The duties and responsibilities of a Lecturer will vary greatly from one institution, country, and academic subject to the next. While “Lecturer” and “Assistant Professor” may be used interchangeably in some institutions, others treat them as two separate positions with unique duties and responsibilities. Even within the realm of teaching-centric faculty posts, various schools may employ a variety of titles, such as “Teaching Professor” or “Senior Lecturer,” to indicate differences in experience and duties.

1.3 PROBLEM STATEMENT

Career advancement is a continuous and lifetime process. According to the United States Department of Labor (Bureau of Labor Statistics, 2022), the average job tenure of employees was 4.1 years; however, the job tenure among academic professionals is found to be different from other sectors.

Although very few studies have been conducted on career planning, many issues still become prominent in career management. Most of these studies conducted on career planning and commitment, career planning and development, career goals and management strategy, career choice and academic performance, career planning and employee participation, and similar others (Aminu & Timothy, 2014; Kakui & Gachunga, 2016; Lee, 2002; Mulhall, 2014). All those studies do not focus on the effects of career planning on employees’ academic performance. Hence, these areas of knowledge remain untapped in academic research. Due to limited research on career management, academic institutions, in many cases, fail to attract and retain high-caliber employees. In line with the other nations, research on career planning and performance of academic professionals is being found prominent in Bangladesh. So, the current study could address the problem to arrive at a better solution to overcome the problem.

In the case of career planning, academic professionals are highly career oriented as most of them intend to go outside for their higher education (Jackson & Tomlinson, 2020). But in most cases, they do not come back to their native country (Abdullah & Hossain, 2014). So, it influences the overall performance of those respective universities. At the same time, universities of our country are far lagging in the world ranking compared to the universities of other countries of the world (Anowar et al., 2015; The World Bank, 2019). Thus, it also influences the performance of university and its academic professionals. In these circumstances, it can be inferred that there is a mismatch between career planning and the performance of academic professionals. Hence the main challenge of this study is to identify the key dimensions of career planning and performance of academic professionals. Again, some areas still remain unexplored in this sector, that's why researcher of this study feels interest to explore underlying things associated with career planning and performance of academic professionals.

A significant relationship is found between career planning dimensions and the performance of academic professionals (Aryee & Debrah, 1993; Kinkel & Henke, 2006). However, in the actual field, there might be some gaps or inconsistencies that there is little or insignificant relationship between defined career planning and performance of academic professionals (Chen et al., 2004). There might be several reasons for which the ideal situation does not match the actual situation. The reasons may be the problem of organizational structure, career dissatisfaction, indefinite pay structure, unhealthy working environment, lack of appreciation motivation, undue influence of reporting, the practice of unsound politics, and hostile relationship with the coworker seniors reporting. It might also be a personal problem like pressure/stress of work, feeling depression, disinterest /aversion of research work, engagement with unsound politics and hanker after post & position, and finally family related problem (Clark, 1986; Colman et al., 1995; Hayes, 2006; Raziq & Maulabakhsh, 2015; Staw et al., 1994).

The issue of career planning and academic performance of academic professionals is now a matter of concern for the university administration, as there are many problems arising in this field that the researcher also addresses. However, they do not offer any practical solution in this regard. Consequently, this topic was given greater attention in this study. The researcher focuses on career planning and its dimensions. Besides, the researcher also wants to show how these dimensions of career planning affect academic professionals' job satisfaction and performance. These issues are common, but no researcher addresses them significantly to the policy maker. Besides, no specific solutions are addressed to the university administration (Canrinus et al., 2012; Chen et al., 2004; Wang et al., 2020).

Moreover, research on career planning and performance of academic professionals are very crucial in Bangladesh in order to ensure the quality of education and retention of talent. Besides, this research helps to ensure professional development of academic professionals. At the same time, this research plays an important role in the socioeconomic development of Bangladesh. This study tried to find out the answer to some questions, all of which were developed based on the above problems, i.e., What are the key dimensions of career planning and performance of academic professionals? Why is career planning important for academicians? Does CP dimension matter for job satisfaction and performance of academic professionals? How do CP dimensions directly and indirectly effect on performance of academic professionals? The researcher of this study will also provide some concrete solutions to these current issues to the concerned authorities and policymakers to ensure productivity and higher performance of the academicians. Thus, this study designed the following objectives based on the above research questions.

1.4 OBJECTIVES OF THE STUDY

The study's overall objective is to examine the impact of career planning phenomena on performance of academic professionals.

The specific objectives of the study are enumerated as follows:

Research Objective 1: To explore the dimensions of career planning of academic professionals.

Research Objective 2: To assess the effect of career planning dimensions on the job satisfaction of academic professionals.

Research Objective 3: To examine the effect of career planning dimensions on the performance of academic professionals.

Research Objective 4: To measure the effect of job satisfaction on the performance of academic professionals.

Research Objective 5: To assess the mediation effect of job satisfaction between career planning dimensions and the performance of academic professionals.

Research Objective 6: To examine the moderating role of motivation on the relationship between job satisfaction and the performance of academic professionals.

All those objectives are very clear and relevant to the proposed research topic and initial research model because an extensive literature review was conducted before the development of this problem. Besides, these objectives are very important to the current study context.

1.5 SIGNIFICANCE OF THE STUDY

Bangladesh has a growing number of public universities. This figure has now exceeded nearly half a century. These public universities likewise see an increase in the number of academics. And these academics are playing an essential role in defining its national identity. As a result, their career satisfaction and proper career planning are crucial. Because if they are displeased with their activities, it will impact their personal life and family life that will also impact on their organizational performance. As a result, they will not be able to provide their complete attention at work. This will be detrimental to the students and the country because a country's expected human resources will not be built. On the other hand, if the faculty members in a country are happy with their careers, it will affect their personal and family lives and play a significant part in enhancing their organization's overall performance. Academic professionals guarantee that a country's human resources are well-organized and efficient.

This study is expected to contribute to the existing literature, theory, methodology, and practical contributions. This study will contribute to the literature by exploring the various dimensions of career planning in the human resource management context. Besides, this study will contribute to the theory by the extension of two-factor theory, social exchange theory, and equity theory in the career planning context. Therefore, this study will also contribute to the methodology by exploring the qual→Quan approach in this study. Moreover, this study will contribute practically by informing the concerned authority (university administration regarding the actual scenario of public universities and to act accordingly). Furthermore, this study will inform the policymakers (UGC in BD and Ministry of Education) about various aspects of university to formulate need-based policies nationally to ensure better performance of professionals. Finally, the university administrations and policymakers' attempts will help the university be placed in the world ranking.

Furthermore, a country's level of development is determined by its educated and skilled workforce. Moreover, in this scenario, the value of university professors is enormous. Moreover, it all depends on the teachers' well-being and work performance, like teaching, research and publications, administrative performance, etc. Hence, the researcher has addressed this topic study. The researcher has also given special consideration to the faculty of public universities in Bangladesh for the sake of this research. This is because public universities have been playing a pivotal role in Bangladesh, and the number of these universities has been steadily expanding since the twentieth century. As a result, the researcher believes there is considerable scope to conduct a study under the subject "Career Planning and Performance of Academic Professionals of Higher Education in Bangladesh."

1.6 THE THESIS STRUCTURE

This thesis is divided into eight distinct but interconnected chapters. Table 1.1 depicts the chapter sequence. Each chapter is briefly summarized below:

Chapter 1- Introduction

Chapter 2- Literature Review

Chapter 3- Methodology

Chapter 4- Qualitative Study

Chapter 5- Hypotheses and Questionnaire Development for Quantitative Study

Chapter 6- Quantitative Data Analysis and Results

Chapter 7- Discussion of the Findings

Chapter 8- Conclusions

Table 1.1 presents the entire thesis's contents and each chapter's key outcomes.

Chapter 1- Introduction: This chapter provides the context of the study, commencing with a brief overview and the background of the research. In this chapter, the research problems are identified, followed by the research questions and objectives. The significance of the study is then asserted in light of its theoretical and practical contributions. Finally, this chapter also presents a thesis statement and a brief summary of this chapter.

Chapter 2- Literature Review: This chapter offers a concise evolution of the career planning literature, followed by a comprehensive literature review in accordance with the constructs and measurement items of the research model. The literature on the two-factor theory, social exchange theory (SET), and the theory of equity is also presented to establish the theoretical basis of this study. The primary focus of the review process is the literature on career planning, job satisfaction, motivation, and performance. This chapter proposes a conceptual model based on the literature review and then identifies existing research gaps.

Chapter 3- Methodology: At the outset of this chapter, we discuss the paradigmatic perspective of this study and then go on to the research methodologies under consideration. This chapter goes deeper into the justification for employing a mixed methods approach for the present study. The techniques for selecting samples to study and collecting data are also discussed in this chapter as well. At the very conclusion of this chapter, you will find a comprehensive overview of the process for analyzing the data.

Table 1. 1: The Thesis Structure

Chapters	Descriptions		Key Outcomes
Chapter 1	• Overview of the study • Problem statement		➤ Questions and objectives for research
Chapter 2	• Background of the literature • Theoretical underpinning • Research gap • Initial research model		➤ Identification of research gaps ➤ Initial research model development
Chapter 3	• Paradigmatic perspective • Qualitative method • Quantitative method		➤ Determination of the methodology for this study
Chapter 4	• Field study process • Identifying factors and items • Developing comprehensive model		➤ Development of a comprehensive research model
Chapter 5	• Hypotheses development aligned with the research model • Questionnaire development		➤ Hypotheses finalization ➤ Survey instrument finalization
Chapter 6	• PLS-based SEM analysis • Moderation analysis • Mediation analysis		➤ Analytical results reporting ➤ Hypotheses confirmation
Chapter 7	• Discussion of the findings		➤ The interpretation of the findings
Chapter 8	• Synopsis of the findings • Study limitations • Future research opportunities		➤ Summary of the thesis

Chapter 4- Qualitative Study: The methodology and results of the field study are presented in this chapter. From the content analysis of the field study data, the underlying factors and items and their relationships are determined. This chapter details the refinement of the preliminary research model in light of the results and the establishment of the final comprehensive study model.

Chapter 5- Hypotheses and Questionnaire Development for Quantitative Study: In this section, we explore how to formulate hypotheses by drawing on the interdependencies between the various elements of the underlying research model. The chapter also verifies the measures and their origins for all the constructs. In this chapter, we also show the design of the final questionnaire of this study.

Chapter 6- Quantitative Data Analysis and Results: This chapter covers the quantitative data analysis, including the pilot study results. The initial analysis was performed to ensure data quality by evaluating for non-response bias and common method bias. The survey data is then analyzed using partial least squares (PLS)-based structural equation modeling (SEM) to establish the validity and reliability of the measures and constructs, as well as the relationships between the constructs employed in the study model. Consequently, the results of the SEM analysis (i.e., measurement model and structural model) are reported in this chapter. Therefore, this chapter concludes with an analysis of the mediating role of job satisfaction between CP dimensions of performance. Finally, the moderating effects of motivation on the relationship between job satisfaction and performance are also highlighted in this chapter.

Chapter 7- Discussion of the Findings: This chapter presents an analysis and interpretation of the findings obtained from the quantitative investigation. The present study examines the quantitative findings in relation to the previous literature while also considering the qualitative outcomes obtained in this study. Furthermore, the results are analyzed in accordance with the hypotheses and corresponding research objectives of this study.

Chapter 8- Conclusions: The content of the thesis is reorganized and presented in its conclusion chapter. This chapter provides a summary of the findings, which is followed by a discussion of several topics to which the thesis has contributed and which are highlighted in the findings of this study. This chapter concludes with a discussion of the limitations and drawbacks of the study, followed by a presentation of potential avenues for further research.

1.7 THE THESIS STATEMENT

The study's findings expected that career planning has a positive and significant impact on the performance of academic professionals. This study expected a significant relationship between career planning and job satisfaction. Besides, job satisfaction impacts the performance of academic professionals, i.e., teaching, research and publication, administrative, and managing the external fund. Moreover, it is expected that motivation plays a moderating role between job satisfaction and the performance of professionals. This study is expected a significant relationship between definite pay structure and performance, promotion system and performance, sound working environment and performance, and faculty development program and performance. Due time promotion system might significantly impact teaching, research and publication performance. Besides, there is also expected to be a minor or insignificant relationship between the faculty development program and administrative and managing external funds. In order to enhance the productivity of academic professionals, the university administration should ensure a definite and up-to-date pay structure in a sound, risk-free, congenial environment. Due time promotion and administrative training must be adopted to achieve the desired outcomes. Finally, fair policies and fair treatment need to be ensured for all.

1.8 CHAPTER SUMMARY

The purpose of this chapter was to provide an overview of the research area and concerns pertinent to the research context. The research context was mentioned at the beginning of the chapter. The following section describes the research challenges of the study area, followed by a brief explanation of the study site and sample. This chapter focused on specific research questions and research objectives. Furthermore, this chapter explored the significance of the current research from the theoretical, methodological, and practical aspects. Subsequently, the thesis framework and thesis statement were presented at the end of this chapter.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, literature related to career planning, dimensions of career planning, job satisfaction, motivation, performance, and contribution of career planning dimensions on the livelihood of academic professionals in public universities are reviewed. The literature study commences with some background information on the evolution of career planning and job satisfaction. The next section explains the search strategy developed to identify relevant studies in the literature, which was adapted based on the research aims. The next section of this chapter provides a summary of the relevant literature, with an emphasis on the key factors and constructs of this investigation. Following this introduction, researcher will discuss the theoretical underpinnings used to fill the gaps in the available studies and the gaps altogether.

2.2 EVOLUTION OF CAREER PLANNING

Career planning is the process of identifying one's career objectives and the means to achieve them. Career planning and education have been the subject of study since the early 1900s, and new models are constantly emerging in response to the changing world of work and our social surroundings (Blackford, 2013). The major stages of the career cycle are growth, exploration, establishment, and maintenance (Ahmed, 2017; Jiang et al., 2019; Sullivan & Al Ariss, 2021). Frank Parsons, known as the father of vocational guidance or career development, is credited with the origins of career planning or occupational counseling. His book, "Choosing a Vocation," was published in May of 1909, following his death in 1908. It is equally important to choose a wise location, lay proper foundations, and work up with a well-thought-out, scientific plan when constructing a career (Parsons, 1909). Parsons created a framework to assist people in making career decisions (Parsons, 1909). Career progression has always followed a matched paradigm, which consists of the following four parts: (i) The person- self-awareness and -understanding (ii) Work- learning how to navigate the working world (iii) Decision making- a perfect fit between individual and job, and (iv) Implementation- the process of putting a choice into action.

A career was no longer seen as a static choice but as an evolving process that required different kinds of choices at different stages of life. These phases were defined, and a timetable was also provided showing when people typically enter and leave each phase. Career development was regarded as the implementation of an occupational self-concept (Lau et al., 2020; Yang & Wong, 2020; Zhan & Wang, 2015). Consequently, although the four-component model continues to serve as the

prevailing framework for understanding career development, the past century has revealed its far greater complexity, dynamism, and varied nature, surpassing the initial expectations of early proponents who focused on aligning individuals with specific jobs.

2.2.1 Definition of Career Planning

Career planning encourages people to explore and gather information, which allows them to synthesize, gain competencies, make decisions, set goals, and take action. It is an important stage of human resource development that assists employees in developing work-life balance strategies (Greenhaus et al., 1995; Kappia et al., 2007).

Career planning is the continuous self-evaluation and planning process that a person engages in order to have a strong career path that is aligned with one's career goals, aspirations, and skills (Di Fabio, 2019; Kumar, 2022). Career planning is the stepwise process of understanding oneself, setting career goals, revising skills, and searching for the best career options (Antoniou, 2010; Dedmond, 1996; Wei et al., 2021). In conclusion, career planning is defined as an initiative in which an individual takes personal control of their career and makes informed decisions about their occupation, organization, job assignment, and self-development.

2.2.2 Definition of Job Satisfaction

Job satisfaction is characterized as the extent to which an employee feels driven, content, and satisfied with his or her work. A comfortable work-life balance, career growth, and employment security are all factors that contribute to employee satisfaction. It means that an employee is content in his or her position since his or her responsibilities are satisfactory. (Sujatha & Balaji, 2020; Tehra, 2020).

According to Lofquist and Dawis (1991), job satisfaction is defined as an individual's positive effective reaction to the target environment as a result of the individual's assessment of the amount to which the environment meets his or her needs (Babitha & Murugesan, 2020; Lofquist & Dawis, 1991). Therefore, the job satisfaction of academic professionals largely depends on pay structure, work environment, autonomy, career development, recognition and rewards, etc.

2.2.3 Definition of Motivation

The term “motivation” comes from the Latin word “movere,” which means “to transfer” or “push.” The phrase “motivation” refers to the cause for anything being done. It is the stimulus for human behavior. Motivation is the process of initiating, guiding, and maintaining goal-oriented behaviors. (Kleinginna & Kleinginna, 1981; Ridder & Wit, 2006).

According to Rao (2016), motivation refers to the processes that account for an individual's intensity, direction, and persistence of effort toward achieving a goal (Rao, 2016). According to Robbins and Coulter (2014), motivation is the process of energizing, directing, and maintaining a person's efforts towards completing a goal. (Robbins & Coulter, 2014). Sansone and Harackiewicz (2000) define motivation as an internal mechanism that guides behavior cited by Pang and Lu (Pang & Lu, 2018). However, the motivation of academic professionals is influenced by various factors like passion for knowledge, research and innovation, career advancement, impact of students, collaboration and work-life balance etc.

2.2.4 Definition of Performance

Performance refers to a set of measurements that indicate how well an individual, group, organization, or institution is achieving a goal or set of goals. A university teacher's performance is determined by his or her commitment to the job, the percentage of students who succeed, research and development, active communication with students, and so on (Hosain, 2016). However, performance is a complicated variable with numerous elements influencing the degree of global performance at any particular time (Perera et al., 1997); although the quantitative framework cited by Joardo, Novas, and Gupta is useful, it does not capture the whole range of organizational difficulties (Jordão et al., 2020).

Faculty performance can also be defined in terms of system maintenance or the extent to which a faculty member contributes to social support, integration, or effort coordination within a university (Kurz et al., 1989). The organizational performance involves evaluating a company's performance against its objectives and goals. In other words, organizational performance is the comparison of actual results or outputs to expected outputs (Jordão et al., 2020). Thus, the performance of academic professionals encompasses a variety of contexts including how well someone or something functions or delivers results.

2.3 LITERATURE REVIEW PROCEDURE

The literature review aimed to find places where more investigation was needed. The literature search procedure includes (i) amassing a collection of relevant articles, (ii) selecting relevant literature based on the context of this study, (iii) evaluating those publications for their relevance to this investigation, and (iv) comparing and contrasting the findings of existing literature. The investigator first compiled a literature review on career planning, job satisfaction, motivation, and performance. Additionally, literature on theoretical and methodological perspective was also reviewed. Most of the materials were gathered from webpages such as Google Scholar, Researchgate, and university libraries. Business Source Complete, Emerald, Elsevier, Springer, Taylor & Francis, Sage, ScienceDirect, Web of Science, and Wiley Online Library were used as the main databases for collecting academic materials. Some relevant books were collected in order to gather ideas

and thoughts on career planning, career development, job satisfaction, motivation, and research methods. The researcher explored these materials using keywords such as: ‘Career planning dimensions’; ‘Job satisfaction’; ‘Motivation’; ‘Social exchange process’; ‘Benefits and costs of exchange’; ‘Inputs and outputs’; ‘Satisfaction and dissatisfaction’; ‘Motivation’ and ‘Performance relationship’. The search process also included the theory driven literature on career planning studies. During this investigation, three major theoretical frameworks were particularly relevant—the two-factor theory, the social exchange theory (SET), and the equity theory.

Over 200 relevant studies in the aforementioned fields that were published between 1943 and 2023 were consulted in the review process. During the searching process, irrelevant materials were filtered out using predetermined criteria. Author only looked at the articles that had some bearing on the variables and measures used in this study. This resulted in the waste of a great deal of the materials that had been gathered at the outset. The identification of theory-driven literature in the context of the current study setting was also given consideration. In addition, literature search discovered the use of various methodologies in career planning and job satisfaction research, such as quantitative, qualitative, interviews, case study, and mixed-methods research.

2.4 LITERATURE REVIEW OF THE STUDY

Since the early 1900s, career planning and education have been the subject of research, and new models are continually evolving in response to the changing work environment and our social surroundings (Blackford, 2013). Career planning has an impact on employee and organizational performance (Katou & Budhwar, 2007; Osman et al., 2011; Quresh et al., 2010). According to Amin et al. (2014), human resource management methods such as career planning, job design and analysis, selection, recruitment, training, performance appraisal, employee participation, job definition, and compensation have a substantial impact on university ranking.

Several reviews of the literature have focused on career development as well as personal and professional career success (i.e., achieving personal goals or receiving tangible rewards such as promotions, respectively) across numerous occupational domains (Blokker et al., 2019; Guan, 2020; Zepeda, 2019). Subsequently, according to Markovits et al. (2014), career planning has a significant positive effect on performance. It's possible that there's a link between career planning and performance and motivation. They used a quasi-experimental research methodology that includes people planning and making decisions about training, education, and career choices, as well as developing the necessary expertise and information. According to the findings, career counseling had a significant positive

effect on effectiveness, while career development had a significant positive effect on efficiency and effectiveness. In the similar context, Dialoke and Nkechi (2017) investigated the impact of career advancement on employee performance and motivation (Dialoke & Nkechi, 2017).

According to Abubakarr, employees at Deloitte Kenya are more satisfied and wish to stay with the organization. As a result, inferential data suggest that career planning, training and development, coaching and mentoring, career counseling, succession planning, and talent management all impact employee retention at Deloitte Kenya (Foday, 2014). Salahat, Halim, and Majid (2016) found that increased role completion interferes with the link between career planning and customer satisfaction in their research on career planning, recruiting, and customer satisfaction. On the other side, career planning, recruitment, and selection had no direct impact on satisfaction. On the other side, career planning, recruitment, and selection had no direct impact on job satisfaction (Salahat & Majid, 2016).

The findings of Khan et al. (2012) revealed that pay, promotion, job safety and security, working conditions, job autonomy, relationship with coworkers, relationship with supervisor, and nature of work are all factors that influence job satisfaction and performance. On the other hand, training had virtually little impact on academic staff motivation or performance at Sebha University. Furthermore, motivation has an effect on academic staff performance in terms of teaching, research, and publication (Alfagira & Bin Zumrah, 2019).

Career planning has been perceived from the perspectives of both the organization and the employees. From the perspective of a continuous process, career planning is viewed as a key organizational practice that involves evaluating skills and interests, setting career goals, and preparing development activities that correspond to the future needs of both employees and employers (Pynes, 2009). Career planning and development, as an HRM practice, permits organizations to strike a balance between employees' preferences and strengths and the needs of the organization (Amin et al., 2014; [Greenhaus et al., 2018](#); [McDonald & Hite, 2023](#)). Career planning and development also match individuals' interests and talents with the organization's needs, resulting improved performance (Nwuche & Awa, 2011). Moreover, a solid career planning and development system at an organization help individuals acquire skills that are important for their own professional development and advancement, as well as beneficial to the efficient completion of organizational goals. (Zia-ur-Rehman et al., 2015).

This study encourages professional development programs in organizations and offers prizes to individuals who desire career advancement and maintain high performance (Dialoke & Nkechi, 2017; [Zaharee et al., 2018](#)). Their research

demonstrated that university professionals' performance was boosted by career development (Dialoke & Nkechi, 2017). Another study stated that, the gap between actual and desired employee performance can often be addressed by careful career planning and growth on the part of the individual (Kakui & Gachunga, 2016). Again, the finding of the other study revealed that career development techniques such as career planning, mentorship, and promotion opportunities have a significant impact on academic staff performance (Mwashila, 2018).

Similarly, several previous studies have identified that positive association between career planning and employee performance, stating that having a well-planned career structure in place in an organization serves as a great motivator for people to perform well (Akhter et al., [Ali et al., 2019](#) [2013](#); [Forson et al., 2021](#) [Oduma & Susan, 2014](#); [Saleem & Amin, 2013](#)). Further, evidence suggests that when organizations invest in their employees' professional growth through robust career planning and development programs and policies, those employees go above and beyond to support the organization's objectives (Tabiu & Nura, 2020). The above arguments refer to the notion of the two-factor theory, social exchange theory (SET), and the equity theory. According to Herzberg's two-factor theory, "motivators" are variables that lead to job satisfaction and motivate employees to perform better on the job (Dartey-Baah & Amoako, 2011; Frederick et al., 1959). According to SET, exchange occurs when both parties are benefitted from that exchange (Bagozzi, 1975; Homans, 1958; Kuiper, 2021). At the same time, the equity theory focuses on employees' perceptions of the fairness of their job inputs and outcomes (Adams, 1963; Al-Zawahreh & Al-Madi, 2012). They specifically strive to keep their own reward-to-contribution ratios equal to the ratios of others (Alabi et al., 2022; Hysom & Fişek, 2011; Johnson et al., 2013). In the proposed research, if an organization offers suitable pay, promotion, sound working environment, and faculty development program employee will then contribute to the organizations in the form of high-quality teaching, research and publication, sound administrative and manage external funding. Thus, the following section has been discussed in the light of two-factor theory, social exchange theory and equity theory.

2.5 DIMENSIONS OF CAREER PLANNING

2.5.1 Pay Structure

In an organization, pay is anything that is offered in exchange for services rendered (Różyńska, 2022; Shaw, 1998). It has been essential in keeping and rewarding high-quality employees. Pay structure means people's feelings about their pay and the disparity between what they are paid and what they believe they should be paid. Several factors influence the pay structure, including the payment of salaries doing the same job, the employee's financial status, the income received in previous jobs,

and the economic condition of the country (Rahman, 2020). According to the literature, employees are less likely to remain with an organization if they are paid less and provided fewer financial benefits (Labov, 1997). A popular belief is that good compensation is a key factor in job satisfaction, which leads to increased productivity in the workplace (Al Mamun & Hasan, 2017).

The satisfaction with the work itself, the level of supervision, and pay satisfaction all had a substantial favorable impact on faculty members' organizational commitment, according to this study (Malik et al., 2010). They reported a high level of organizational commitment and satisfaction with their work, supervision, pay, teammates, and promotion possibilities (Malik et al., 2010). Another study stated that, there is a positive association between pay and job satisfaction, as well as the likelihood that both pay and job satisfaction can predict employee turnover (Asekun, 2016). Besides, this study revealed that, job satisfaction is influenced by relative pay comparisons, and this relationship is nonlinear (Card et al., 2011). Pay has a significant impact on job satisfaction, although promotions have a smaller impact and are only partially significant (Ehsan Malik et al., 2012). [So, this study considered the pay structure as a significant dimensions of career planning which leads both job satisfaction and performance of academic professionals.](#)

2.5.2 Promotion System

Promotion system refers how employees feel about the promotion practices by the organization. There are three key criteria such as frequency of promotions, the importance of promotions, and desirability of promotions that influence employee's satisfaction with promotions (Rahman, 2020).

According to Lazear (2000), "promotion is the transfer of an employee to a position with greater responsibility and compensation (Lazear, 2000)." Many academics believe that job satisfaction is significantly linked to promotion prospects and that there is a direct and positive relationship between job satisfaction and promotion opportunities (Ehsan Malik et al., 2012; McCausland et al., 2005). Employee retention in firms is influenced by opportunities for advancement or career growth (Wane, 2016). Another study also found that, career advancement has been highlighted as a significant factor for the satisfaction academicians (Ali & Akhter, 2009; Arah et al., 2011; Mohammad & Joarder, 2010).

When an employee advances up the organizational structure and hold a position of higher responsibility, (s)he is said to be promoted (Dessler, 2013). A promotion can result in a large boost in the employee's compensation as well as their authority and control span. It will assist competitors in identifying the most productive individuals in the business sector while also recognizing employees within their

own companies (Naveed et al., 2011). Promotion as a tool can persuade others to participate in an activity. It's a way of rewarding employees for attaining company goals while matching organizational and personal objectives (Lazear & Rosen, 1981). According to the findings of Naveed et al. (2011), promotion has a small but beneficial impact on job satisfaction and performance. [Therefore, the promotion system is regarded as the key dimensions of career planning of academic professionals under this study that influences job satisfaction and performance.](#)

2.5.3 Sound Working Environment

Sound working environment refers to the conditions where prevails good light, sound and air quality, which reducing the risk of boredom and creating the right environment for good work performance (Altomonte et al., 2020; McCoy, 2002). This variable evaluates how employees feel about several aspects of the inside and outside physical environment, such as plant layout, safety measures, interior design, ventilation, lighting, noise, and structural facilities, among other things (Rahman, 2020).

There are two main aspects of a workplace: the work itself and the surrounding environment. Work encompasses all aspects of a job, from how it is performed and completed to the tasks involved. It includes task activities training, control over one's own job-related activities, sense of accomplishment from work, task variation, and intrinsic value for a task (Raziq & Maulabakhsh, 2015). A variety of studies demonstrated a positive relationship between work environment and intrinsic job satisfaction which includes physical and social working conditions, which affects job satisfaction (Gazioglu & Tansel, 2006; Skalli et al., 2008; Sousa-Poza & Sousa-Poza, 2000).

Another study stated that, when employees don't have access to water, food, shelter, adequate lighting, ventilation, air conditioning, open space, restrooms, furniture, and safety gear—all of which are necessary for the execution of potentially dangerous tasks—they won't be able to face the challenge for very long (Al Mamun & Hasan, 2017). So, this study considered this variable as an important antecedent of career planning dimension which could impact on both job satisfaction and performance of academic professionals.

2.5.4 Faculty Development Program

Faculty development encompasses a wide range of activities aimed at supporting academicians in the development of professional skills needed to fulfill their teaching, research, and administrative obligations in medical education (Kwan et al., 2009).

Faculty development and continuous improvement of teaching abilities are critical features of every educational institution, regardless of whether it operates face-to-face or via remote learning. The caliber of teachers involved in educational transactions significantly impacts the success of lessons, the usefulness of course materials, and the expansion of institutions as a whole (Asgar & Satyanarayana, 2021).

Faculty Development Programs (FDPs) for healthcare educators were first established in Pakistan's Islamabad region. In collaboration with Partners Harvard Medical International (PHMI) of the United States, Pakistan's National Institute of Health and Social Sciences (NIH&SS) created a platform that could provide assistance and teaching/learning mentoring services to healthcare educators (Abid et al., 2016). This study demonstrates that FDPs have a significant and positive impact on faculty knowledge and professional competence (Bilal et al., 2017).

The study's findings suggested that the training was successful in conveying adequate information and abilities to the learners in the area of print self-learning materials (SLMs) design (Batac et al., 2021). Nevertheless, several deficiencies and vulnerabilities were identified and revealed in this study, prompting the formulation of key suggestions to rectify these gaps and enhance future FDPs (Asgar & Satyanarayana, 2021). [Hence, FDP is considered as the key dimensions of career planning and performance of academic professionals.](#)

2.6 JOB SATISFACTION

Job satisfaction is a person's attitude towards his or her employment (Robbins, 2003). The term "job satisfaction" refers to a person's emotional response to their work. This is a sensitive situation that occurs in an organization where the employees perform their important tasks more beautifully and efficiently (Zaman et al., 2014). According to Vroom (1964), an individual's emotional stance towards their job is reflected in their satisfaction. Thus, job satisfaction is an essential factor in motivating and encouraging employees to achieve higher levels of performance (Vroom, 1964).

According to Raziq and Maulabakhsh (2015), the working environment exerts a positive influence on employee job satisfaction. The study concludes with some brief recommendations, including the necessity for organizations to recognize the value of a pleasant working environment in maximizing employee satisfaction. Another study stated that pay has a significant impact on job satisfaction, but promotions have a lesser impact and are only partially significant (Ehsan Malik et al., 2012). [Thus, this study considered job satisfaction as the bridge between the career planning dimensions and the performance of academic professionals which mediate the relationship between CP dimensions and performance.](#)

2.7 MOTIVATION

The set of influences that motivate people to behave in certain ways is referred to as motivation (Griffin, 2017). Motivation includes the factors that activate behaviors and those that guide and sustain these goal-directed activities (even though such motives are rarely clearly observable). As a result, researcher frequently has to assume people's goals based on observable behaviors (Nevid, 2009).

According to Reeve (2009), motivation might be extrinsic or intrinsic. Extrinsically driven behavior is defined as working for externally determined incentives, but intrinsic motivation is defined as people's desire to learn in order to fulfill their curiosity and feel competent (Reeve, 2009). Another study stated that intrinsic motivation is typically required for motivated action to endure (Malik et al., 2019).

The findings show a negative relationship between motivation and research performance, as well as a moderate positive correlation between motivation and teaching performance. It also demonstrates that whereas motivation has a considerable impact on teaching performance, however it has no impact on research performance of academic professionals (Abdulsalam & Abubakar Mawoli, 2012).

This study found that encouraging creativity and innovation, as well as appreciating the genuine effort, awarding impressive titles, and recognizing achievement, improves university lecturers' performance (Victor & Babatunde, 2014). Additionally, 60 percent of respondents agreed that the head should provide regular payment of salary and other remuneration to promote performance (Victor & Babatunde, 2014). [As a result, this study took motivation as a moderator between the job satisfaction and performance of academic professionals.](#)

2.8 PERFORMANCE

The academic performance is used to describe the degree to which a student, teacher, or educational institution has accomplished both short-term and long-term goals. Academic achievement is described as obtaining educational milestones such as high school diplomas and bachelor's degrees (Alipio, 2020; Allen et al., 2008). Academic achievement is a multifaceted phenomenon affected by factors such as meta-reflective thinking and learning, intrinsic motivation, learning and study skills, levels of engagement and disengagement, the effectiveness of instructors, and socioeconomic background (Duckworth & Seligman, 2005; H. D. Mason, 2017). Academic performance has a significant impact on academic self-discipline, transfer and retention, pre-college academic achievement, and pre-college educational growth have indirect effects on transfer and retention, and college

commitment and social engagement have direct effects on retention (Allen et al., 2008).

The findings of the study stated that, motivation had an indirect effect on job satisfaction and performance (Bashir et al., 2020). While other study revealed that self-efficacy assists in the prediction of motivation and performance (Schunk, 1995). According to Schunk, motivation influenced persistence, although extremely persistent participants performed no better than less persistent individuals. So, in this study, as a performance of academic professionals following variables were explored. [However, this study considered performance as the formative constructs which is consisting four indicators like teaching, research and publication, administrative and managing external fund.](#)

2.8.1 Teaching

Teaching pertains to the capacity of teachers to proficiently fulfil their responsibilities and obligations throughout the educational process (Danielson, 2007; Sancar et al., 2021). Teaching can be compared to the business of selling commodities. No one can sell unless someone is willing to buy. However, some teachers may believe that they have completed a good day's teaching regardless of what the students have learned. Between teaching and learning, there is the same precise equation as between selling and buying (Dewey, 1933; Noddings, 2003).

However, the measurement of teaching performance is somewhat difficult task (Brew & Boud, 1995). But teaching is regarded as one of the key performance activity of an academic professionals (O'Leary & Wood, 2019). This study detailed what more than 200 faculty members at one institution did over a three-year period to improve their teaching significantly and sustainably, shockingly with little effort (McGowan & Graham, 2009). Besides, this study emphasis on practical learning, teacher-student interactions, and explicit learning outcomes that were the top three criteria that led to progress (McGowan & Graham, 2009). As a result, this study considered teaching as a crucial performance indicator of academic professionals.

2.8.2 Research and Publication

Research and publication are a systematic and methodical investigation undertaken to discover new knowledge, validate existing theories, or answer specific questions and then disseminate through various media, such as academic journals, conference proceedings, books, or online platforms (Chen et al., 2018; Marín-González et al., 2017; Rojon et al., 2021). In academia, research performance refers to scientific accomplishments that are mostly published in academic publications (Cadez et al., 2017b). The best research successes are published in the most prominent scientific journals and have a high impact factor, while lesser quality discoveries are published in low ranked journals and have a low impact factor (Harvey et al., 2020).

The respondents are aware of the widespread belief that academic employees must publish papers that demonstrate their academic credentials (Ishak et al., 2009). The findings reveal that all three factors, namely personal, environmental, and behavioral, had a beneficial impact on the targeted population's scholarly publication productivity (Dhillon et al., 2015). This study treated research and publication as a significant performance activity of academic professionals.

2.8.3 Administrative

The process of creating and maintaining performance targets is known as performance administration. The function of the service level administrator is introduced by workload management. The service level administrator is in charge of setting performance targets for the installation based on business needs and existing performance (Castetter & Heisler, 1971; Schriver, 2000). In 2001, the Australian government established a new Australian University Quality Agency, one of whose goals is to assess administrative (management) quality. It is proposed that the number of second-order factors that make up academic professionals' impressions of administrative excellence is operationally dictated by the number of first-order characteristics (Waugh, 2002).

This study investigated that stability is a factor contributing to higher administrative performance, although some studies claim that stability prevents performance (Milio, 2008). This study could be useful to university and government decision-makers because it investigates how professors' research and administrative activities affect the quality of their classroom instruction. The study of García-Gallego et al. (2015) found a nonlinear and favorable connection between research output, teaching quantity, and quality. According to Heck et al. (2000), this approach is demonstrated by faculty and staff evaluations of their Deans' leadership performance. Thus, the researcher of this study explored administrative as an important and day-to-day activity of different academic professionals.

2.8.4 Managing External Fund

In the literature, funding has been identified as one of the most important predictors of research activity. Additionally, acquiring financing is one of the most critical things for a researcher to be able to carry out research projects on a personal level (Ebadi & Schiffauerova, 2015). Therefore, obtaining external funding is a widely regarded indicator of success in the research community. The majority of Australian researchers cited the quantity of funding received from outside sources as a measure of their research's success (Tognolini et al., 1994). Furthermore, external funding is utilized as a consideration in individual academic career selections, such as tenure track decisions in the United States (Huisman et al., 2002). In this way, external funding is employed as a performance metric across the board, from macro-level

national systems of performance-based university funding to micro-level hiring and promotion decisions (Laudel, 2005).

This research investigates the relationship between size and performance, as well as how performance for Centers of Excellence (CoE) changes over time (Aras et al., 2010). Another study revealed that the vast majority of increased financing goes to early career researcher, implying that this accumulation has a 'generational' dimension, allowing scientific expertise to be passed down to a rising number of younger researchers (Bloch et al., 2016). On the other hand, this study stated that, although researchers' productivity favorably affects funding, our findings emphasize the importance of networking and collaboration (Ebadi & Schiffauerova, 2015). According to Hicks (2012), a Performance-based Research Funding System (PRFS) will enhance professional elite control in the correct circumstances. Because PRFSs strive for excellence, they may compromise other vital ideals, such as equity and diversity. They will not contribute to the goal of increasing the economic significance of research (Hicks, 2012). In this study, researcher initiated managing external fund as an essential performance measure of academic professionals.

2.9 RESEARCH GAPS

Following the aforementioned comprehensive review, the current study seeks to address research gaps in the existing body of literature about the career planning process and its implications on academic professionals' job satisfaction and performance. The issue of academic professionals' career planning and performance is now a point of concern for university administration, as there are numerous issues that must be addressed in this field. However, they offer no concrete solutions in this regard. As a result, this study placed a greater emphasis on these issues. These are common issues, but no researcher has addressed them significantly to policymakers (Aminuzzaman, 2013). In addition, no specific solutions are addressed to the university administration (Canrinus et al., 2012; Wang et al., 2020). Besides, this study combinedly uses two-factor theory, SET theory and equity theory to address the current study's hypotheses, which is very rare in career planning context. In addition, the qual→QUAN technique is employed for in the current study, which has rarely been done before in this context. To address this gap in the literature, this study adopted a mixed methods design, first conducting a qualitative exploration of factors and items, and then employing a quantitative technique to validate the structural links between the constructs. Therefore, the current study drew on two-factor theory, SET, and equity theory elements to create a research model to address knowledge gaps in the field of career planning. Consequently, this study aims to incorporate the components of two-factor and equity theory within the framework of SET in order to examine academic

professionals' perceptions and behavioral aspects while participating in career planning-related activities. Besides, the findings of existing literatures are inconclusive in public university of Bangladesh. However, the aim of this research is to fulfill the gaps with regard to methodology, theory and background of the current study context thereby contributed to the existing literature.

2.10 THEORETICAL ORIENTATION OF THE STUDY

Theory provides an explanation for the connections between the variables and shows how and why they are linked (Creswell & Creswell, 2018). Researchers collect data in order to test a theory in a given study context; yet, extending an existing theory can be more intriguing than developing a new theory (Creswell & Creswell, 2018). A variety of theories were studied within the context of broader career planning related studies for the aim of the present study. The two-factor theory of motivation popularized by Herzberg, the social exchange theory (SET), and the equity theory are all examples in this context. The present study aimed to explore the theories that are most pertinent to the research context, specifically in relation to the factors and sub-factors discussed in preceding sections.

Initially, Herzberg's **two-factor theory** was employed for the purpose of exploring the likelihood of using this theory for attaining the aim of the current research. Herzberg's two-factor theory is a motivation theory which was conducted extensive research on workplace motivation and job satisfaction that proposes two sets of elements influence employee attitudes and behaviors in the workplace: hygiene factors and motivators (Alrawahi et al., 2020). Hygiene factors are elements that, when absent or insufficient, can contribute to employee dissatisfaction, but their presence does not necessarily result in high job satisfaction or motivation. (Amzat, 2017a; Valk & Yousif, 2021). They are frequently regarded as basic necessities that must be fulfilled to prevent dissatisfaction. Employees are likely to be dissatisfied and demotivated if their needs are not met. They include issues such as job security, compensation, working conditions, corporate policies and administration, interpersonal interactions, and the physical work environment (Thant & Chang, 2021). According to Herzberg, addressing hygienic aspects can help reduce employee dissatisfaction but will not always motivate them. Employees will no longer be discontented if these elements are addressed and maintained at a satisfactory level, but they will not necessarily become exceedingly motivated or satisfied with their jobs (Frederick et al., 1959). On the other hand, Motivators are variables that, when present and emphasized, can contribute to high levels of employee job satisfaction and motivation. Unlike hygiene factors, motivators are intrinsic to the job itself and are related to the nature of the work and the opportunities it provides for advancement, personal growth or development, achievement, and recognition (Amzat et al., 2017; Herzberg, 2005). Hence, the

variables examined in this study exhibit a greater focus on outcomes. Besides, the lack of universality, limited scope, and unsophisticated model hindered the application of this theory (Hur, 2018; Sanjeev & Surya, 2016). Such as, this theory does not account for individual differences in what motivates or satisfies people. At the same time, focuses on intrinsic motivators related to the nature of the work itself (e.g., achievement, recognition, responsibility), but it does not comprehensively address extrinsic factors like external rewards (e.g., salary, benefits, promotions) or social and emotional factors (e.g., workplace relationships, job security), which can also significantly impact job satisfaction and motivation. As a result, this study explored various applicable theories to meet the objective of the current study.

In this part of the study, **social exchange theory** (SET) was initiated in order to address the problem that emerged in this study. In point of fact, George C. Homans's foundational work was the first to extract SET from the field of behavioral psychology. According to this view, every exchange contains both rewards and costs (Homans, 1958). This theory seeks to explain the dynamics of social interactions and relationships by focusing on the principles of exchange and reciprocity. According to Homans, individuals engage in social interactions and relationships based on the expectation of rewards and the minimization of costs (Homans, 1958; Kuiper, 2021). Initiating an exchange is typically motivated by a desire to derive some form of advantage, but the gain must outweigh the cost for the exchange to be effective and replicated. Homans (1958) argued that all social interaction is based on the bartering of some kind of product or service. People make a decision to take part in a trade after considering the benefits and drawbacks of that transaction in the past, as proposed by SET (Liao, 2008; Romani-Dias & Carneiro, 2019). This theory includes variables, such as exchange relationships, rewards and costs, Outcome, equity and reciprocity (Gould-Williams, 2007; Leon & Brock Baskin, 2022; Shan et al., 2015).

In the beginning, academic professionals' perceptions and attitudes were used to assess the usefulness of SET in career planning studies; however, researcher eventually realized that SET was most useful for explaining the social exchange process (Panaccio et al., 2015; Zellars & Tepper, 2003). To maximize the benefits of social exchanges in terms of outcomes (performance) in areas such as teaching, research and publication, administrative, and managing external finance, the study above emphasized the importance of including a pay structure, promotion system, SWE, and FDP. This proposed research suggested that employee will contribute to the organizational performance, if the organization provides lucrative pay, promotion, sound working conditions, and development programs. According to this study, social exchange theory were utilized to comprehend employment relationship (Shore & Barksdale, 1998). However, this study utilized the SET in

this study to explain the relationship exist between the career planning dimensions and the performance of academic professionals. Notably, despite the fact that the social exchange theory provides valuable insights into human behavior in social contexts, it has been subject to a number of criticisms and limitations. It has been criticized on the grounds that it simplifies too much and that not all social interactions can be reduced to a rigid cost-benefit analysis (Liu et al., 2018; Zafirovski, 2005). Therefore, the researcher was persuaded that there was a need to look into additional relevant theories that could adequately explain the connection between career planning and performance.

In an effort to find an appropriate explanation, the **equity theory** was measured by the present study with a view to demonstrating the inputs (CP dimensions) and outputs (performance) a component of the suggested research paradigm (see Figure 2.1). The equity theory is a psychological theory that focuses on the perception of fairness and equity in social exchanges, particularly in the context of workplace relationships (Folger, 1986; O'Connor & Crowley-Henry, 2019). Adams (1963) proposed that individuals compare their inputs (contributions or efforts) and outcomes (rewards or outcomes) in a social exchange situation to those of others (Adams, 1963). According to the equity theory, a person's level of motivation at work is greatly determined by their perception of whether or not they are being treated fairly by their employer (Daniel, 2019; Marescaux et al., 2019). This theory proposes that individuals are motivated to maintain a sense of equity, in which the ratio of their inputs to outputs is perceived to be the same as the ratios of others with whom they compare themselves (Al-Zawahreh & Al-Madi, 2012). So, the key variables include this theory are inputs, outputs, comparison, and a sense of fairness of one's working places.

Adams' Equity Theory (1963) has been frequently used to explain employee motivation, job satisfaction, and performance in the field of organizational psychology (Al-Zawahreh & Al-Madi, 2012; Balkin & Werner, 2023; Patricia & Asoba, 2021). It implies that organizations should attempt to create an environment in which employees perceive fair and equitable treatment. This can result in improved job satisfaction, motivation, and performance. Thus, this theory has some certain limitations, which are: (i) it relies heavily on individual perceptions of fairness which differs from one person to another; (ii) there is no objective way to measure inputs and outputs; and (iii) it focuses only on exchange relationships and may not fully explain the dynamics of all types of relationships (Christ-Brendemühl & Schaarschmidt, 2021; Marescaux et al., 2019). Despite these limitations, equity theory remains an important paradigm for understanding how people perceive and respond to fairness and unfairness in a variety of social situations. Therefore, this

study explored this theory to explain the CP dimensions and performance of academic professionals in the current study context.

Following a thorough analysis of the relevance of the existing theory or theories to the current study situation, however, each theory has its own limitations. Thus, a combination of the three aforementioned theories would extract the greatest benefit from the present study. Last but not the least, the application of blending of these three theories is really unique in the career planning literature, thus this study will theoretically contribute to existing literature.

2.10 PROPOSED INITIAL MODEL

The proposed initial model was developed based on blending of above-mentioned theories to fill the research gap identified in the literature review section. Conducting thorough research of literature is the first step in creating a conceptual model. A conceptual framework describes the meanings and relationships that the concepts in a study have for the researcher (Saunders et al., 2012). The researcher of this study adopted the model variables from various sources of literature, which were discussed in the literature review section. Again, some of the constructs are developed by the researcher from his real-life experience. A conceptual model help researcher to successfully accomplish his research goals (Kazemi & Zafar Allahyari, 2010; Thompson et al., 1991). As a result, academics have developed a conceptual framework based on the casual relationship between the influencing factors associated with the study model, as well as effective strategies for reducing staff turnover (Al Mamun & Hasan, 2017). [After conducting the extensive literature review, this study mainly set four dimensions of career planning which is based on the two-factor theory. Besides, the other variables within the initial research model are derived from the concept of social exchange theory and equity theory. All those variables are very crucial in the context of Bangladesh.](#) Thus, the following model (see Figure 2.1) is developed to attain the objective of the proposed study:

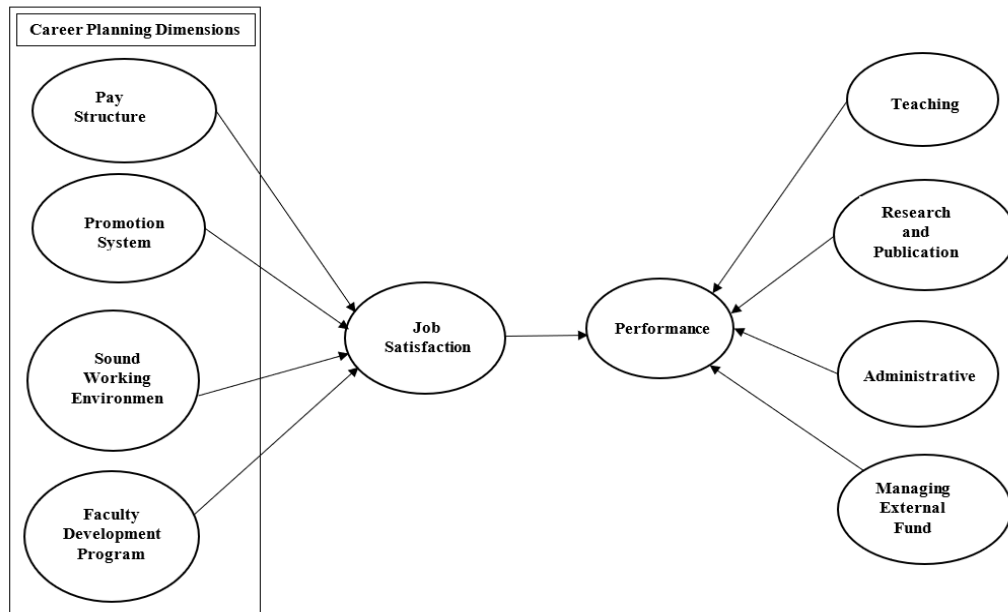


Figure 2. 1: Initial research model (Conceptual framework)

2.11 CHAPTER SUMMARY

In this chapter, researcher looked at the gaps in the current body of research. The purpose of this literature review was first to identify the factors employed in previous investigations and then to develop relationships between the variables considered in this investigation. There was a search for theoretical viewpoints on the study's setting, so other studies from the literature were explored. Research gaps were determined in this study based on academic, methodological, and contextual considerations after a comprehensive literature review was conducted. The review allowed the researcher to see where there were gaps in the literature and what questions needed to be addressed next. Hence, additional scholarly literature on the two-factor theory, social exchange theory (SET), and equity theory was examined to assess their relevance in addressing the research gaps and aims of the study.

CHAPTER 3: METHODOLOGY

3.1 INTRODUCTION

This chapter details the methodology employed in the study, qualitative field study, the process of transcription and qualitative interview analysis, the design of the quantitative survey instrument, the collection, screening, validation, and analysis of data. A portion of this chapter discusses the qualitative procedure, followed by a thorough quantitative approach, as part of the mixed-method, sequential design used in this study. The quantitative technique, which estimates the measurement and structural models, provides a significant portion of the information in this chapter. This chapter also discusses problems with measuring the paradigm's validity and reliability. A discussion of the predictive power of the model's latent constructs is made as follows. The following sections detail the whole research methodology of the study.

3.2 RESEARCH PARADIGM

A paradigm includes a number of elements that belong under the following categories: Ontology, epistemology, methodology, and methods (Alharahsheh & Pius, 2020; Scotland, 2012). So, a paradigm is a way of thinking that is characterized by various components, such as epistemology (the process via which we acquire our knowledge), ontology (underlying characteristics of reality), axiology (values), and methodology (the research procedure) of the study (Doyle et al., 2009; Hanson et al., 2005).

Hitchcock and Newman (2013) fundamentally argued that excellent studies are excellent studies regardless of paradigm. (). The use of all four research paradigms depends on the setting and is pertinent to the investigator's objective: what topics will be explored in the study? The findings of the study recommend that it is appropriate to view research as being independent of paradigmatic debate (Hitchcock & Newman, 2013). However, in order for qualitative and quantitative research research procedures or methods must be separated from particular paradigms (Gummesson, 2005). The use of mixed-methods research designs has been on the rise in the social sciences (Creswell, 2015). A mixed-methods approach gives researcher the ability to compare and contrast different aspects of research design (Johnson & Onwuegbuzie, 2004), which is probably going to make it easier to respond to certain research questions. Each of the paradigms has its own specific ontology, epistemology, methodology, and axiology that it discusses. The four most prevalent types of research paradigms that are utilized in the field of social science are as follows: (i) the positivist paradigm, (ii) the post-positivist paradigm, (iii) the

interpretivist paradigm or constructivist, and (iv) critical theory. The several perspectives on pragmatic research are broken down (see Table 3.1) as follows—

Table 3. 1: Paradigmatic views

Paradigmatic views	Positivism	Post-positivism	Critical theory	Interpretivist/Constructivism
Ontology (nature of the actual world)	Nave realism holds that reality exists solely due to unchanging natural rules and mechanisms.	Critical realism—imperfect, probabilistic “real” reality	Historical realism— virtual reality molded by society and personal ideals (political, cultural, economic, ethnic, and gender); formalized over time.	Relativism— created realities that are both local and unique
Epistemology (the link between knower and what-would-be-known)	Dualist/Objectivist; Meaningful Results	Critical tradition/community; presumably accurate results; mitigated dualism; the importance of objectivity	Transactional/Subjective; value-mediated findings	Transactional/Subjectivist: the results are formulated
Methodology (systematic inquiry method)	Experimental/manipulative verification of hypotheses; quantitative techniques predominate	Primary quantitative may include qualitative, modified experimental/manipulative, critical multiplier, and falsified theories.	Hermeneutical/dialectical	Hermeneutical/dialectical
Axiology (ethical behavior)	External to inquiry	Extrinsic: Respect privacy; obtain informed consent; minimize harm; justice/equal chance	Intrinsic: the researcher actively promotes the release of information during the course of the investigation.	Intrinsic to the inquiry: the values of participants are essential to the investigation process.

Source: Adapted from (Ali, 2017; Guba & Lincoln, 1994)

After carefully evaluating the ontology, epistemology, methodology, and axiology of all four research paradigms proposed by Guba and Lincoln (1994) and Johnson and Onwuegbuzie (2004), this study adopts the post-positivist research paradigm to address the issues underlying the career planning and performance of academic professionals in a variety of job satisfaction and performance related activities. With reference to the ontology, reality is determined by the findings of

the investigation. As a result, it's possible that the nature of reality is not always thought to be true. The knowledge gained from this study is epistemologically relevant to the universities and their related authorities because it was gathered through direct observation and semi-structured and unstructured interviews with academic professionals at various public universities in Bangladesh. Methodologically, this study employed a mixed-methods approach, aligning with the philosophical framework of post-positivism (Ali, 2017; Dawadi et al., 2021). Last but not least, the study's axiological perspective is external to the investigation procedure, in which participants were given as much information as possible about the inquiry to gain informed consent. Besides, this study used a stratified random sampling method to ensure that all participants were treated fairly. When all four paradigmatic perspectives are considered, it is possible to argue that post-positivism is the most appropriate research paradigm to address the research contexts of the current study.

3.3 RESEARCH APPROACH

The mixed-methods approach adopted in this study is widely recognized as a significant methodological advance and a clear signal for the social science field over the past quarter-century (Biddle & Schafft, 2015; Maxwell, 2016; Sweetman et al., 2010). According to proponents of mixed-methods research, the study's success hinges on integrating the various methods used to gather data, analyze that data, and draw conclusions about the research subject at hand (Creswell, 2015; Johnson et al., 2007). In contrast to adopting either method alone, integrating qualitative and quantitative research allows researcher to take advantage of the strengths of both approaches while avoiding their weaknesses. More time is allotted for the researcher to discover and verify relevant aspects in the study's context (Klassen et al., 2012; Tashakkori & Teddlie, 2010).

The mixed-methods research paradigm considers and accounts for differences in available resources and research methods based on geographical location. It also generates the most exhaustive, precise, well-rounded, and substantive discoveries in the field (Johnson et al., 2007). The researcher can better understand and comprehend the study's overall findings with the help of mixed-methods research design because the results from each method strengthen and expand upon those from the others (Driscoll et al., 2007; Pasape et al., 2015). This study could benefit from such concepts from mixed-methods research. Thus current research employs a mixed-methods strategy, the qualitative-quantitative (qual→QUAN) analysis technique (Creswell, 2009), in which qualitative approaches are employed to contextualize the variables of the study (Osterman et al., 2014), and the research hypotheses are tested using quantitative techniques. Therefore, the 'arrows' used above represent the sequential design employed in mixed methods.

3.4 RESEARCH PROCESS

A sequential approach was used in this research. The research process was divided into two phases—qualitative and quantitative—to get a complete picture of how different career planning elements affect the performance of academic professionals (Ayeleke et al., 2019; Baruch et al., 2015; Kezar et al., 2020; Limberg et al., 2021).

Step 1: Review of Literature

To better understand the study problem, this step was carried out. The review was based on career planning and its various dimensions, job satisfaction, motivation, and performance of academic professional. Additionally, the two-factor theory, social exchange theory, and equity theory served as the foundation for the current study.

Step 2: Development of Initial Model

The thorough and rigorous review of the theories and empirical research in the literature allowed for the development of a comprehensive model for analyzing the effects of numerous elements and their interrelationships. After surveying the relevant literature, researcher proposed the initial conceptual model (Chapter 2, Figure 2.1). The literature supported, explained, and justified the proposed model's variables, constructs, sub-constructs, and relationships.

Step 3: Qualitative Field Study

Following the development of the primary research model, a field study was conducted utilizing in-depth interview techniques and a semi-structured interview schedule. Therefore, the investigation (field study) was conducted in several different public universities in Bangladesh. The primary aims of the field study were to verify and provide further context for the theoretical concepts and their relationships found in the literature review.

Step 4: Refinement of Research Model

Here, the preliminary research model was improved by contrasting the literature review results with those of the qualitative data. As a result, some constructs were eliminated, and any necessary alterations to the specific constructs were made. The preliminary model was refined in light of the findings from the field study and further review of the relevant literature.

Step 5: Development of Hypotheses

At this point, hypotheses were developed in line with the connections and orientations of the constructs of the comprehensive research model, that are backed by theories and their applications in the proposed study setting. In this study, the

researcher used two-factor, SET and equity theory, to formulate their hypotheses. To quantitatively validate the linkages and generalize the findings, a total of 14 hypotheses were formulated. In Chapter 5, this study looks at how the hypotheses are designed.

Step 6: Designing the Questionnaire

Based on the research model and hypotheses, a draft questionnaire for the quantitative survey was created in this stage. Each of the 14 hypotheses was covered in the accompanying questionnaire. The measurement items for each construct in the questionnaire are grounded in literature. Based on the results of the qualitative research, some of the measuring items are included in the questionnaire because they are very contextual.

Step 7: Pre-testing of the Questionnaire

Before sending out the initial questionnaire to responders, it underwent a round of testing. Preliminary testing was conducted to ensure the questionnaire whether the it is free of mistakes, omissions, and overstatements of critical terms and concepts and to enhance its validity and reliability. There were a total of 12 respondents used for this purpose, and they were all experts in the academic field being investigated.

Step 8: Refinement of Questionnaire

The questionnaire was revised in response to comments from expert participants during pre-testing. The questionnaire was extensively revised to refine the initial instruments. The revisions, adjustments, and alterations done during this process led to the designing final questionnaire.

Step 9: Pilot Study Process

A pilot study was conducted by taking 47 responses from the study area in order to see the data trend of the current study. Consequently, the mean and standard deviation (SD) was measured for each observed items associated with the respective constructs. Therefore, some major corrections, modifications, and adjustments were made to the questionnaire, like **Step 8** (Refinement of Questionnaire).

Step 10: Collection of Data

After the completion of the qualitative field study analysis, quantitative data were collected from several public universities in Bangladesh. Respondents for the study were Academic Professionals (AP) who are directly or indirectly involved in career planning activities. The respondents came from ten different public universities in

Bangladesh, and their selection was carried out using stratified random sampling method.

Step 11: Analysis of Data

The data was analyzed with the help of statistical software, primarily the Statistical Package for the Social Sciences (SPSS), and a Structural Equation Modelling (SEM) technique based on partial least squares (PLS) (Gefen et al., 2000; Harland et al., 2015; Moores & Chang, 2006; Tehseen et al., 2021) were used. In order to assess validity, reliability, and testing hypotheses, data were first loaded into the SPSS spreadsheet (i.e., .sav file) and then converted to a comma delimited file (i.e., .csv file) for advanced analysis using SmartPLS software. On the other hand, the descriptive analysis was carried out using the SPSS program. The study is broken down into parts and detailed in Chapter 6.

Step 12: Result Interpretation and Report Writing

The last stage of the investigation consisted of a discussion and interpretation of the findings obtained from the qualitative and quantitative data analysis. The debate was carried out in a manner consistent with both the hypotheses and the research aims. As soon as the data analysis finished (both qualitative and quantitative), the results were discussed and evaluated in light of the study questions and objectives. As presented in the preceding chapters, this stage involved the articulation and integration of the findings from the preceding phases of the research.

The following figure (Figure 3.1) explains the process of the entire research work.

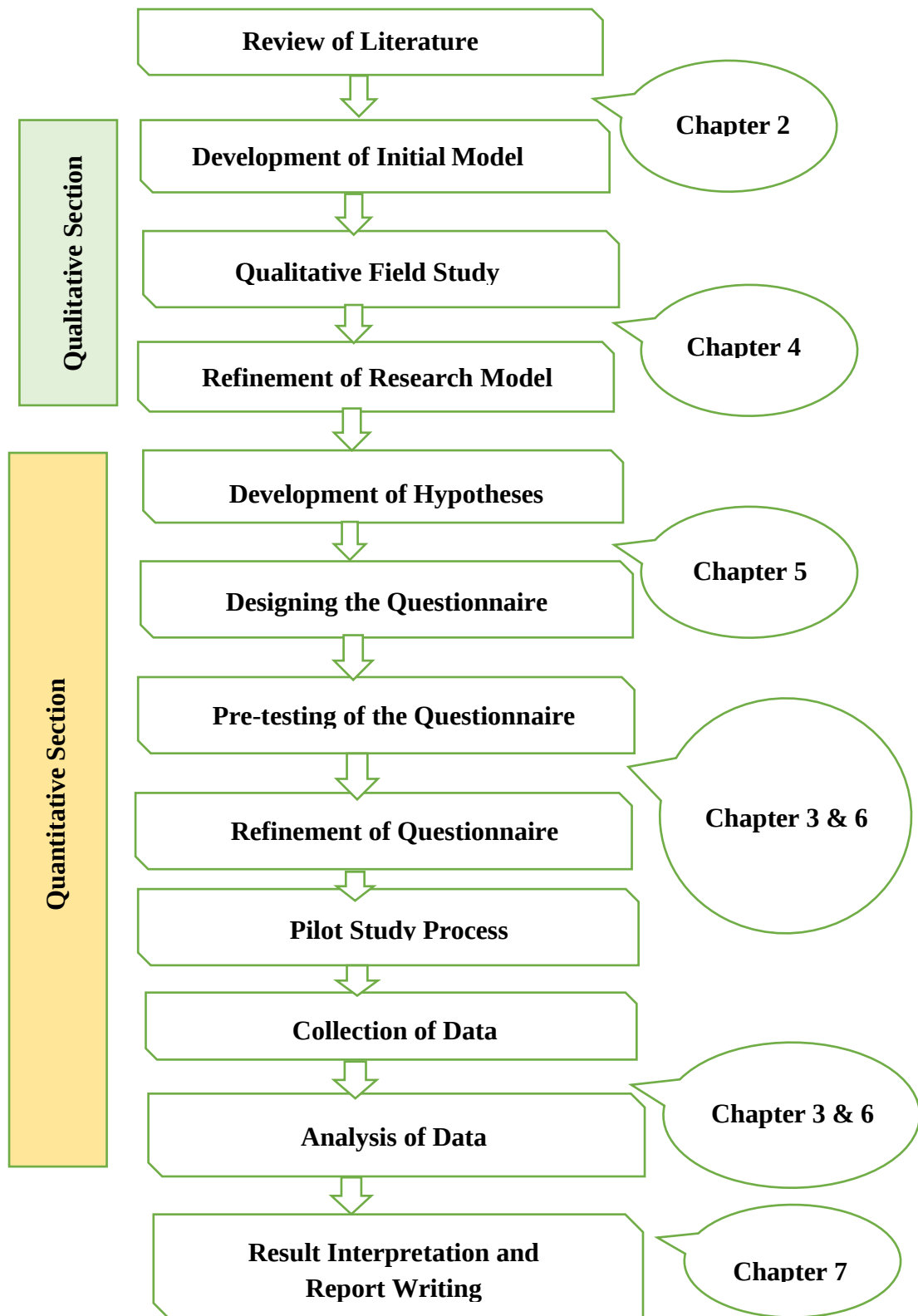


Figure 3. 1: Stepwise presentation of the research

3.5 QUALITATIVE FIELD STUDY

This study used a mixed-method approach to attend the study objectives. In accordance with the exploratory research approach, this study combined a qualitative field study with a quantitative survey. For the purpose of assessing and validating the components and variables indicated in the literature review and initial research model, a qualitative study was done to investigate the phenomena associated with job satisfaction and performance in career planning. The primary purpose of the qualitative research was to provide background information and assess the exploratory model. At this point, the connections between the different components were also identified. The experimental nature of the qualitative approach, which yields reliable details about the study sample, led to its selection as the optimal technique. This research strategy permits a comprehensive analysis of the phenomenon under study. According to a post-positivist viewpoint, the current study is devoid of any preset outcomes and is based on the transparency of responses, which allows respondents to discuss in-depth in their real-life experiences (Roy, 2014). Before conducting the fieldwork, a semi-structured interview schedule was designed based on the initial research model, which is widely employed in qualitative research (Malhotra & Birks, 2007). The researcher developed all the interview scripts in close collaboration with the study supervisor.

After conducting interviews, the researcher transcribed the recordings into English from the participants native language in order to analyze the collected data. This was done to ensure the collection of reliable qualitative data. Note that the Institute of Bangladesh Studies gave its formal consent for data collection before the interview even began. Once again, researcher obtain verbal consent from each individual who participates in the interview over the phone. After getting the permission, 21 in-depth interviews were conducted, with notes taken by hand and audio recordings made. After the interviews were finished, the audio was transcribed into plain text in the individuals' native language of Bengali and subsequently transcribed into English (Lee et al., 2010; Zhou, 2011). A content analysis method was then used to examine the data. Two distinct analyses were performed on the transcribed data. In the first stage, this study analyzed each interview independently to figure out the underlying elements, variables, and relationships between them and certain constructs already established in the literature. Concurrently, the second stage entailed integrating all of the newly identified components based on their interactions with one another to create a new theoretical framework for the study. Several aspects and dimensions pertinent to the present investigation were uncovered by the qualitative study's data that had not been used in a similar setting in the literature. As a result, the primary research

model was modified to include these variables and dimensions for quantitative study.

3.5.1 Participants Selection

Purposive sampling method can be employed to pick samples for a study (Malhotra & Birks, 2007). Thus, purposive sampling was used in this study to select the most representative participants because it was found to be the most consistent with the data needed (Moser & Korstjens, 2018; Palinkas et al., 2015). The following participants were purposefully selected from the same profession after the researcher selected one interview participant using this method. In fact, the interviewees were carefully selected based on five key parameters: (i) Faculties of public universities of Bangladesh (i.e., Professor, Associate Professor, Assistant Professor, and Lecturer), (ii) Faculties of general universities, (iii) Faculties of Science and Technology universities (iv) Faculties of Engineering and Technology universities and (v) Faculties of Agricultural universities. A total of 21 interviews were carried out, at which point the data was considered saturated (Guest et al., 2006; Mason, 2010).

3.5.2 Data Collection Method

When the prospective samples had been identified, the sample respondents were contacted and asked for information regarding their experiences with the various career planning dimensions. The participants were approached on a purposive basis using the respondents' cell numbers, which were retrieved from both the university database and university websites, respectively. Before beginning the interview, each individual participant was contacted individually and asked for their consent to record the conversation. After getting approval (that is, recording in the audio system), the researcher himself conducted the interviews employing a semi-structured interview schedule. After that, it was documented by handwriting and recorded by the audio recording system on the researcher's smartphone. Out of 21 in-depth interviews, twenty (20) interviews were conducted at the respondents' working place where their university was located, and only one (1) interview was conducted online through Zoom meeting (Nyaupane et al., 2006; Wan Ahmad & Abdurahman, 2015). The session lasted more than an hour on average. The interviews were carried out in Bengali, and for the sake of analysis, the recordings were afterward transcribed into English (Nyaupane et al., 2006; Zhao et al., 2008; Zhou, 2011). Therefore, the transcription procedure was carried out with sufficient care, with emphasis placed on preserving the actual 'meaning of words' spoken by those who took part in the interview.

3.5.3 Data Analysis Technique

This study utilized content analysis techniques for analyzing qualitative data, as previously mentioned so that researcher could pay closer attention to contextual factors (Merriam & Tisdell, 2015). This method is widely recognized as highly valuable for determining the frequency and nature of messages derived from patterns that do not have a significant degree of structure (Merriam & Tisdell, 2015). In this study, NVivo software was used to analyze the data for identifying relevant features, variables, and their connections. Since it lets users search for variables and analyze their patterns and related links, NVivo software is considered one of the most relevant tools for content analysis. Content analysis is also a valid analytical tool for both inductive and deductive investigation (Quaddus & Xu, 2005). Therefore, a two-stage content analysis technique was performed in the present study to extract themes, sub-themes, components, and variables that help the researcher to refine the original model and deductive analysis used to compare the original model with the field study model, which helped shaping the final research model.

3.6 QUANTITATIVE STUDY

While a thorough literature review and in-depth field research laid the groundwork for the theoretical framework, the theoretical foundation of the current study rests on the design and implementation of quantitative analysis under the positivist research paradigm. After the basic study model has been completed, the subsequent stage involves the confirmation of the components, variables, and their respective relationships. As mentioned before, this investigation used a predominantly quantitative approach (i.e., qual→QUAN). Within the context of this investigation, the qualitative phase was considered the legitimacy phase, which played a role in the accepted research model. On the other hand, the quantitative aspect of this study involved creating hypotheses in accordance with the research model and testing those hypotheses to attend the study objectives.

3.6.1 Development of Survey Questionnaire

A questionnaire sometimes refer to interview form, interview schedule, and questionnaire (Carpino et al., 2019). A questionnaire, according to Malhotra (2010), is a standardized series of questions designed to collect data from respondents (Malhotra, 2010). For any researcher interested in carrying out a quantitative primary data study, a questionnaire is an indispensable research instrument. Developing a questionnaire is one of the steps that a researcher needs to do in order to collect primary data.

Using the all-inclusive research paradigm as inspiration, a questionnaire is designed for quantitative data-gathering. The questionnaire covered every facet of the study model to quantify the interrelationships between the components. The questions related to the study constructs and items were asked in closed-ended response format in Section B of the questionnaire. In contrast, Section A refers to the socio-demographic characteristics of the respondents. All of the variables in Section B of the questionnaire were measured using a six-point Likert scale in the current study, with one (1) representing a strongly disagree and six (6) a strongly agree respectively (Ali et al., 2020; Davies & Ercolani, 2021; Miralles-Cardona et al., 2022).

One of the most effective methods of gathering quantitative data is the use of a Likert-type scale due to the respondent's freedom of choice (DeSimone & Harms, 2018; Louangrath & Chanoknath, 2018). Moreover, the Likert scale is used to examine the correlations among the variables in most empirical investigations based on SEM completed by earlier researchers (Hills & Argyle, 2002; Hossain et al., 2015; Mourad & Valette-Florence, 2016). In this study, a six-point scale was used to avoid central tendency errors (a type of bias towards the middle) among our respondents (Ali et al., 2020; Nadler et al., 2015; Taherdoost, 2019). This is due to the fact that Asians have common intentions to select the neutral alternative (Fruja Amthor & Roxas, 2016; Wibowo et al., 2009). Since the current study focuses on public universities in Bangladesh, a developing Asian country; the 'neutral' or 'neither agree nor disagree' response option was not offer to the survey procedure, and the questionnaire was constructed with a six-point scale.

3.6.2 Pre-testing the Survey Questionnaire

Before conducting a large-scale quantitative survey, researcher field-tested the questionnaire with academic experts in the field. Different academics have different opinions on how large of a sample should be used to pilot test the questionnaire (Hunt & Sparkman, 1982). Evidences are available in the literature that the sufficient amount of sample for pretesting is 12 (Ali, 2017; Hulland et al., 2018; Hunt & Sparkman, 1982). Therefore, the current study took a total of 12 questionnaires in the pretesting process (eight to the study sample, three to the department heads, and the rest were Dean of the respective faculty) to see if there is any issue with the questionnaire items being too difficult to understand. Therefore, face-to-face interviews were used to select study samples from the study area randomly. Pre-testing results were used to make changes to the questionnaire in response to comments and suggestions.

3.6.3 Study Population, Sampling Method, and Selection of Study Area

The study was conducted with a view to finding out the overall performance of academic professionals in public universities of Bangladesh. So, the sampling design and sampling size are determined on the basis of public universities in Bangladesh. The target population of the study is public university teachers in Bangladesh. There are 15426 (N) teachers currently working in public universities in Bangladesh (UGC, 2021). A stratified Random Sampling (SRS) technique was employed in this study. Four major strata were selected randomly. i.e., general university, science & technology university, agricultural university, and engineering & technology university. From all strata, 3 general universities, 3 science & technology universities and 2 agricultural universities and 2 engineering & technology universities were selected randomly. Finally, 459 samples were collected for this study.

3.6.4 Sample Size Determination

In this study, the hypotheses were measured using PLS-based SEM approaches. Similarly to other methods of statistical analysis, PLS can handle relatively small sample sizes because “small sample size assures that the results of statistical methods are robust and the model is generalizable” (Hair, Astrachan, et al., 2021). Therefore, the sample size was chosen so that the data could be efficiently processed using PLS software. Hence, 459 samples were used for final analysis, which is quite a large amount when compared to the minimum sample size necessary for PLS estimation (i.e., 10 times the minimum number of arrowheads pointing to the latent variable anywhere in the PLS path model) as suggested by Hair et al. (2021). On this basis, the current study requires a minimum sample size of 140 responses. Thus, the collected sample of 459 is quite larger than the minimum sample size requirement of the current study.

In a separate thought, the total number of public universities teachers is 15426 (N) which is considered as study population (UGC, 2021). From this population, the required number of samples (n) was selected using stratified random sampling (SRS). According to WG Cochran, the sample size (n) will be determined by the following formula (Cochran, 1977). The sample size (n) will be determined by the following formula-

$$n_0 = \frac{z^2 pq}{e^2} \dots\dots\dots (1)$$

Where

n_0 = the sample size.

$z = 1.96$ is the standard normal value corresponding to the desired level of confidence (95%),

$e = 0.05$ is the accepted margin of error.

$p = 0.5$ is the estimated proportion of an attribute that may be present in the population.

$q = 1 - p$ is the estimated proportion of an attribute that may not be present in the population.

The value of n_0 is obtained using equation ...

$$n_0 = \frac{z^2 pq}{e^2}$$

$$n_0 = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = \frac{0.9604}{0.0025} = 384.16 \approx 385$$

Table 3. 2: Paradigmatic views

Name of University	Number of Teachers	Representative Sample Size
Public Universities in Bangladesh	15426	385

**** Source:** UGC, 47th Annual Report, 2020.

So, the recommended sample size is 385 teachers. But in this study, we will collect more than 450 responses to make the study more representative and reduce the precision in both estimations. Table 3.2 represents the representative sample size of this study. Finally, the respondents were selected through probability proportionate to size (PPS) sampling. *Sample (n_i) from ten strata is calculated by the following formula,

$$n_i = \frac{N_i}{N} \times n$$

After dividing the sample size proportionately from the strata, the respondents were selected through SRS from the following universities (see Table 3.3) of each stratum, which are also based on random sampling.

Table 3. 3: Representative sample size determination from ten strata

Name of University	Total Teachers	Representative Sample Proportionately	Representative Sample Size
RU	1097	125.504	125
KU	507	58.0042	58
BU	191	21.8517	21
JUST	276	31.5763	32
HSTU	321	36.7246	37
BSMRSTU	272	31.1186	31
KUET	374	42.7881	43
RUET	308	35.2373	35
BAU	591	67.6144	68
KAU	75	8.58051	9
Total	4012	459	459

**** Source:** UGC, 47th Annual Report, 2020.

3.6.5 Pilot Study

A pilot study refers to a small-scale preliminary investigation conducted before the main research project. The purpose of a pilot study is to test and refine the research methods, procedures, and instruments to be used in the larger study (Ismail et al., 2018; Leon et al., 2011). It allows researcher to identify and address any potential issues or challenges that may arise during the actual research. Besides, it was piloted to check for unclear concepts or words that would hinder respondents' ability to answer questions and to ensure that the questionnaire could be utilized with a wide range of respondents from the study area. In the pilot study, academic professionals in the studied field were prioritized as responders, but professionals in human resource management and those who work in public universities were also considered.

3.6.6 Quantitative Data Collection

A structured survey instrument was used to collect quantitative data. The survey was conducted by using both online and offline systems. In preparation for the survey, a group of eight people worked together offline to collect responses. The survey instruments were delivered to them so that they could learn about the survey's theme and aim. The researcher briefed them and provided verbal instructions on how to go about collecting data for this study. In addition, the researcher personally joined the team for the completion of the survey. The respondent was approached randomly (with replacement) by using university

websites and university databases. Besides the offline system (face-to-face data collection), the researcher will also collect data using the online system for the purpose of the feasibility of the respondents, as they have time constraints during office time. Thus, the researcher sent a Google form link to the questionnaire to the respondent's individual e-mail address. The researcher of this study also calls the respondents over the phone in order to have a quick response from them. So, data was collected using both online and offline methods, such as e-mailing a Google form and doing a face-to-face survey (Kim & Tamborini, 2014), where there was enough time for respondents to fill out the surveys.

3.6.7 Quantitative Data Analysis

Several preventative actions have been carried out during the survey in order to avoid any minor mistakes in the data collection procedure. The data collected from primary sources were double-checked, sorted, and re-evaluated. Inconsistencies in the data must be corrected. After that, the collected data were coded, categorized, and tabulated. To process the acquired data, the researcher used IBM SPSS-26 and Smart PLS software to make objective judgments utilizing logical analysis approaches in accordance with the study objectives. SmartPLS (Partial Least Square) version 3.2.9 was used to test the measurement and structural models using structural equation modeling (SEM). Quantitative data in this study was analyzed using a PLS-based structural equation modeling technique because PLS can run many regression equations/models simultaneously and deals with many factors/variables in a rather complex model (Lowry & Gaskin, 2014; Sarstedt et al., 2017).

3.6.7.1 Structural equation modeling (SEM)

Analyzing the structural relationships in a complex system can be done through a method known as structural equation modeling (SEM), which is a highly predictive analysis methodology. Multiple regression and path analysis are the theoretical foundations upon which it is built (Ali, 2017; Chin, 2010). It is an analytical method of the second generation that may be used to estimate the relationships between latent constructs and the factors under the surface that can be observed (Chin, 2010; Hair, et al., 2021b). Measurement errors, as well as assessments of reliability and validity, may be extensively addressed using SEM. It offers the researcher advantages over first-generation analytic methods like multiple regression, principal component analysis, and cluster analysis, including more research depth, greater study flexibility, and more significant results clarity (Barclay et al., 1995; Lowry & Gaskin, 2014).

3.6.7.2 Partial least squares (PLS)

Covariance structural equation modeling (COV-SEM) and partial least squares structural equation modeling (PLS-SEM) are the two most common approaches to SEM analysis. Compared to COV-SEM, PLS-SEM has certain advantages because it can handle both reflecting and formation indicators (Chin, 2010; Hulland, 1999). Another difference between the two is that PLS-SEM can function with a smaller sample size than COV-SEM does. For COV-SEM analysis, data must follow a multivariate normal distribution; normality is not a prerequisite for PLS-SEM analysis (Ali, 2017; Zayed & Elshaer, 2022).

Due to its flexibility in dealing with limited sample sizes and modeling latent structures under varying conditions, partial least squares (PLS) have lately gained popularity among researchers (Wilson, 2010). It is also suitable to employ in a fresh measuring context, even if the measurement indicators are not well-known (Ghyas & Kondo, 2016). Furthermore, PLS has grown in popularity because of its free online availability. With all these benefits in mind, the Smart PLS was chosen for this research as the analysis method.

3.6.7.3 Partial least squares (PLS) procedure

Data analysis for the PLS-based SEM method consists of two stages: (i) evaluation of the measurement model and (ii) evaluation of the structural model. This research explores the measurement model in terms of formative and reflective models, exploring the connection between the latent variable and its indicators. Following that, this research used the structural model to examine the association between the constructs by computing the t-statistics for each path coefficient according to the appropriate hypotheses. The study also produced results about the explanatory strength of the endogenous constructs utilized in the research model. Table 3.4 outlines the systematic procedure that will be followed to conduct a SEM analysis of the research model based on PLS. The processes involved in the analysis are broken down in greater detail in Chapter 6.

Table 3. 4: Step-by-step procedure of SEM analysis

Stages	Indicator Types	Analysis	Rule of Thumb	Cutoff point for this study
Stage 1 Measurement Model Assessment	Reflective	Reliability		
		Indicator reliability	≥ 0.70 ; loadings of 0.40 are considered satisfactory in exploratory research. (Hair, Ringle, & Sarstedt, 2013).	≥ 0.70
		Internal consistency reliability	Composite reliability ≥ 0.7 (Hair et al., 2011).	≥ 0.85
		Validity		
		Convergent Validity (Average Variance extracted)	≥ 0.5 (Hair et al., 2013).	≥ 0.55
		Discriminant validity construct level	The “Square root” of each latent variable’s AVE is larger than correlations (Fornell & Larcker, 1981).	Supported by the general rule of thumb
		Discriminant validity-item level	An indicator’s loadings should exceed its cross-loadings (Hair et al., 2011).	In accordance with the general rule of thumb
	Formative	Indicators’ relative contribution (weights)	Each item’s weight is > 0.10 (Andreev et al., 2009; D. X. Peng & Lai, 2012).	≥ 0.27
		Indicators’ absolute contribution (loadings)	≥ 0.70 ; loadings of 0.40 are acceptable in exploratory research (Hair et al., 2013).	≥ 0.60
		Multicollinearity	VIF < 5 ; tolerance > 0.20 (Hair et al., 2013).	VIF ≤ 2.09 , Tolerance ≥ 0.48
Stage 2 Structural Model Assessment	Reflective and formative	Coefficient of determination		
		Amount of variance explained (R^2)	Substantial=0.67, moderate=0.33 and weak=0.19 (Suhartanto, 2016). The context of the study determines the acceptable level (Hair et al., 2013).	≥ 0.18 ; (0.30 with ultimate dependent variable)
		f^2 effect size	Strong = .35, moderate = .15, and weak = .02 (Hair et al., 2013).	$f^2 \geq 0.001$
		Predictive Relevance		
		-cross-validated redundancy (Q^2)	$Q^2 > 0$; is inductively relevant to prediction (Hair et al., 2013).	$Q^2 \geq 0.08$
		- q^2 effect size	Strong = .35, moderate = .15, and weak = .02 (Hair et al., 2013).	$q^2 \geq 0.001$
		Path coefficient (β) and Statistical significance of t-value	t-value, 1.65 @ a Significant level of 10%, 1.96 @ a significant level of 5%, and 2.58 @ a significant level of 1% (Hair et al., 2011).	t-value ≥ 2.47
		Nomological validity	The formative construct should be strongly related to other conceptually related constructs in the study model (Peng & Lai, 2012).	All of the relationships discovered within the nomological net were significant.

Source: (Ali, 2017, p. 70)

3.6.7.4 Reflective/formative model specification

This study incorporates both reflective and formative measurement components within its overall design. Consequently, it is of the utmost importance to determine if a particular construct utilized in the research model is reflective or formative. This is because the incorrect specification of the constructs might lead to skewed estimations of the link between the components of the structural model (Blut, 2016; Jarvis et al., 2003; Vilma & Egle, 2007). Based on this lens, the study model's constructs were categorized as either reflective or formative. First and foremost, specifying the reflective and/or formative measurement model is aided by understanding the theoretical orientation of causality between each latent variable and its indicators. Data from field research helped put them into much more context.

All indicators in the reflective indicator model are meant to reflect the same latent variable. Therefore, the direction of causality is from the construct to the indicator (see Figure 3-2a). Because all indicators in a latent construct share the same theme, there is a strong relationship between them and the belief that they are interchangeable (Jarvis et al., 2003). Due to the inter-correlation among the indicators, modifications made to one hand may impact the outcomes of the other indicators. Nevertheless, alterations to the indicator do not lead to changes in the interpretation of the underlying variable. Consequently, removing one or more signals may not alter the conceptual domain of the latent variable (Jarvis et al., 2003). In addition to this, it is essential for all of the indicators in a reflective model to have the same causes and consequences.

However, in the formative model, causality runs through the indicators to the latent variable (see Figure 3.2b). Because the indicators are considered uncorrelated in this scenario, removing any item may have a major effect on the latent variable; that is, an alteration to one item could impact to the entire meaning of the latent variable (Jarvis et al., 2003). Therefore, it is crucial to determine the indicator used in the measurement model, as this must be in keeping with the theoretical foundation. The conceptual framework for distinguishing between reflective and formative components is laid out in Table 3.5.

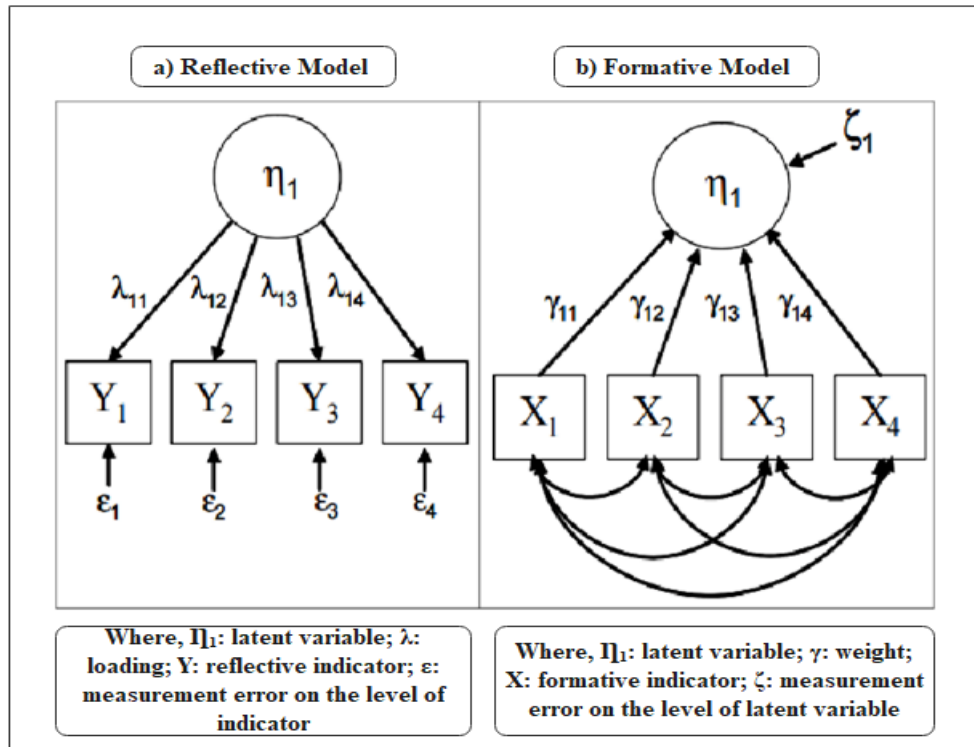


Figure 3. 2: Reflective and formative measurement model. Source: (Bollen & Lennox, 1991, p. 306)

The theoretical underpinnings of the connection between the latent variable and its underlying constructs are shown through reflective and formative models in Figure 3.2 and Table 3.5, respectively. Accordingly, the model used in the present investigation combines reflective and formative components, adhering to the standards of well-known PLS-based methodological studies such as Petter et al. (2007) and Jarvis et al. (2003). According to the existing literature and the results of the qualitative field study, the constructs relating to CP dimensions, job satisfaction, and motivation consequences are reflecting, whereas the constructs relating to performance relationship formation are second-order formative. This research is more reflective in nature.

Table 3. 5: Decision rules for identifying a construct as reflecting or formative

Decision Rules	Reflective Model	Formative Model
Direction of causality	Construct to indicators; the construct is reflected in the indicators.	Indicators to construct: the indicators are the properties of the construct that define it.
Interchangeability of the indicators/items	Indicators should be comparable and usable in place of one another.	There is no requirement that indicators have the same or similar material.
Co-variation among the indicators	It is assumed that indicators will vary in conjunction with one another.	Indicators don't always have to vary together.
Nomological net of the construct indicators	The nomological network of the indicators ought to exhibit uniformity, whereby all hands possess identical antecedents and consequences.	The nomological network of the indicators may exhibit variations, as these indicators are not obligated to possess identical antecedents and consequences.

Sources: Adapted from Table 1 (Ali, 2017; Jarvis et al., 2003).

3.6.7.5 Reflective measurement model assessment

The observed variables were analyzed to determine the validity and reliability of the reflective measurement model. Validity was evaluated using convergent validity and discriminant validity concerning the observed indicators of each reflective construct, and reliability was measured using indicator reliability and internal consistency reliability (Jarvis et al., 2003). Table 3.4 shows the steps for analyzing the reflective measurement model. Furthermore, a quick explanation of the reflective model analysis is provided below.

3.6.7.5.1 Indicator reliability

First, this study checked to see how accurate the indicators were so the researcher could evaluate the measurement model. Indicator dependability depicts the extent to which a given indicator corresponds to its corresponding latent variable by loading on that variable. Looking at their loadings, you can tell how strongly several signs fall under a given construct. Several metrics are employed in PLS analysis to determine an indicator's validity: indicator (i) weights and (ii) loadings and their significance in the reflective and formative models (Hair et al., 2011a). Hulland (1999) argues that a factor with a very low loading contributes very little to the model's explanation. A larger loading indicates stronger relationship between the indicators, and a lower loading indicates weaker relationship. Researchers have different opinions on what constitutes an adequate loadings score. According to Hulland (1999), for instance, the construct may account for more than half of the observed variation. Chin (1998) states that most loadings should be 0.60 or above and that 0.70 is preferable. However, the latest research says that 0.70 or higher is an appropriate loading, with 0.40 being acceptable for exploratory analysis

(Hair et al., 2011; 2013, 2017, 2021; Wong, 2013). The minimally acceptable loading scores for the indicators used in this research are provided with excellent support from the aforementioned reviewed literature, which can be seen above. Therefore, this research concluded that a loading score of 0.70 was sufficient. Reducing the number of indicators until the minimum acceptable score of 0.70 was reached enhanced reliability of the indicators and, consequently, the accuracy with which the genuine relationship between the constructs used in the research model could be estimated.

3.6.7.5.2 Internal consistency

Internal consistency, also known as construct dependability, is the focus of the next section of the reliability analysis. While indicator reliability refers to how well indicators within a latent variable perform, internal consistency evaluates how well the latent variable performs overall. When conducting studies in the social sciences, researchers typically use Cronbach's Alpha to test for internal consistency (Wong, 2013). On the other hand, recent research, like that of Ballestar et al. (2016), claims that Cronbach's alpha provides conservative measurements of internal consistency. In contrast, composite reliability scores continue to represent the limit of internal consistency. Using composite reliability ratings as an indicator of construct internal consistency is becoming increasingly common. Thus, that's the method used here. Internal consistency is characterized in PLS as follows:

$$\text{Internal Consistency} = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum \text{Var}(\epsilon_i)}$$

Where λ_i denotes factor loadings (simple correlation between items and constructs) and $\text{Var}(\epsilon_i) = 1 - \lambda_i^2$ denotes the unique/error variance.

In addition, academics have different opinions on what value of Cronbach's Alpha or composite reliability should be considered statistically significant in social science studies. Although LISREL was used in this investigation, Bagozzi and Yi (1988) claimed that scores above 0.60 were preferable. The composite reliability and Cronbach's Alpha cutoff value in PLS-SEM are equal to or more than 0.70 (Hair et al., 2013a) and 0.60 (Ballestar et al., 2016), respectively. In accordance with the previous research, the cutoff value for each of the latent variables in this study was determined by using the composite reliability values of 0.70.

3.6.7.5.3 Convergent validity

The concept of convergent validity is used to explain the connection between different measures of the same latent variable. Latent variables with scores of 0.5 or higher are considered to have convergent validity in PLS-SEM according to the average variance explained (AVE) criterion (Ballestar et al., 2016; Hair et al., 2013; Wong, 2013). For convergent validity to be established, the latent variable must be

able to account for at least 50% of the variation in its indicators as a score of 0.5 (Wong, 2013). The current research adopts a cutoff value of 0.5 for the AVE, consistent with the PLS based studies. According to Chin (2010), AVE is defined as:

$$AVE = \frac{(\sum \lambda_i^2) \text{ var } F}{(\sum \lambda_i^2) \text{ var } F + \sum \theta_{ii}}$$

Where λ_i , F , and θ_{ii} indicate factor loading, factor variance, and unique/error variance, respectively.

3.6.7.5.4 Discriminant validity

The third and last criterion for validating the measurement model is the evaluation of discriminant validity. Discriminant validity is the degree to which separate latent variables can be used to explain distinct situations within the same research model (Ballestar et al., 2016). The cross-loadings matrix and Fornell Larcker's criteria of diagonal inter-construct correlation are two common techniques used to test discriminant validity by comparing the square root (SQRT) of AVE for one set of latent variables to that of another group of latent variables along a diagonal direction (Ballestar et al., 2016; Hair et al., 2013). This study follows the previous literature by investigating discriminant validity based on both criteria. To do so, the study first evaluates the cross-loading matrix, excluding any items whose correlations are lower than the average across all other items in the matrix (across both rows and columns). The Fornell-Larcker criteria for evaluation included the representative latent constructs of the indicators that fulfilled the cross-loading assessment requirements. All latent constructs in the current study model met the Fornell-Larcker criterion for discriminant validity.

3.6.7.5.4.1 Discriminant validity at construct level

The method of measuring the AVE proposed by Fornell and Larcker (1981) is widely used as an efficient criterion for establishing discriminant validity across reflective constructs. The inter-construct correlations and the square root of AVE are compared to determine discriminant validity. For the constructs to be considered discriminately valid, the square root of AVE needs to be greater than the correlations between the components.

Correlations between constructs are shown on the matrix's main diagonal, while the square root of AVE is shown in bold text on the other diagonal. Discriminant validity among the reflective constructs can be established if the off-diagonal elements (correlation of latent variables) in the appropriate rows and columns are less than or equal to the highlighted diagonal (square root of AVE) features (Azam, 2015; Gefen et al., 2000; Huang et al., 2013).

3.6.7.5.4.2 Discriminant validity at item level

Barclay et al. (1995) proposed another method for testing discriminant validity at the item level by employing a cross-loading matrix that takes into account measure loadings and cross-loadings. The constructs are displayed in the columns of the cross-loading matrix, while the measuring items are listed in rows. This format allows the researcher to assess the item-construct association at any time. Therefore, you may examine the discriminant validity of the construct-item connection using the correlation matrix. In order to establish the discriminant validity of the constructs, the loading of items contained within a construct (which is represented by columns) should be higher than the loading of any other item contained within the same column (Azam, 2015; Henseler et al., 2015).

3.6.7.6 Formative measurement model assessment

Along with the reflecting model, the formative model needs substantial evaluation criteria to be compatible with PLS-SEM analysis. Internal consistency, reliability, and convergent validity may not be as important as they once were, according to some studies; nonetheless, theoretical rationale and expert opinion are more beneficial when analyzing the formative model (Chandler et al., 2011; Hair et al., 2011a; Purwanto & Sudargini, 2021). Consequently, it is anticipated that the formative model will provide a more adequate explanation of the underlying connection (Ringle et al., 2012). PLS often entails carrying out a number of statistical tests in order to evaluate the overall quality of the formative model (Hair et al., 2011a).

The technique for evaluating the formative measurement model contains the following steps: (i) identifying the relative contribution (weights) of the indicators, (ii) determining the absolute contribution (loadings) of the indicators, and (iii) assessing redundancy and multicollinearity. If these are not thoroughly evaluated, the entire analysis becomes questionable (Hair et al., 2013). The major criteria for including an indicator in the formative model are its weight and loading. Even without a solid theoretical basis, there is substantial support for integrating an indicator with a high weight and load score in the formative measurement model. Only significant indicators should be removed from the preliminary model if strong theoretical justification supports their continued inclusion (Hair et al., 2011a).

This study considers only a single formative construct (i.e., performance relationship) with four indicators, which are teaching, research and publication, administrative, and managing external funds. From the four indicators, two of them (i.e., teaching and research & publication) were taken from existing literature (Albert et al., 2018; Jameel & Ahmad, 2020; Mohammadi & Karupiah, 2020), and other two (i.e., administrative, managing external fund) were taken from field study

that were further supported by the literature (see Chapter 4). In this sense, they are building blocks of the performance connection. As part of evaluating the formative measurement paradigm, this research investigates the redundancy and multicollinearity analysis of the indicators (Hair et al., 2011a, 2013a; Ringle et al., 2012).

In order to analyze whether or not the formative indicators are redundant, the researcher needs to evaluate the multicollinearity challenges in formative indicators (Hair et al., 2011). The variance influence factor (VIF) and multicollinearity analysis tolerance level scores predicted by Hair et al. (2013) are 5 and > 0.20 , respectively. If the VIF score of a single indicator is greater than 5 in PLS-SEM, for example, multicollinearity concerns with a formative concept are likely present (Hair et al., 2011). This signifies that the other indicators of the same construct retain 80% of the variation. Hence, a VIF score of 5 or more is considered a strong recommendation for eliminating an indicator, according to Hair et al. (2011). In this study, all four formative model indicators yielded fairly significant findings in this study, which agree with the required VIF and tolerance threshold.

3.6.7.7 The assessment of hierarchical construct

Once the primary constructs of the research model had been established, the next step was to examine the model's hierarchical structure and any multidimensional features. According to the hierarchical component model, the constructs being studied are hierarchical and include more than one dimension (Jarvis et al., 2003; Wetzels et al., 2009). A strong theoretical case in favor of using multidimensional constructs in the research model is necessary because it can explain the constructs' multi-connectedness and the interaction of the constructs with higher-order constructs (MacKenzie et al., 2011; Wetzels et al., 2009). As a consequence, the inclusion of a multidimensional construct in the study's framework is not well justified, the result may be an inadequate fit between the model and the data (Jarvis et al., 2003). Thus, formative and reflective items can be used to assess each dimension of a multidimensional construct (Petter et al., 2007). Finally, each component of the constructs must be adequately specified, regardless of their shape, to ensure that the measurement relationship is appropriate for the study's context (Jarvis et al., 2003).

3.6.7.7.1 Levels and modes of the hierarchical construct

It has been increasingly common practice in PLS-SEM modeling to make use of hierarchical constructs (Becker et al., 2012; Jarvis et al., 2003; Ringle et al., 2012). The inherent complexity of the latent variables and their respective dimensions in a multidimensional context, according to Johnson, Rosen, Djurdjevic, and Taing (2012), is expected to have a stronger predictive capacity of the contextual criteria

(Johnson et al., 2012). There are two types of relationships between latent variables that can be specified in a hierarchical model: formative and reflective, and reflective and formative (Becker et al., 2012; Ringle et al., 2012; Wilson, 2010). Hence, Figure 3.3 depicts a hierarchical model with numerous levels: (i) second-order, (ii) third-order, (iii) fourth-order, and perhaps more; however, second-order latent variables predominate in the current PLS-SEM literature. (Crocetta et al., 2021; Ringle et al., 2012; Wetzels et al., 2009). These connections may take the shape of reflective-reflective connections, reflective-formative connections, formative-reflective connections, or formative-formative connections (Becker et al., 2012; Ringle et al., 2012).

As a first step, in the **reflective-reflective type 1** mode, lower-order constructs are separated from and correlated with one another reflectively measured components (Becker et al., 2012). Lower-level constructs under the Type I relationship are identical according to reflective logic and can be modeled as formative. This leads to the reflective-formative type of hierarchical hidden variables model, the validity of which has been the subject of some debate (Lee & Cadogan, 2013). Second, the higher-order construct is an idea shared by several separate formative lower-order constructs in the **formative-reflective type III mode** (Becker et al., 2012). Although there are few illustrations of this model in the empirical literature, one possible application is measuring firm performance as a reflecting higher-order construct using numerous formative lower-order constructs or indices. Athletic performance is an important idea in strategic management (Becker et al., 2012). Formative constructs are effective in representing performance parameters that combine multiple performance-relevant attributes (Jarvis et al., 2003; Petter et al., 2007). Examples of formative latent variables contributing to firm performance include profitability and production efficiency. Profitability can affect strong performance by influencing sales volume and expenses, while production efficiency can affect athletic performance by influencing personnel qualifications, training, and supply efficiency. Third, in the **reflective-formative type II mode**, lower-order components are reflectively measured constructs that do not have a common source but generate a fundamental notion that fully mediates the influence on following endogenous variables (Becker et al., 2012). Despite not being explicitly operationalized as a formative higher-order concept, the multidimensional ‘STROBE’ construct (Strategic Orientation of Business Enterprises) (Venkatraman, 1989) may serve as an example. The ‘STROBE’ construct consists of the reflectively measured first-order components of riskiness, proactiveness, futurity, defensiveness, analysis, and aggression. As a fourth and final point, lower-order constructs are constructions that are formatively measured and merged to build a more abstract general notion in the **formative-**

formative type IV mode (Becker et al., 2012). This occurs commonly when multiple management-related concepts are collapsed into an overarching idea. As another example, consider firm performance as a higher-order construct (Becker et al., 2012). For instance, formative latent variables like political stability, regime fulfillment, and economic progress can be used to evaluate the success of the government at the higher-level latent variable level (Ali, 2017; Jarvis et al., 2003; Petter et al., 2007). Based on the foregoing theoretical frameworks, the reflective-formative (Type II) model (see Figure 3.3) is the most relevant to this investigation.

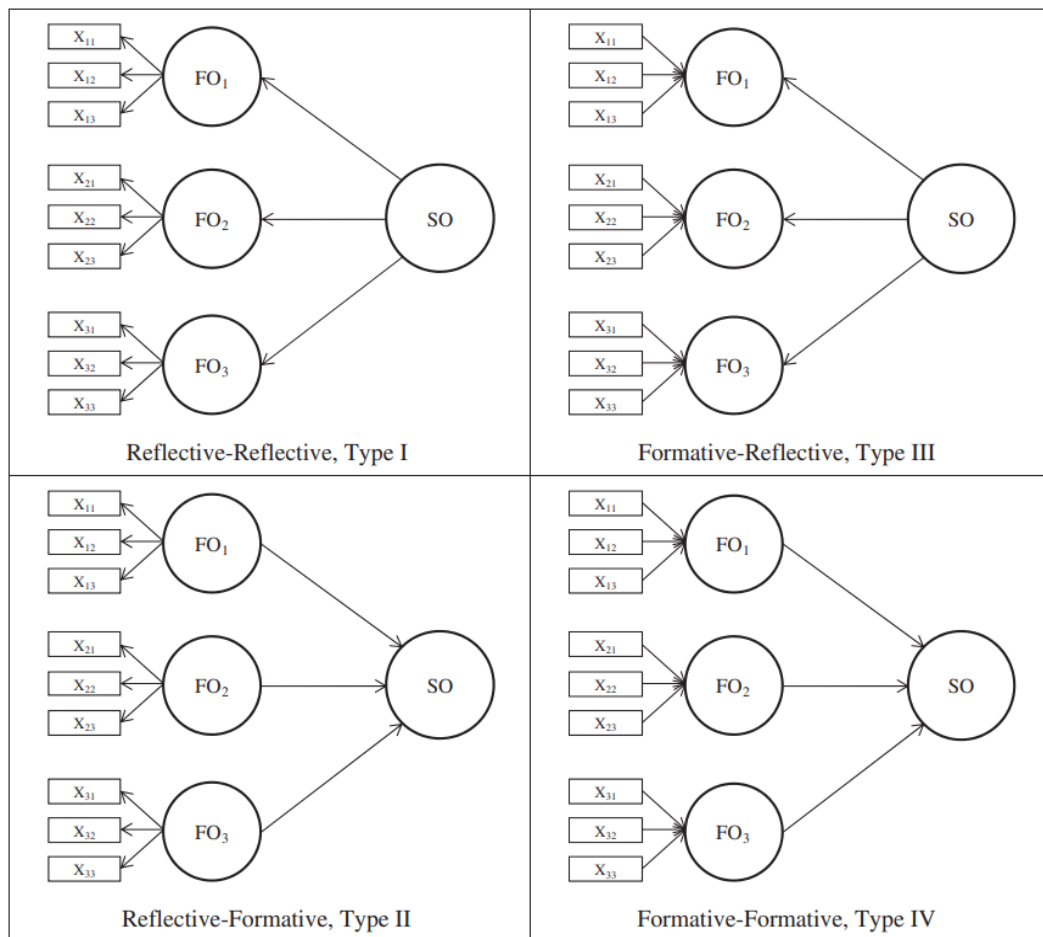


Figure 3. 3: PLS-SEM hierarchical latent variable models, Source: (Becker et al., 2012, p. 363).

3.6.7.7.2 Higher-order formative latent variables in the research model

With regard to the extant literature and field study findings, the performance relationship reveals a multidimensional construct that may be quantified. At the second-order level, it is a latent construct of formative type, with corresponding latent variables of the reflective type (Becker et al., 2012; Nunkoo & Ramkissoon, 2012; Ugaddan & Park, 2017). This study followed the reasoning of the reflective-formative hierarchical latent variable model by examining the connection between performance and indicators of teaching, research and publication, administration, and the management of external funds (Jarvis et al., 2003; Na-Allah & Ahmad, 2022; Yusfiarto et al., 2023). The values of these lower-order latent variables are subject to change as the subject matter shifts, and they are independent and not correlated with one another.

There are three methods for evaluating the parameters of a hierarchical latent variable model that have been proposed in the literature: (i) the repeated indicator approach (Lohmöller, 1989); (ii) the two-stage approach (Becker et al., 2012; Ringle et al., 2012); and (iii) a hybrid approach (Wilson & Henseler, 2007). The first two procedures are extensively employed in PLS-SEM analysis, although the latter is less prevalent (Becker et al., 2012). The higher-order latent variable in the **repeated indicator technique** is constructed from a lower-order latent variable, which reflects all the indicators shown in the model (Becker et al., 2012; Lohmöller, 1989; Wetzels et al., 2009). This can be done (i) by evaluating the second-order latent variable based on the loadings/weights of the first-order latent variable indicators, and (ii) by evaluating the second-order latent variable based on the loadings/weights of the second-order latent variable scores (Becker et al., 2012).

During the first step of the **two-stage procedure**, only the first-order construct is measured; in the second stage, the scores from the first-order construct serve as predictors of the second-order latent variable (Becker et al., 2012). The **hybrid approach** is implemented similarly to the repeated indicator approach. Still, it divides the indicators of first-order latent variables in half and uses one half to determine those variables and the other half to assess second-order constructs. This helps to avoid the artificially generated correlation problems that arise from using the repeated indicator approach (Becker et al., 2012; Wilson & Henseler, 2007). While all three methods could be used to conduct an accurate measurement analysis, it was decided to use a two-stage strategy to estimate the hierarchical model by reflecting latent variables at the first-order level and formative latent variables at the second-order level (Becker et al., 2012).

3.6.7.8 The structural model assessment

The structural model was assessed once the measurement model has proved substantial validity and reliability (Ballestar et al., 2016). Reviewing the path relationships, including loadings and path coefficients, is a key part of the PLS-SEM assessment of a structural model, which involves weighing the significance of anticipated relationships between the research model's constructs (Ballestar et al., 2016; Hair et al., 2013a; Ringle et al., 2012). Because of its accuracy in making predictions and providing estimates of connections between the research model's variables, structural model evaluation ranks among the most powerful analytical methods (Ballestar et al., 2016; Hair et al., 2011b; Ringle et al., 2012). For the purpose of measuring the structural model, researcher uses (i) the coefficient of determination (R^2 and f^2 effect size), (ii) the predictive relevance (cross-validation redundancy- Q^2 and q^2 effect size), and (iii) the path coefficients (β) and the significance (t) level (Ballestar et al., 2016; Ringle et al., 2012). It has been argued that R^2 and the significance of the path coefficient are the two most important criteria for evaluating structural relationship (Esfandiar et al., 2019; Hair et al., 2011a). The following sections describe the structural model's evaluation criteria.

3.6.7.8.1 Coefficient of Determination

The coefficient of determination describes the ability to explain and predict endogenous constructs of a model (Ringle et al., 2012). Coefficient of determination (R^2) and effect size (f^2) values are employed as empirical test criteria (Ringle et al., 2012). R^2 is the coefficient that describes the proportion of the variance accounted for by the latent endogenous constructs that constitute the source of the latent exogenous constructs (Ballestar et al., 2016). The R^2 value for an exogenous latent construct explains how well it explains the corresponding endogenous latent construct. It is through this algorithm technique (bootstrapping) that PLS determines its R^2 value. According to Suhartanto (2016), the endogenous latent components of a structural model should have R^2 values of 0.67 (substantial), 0.33 (moderate), and 0.19 (weak) for accurately portraying strong, medium, and weak associations, respectively. According to the findings of the research carried out by Ballestar et al. (2016), a R^2 value of 0.20 for a particular endogenous latent component indicates a high value. According to Hair et al. (2013), the appropriate level of R^2 value shifts depending on the kind of research being carried out.

The effect size is another factor to consider when calculating the coefficient of determination. It is generally accepted that effect size (f^2) is a useful supplement to R^2 since it evaluates how much each exogenous latent variable contributes to explaining the related endogenous latent variable (Ballestar et al., 2016). This provides the researcher with the opportunity to evaluate the incremental explanatory power of an independent exogenous latent construct on a dependent endogenous

latent construct (Ringle et al., 2012). It has been determined by Hair et al. (2013) that the f^2 of 0.02, 0.15, or 0.35 represents a weak, moderate, or high level of effect. On the other hand, Ringle et al. (2012) argue that f^2 values of 0.30 or less are more realistic. The size of the effect (f^2) is computed as follows by Chin (2010):

$$f^2 = \frac{R^2 (\text{included}) - R^2 (\text{excluded})}{1 - R^2 (\text{included})}$$

3.6.7.8.2 Predictive relevance

Predictive relevance is the process of estimating Q^2 and the magnitude of the q^2 effect through cross-validation. Both metrics, when combined with R^2 , strengthen the claims statistically (Ballestar et al., 2016). Although many studies have used PLS-SEM for prediction, some researchers only look at the R^2 value and don't evaluate the predictive importance of Q^2 . This severely limits the predictive power of the structural relationship (Hair et al., 2013). The predictive relevance method is a measurement technique that explores how each external latent variable explains the related endogenous latent variables (Ballestar et al., 2016). Geisser (1975) and Stone (1974) made the predictive sample reuse method, where Chin (2010) suggested for figuring out predictive relevance. In PLS, Q^2 values for each concept are found using the blindfolding procedure (Ballestar et al., 2016; Hair et al., 2011b, 2013a). Ballestar et al. (2016) state that if Q^2 is less than 0.5, the predictive importance of exogenous latent constructs is greater than that of endogenous latent constructs. However, there is some evidence in the literature that suggests $Q^2 \geq 0$ as the accepted value when using the blindfolding process in PLS analysis, which would indicate that a value below 0 indicates that the model is not predictively reliable (Hair et al., 2011b, 2013a). Chin (2010) defines cross-validated redundancy (Q^2) as:

$$Q^2 = \frac{\sum_D E_D}{\sum_D O_D}$$

Where D is the omission distance, E is the sum of the squares of prediction error, and O is the prediction mean.

To make more informed choices, the q^2 effect size was employed to complement the statistical significance of the associations between the exogenous and endogenous latent variables (Arrami & QingXiang, 2021; Desalegn & Solomon, 2022; Fan, 2001). A q^2 effect size analysis is required whenever a change in Q^2 requires knowing more about the relative impact of the structural link for anticipating the indicators of an endogenous latent construct (Ringle et al., 2012). When determining the q^2 effect size in PLS, the Q^2 value is used, and the procedure followed is called blindfolding. It has been suggested by Hair et al. (2013) that q^2

values of 0.02, 0.15, and 0.35 indicate a low, moderate, and high level of predictive relevance for each effect. Chin (2010) suggests the following formula for calculating the magnitude of the q^2 effect:

$$q^2 = \frac{Q^2 (\text{included}) - Q^2 (\text{excluded})}{1 - Q^2 (\text{included})}$$

3.6.7.8.3 Path coefficients (β)

The path coefficient is used in the structural model to describe the associations between latent variables (Ballestar et al., 2016). The absolute value of the path coefficient explains why a value of 0.1 indicates a weak influence, 0.3 means a moderate effect, and a value of more than 0.5 indicates a substantial impact on the relationship (Ballestar et al., 2016). Typically, the significance level of an association between two latent variables is defined as *p < 0.05, **p < 0.01, and ***p < 0.001; however, the p-value for a path between two latent variables can be any integer number between 0.000 and 1.000 (Lowry & Gaskin, 2014). The value of the path coefficient (β) and the significance level (t) are determined by the bootstrapping methods in PLS (Ballestar et al., 2016; Hair et al., 2013).

3.6.7.8.4 Nomological validity

Nomological validity is the process of determining if the research model's nomological network accurately represents the relationships (see Figure 3.4) between the focal construct's items and those of other constructs (MacKenzie et al., 2011). Thus, nomological networks emphasize the significance of the connections between the constructs of interest (Dowling, 2016; Rutherford & Kuratko, 2016). When the research model comprises higher-order components, it is necessary to conduct measurements of the nomological relationships (Ringle et al., 2012). A significant direct path can be seen, for instance, if it is found that the immediate effect on the sub-constructs of the focal construct is greater than the indirect effect, demonstrating that the hypothesized multidimensional connection is inconsistent with the data and the nomological net needs to be redesigned (MacKenzie et al., 2011). In reality, nomological validity assessment aims to ascertain the degree of structural similarity between the antecedent and/or consequence constructs in the near neighborhood (Chin, 2010; Wetzels et al., 2009). The nomological interaction between indicators of the focal construct is determined by the statistical significance of the path coefficient on each side (MacKenzie et al., 2011). There is more reason to think that the indicators are reliable because of the strong path association, which shows that the central construct is linked to all other constructs in the nomological net (MacKenzie et al., 2011).

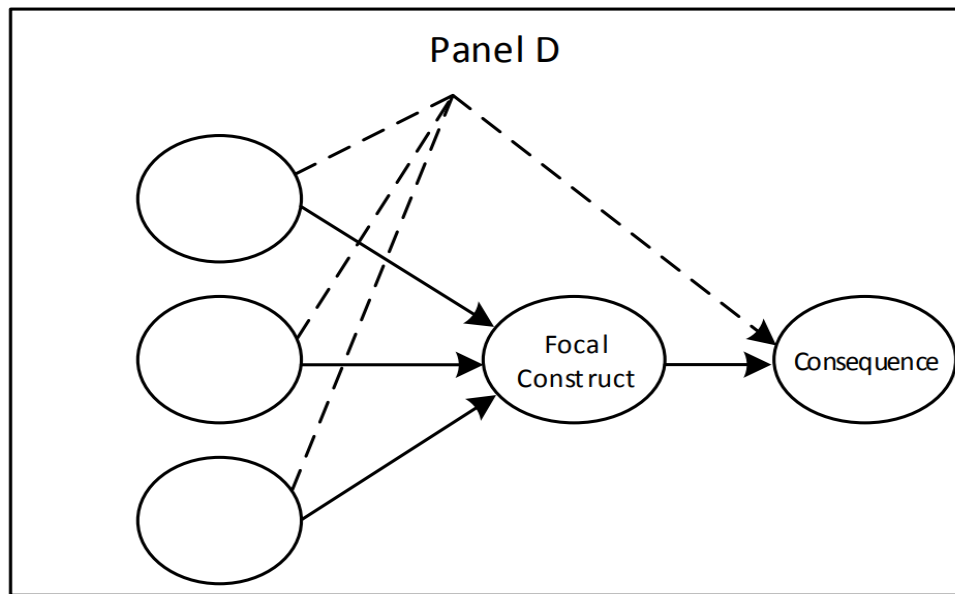


Figure 3. 4: Relationship between a multidimensional focal construct. Source: (MacKenzie et al., 2011).

3.6.7.8.5 Power analysis

The researcher can get the right conclusion about the null hypothesis with the use of power analysis, which suggests that strong statistical power can measure the effects of treatments (Murphy et al., 2014). Power analysis plays a crucial role in aiding researchers in the acceptance of the alternative hypothesis (H_1) and the rejection of the null hypothesis (H_0), hence mitigating the probability of committing Type I and Type II errors (Mazen et al., 2017). There are three variables that influence power: (i) the number of samples taken (N), (ii) the size of the impact, and (iii) the level of alpha (α) a statistical significance (Cohen, 1988; Murphy et al., 2014). According to Cohen (1988), decreasing the impact size by altering the treatments with a large enough sample size is possible. If the p-value for the test of statistical power is more significant than 0.80, then the predicted association is likely to be accurate (Cohen, 1988).

3.7 CHAPTER SUMMARY

The purpose of this chapter was to explain the research's sound methodological approach. This chapter explained each step of the investigation in chronological order, from the study paradigm to the analysis processes. This is achieved by referencing relevant studies that support the claims made. The study employed a mixed-method research strategy. Thus, the techniques and processes employed in the qualitative field research and the quantitative survey were presented independently. The field interview data collection technique, as well as the methodologies for analyzing the interviews, were described. In the next section, the researcher will dissect the in-depth interviews and use the results to modify or rebuild the research framework.

CHAPTER 4: QUALITATIVE STUDY

4.1 INTRODUCTION

The qualitative field research was carried out among the academic professionals of ten different public universities in Bangladesh. The academic professionals from those universities were asked to provide information regarding their own experiences in career planning and performance-related factors. The interview went more smoothly because a semi-structured interview schedule covered all the bases of the proposed model. The primary purpose of the field research was to identify potential factors and items of the proposed research model. It was necessary to conceptualize and legitimate the factors and items of the original research model from the literature to apply them to the present study.

This chapter detailed the methodology used in the field study and the findings of the qualitative investigation. In the following section of this chapter, a model is constructed based on the findings, and the field study results are compared to the initial research model. Further literature review was performed to validate the identified elements and items from the field research. In this final section, the research model was refined based on the field study findings.

4.2 FIELD STUDY PROCESS

In line with the mixed-methods design, qualitative data were first collected through field research. A semi-structured interview schedule was used to help guide participants through the field research process. The NVivo software was used to analyze data. The subsequent sections detail the field study process for this study.

4.2.1 Interview Schedule

A semi-structured interview schedule was developed to explore the aspects of the initial study model. The first part of the interview schedule includes the demographic information of the respondents such as, respondents' age, gender, family income, designation, university service length, marital status, last educational qualification, department, and the name of the serving university. The second section includes questions pertaining to respondents' career planning, job satisfaction, and performance-related experiences (see Table 4.1). The first question contained respondents' overall understanding of academic professionals' career planning. The second question involves the relationship between career planning and the performance of academic professionals. Then, there were a few questions concerning career planning dimensions and their sub-dimensions. The fourth question was about the job satisfaction of academic professionals and its related items. The fifth question was related to the impact of career planning dimensions on job satisfaction, which was also part of the initial study model. Question number

six involves the effect of job satisfaction on the performance of professionals. Besides, different aspects of performance were addressed in question number seven. Motivation and its different aspects were investigated in question eight. Finally, the moderating role of motivation on job satisfaction and performance was addressed in question number nine. In the interview process, necessary probing was done to explore the in-depth reasoning of the factors and their relationships.

Table 4. 1: Semi-structured interview schedule pattern for field study

Aspects	Questions	Descriptions
Career planning of academic professionals definition	1	Understanding of academic professionals' career planning
Career planning and performance relation	2	Relationship between career planning and performance of academic professional
Dimensions/ key factors of career planning	3	Key factors concerning career planning dimensions and their sub-dimensions
Job satisfaction	4	Job satisfaction of academic professionals and its related items
Impact of CP dimensions on job satisfaction	5	Impact of career planning dimensions on job satisfaction
Effect of job satisfaction on performance	6	Effect of job satisfaction on the Performance of Professionals
Different aspects of the performance of academic professionals	7	Different aspects of performance were discussed in question number seven
Motivation	8	About motivation and its different items
Impact of motivation on job satisfaction and performance	9	Moderating the role of motivation on job satisfaction and performance of academic professionals

4.2.2 Sample and Sampling

Public universities of Bangladesh were chosen as the study site for career planning and performance of academic professionals based on the judgment of the researcher considering the social, economic, and environmental significance of the sample university as the number of public universities have been growing rapidly in the past few decades. The respondents in this study were academic professionals from the selected universities (professor, associate professor, assistant professor, and lecturer) who were directly or indirectly involved in career planning and performance activities. The interviewee was approached on a random basis using the respondents' cell phone numbers, which were obtained from the university website and the university database, respectively. The respondent was approached

by phone to obtain their voluntary consent and to set up an interview time slot. Participants were given interview kits that explained the study's goals and provided more context before the in-depth interview. At the outset of each interview, participants were asked to sign a consent form indicating their willingness to participate. The formal interview was conducted after obtaining the voluntary consent of the interview participants, and then it was documented and recorded both by handwriting and using an audio recording device (smartphone).

4.2.3 Interview and Data Collection

Although quantitative analysis uses a large sample to produce statistical and numerical results, qualitative investigations, in contrast, use a small number of samples (Alam, 2020). At the very outset, the researcher intended to conduct 10 in-depth interviews because it was recommended that a sample size of 10 would be adequate and appropriate for qualitative investigations of homogeneous individuals (Sandelowski, 1995). In this study, 21 in-depth interviews were considered as the university in Bangladesh has heterogeneous academic concentrations such as general education, science and technology education, agricultural education, engineering education, and medical education. The researcher expressed contentment with the 21 in-depth interviews that were conducted to arrive data redundancy stage (Guest et al., 2006; Mason, 2010). In reality, data saturation was achieved on the 19th interview. Two further interviews were undertaken to confirm the saturation of the data, where no new data was discovered from the extended interviews. As a result, the number of interviews is judged sufficient because there is no consensus on the minimum sample size for qualitative investigations, and this topic is still controversial in academia (Collins et al., 2007). In general, a small sample size is linked with qualitative research, while a large sample size is affiliated with quantitative research (Collins et al., 2007). Furthermore, some research reveals that a sample size of 12 is the minimum for conducting an interview-based study (Collins et al., 2007; Guest et al., 2006). Another study suggested that the appropriate size for different types of qualitative investigations is 15-20 for homogeneous interviewees (Sohel et al., 2021).

As previously stated, all in-depth interviews were both handwritten and audio recorded with the participants informed consent. Each individual interview lasted roughly 40 minutes to 90 minutes. Throughout the interview, respondents were asked about their experiences and impressions of the various components of career planning dimensions, as well as their relationship with job satisfaction and academic performance.

4.2.4 Qualitative Data Analysis

Following the completion of the interviews, the researcher attentively listened to and documented each electronically recorded interview in the participants' original language (Zhou, 2011). During this process, 21 in-depth interviews were recorded and transcribed into English for data analysis. The researcher himself is involved in the data transcription process as he has linguistic skills in both Bengali and English, which help to retain the interview texts' theme or meaning. The NVivo software was used to analyze the interview data. Because the purpose of this study is to contextualize the basic model, content analysis was deemed more relevant than other approaches (Deterding & Waters, 2021; Siman et al., 2016; Sotiriadou et al., 2014). The analysis was limited to (i) determining the factors and items from each in-depth interview that were relevant to the career planning dimensions, job satisfaction, and professional performance and (ii) assessing the relationship between the factors. All of the factors and items were identified using an open coding method (Jeong et al., 2016; Shet et al., 2021). A total of 65 items were discovered under 10 different categories. Each item was discovered as a "Node" while exploring NVivo's 'Text Search' function, and the associated themes of the specific objects were marked under "coded text." Using this method, the researcher could locate all 65 items and their respective constructs. After that, the connections and interrelationships between the constructs were identified. The following figure (see Figure 4.1) explains the process of qualitative data analysis.

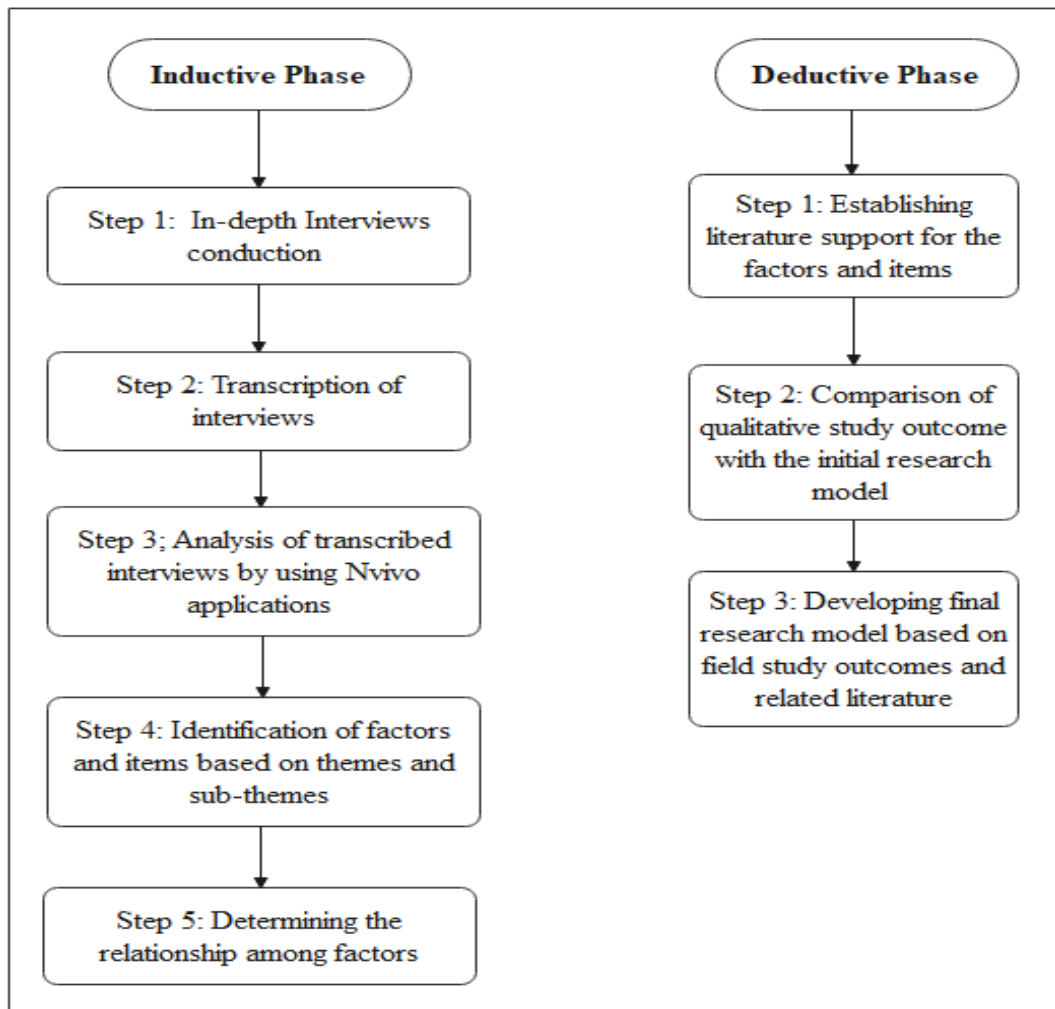


Figure 4. 1: Qualitative data analysis process (inductive and deductive models)

4.3 THE FIELD STUDY FINDINGS (Inductive Process)

4.3.1 Demographic Profile of the Participants

During the audio recording of the interview, the demographic profile of each interview participant was also collected. The demographic variables of this study addressed participants' age, gender, family income, designation, university service length, marital status, last educational qualification, academic department, and the name of the serving university. It was found that out of 21 interviews, 15 were male, and 6 were female. The percentage of females and males was 29 and 71, respectively, which is quite representative in the context of Bangladesh. Besides, most of the participants (47.62%) were aged between 30 to 40 years, and their average service length was nearly 9 years.

Table 4. 2: Participants' demographic profile

Demographic Profile	Dimensions	Number of Interviewees	Percentage (%)
Age	Below 31 years	6	28.57
	31-39 years	10	47.62
	Above 40 years	5	23.81
	Total	21	100
Gender	Male	15	71.43
	Female	6	28.57
	Total	21	100
Family income	Less than 50 K	4	19.05
	50-64 K	4	19.05
	65-79 K	3	14.28
	80-94 K	4	19.05
	95-104 K	5	23.81
	More than 104 K	1	4.76
	Total	21	100
Designation (Academic Position)	Professor	5	23.81
	Associate Professor	2	9.52
	Assistant Professor	10	47.62
	Lecturer	4	19.05
	Total	21	100
University service length	Less than 4 years	5	23.81
	4-8 years	7	33.33
	9-13 years	4	19.05
	More than 13 years	5	23.81
	Total	21	100
Marital status	Married	19	90.48
	Unmarried	1	4.76
	Others	1	4.76
	Total	21	100
Last educational qualification	Bachelor or equivalent	1	4.76
	Masters or equivalent	12	57.14
	MPhil/Masters (Research)	4	19.05
	PhD	4	19.05
	Total	21	100
Background (Department)	Business	12	57.15
	Science	7	33.33
	Humanities	2	9.52
	Total	21	100
Serving university types	General universities	7	33.33
	Science & technology	7	33.33
	Engineering & technology	4	19.05
	Agricultural universities	3	14.29
	Total	21	100

Source: Field study, 2022

At the same time, the average family income of the participants was nearly eighty thousand. Again, of the 21 participants, almost 90% were married, and 95% of them were above master's degree holders; even four of them completed their PhD too. Further, out of the 21 participants, there were five professors (23.81%), two associate professors (9.52%), ten assistant professors (47.62%), and four lecturers (19.05%) from four different categories of public universities in Bangladesh. Furthermore, among the 21 participants, almost 57% were from a business background, 33% were from a science background, and 9.5% were from a humanities background. In terms of education, the majority of interviewees had master's or equivalent degrees (57.14%), but only four of them had PhD (19.05%). The demographic profiles of the participants are detailed in Table 4.2.

4.3.2 Career Planning and Performance Relationship

Based on the interview data analysis, it revealed that there is a relationship between career planning and the performance of academic professionals. Most of the participants of the interview stated that a significant positive relationship was associated with career planning and the performance of academic professionals. It was also suggested that job satisfaction and organizational commitment are important elements that influence job performance through career planning (Lee & Lee, 2018). Besides, Employee career satisfaction and career management were positively associated with organizational support for career development and career management activities (Barnett & Bradley, 2007). The degree of relationship between career planning and performance is presented in Table 4.3.

Table 4. 3: Relationship between career planning and performance of academic professionals

Relation	Pattern of Relation	Interview																					%
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
Career Planning→ Performance Relationship	Absolutely positive	X	X		X	X	X		X				X		X	X		X	X		X	X	100
	Positive			X				X		X	X	X		X						X			61.9
	No relation																X						33.33
																							4.76

Source: Field study, 2022

The above Table shows that there is a significant relationship between career planning and the performance of academic professionals. It was presented that almost 62% of participants claimed an absolutely positive relation between the terms, whereas 33.33% of participants mentioned a positive relation between them.

4.3.3 Identifying Factors and Items

As previously stated, all of the factors and items were detected using NVivo's "Text Search" function. The interview data revealed many factors and items of career planning issues. Not all those factors are equally important for the current study context. So, this study only emphasizes those factors which are most relevant and consistent with the study's objectives. Consequently, the open-ended responses provided valuable information and were utilized to derive meaningful conclusions, as elaborated in the findings section. Nevertheless, to offer a concise summary of the concerns expressed by the participants, researcher generated a visual representation known as a word cloud (see Figure 4.2). Such aspects as 'academic,' 'professionals,' 'job,' 'satisfaction,' 'performance,' 'career,' 'planning,' 'motivation,' 'respondents,' 'important,' 'elements,' and 'mentioned,' on the forefront of the participants' concerns. They also highlighted 'pay,' 'promotion,' 'working,' 'environment,' 'faculty,' 'development,' 'university,' 'teaching,' 'research,' 'publication,' 'administrative,' 'fund,' and 'grant.' These are undeniable signs that the CP has addressed not only job satisfaction issues but also motivation and performance relationships among academic professionals from various public universities in Bangladesh. The identified factors and items are addressed below.



Figure 4. 2: Word cloud of qualitative survey responses

4.3.3.1 Factors of career planning dimensions

The interview data revealed several factors or dimensions of career planning. Of them, four were regarded as the key factors that were responsible for both job satisfaction and performance of academic professionals. When the participants were asked about factors of career planning dimensions, most of them focused on the factors of pay structure, promotion system, sound working environment, and faculty development program (extracted from In-depth Interview (IDI)- 1,2,3,5,7,8, 10, 15...21). Although there were some other factors discussed under the career planning dimensions, all of those factors were not given equally important by the majority of participants. Therefore, some factors were eliminated from the initial research model. So, the key factors of career planning dimensions that lead to job satisfaction are briefly discussed as follows:

4.3.3.1.1 Pay structure

According to the interview data, there were six items (child nodes) under the main factor (parent node), which is the pay structure in the study area. These items are a satisfactory salary package, bonus and allowances, number of increments, full medical support, transportation facility, and paid-study-leave policy. However, satisfactory salary packages were cited as the key item, which was strongly mentioned (see Table 4.4) by most of the interview participants (85.71%). One of the interview participants also mentioned that-

“satisfactory salary package is the urgent demand of academic professionals in the public universities of Bangladesh” (extracted from IDI-17, Male, Age: 38).

The second most important issue is the increase in the number of increments, which is also a requirement of academic professionals for their job satisfaction. Besides these, academic professionals also demanded transportation facilities, competitive bonuses and allowances, full medical support, etc. The following Table (see Table 4.4) contains interview details regarding the pay structure as the career planning dimensions.

Table 4. 4: Items of pay structure

Parent Node	Child Nodes	Interview																					%	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	100	
Pay Structure	Satisfactory salary package	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X	X	X	X		85.71
	Bonus and allowances		X		X		X	X	X	X		X		X		X		X				X		52.38
	Number of increment	X		X	X	X			X	X	X		X		X		X	X	X				X	61.9
	Full medical support			X			X		X	X		X		X		X		X	X			X		47.62
	Transportation facility	X	X		X			X			X		X	X		X	X				X	X	X	57.14
	Paid-study-leave policy		X	X					X	X		X			X			X	X				X	

Source: Field study, 2022

4.3.3.1.2 Promotion system

There were six items (child nodes) found under the promotion system for academic professionals as the main factor (parent node). The interview data reveal that academic professionals are mainly associated with the promotion system, which has a relationship with both job satisfaction and performance (extracted from IDI-7, 11, 15, and 20). The fair chance of promotion, due time promotion, publication requirement, promotion facility during study leave, eradicating bureaucratic complexity, and rebate facility for promotion are the key items of the promotion system on which academic professionals engage themselves. One of the interview participants mentioned that-

“due to the delay in promotion may cause dissatisfaction which led to the depression and poor performance” (extracted from IDI-13, Female, Age: 30).

The scenario is also depicted in Table 4.5, which clearly shows that about 81% of participants demanded due-time promotion in their profession. Besides this, a fair chance of promotion also holds the second most important item (66.67%), which influences the job satisfaction of academic professionals. The following Table 4.5 details the interview output of numerous items relevant to the academic and professional promotion system.

Table 4. 5: Items of promotion system

Parent Node	Child Nodes	Interview																					%
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	100
Promotion System	Fair chance of promotion	X	X	X				X			X		X	X	X	X	X		X	X	X	X	66.67
	Due time promotion	X	X	X	X		X	X	X	X	X	X	X	X		X	X			X	X	X	80.95
	Publication requirement	X		X	X				X						X			X	X			X	38.09
	Promotion facility during study leave	X	X			X		X		X	X	X	X			X		X		X	X		57.14
	Eradicate bureaucratic complexity	X		X			X						X	X	X		X		X		X		42.86
	Rebate facility for promotion		X		X				X	X		X				X	X						33.33

Source: Field study, 2022

4.3.3.1.3 Sound working environment

On the basis of interview data, there were eight items (child nodes) derived under the sound working environment to explore as the dimensions of career planning. All those items were employed to measure the working environment condition and also try to show how those items lead to the job satisfaction of academic professionals. The items of a sound working environment are a well-furnished room, ICT facility, politics-free environment, security from harassment, recreational and refreshment facility, collaborative teaching aid facility, access to academic resources, and availability of staff facility. When interview participants were asked about the sound environment, they mainly focused on the well-furnished room (71.43%) composed of all modern equipment and facility. They also highlight the item of collaborative teaching aid and facility, which contain the second most value (66.67%). All other elements of a sound working environment are presented in Table 4.6.

Table 4. 6: Items of sound working environment

Parent Node	Child Nodes	Interview																					%	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	100	
Sound Working Environment	Well-furnished room	X	X		X	X	X	X			X		X	X			X	X	X	X	X	X		71.43
	ICT facility	X	X	X					X	X		X			X	X		X		X		X		52.38
	Politics free environment	X		X	X		X		X	X	X		X	X			X		X		X			57.14
	Security from harassment			X			X		X			X	X	X	X						X			38.09
	Recreational and refreshment facility	X	X		X	X	X	X	X			X		X					X	X	X	X		61.9
	Collaborative teaching aid facility	X		X	X		X			X	X		X		X	X	X	X	X	X		X		66.67
	Access to academic resources		X			X	X	X			X			X						X	X	X		42.86
	Availability of staff facility		X	X	X					X	X		X			X		X						38.09

Source: Field study, 2022

4.3.3.1.4 Faculty development program

The results of the interviews show that seven distinct factors (items) for measuring faculty development programs on job satisfaction and performance of academic professionals. They were associated with training on recent research tools, career development programs, collaboration with foreign universities, financial assistance for attending conferences, self-assessment-based training, current curriculum-based training, and foundation training program. Despite all the different factors, the majority of the participants concentrated on foundation training (85.71%), career development programs (76.19%), and self-assessment-based training (71.43%). One of the interview participants stated that-

“an academic professional needs at least six months training before starting his or her maiden class” (extracted from IDI-4, Male, Age: 39).

The following Table 4.7 presents the items that influence the job satisfaction and performance of academic professionals.

Table 4. 7: Items of faculty development program

Parent Node	Child Nodes	Interview																					%
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	100
Faculty Development Program	Training on recent research tools	X	X	X		X		X	X			X	X	X	X						X	X	57.14
	Career development program		X		X		X	X		X	X		X	X	X	X	X	X	X	X	X	X	76.19
	Collaboration with foreign university	X		X					X		X	X				X		X		X	X		42.86
	Financial assistance for attending conference	X		X	X		X		X	X	X	X						X	X			X	52.38
	Self-assessment based training		X	X	X	X	X	X	X	X		X	X			X	X	X	X			X	71.43
	Current curriculum-based training		X			X		X		X	X		X	X									33.33
	Foundation training program	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X			X	X	X	85.71

Source: Field study, 2022

4.3.3.2 Job satisfaction

The interview was based on dimensions of career planning as components of academic professionals' job satisfaction. The interview data reveals the seven items of job satisfaction, which are: enthusiastic job, feeling self-esteem, receiving regard, feeling proud to teach, financial benefits, non-financial benefits, and socially recognized job. All the items indicated that the job satisfaction of academic professionals resulted from those items on which a socially recognized job holds the highest value (66.67%) and feeling proud to teach carries the second highest (61.90%). When interview participants were questioned about the relationship between job satisfaction with performance, they focused on how job satisfaction mediates the career planning dimensions and performance of academic

professionals (see Table 4.14). Table 4.8 depicts in detail the other items of job satisfaction.

Table 4. 8: Items of job satisfaction

Parent Node	Child Nodes	Interview																					%	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	100	
Job Satisfaction	Enthusiastic job	X			X			X			X	X		X		X	X	X	X		X			52.38
	Feeling self-esteemed		X	X		X		X					X		X		X		X	X		X		47.62
	Receiving regards		X				X		X			X	X			X		X						33.33
	Feeling proud to teach	X	X	X			X	X	X	X	X	X			X		X				X		X	61.9
	Financial benefits	X	X	X			X		X	X		X		X			X		X			X	X	57.14
	Non-financial benefits		X		X						X	X				X		X				X		33.33
	Socially recognized job	X	X		X	X		X	X	X			X		X		X	X			X	X	X	66.67

Source: Field study, 2022

4.3.3.3 Motivation

There were six items (child nodes) discovered under the motivation of academic professionals' job satisfaction and performance as the key factor (parent node). The evidence suggests that academic professionals are frequently associated with career development due to their ability to increase motivation and its different items like an opportunity for interdependence and freedom, getting recognition, the incentive for quality publication, community appreciation for contribution, coworker support, and decision-making power. All of these factors motivate academic professionals to participate in career planning activities. Among all the items, getting recognition contains the maximum value (71.43%), and decision-making power containing 61.90%, is placed in second position. One of the participants stated his feelings on career planning and job satisfaction as follows: -

“I personally believe it is a noble career that provides public service. I am doing it for the benefit of my country and the students”
(extracted from IDI-18, Male, Age: 27).

Another participant mentioned that-

“never ever lose motivation as it is the fuel of performance”
(extracted from IDI-17, Male, Age: 38).

When interview participants were asked about the consequence of motivation on job satisfaction and performance, they focused that motivation moderating the relationship between job satisfaction and the performance of academic professionals (see Table 4.14). Table 4.9 highlights the interview output of numerous items pertaining to academic professionals’ motivation in career planning and performance.

Table 4. 9: Items of motivation

Parent Node	Child Nodes	Interview																					%	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	100	
Motivation	Opportunity for interdependence and freedom	X	X	X		X	X		X			X	X			X	X	X		X				57.14
	Getting recognition		X		X	X	X	X	X	X	X		X		X	X		X	X	X				71.43
	Incentive for quality publication	X		X	X			X		X	X	X	X					X	X			X		52.38
	Community appreciation for contribution	X		X					X	X				X				X						28.57
	Coworker support	X	X	X					X		X	X		X		X	X				X			47.62
	Decision-making power	X	X		X		X	X				X	X			X	X	X	X	X		X		61.90

Source: Field study, 2022

4.3.3.4 Performance factors

According to the interview data, academic professionals generally performed four functions: teaching, research, publication, administrative, and managing external funds. All those performance were depicted in Tables 4.10, 4.11, 4.12, and 4.13. Besides, according to interview data, the academic professionals also perform some roles, but all those roles were not regarded as the list of performance; rather, it was somehow under the sub-items of the above four key performances.

4.3.3.4.1 Teaching

The interview data revealed that there were six items under the teaching performance of academic professionals, which can be explored to measure the teaching quality of academic professionals. All those items are reasonable teaching load, proper supervision of students, co-curriculum involvement, proper student evaluation, engaging class, deep knowledge in teaching contents. Among all the items, the most important item was detected as an engaging or interactive class (71.43%), and the second key items were proper supervision of students (66.67%). Besides, reasonable teaching load placed at the third position (61.90%). All of the components of teaching are presented in Table 4.10.

Table 4. 10: Items of teaching

Parent Node	Child Nodes	Interview																					%
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	100
Teaching	Reasonable teaching load	X			X			X			X	X	X	X		X	X	X	X	X		X	61.9
	Proper supervision of students	X	X		X	X	X	X	X	X	X	X		X			X		X		X		66.67
	Co-curriculum involvement		X	X			X		X				X			X		X		X		X	42.86
	Proper students evaluation	X	X	X		X	X	X				X		X			X			X			47.62
	Engaging class		X		X	X	X	X	X	X	X		X			X		X	X	X	X	X	71.43
	Deep knowledge in teaching contents	X		X	X	X		X				X		X			X	X		X			47.62

Source: Field study, 2022

4.3.3.4.2 Research and publication

There were seven items under these factors that could explain the research and publication performance properly. The items associated with research and publications are: research collaboration, research fund or amount of grant, quality publication, dedicated laboratory, frequency of publication, interest in research work, regular attendance, and arranged seminars and conferences. All those factors are the components of RP as well as the elements of performance. Among the seven items, the quality of publication carries about 81% value which shows the maximum

one. On the other hand, research collaboration contains 57.14% placed in the second position. When interview participants were asked about the research and publication performance, one of the participants stated that-

“research and publication is the key activity of an academic professionals which makes an academics different from others”
(extracted from IDI-1, Male, Age: 29).

Table 4.11 presents the interview findings about the research and publication performance of academic professionals.

Table 4. 11: Items of research and publication

Parent Node	Child Nodes	Interview																					%
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	100
Research and Publication	Research collaboration	X	X	X			X		X	X	X			X				X	X	X		X	57.14
	Research fund or amount of grant	X	X	X			X	X			X						X		X	X	X		47.62
	Quality publication	X	X	X	X	X			X	X	X	X	X	X		X	X	X	X		X	X	80.95
	Dedicated laboratory	X		X														X		X			19.05
	Frequency of publication	X			X	X				X		X		X		X						X	38.09
	Interest in research work		X		X	X	X	X		X			X			X	X		X		X	X	57.42
	Regular attend and arrange seminars and conference	X		X	X				X	X	X	X				X		X	X	X			52.38

Source: Field study, 2022

4.3.3.4.3 Administrative

The interview data reveal that, under the administrative factors, there were seven items that can explore the administrative performance of academic professionals of which the ability to handle the situation represented 66.67% placed at the first position, and the second one was the sense of duty(52.38%. The interview data revealed other administrative items, that are- performing general administrative activities, the ability to handle the situation, sense of duty, logistic support, financial

incentive, sound management capacity, and a harassment-free environment. But one of the participants mentioned that-

“administrative task is not the task of academic professionals; rather it is more clerical in nature, so it should be done by administrative staffs” (extracted from IDI-17, Male, Age: 38).

He also claimed that-

“in foreign universities, no such task is done by the academic professionals” (extracted from IDI-17, Male, Age: 38).

The following Table 4.12 presents the findings about the administrative performance of academic professionals.

Table 4. 12: Items of administrative

Parent Node	Child Nodes	Interview																					%
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	100
Administrative	Perform general administrative activities	X		X		X	X			X	X			X		X	X		X				47.62
	Ability of handling situation	X	X		X		X	X	X	X		X	X			X	X		X	X		X	66.67
	Sense of duty		X		X	X		X	X			X		X			X			X	X	X	52.38
	Logistic support	X	X	X						X	X		X							X	X	X	42.86
	Financial incentive	X			X			X			X					X							23.81
	Sound management capacity		X		X	X	X					X		X		X				X			38.09
	Harassment free environment		X	X				X	X	X		X	X	X			X				X		47.62

Source: Field study, 2022

4.3.4 Relationships between the Factors

The analysis of interview data revealed that career planning dimensions influence the job satisfaction of academic professionals. At the same time, the performance of academic professionals is also influenced by job satisfaction. From the analysis of the interview data, it was found that job satisfaction of academic professionals is the result of an attractive pay structure, promotion system, sound working environment, and faculty development program. As a result, a form of relationship was developed between factors like pay structure to job satisfaction, promotion system to job satisfaction, SWE to job satisfaction, FDP to job satisfaction. Hence, career planning dimensions lead to the job satisfaction of academic professionals. Besides, motivation plays a significant moderating role between job satisfaction and the performance of academic professionals as mentioned by the interview participants. Moreover, job satisfaction has the mediating role between the career planning dimensions and performance of the professionals extracted from IDI- 6, IDI- 17, and IDI- 9. The relationship between the factors can be explained through the three sub-dimensions, which are: (i) the relationship between career planning dimensions and job satisfaction, (ii) the relationship between job satisfaction and performance, (iii) Moderating relationship of motivation with job satisfaction and performance that are depicted in the Table 4.14.

One of the interview participants expressed his opinion as

“career planning dimensions like pay structure have a relationship with the job satisfaction and performance of academic professionals. Because pay structure is the prime motive that leads to the job satisfaction of individuals. So most of the academics looking for the attractive pay structure” (extracted from IDI- 06, Male, Age: 59).

Furthermore, academic professionals’ job satisfaction and performance are influenced by economic, environmental, psychological, and motivational factors (Maican et al., 2021; Raziq & Maulabakhsh, 2015; Suifan, 2019). As a result of these motivations, academics are satisfied in their professions and become involved in teaching, research, and publication activities. As a result, it impacts to academic professionals’ job satisfaction and improves performance. As a result, motivation contributes to job satisfaction and performance. The interview participants claimed that such job satisfaction leads to the performance of academics, which are related to teaching, administrative, fund managing, and research and publication. As extracted from IDI-11,

“When we get satisfied in our jobs, we become motivated, and this motivation encourages us to devote ourselves to teaching, research,

and publication-related activities” (extracted from IDI- 11, Female, Age: 31)

In this connection of career planning and performance, one of the participants mentioned that-

“I think career planning dimensions and performance are related to each other because job satisfaction is directly related to these dimensions. I also think that foundation training is a must for an academic professional before conducting his maiden class because this career development program brings satisfaction and leads to better performance of academics” (extracted from IDI-5, Male, Age: 34).

Therefore, most interview participants argued that dimensions of career planning, especially pay structure, promotion system, SWE, and FDP, are closely associated with job satisfaction. However, this association might also negatively impact job satisfaction and performance of academic professionals if the variables of these dimensions are not properly allocated to the academics (extracted from the majority of the interviews). The literature also supports that salary, promotion, work environment, and career development programs have both positive and negative relations with job satisfaction (Bellou, 2010; Jorde-Bloom, 1988; Ko, 2012; Tarcan et al., 2017). Again, one of the participants mentioned that-

“we need full medical support like CMH facility instead of medical allowances, which is essential for job satisfaction and performance of academic professionals” (extracted from IDI-9, Male, Age: 51).

Whenever participants were asked about the pay structure, most of them mentioned that they needed a separate pay structure. One of the respondents said that-

“academic professionals have the right to get separate pay structure” (extracted from IDI-13, Female, Age: 30).

In connection with the promotion system, the interview data revealed that due-time promotion is the current requirement of academic professionals (extracted from the majority of the interviews). Again, a well-furnished personal room composed of all modern equipment is also essential for job satisfaction and the performance of academic professionals. One of the participants mentioned that-

“having a positive impression creates on the working environment can ensure both satisfaction and productivity of the professionals” (extracted from IDI-6, Male, Age: 59).

Besides this, some of the interview participants stated that-

“they need day care facility for the safety of their children”
(extracted from IDI-10, IDI-11, IDI-12, IDI-13, and IDI-20).

Another common connection with the faculty development program is foundation training and career development opportunities for professionals. As it is (extracted by IDI-21)

“better career development opportunity makes an academic satisfied in his job, which ensures better performance too”
(extracted from IDI- 21, Male, Age: 39).

The analysis of interview data also revealed that motivation influences job satisfaction and performance, which is connected with both extrinsic and intrinsic motivation. One of the interviewees mentioned that-

“motivation is such a fuel that causes/derives an academic professional to behave in a certain way” (extracted from IDI-15, Male, Age: 38)).

So this motivation moderates the relationships between job satisfaction and the performance of academic professionals (Hayati & Caniago, 2012).

Furthermore, the interview data reveals that the dimensions of career planning, such as pay structure, promotion system, SWE, and FDP are all directly linked to job satisfaction and performance of academic professionals, where job satisfaction is mediating between them. On the other hand, motivation also plays a significant moderating role between Job satisfaction and the performance of academic professionals. Interview participants also pointed out that career planning itself has a direct influence on academic professionals’ performance, especially in teaching, research and publication, administrative, and managing the external fund. The following Table 4.14 presents details of the relationships identified from the interview data.

Table 4. 14: Relationships between the factors

Relationship dimensions	Interview																					%
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	100
PaySt→JobSat	X	X		X		X	X	X	X		X	X			X			X	X		X	61.9
PaySt→PAP		X		X		X		X			X				X		X		X		X	42.86
PaySt→JobSat→PAP		X				X		X			X				X						X	28.57
ProSy→JobSat	X	X		X		X		X			X	X	X		X		X		X		X	57.14
ProSy→PAP	X	X					X				X		X		X			X		X		38.09
ProSy→JobSat→PAP							X				X				X					X		19.05
SWE→JobSat	X	X			X			X		X		X	X		X		X		X		X	52.39
SWE→PAP		X			X							X	X					X				23.81
SWE→JobSat→PAP		X			X							X										14.29
FDP→JobSat		X	X		X		X		X	X		X				X			X	X		47.62
FDP→PAP	X	X				X			X				X				X		X			33.33
FDP→JobSat→PAP	X								X										X			14.29
JobSat→PAP	X	X	X	X	X		X		X		X	X		X		X	X	X		X	X	71.43
Mot*JobSat→PAP		X		X		X	X		X		X				X		X				X	42.86

Source: Field study, 2022

4.3.5 Field Study Model

After the content analysis was finished, the themes and sub-themes discovered were extracted so that they could be matched with the factors and items most relevant to them. A total of 10 variables, comprising 65 individual items were identified from the field study (see Table 4.4 to Table 4.13). Each of the ten factors has between six and eight items contained inside it, and all of the items have been categorized under those factors. Among all ten factors, four are career planning dimensions (pay structure, promotion system, sound working environment, and faculty development program) related factors, one is Job satisfaction factors, another one is motivation related factors, and the remaining four are performance and outcome-related factors (teaching, research, and publication, administrative and managing external fund). After completing the 1st phase of the qualitative data analysis, , the next step was to construct a field study model (see Figure 4.3). All of the relationships in the initial conceptual model are supported by the field study data (see Table 4.15).

In addition, some additional linkages and a factor were incorporated into the employed field research model. The interview participants mentioned that motivation has a direct influence on job satisfaction and performance. So, one new

link was established from motivation between job satisfaction and performance. Besides, four new relationships were identified between pay structure to performance, promotion system to performance, sound working environment to performance, and faculty development program to performance (see Figure 4.4). All the variables found from the field interviews were used to develop a model. All the theoretically and contextually relevant and dependable dimensionalities of the constructs were provided by this model.

The study's checklist was developed in both the participants' native language and in English; regional dialects were also accounted for in the latter. The participants were also given the chance to ask questions. In this approach, the researcher ensured the validity of the qualitative study findings. Furthermore, using a standard method with an audio recording smartphone in data collecting can verify the validity of the data in this study (Roberts & Priest, 2006). The present study employed a content analysis methodology that utilized a system of 'codes' to describe the collected data. This approach boosts the dependability of the findings, particularly when employing computerized data analysis tools such as NVivo (Roberts & Priest, 2006; Sotiriadou et al., 2014). Consequently, the findings of the present study demonstrate a high degree of reliability and can be replicated in comparable contexts.

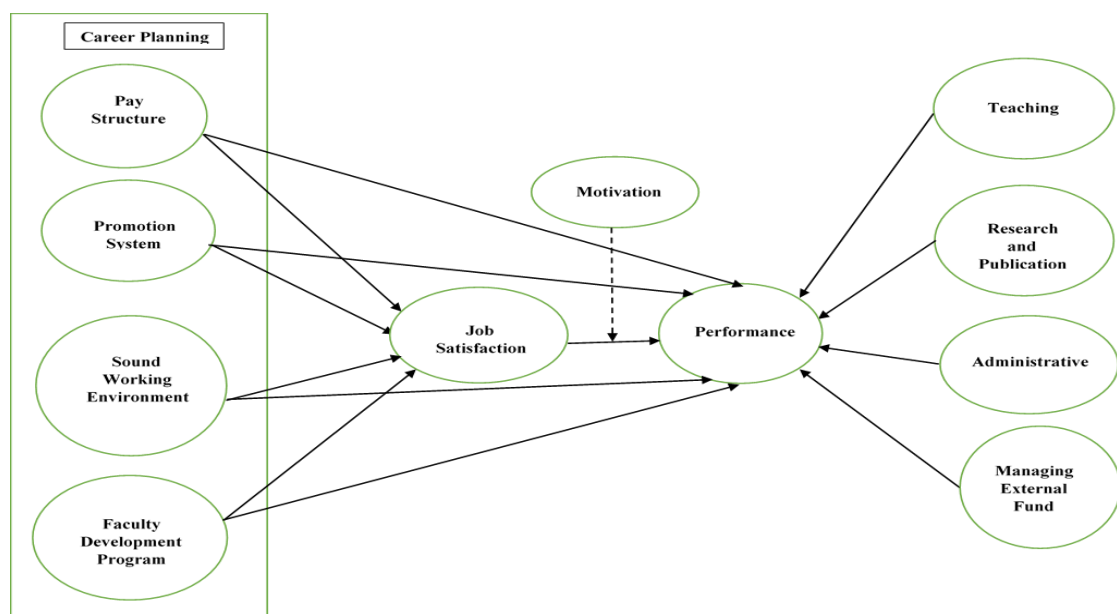


Figure 4. 3: Field study model

4.4 COMPARISON OF THE FIELD STUDY MODEL AND THE CONCEPTUAL MODEL (Deductive Process)

The following section describes the research that has provided support for the majority of the variables used in the field study. This section addresses the factors that evolved during the field research or provided significant deviations from the existing literature.

At this point, this study investigated how the model based on field research differed from the initial model (see Figure 2.1). In the beginning, each of the indicators found in the data from the field study was analyzed by utilizing the constructs from the conceptual model. Within the conceptual framework, each indication could be legitimately connected to the respective constructs they outlined. Therefore, more work was done to contrast the dimensions and connections between the constructs. At this stage, the researcher assessed the interconnectedness of the constructions (factors) and their constituent parts. The interview data showed the established connections of the first model to be the most reliable. As a result, no constructs were removed at this point. The field study also identified a new construct, Motivation, for addressing the moderating relationship between job satisfaction and the performance of academic professionals. The field study also explored the items of motivation, which were explained and supported by the existing literature (Hanaysha & Tahir, 2016; Jones et al., 2022).

Through the field study and from the extensive literature review, it is found that motivation moderates the relationship between job satisfaction and the performance of academic professionals. This study found a negative relationship between perceived career planning and both job satisfaction and commitment to the organization (Ahmed, 2019). Besides, this study demonstrated that a sense of career plateau is negatively related to employee loyalty and that professional motivation barely moderates this link (Jung & Tak, 2008). Moreover, the findings revealed that the rewards system or motivation had a positive and significant moderating effect on the relationship between career planning and employee commitment (Awino & Kipsang, 2020). Another study suggested that motivation plays a significant moderating role between job satisfaction and job performance (Bashir et al., 2020). As a result, the researcher of this study incorporate motivation in the field study model.

The field research examined how different variables are affecting satisfied and productive professionals in their job. This qualitative research aimed to investigate the hypothesis that “motivation” at a public university in Bangladesh has a significant role in determining the level of satisfaction and performance experienced by academic professionals at the university. Previous researchers have

paid little attention to motivation as a moderator, so this study was designed to fill the identified gap (Yuen et al., 2018).

However, because this study model contextualizes the notion of two-factor theory, social exchange theory, and equity theory, the incorporation of new variables in the comprehensive research model must have a sufficient theoretical basis. Furthermore, depending on the outcomes of a single study, the addition of a new factor in the research model may extend the model's application.

4.5 LITERATURE SUPPORT FOR FACTORS AND ITEMS

This section has justified the chosen constructs and items derived from the field study using evidence from the literature. It has been underlined that the factors and items derived from the field study were also validated by the existing literature based on commonality and consistency. As a direct consequence of this, this justification has provided evidence that demonstrates the competence and appropriateness of each construct and item found in the existing literature.

The extant research supports the factors and items discovered during the field study. The justification procedure was carried out in two stages: (i) by using the interview data to support the factors and items of the conceptual model and (ii) by using the existing literature to support the new factors and items (i.e., further literature needs to be reviewed). Similarly, the relationships and dimensions have been developed. As a result of this procedure, the thorough study model can be considered valid. Tables 4.15, 4.16, and 4.17 present evidence from the literature supporting the incorporation of the indicators into their respective constructs.

Table 4. 15: Supporting factors and items (career planning dimensions)

Variables (indicators)	Percentage	Sources
Pay Structure (PaySt)		
Satisfactory salary package	85.71	(Ashraf, 2020)
Bonus and allowances	52.38	(Ashraf, 2020; Chevaillier, 2001)
Number of increment	61.9	(Ehsan Malik et al., 2012)
Full medical support	47.62	(Kornberg et al., 2010; Z. Li et al., 2020)
Transportation facility	57.14	(Ashraf, 2020; Daggett & Gutkowski, 2003)
Paid-study-leave policy	42.86	(Ashraf, 2020)
Promotion (ProSy)		
Fair chance of promotion	66.67	(Russen et al., 2021; Takahashi, 2006)
Due time promotion	80.95	(Nguyen et al., 2015)
Publication requirement	38.09	(Bak & Kim, 2015; Owusu et al., 2016)
Promotion facility during study leave	57.14	(Bashir & Gani, 2020; Okpara, 2006)
Eradicate bureaucratic complexity	42.86	(Jokinen & Pehkonen, 2017; Stephens et al., 2008)
Rebate facility for promotion	33.33	(Guarino & Borden, 2017)
Sound Working Environment (SWE)		
Well-furnished room	71.43	(Mittal et al., 2018; Y. Peng & Ke, 2015)
ICT facility	52.38	(Nuere & de Miguel, 2021)
Politics free environment	57.14	(Arefin et al., 2020)
Security from harassment	38.09	(Gilani et al., 2014; Park et al., 2021)
Recreational and refreshment facility	61.9	(Mohammadiaghdam et al., 2020)
Collaborative teaching aid facility	66.67	(Hernández-de-Menéndez et al., 2019)
Access to academic resources	42.86	(Bilimoria et al., 2006; Pogodzinski, 2014)
Availability of staff facility	38.09	(Ngabonzima et al., 2021)
Faculty Development Program (FDP)		
Training on recent research tools	57.14	(Buzzard et al., 2011; Larraz et al., 2017)
Career development program	76.19	(Bocciardi et al., 2017)
Collaboration with foreign university	42.86	(Jin et al., 2011)
Financial assistance for attending conference	52.38	(Gutman et al., 2020)
Self-assessment based training	71.43	(José Tarí, 2006)
Current curriculum-based training	33.33	(Al-Shwabkah et al., 2016)
Foundation training program	85.71	(Fukkink et al., 2019; A. Islam, 2012)

Table 4. 16: Supporting factors and items (performance of academic professionals)

Variables (indicators)	Percentage	Sources
Teaching (Tea)		
Reasonable teaching load	61.9	(Ishak et al., 2009; Redding et al., 2019)
Proper supervision of students	66.67	(Amzat, 2017b; Kuwaiti et al., 2019)
Co-curriculum involvement	42.86	(Hashim, 2012)
Proper students evaluation	47.62	(Svanström et al., 2008)
Engaging class	71.43	(Forsey et al., 2013)
Deep knowledge in teaching content	47.62	(Bain & Mirel, 2006)
Research and Publication (RP)		
Research collaboration	57.14	(Ishak et al., 2009; Ponds, 2009)
Research fund or amount of grant	47.62	(Rybnicek et al., 2019)
Quality publication	80.95	(Palali et al., 2018)
Dedicated laboratory	19.05	(Baekgaard et al., 2015)
Frequency of publication	38.09	(Kuperberg & Stone, 2008)
Interest in research work	57.42	(Naderi Anari, 2012)
Regular attend and arrange seminars and conference	52.38	(Tian et al., 2009)
Administrative (Adm)		
Perform general administrative activities	47.62	(Guarini et al., 2020; Pogodzinski, 2015)
Ability of handling situation	66.67	(Carreri & Dordoni, 2020; C. Roy, 2011)
Sense of duty	52.38	(Martín-Sempere et al., 2008; Westoby et al., 2021; Yusuf et al., 2020)
Logistic support	42.86	(Becuwe et al., 2016; Fernando et al., 2020)
Financial incentive	23.81	(Guarini et al., 2020)
Sound management capacity	38.09	(Argento et al., 2020; Perez et al., 2011)
Harassment free environment	47.62	(Bondestam & Lundqvist, 2020; Eyre, 2000; Ward, 2021)
Managing External Fund (MEF)		
Collaboration with firm	42.86	(Bertello et al., 2022; Lee, 2000; Qian et al., 2020; Westlund et al., 2021)
Fund hunting	28.57	(Denney, 2021; Lomas, 2004)
Project bringing capacity	23.81	(Connolly et al., 2020; Sauermann et al., 2020; Taylor et al., 1984)
Fund collection capacity	38.09	(Horan & O'Regan, 2021; Rossi, 2009)
Collection of external research grant	47.61	(García-Martín et al., 2020; Ngongalah et al., 2021)
Manage sponsorship	38.09	(Codd, 2005; Ryan & Fahy, 2012)

Table 4. 17: Supporting factors and items (job satisfaction and motivation)

Variables (indicators)	Percentage	Sources
Job Satisfaction (JobSat)		
Enthusiastic job	52.38	(Toropova et al., 2021)
Feeling self-esteemed	47.62	(Ashraf, 2020)
Receiving regards	33.33	(Alshaikhmubarak et al., 2020; Ashraf, 2020)
Feeling proud to teach	61.9	(Ashraf, 2020)
Financial benefits	57.14	(Alrawashdeh et al., 2021; Di Maria et al., 2019)
Non-financial benefits	33.33	(Bustamam et al., 2014; Hernaus et al., 2012)
Socially recognized job	66.67	(Ashraf, 2020)
Motivation (Mot)		
Opportunity for interdependence and freedom	57.14	(Hanaysha & Tahir, 2016)
Getting recognition	71.43	(Choi, 2016)
The incentive for quality publication	52.38	(Sayogo & Pardo, 2013)
Community appreciation for contribution	28.57	(Javaid et al., 2020)
Coworker support	47.62	(Alonso-Tapia & Ruiz-Díaz, 2022)
Decision-making power	61.9	(Canhilal et al., 2016; Hanaysha & Tahir, 2016)

4.6 FINAL RESEARCH MODEL

As it is previously said, the data from the field study included new information that indicates the need for revising the initial research model. In order to incorporate the field study results into the comprehensive research model, additional analysis was undertaken to match the interview data with the literature (see Table 4.15, 4.16, and 4.17). The existing literature supported most of the constructs and items determined by the data collected from a field study. In addition, the final study model includes five additional relationship links. The field study data and the preexisting literature provide credence to the inclusion of the new element (motivation) explored in the field study data in the encompassing research model.

As a result, a more in-depth research model was produced in line with the first model by drawing on previous research and data from the field. Because it is supported by both the field study data and the literature, the field study model was chosen as the final research model for this study. Therefore, the model explains how job satisfaction influences the performance of academic professionals. Figure 4.4 illustrates the final research model, which is shaped by the aims and objectives of this study.

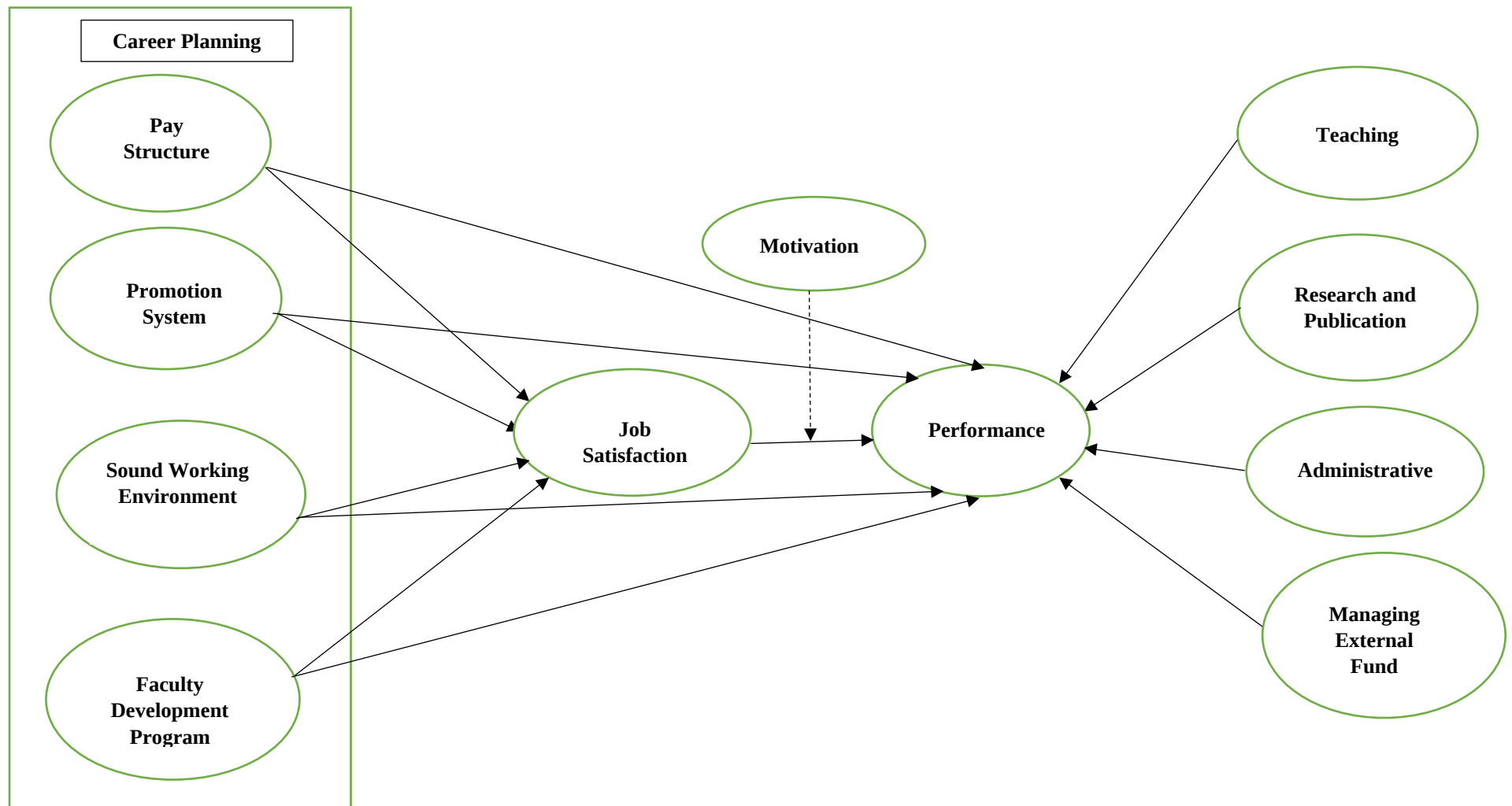


Figure 4. 4: Final research model (adapted from existing literature and field study findings)

4.7 CHAPTER SUMMARY

This chapter explains how field research was conducted and connected to the study at hand. The primary purpose of the field study is to provide background information for the research model developed in the literature review. This chapter is broken up into inductive and deductive parts. The inductive phase includes conducting interviews, analyzing data, uncovering factors and items, and developing connections between variables. The inductive phase is followed by the deductive phase, which explores the literature to support the identified variables and items, compares the conceptual model to the data from the field study, and establishes the comprehensive research model. A total of 65 variables were identified and grouped into 10 factors using the content analysis. Although they weren't accounted for in the initial model, some aspects and objects were very context dependent. All the factors and items were verified by consulting additional literature. However, the literature only provided limited support for the variables. Several hypotheses have been developed based on the comprehensive model and are addressed in Chapter 5. The quantitative data analysis results of this study are reported in the following chapter (Chapter 6).

CHAPTER 5: HYPOTHESES AND QUESTIONNAIRE DEVELOPMENT FOR QUANTITATIVE STUDY

5.1 INTRODUCTION

The purpose of this section is to formulate hypotheses in light of the connections drawn in Figure 4.4 of the research model. The model was developed primarily based on a thorough literature review, which was then contextualized and refined with the qualitative field study findings. In this paradigm, the hypothesis can only be formulated by recognizing the connections between the antecedents variables and the targeted dependent variables, as well as between the targeted exogenous variables and the endogenous outcome variable and their interactions. Section 5.2 presents the hypotheses under various subsections. Section 5.4 examines the development of the research instrument after the presentation of the hypotheses. In order to facilitate the survey instrument, this section outlines and verifies the instruments used to measure the study variables.

5.2 HYPOTHESES DEVELOPMENT

5.2.1 Hypotheses Relating Career Planning Dimensions and Job Satisfaction

The hypotheses relating to career planning dimensions and job satisfaction consist of four different hypotheses. These four hypotheses were formed on the notion of Herzberg's two-factor theory. The following section discusses the formulation of different hypotheses relating to CP dimensions and job satisfaction.

5.2.1.1 The effect of pay structure on the job satisfaction relationship

The term "pay structure," which is synonymous with "salary structure," refers to a hierarchical system of pay that differentiates between different types of jobs (Armstrong & Brown, 2001; Franck & Nüesch, 2011). Typically, compensation ranges are built into pay structures, with a minimum and maximum sum for each pay grade (Tremblay et al., 2023). There are a variety of pay structures all over the world. Academic professionals' pay structure is very crucial to the faculty members of the university. The job satisfaction of the professionals is directly associated with the pay structure (Kim et al., 2019; Rawabdeh & Nawafleh, 2019). Academic Professional pay is determined by a number of elements, such as the employee's level of responsibility, authority over subordinates, years of experience, level of education, company equity, external market forces, employee performance, and the financial resources at the company's disposal (Cappelli, 1997; Davidescu et al., 2020; Dexter, 2020).

This study took into account the pay structure as an important aspect of career planning, particularly as it relates to the factors that cause job satisfaction among academic professionals. A variety of literature suggested a positive correlation between pay structure and job satisfaction (Ashraf, 2020; Mahmood et al., 2019; Zayed et al., 2022). The results of the field study also suggested that there is a positive and significant relationship between pay structure and job satisfaction of academic professionals. However, the literature also suggests that pay structure has a marginal relationship with job satisfaction (Petrescu et al., 2010). Consequently, there becomes a logic to further investigation of the relationship between pay structure and job satisfaction. Therefore, the following hypothesis is put forth in the current study context:

Hypothesis 1 (H₁): The pay structure has a direct positive influence on the job satisfaction of academic professionals (H₁).

5.2.1.2 The effect of the promotion system on the job satisfaction relationship

The term “promotion” refers to the process through which an employee moves up through the ranks to a more responsible and higher-status position that requires more labor (Abdulummini, 2021; Koch et al., 2017; Rony et al., 2019). This is connected to the raise in salary, but not always guaranteed. Promotion is one of the most effective forms of reward since it gives employees greater responsibility, a better income, higher morale, and better job satisfaction (Ali & Anwar, 2021; Stater & Stater, 2019). Sometimes, the promotion system refers to career development, professional growth, and career growth (Ahrari et al., 2021; Masum et al., 2015; Robianto et al., 2020). Therefore, a promotion system is a system for progressing individuals to higher-status positions, as well as a method or process for achieving a desired outcome (Hirschi & Koen, 2021; Li et al., 2023). There are a number of ways of advancing or promoting an employee from a comparatively lower post to a higher post. This promotion is determined by a number of factors, such as tenure of job, number of publications, and any other conditions imposed by the university authority (Caplow, 2017; Valdeón, 2019).

This study considered the promotion system as a key dimension of career planning, which also causes job satisfaction of academic professionals. Academic professionals’ job satisfaction largely depends on the promotion system. Different literature showed a positive relation between promotion and job satisfaction of academic professionals (Linh, 2018; Robianto et al., 2020; Sinniah et al., 2022; Yousaf, 2020). The field study findings from the collected data also suggested this relationship between the promotion system and the job satisfaction of academic professionals. There is also the prevailing insignificant relationship between promotion and job satisfaction (Dalkrani & Dimitriadis, 2018; Masum et al., 2015). But a negative relation could hardly be found between promotion and job satisfaction. Because of this, there is a connection that develops between the promotion system and the job satisfaction level of academic professionals. In point of fact, the construction of the relationship between job satisfaction and the promotion system started with the promotion system. It is for this reason that the following hypothesis is proposed:

Hypothesis 2 (H₂): The promotion system has a direct positive influence on the job satisfaction of academic professionals (H₂).

5.2.1.3 The effect of sound working environment (SWE) on the job satisfaction relationship

Sound working environment (SWE) can eliminate the risk of demotivation of the employees and thus enhances both job satisfaction and better work performance (Altomonte et al., 2020; Lee et al., 2019; Mewomo et al., 2023; Mujaan et al., 2019). In this study, the sound working environment is treated as the focal dimension of the career planning of academic professionals. SWE is not only essential for job satisfaction, but it also enhances the better performance of academic professionals. In order to ensure SWE or sound working conditions, there should be an arrangement of external noise management capacity, good work ergonomics, and high hygiene (Fantozzi & Rocca, 2020; Korhan, 2019; Soltaninejad et al., 2021). These help academic professionals determine the right career planning for their academic profession.

A large number of the literature showed that the relationship between SWE and job satisfaction is positive (Anasi, 2020; Rachman, 2021; Robianto et al., 2020; Taheri et al., 2020; Yousaf, 2020). Similar relationship was also found in the field study results. However, a few literature showed a direct negative relationship between SWE and job satisfaction (Langer et al., 2019; Pawirosumarto et al., 2017a). On the other hand, it appears that not every aspect of the work environment has a substantial influence on the level of satisfaction that individual derives from their work (Vermeeren et al., 2011). As a consequence of this, a correlation is established between the SWE and the extent to which an individual is satisfied with their employment. In point of fact, the establishment of the connection between job satisfaction and the SWE is initiated by a sound working environment. Thus, researcher intends to investigate the relationship testing the following hypothesis:

Hypothesis (H₃): The sound working environment has a direct positive influence on the job satisfaction of academic professionals (H₃).

5.2.1.4 The effect of faculty development program (FDP) on the job satisfaction relationship

The term “faculty development” is used to refer to a variety of activities that are thought to assist academicians for enhancing their professional abilities that are necessary in teaching, research, and/or performing administrative responsibilities (Bilal et al., 2017; Kwan et al., 2009). So, FDP provides professional development of the academic professionals through enhancing their work performance in teaching and research (Kennedy, 2016; Sancar et al., 2021; van Lankveld et al., 2021; Wanzare & Ward, 2000). Faculty development is a word that is used interchangeably with staff development and professional development in various literature (Ceasay, 2021; Raffaghelli & Stewart, 2020; Zepeda, 2019). In this study, the faculty development program is regarded as one of the key dimensions of career planning of academic professionals. In the public university sector, training and development programs are used as faculty development programs or professional development programs (Nasreen et al., 2012; Topor & Roberts, 2016).

Faculty development encompasses a variety of initiatives aimed at enhancing the professional competencies of academics, so enabling them to effectively fulfill their responsibilities in teaching, research, and administrative domains. This connection was primarily suggested and established by the field study findings. A good number of studies found that there is a direct positive relationship between training and job satisfaction (Bodla et al., 2014; Hanaysha & Tahir, 2016; Masum et al., 2015). Besides, some other literature showed that there exists a significant positive relationship between FDP and job satisfaction (Hariyati & Safril, 2018; Linh, 2018; Shetty, 2012; Smet, 2021). However, the findings of this study a negative relationship between FDP and job satisfaction (Smet, 2022). Thus, this relationship is inconclusive. As a result, the researcher of this study examine the relationship between FDP and job satisfaction in career planning context. So, the following hypothesis is put forward:

Hypothesis (H₄): The faculty development program has a direct positive influence on the job satisfaction of academic professionals (H₄).

5.2.2 Hypotheses Relating CP Dimensions and Performance of Academic Professionals

The hypotheses relating to career planning dimensions and performance consist of four different hypotheses. These four hypotheses were formed on the basis of the social exchange theory (SET) and equity theory. The following section discusses the formulation of different hypotheses relating to CP dimensions and the performance of academic professionals.

5.2.2.1 The effect of pay structure on the performance relationship

The pay structure, also known as the compensation structure, refers to the system through which an organization rewards its employees in exchange for the employees' shown desire to carry out a variety of duties and services for the organization (Khan et al., 2019; Rana & Malik, 2017).

It has been demonstrated in various research-based literature that employee performance can be enhanced by appropriate compensation. Several studies have found that compensation can increase employee performance. According to Ramli (2018), there is a substantial association between pay, job satisfaction, and employee performance (Ramli, 2018). Other study also claimed that salary had a direct and positive impact on employee performance (Iptian & Efendi, 2020). Again, some other studies discovered that pay has a positive influence on the performance of employees (Afrin et al., 2023; Verozika, 2018). Moreover, this study found that some literature showed an insignificant but positive relationship between pay structure and employee performance (Arifin, 2017). The findings of the field study data also suggested that there is a positive and significant relationship between pay structure and the performance of academic professionals. The current study, therefore, intends to investigate the connection between academic professionals' pay structure and their performance. Consequently, the following hypothesis is proposed:

Hypothesis (H₅): The pay structure has a direct positive impact on the performance of academic professionals (H₅).

5.2.2.2 The effect of the promotion system on the performance relationship

Employee performance is recognized through promotion. Someone who is promoted is thought to be performing well on the job. Promotions are extremely crucial for the organization since they ensure the company's stability and boost employee morale (Ali & Anwar, 2021; Zeb et al., 2021). In addition, those individuals who obtain promotions will have a stronger motivation to have higher performance (Bindl et al., 2019). When employees see that their efforts are being rewarded with a promotion, they become more interested in work and more committed to improving their performance for the organization. As a dimension of career planning, the promotion system has an influential impact on employee performance. Previous literature suggested that there is a positive and significant relationship between promotion and the performance of employees (Aarabi et al., 2013; Gohari et al., 2013; Sinniah et al., 2022). Another study in a different field showed that a positive relationship exists between promotion and employee performance (Chen et al., 2022). The results of the field research data also found that there is a direct and positive relationship between the promotion system and the

performance of academic professionals. Literature also suggested for insignificant relationships between promotion and performance of employees (Masum et al., 2015). Thus, rooms are open to investigate this relationship in the current study context. As such, this study postulates the following hypothesis:

Hypothesis (H₆): *The promotion system has a direct positive impact on the performance of academic professionals (H₆).*

5.2.2.3 The effect of sound working environment (SWE) on the performance relationship

A positive and sound working environment is essential for employee productivity in order to prevent employees from facing unnecessary tension, which would negatively impact their work performances (Harry, 2020; Malik et al., 2023; Rasool et al., 2021). As an important dimension of career planning, SWE plays a vital role in improving the performance of academic professionals. According to the findings of previous research, there is a favorable and significant connection between SWE and employee performance (Bashir et al., 2020; Widodo, 2014; Wilson, 2015). On the other hand, literature also revealed that there exists a direct negative relationship between SWE and employee performance (Girdwichai & Sriviboon, 2020). Initially, the data from the field study also stated that there is a direct and favorable relationship between SWE and the performance of academic professionals. The results of another study revealed that the work environment does not impact employee performance (Pawirosumarto et al., 2017b). As a consequence, there is a link between the SWE and the performance of academic professionals. In point of fact, SWE is what makes the connection between performance and SWE. As a consequence of this, the following hypothesis is put forward for investigation:

Hypothesis (H₇): *The sound working environment has a direct positive impact on the performance of academic professionals (H₇).*

5.2.2.4 The effect of faculty development program (FDP) on the performance relationship

A faculty development program refers to the systematic provision of professional development training and coaching to faculty members. The aim of faculty development program is to enhance their skills and work performance in various areas, including teaching, research and publications, administrative responsibilities, and fund management from diverse sources (Bilal et al., 2017; Steinert et al., 2012). This professional development training is also interchangeably used as training and development (Evans, 2019). Training and development is a crucial instrument that improves workers' present and future productivity by increasing their knowledge, competence, and motivation.

Besides, it helps in enhancing performance not only at the individual level but also at the organizational level (Ahmed & Yohanna, 2014; Al-Mzary et al., 2015; Khan et al., 2019). As the dimensions of career planning, FDP has a substantial impact on the performance of academic professionals. This relationship was primarily suggested and established by the field study result of this study. Literature also showed that there is a positive and significant relationship between training and development and employees' job performance (Afsana et al., 2016; Khan et al., 2019; Shoaib et al., 2022).

However, the vast majority of the studies have been conducted on the professional development in the business and corporate environments while higher education sector has got less attention in this context.(Al-Mzary et al., 2015; Khatib et al., 2021; Tahir et al., 2014). Thus, the existing findings require further investigation. Hence, the following hypothesis is proposed:

Hypothesis (H₈): The faculty development program has a direct positive impact on the performance of academic professionals (H₈).

5.2.3 Hypothesis Relating to Job Satisfaction and Performance

The following section discusses the formulation of a hypothesis relating to job satisfaction and performance. The formation of this hypothesis was based on the conceptual framework of Herzberg's two-factor theory.

5.2.3.1 The effect of job satisfaction on the performance of academic professionals

The concept of job satisfaction is an outspread and multi-dimensional idea that originates from the perceptions and emotions of humans. In addition, the term "job satisfaction" refers to an individual's favorable feelings towards their job (Afrin et al., 2023; Crayne & Brawley Newlin, 2023; Johnson & Lake, 2019). The area of job satisfaction has been considered the most used researched topic worldwide (Al Kurdi et al., 2020; Hooker et al., 2015; Jung & Suh, 2019). A wide range of studies supported that a positive and significant relationship exists between job satisfaction and the performance of employees (Afrin et al., 2023; Bashir et al., 2020; Khan et al., 2019; Ramli, 2018). One study found that job satisfaction correlates positively with job performance (Alwali & Alwali, 2022). The relationship was also demonstrated by the outcomes of the field study that the current research conducted, which revealed that job satisfaction and performance are positively and strongly connected. Although there exists a positive correlation between job satisfaction and the performance of employees, the researcher found a very few study that showed a negative or insignificant relationship between employee performance and job satisfaction (Sinniah et al., 2022). So the researcher of this study try to examine the extent of relationship between job satisfaction and performance of academic

professionals in the context of career planning. Therefore, there is a relationship developed between job satisfaction and the performance of academic professionals. Hence, the subsequent hypothesis is put forth:

Hypothesis (H₉): *Job satisfaction has a significant positive influence on the performance of academic professionals (H₉).*

5.2.4 Hypotheses Relating to Mediating Variables

The hypotheses pertaining to mediating variables consist of four different hypotheses. These hypotheses relate CP dimensions to job satisfaction and the performance of academic professionals. The following section discusses the formulation of different hypotheses relating to CP dimensions to job satisfaction and the performance of academic professionals. However, these hypotheses were based on the equity theory and social exchange theory.

5.2.4.1 The mediating effect of job satisfaction between pay structure and performance of academic professionals

As was indicated previously, the existing research revealed a direct connection between pay structure and the performance of employees (Afrin et al., 2023; Hartono et al., 2021; Verozika, 2018). The current model also shows an indirect relationship between them through job satisfaction as the mediating variable. Different pieces of literature found that job satisfaction mediates the relationship between employee pay and performance (Bakotić, 2016; Gohari et al., 2013; Khan et al., 2019; Robianto et al., 2020). The data from the field study also showed that the connection between academic professionals' pay structure and performance was mediated by their level of job satisfaction. Therefore, the purpose of this research is to empirically investigate the nexus between pay structure and the performance of academic professionals due to job satisfaction. In order to examine the mediating effects of job satisfaction between pay structure and the performance of academic professionals, the following hypotheses have been proposed:

Hypothesis (H₁₀): *The pay structure has a significant positive impact on the performance of academic professionals through job satisfaction (H₁₀).*

5.2.4.2 The mediating effect of job satisfaction between the promotion system and the performance of academic professionals

As indicated previously, the existing body of research seems to indicate a clear connection between the promotion system and the performance of the employee (Aarabi et al., 2013; Gohari et al., 2013; Sinniah et al., 2022). The existing model also demonstrates an indirect association between the variables, which is mediated by job satisfaction. A number of studies have found evidence of the connection between job satisfaction and employee promotion and performance, which is

connection is mediated by job satisfaction (Gohari et al., 2013; Ratnasari et al., 2019; Sinniah et al., 2022). The results of field study data also indicated that job satisfaction mediates the relationship between the promotion system and the performance of academic professionals. Consequently, this study aims to empirically investigate the indirect impact of the relationship between the promotion system and the performance of academic professionals due to job satisfaction. Thus, the following hypothesis has been established to examine the mediating effects of job satisfaction:

Hypothesis (H₁₁): *The promotion system has a significant positive impact on the performance of academic professionals through job satisfaction (H₁₁).*

5.2.4.3 The mediating effect of job satisfaction between sound working environment and performance of academic professionals

As stated earlier, the existing corpus of research seems to point to the fact that there is a direct relation between SWE and the employee's performance (Bashir et al., 2020; Widodo, 2014; Wilson, 2015). The present model also exhibits an indirect association between the variables, which is mediated by job satisfaction. Several studies have found that job satisfaction mediates the relationship between SWE and performance, as evidenced by the existing literature Bashir et al., 2020; Kaur, 2018; Robianto et al., 2020; Widodo, 2014). The field study data also found that job satisfaction mediates the connection between SWE and the performance of academic professionals. Therefore, the current study intends to further investigate the mediating relationship with empirical data. In order to investigate the mediating effects of job satisfaction, the subsequent hypotheses were formulated:

Hypothesis (H₁₂): *The sound working environment has a significant positive impact on the performance of academic professionals through job satisfaction (H₁₂).*

5.2.4.4 The mediating effect of job satisfaction between faculty development program and the performance of academic professionals

As it was mentioned earlier, the existing body of research points out the notion that there is a direct relation between FDP and employee performance (Afsana et al., 2016; Khan et al., 2019; Shoaib et al., 2022). The existing model also reveals an indirect association between the variables, which is mediated by job satisfaction. A number of researchers have concluded that job satisfaction has a role in mediating the connection between FDP and performance (Khan et al., 2019; Paposa & Kumar, 2019; Shetty, 2012). The results of the field research data also established that job satisfaction mediates the relationship between FDP and the performance of academic professionals. Consequently, the following hypotheses were formulated to investigate the mediating effects of job satisfaction in the relationship between FDP and the performance of academic professionals:

Hypothesis (H_{13}): *The faculty development program has a significant positive impact on the performance of academic professionals through job satisfaction (H_{13}).*

5.2.5 Hypothesis Relating to Moderating Variable

The following section discusses the formulation of the hypothesis relating to moderating variables and how motivation moderates the relationship between job satisfaction and the performance of academic professionals.

5.2.5.1 The moderating effect of motivation on the relationship between job satisfaction and performance of academic professionals

Motivation issues are an important concern for career planning and performance, as it is related to employee job satisfaction. According to Griffin (2013), “Motivation is the set of forces that cause people to behave in a certain way.” Motivation is the process of influencing and encouraging a person to act in a particular way. Within the organizational framework, motivation pertains to the act of stimulating and compelling employees to exhibit optimal performance, hence facilitating the achievement of the organization’s intended objectives (Maryani et al., 2021; Mota et al., 2019; Nakitende, 2019; Osabiya, 2015). Moreover, within the context of this study, professional motivation or career motivation is defined as a multifaceted concept that is intrinsic to the individual, susceptible to situational influences, and manifested through the individual’s choices and actions (Chen & Kanfer, 2006; London, 1983; Stolk et al., 2021). According to Griffin (2013), individual performance is typically ascertained by three variables: motivation (the desire to perform the job), ability (the capacity to perform the job), and the work environment (the resources required to perform the job). Job satisfaction is sometimes determined by the level of motivation an employee receives from the organization (Kapantow et al., 2020; Khaskheli et al., 2020; Pang & Lu, 2018).

Additionally, an employee’s performance depends on the amount of motivation they receive from the organization (Ogbonnaya & Messersmith, 2019; Tingo & Mseti, 2022). One of the studies showed that the influence of transformational leadership (TL) on employee creativity (EC) is moderated by intrinsic motivation (IM), such that the association between TL and EC increased when IM is high and vice versa (Shafi et al., 2020). Moreover, another study found that motivation moderates the connection between job satisfaction and the performance of employees (Bashir et al., 2020). The findings of another study established that the job satisfaction of lecturers and their job performance was significantly moderated by self-efficacy (Sinniah et al., 2022). Besides, the field study outcomes of the current study also showed that motivation moderates the connection between job

satisfaction and the performance of academic professionals. Therefore, the purpose of this study is to empirically investigate the moderated effect of motivation on the relationship between job satisfaction and the performance of academic professionals. To investigate the moderating effects of motivation, the following hypotheses was proposed:

Hypothesis (H₁₄): *Motivation has a significant positive moderating role in the relationship between job satisfaction and the performance of academic professionals (H₁₄).*

Table 5. 1: Hypotheses development

Hypotheses	Statement	Link	Sources	
			In-depth Interview Number	Main Literature
H ₁	<i>The pay structure has a direct positive influence on the job satisfaction of academic professionals. (H₁)</i>	PaySt→JobSat	1,2,4,6,7,8,9, 11,12,15,18, 19,21	(Vrontis, 2019; Yousaf, 2020)
H ₂	<i>The promotion system has a direct positive influence on the job satisfaction of academic professionals. (H₂)</i>	ProSy→JobSat	1,2,4,6,8,11, 12,13,15,17. 19,21	(Alauddin et al., 2019; Ortan et al., 2021)
H ₃	<i>The sound working environment has a direct positive influence on the job satisfaction of academic professionals. (H₃)</i>	SWE→JobSat	1,2,5,8,10,12 ,13,15,17,19. 21	(Akinwale & George, 2020; Ashraf, 2019)
H ₄	<i>The faculty development program has a direct positive influence on the job satisfaction of academic professionals. (H₄)</i>	FDP→JobSat	2,3,5,7,9,10, 12,16,19,20	(Hanaysha & Tahir, 2016; Paposa & Kumar, 2019)
H ₅	<i>The pay structure has a direct positive impact on the performance of academic professionals. (H₅)</i>	PaySt→PAP	2,4,6,8,11,15 ,17,19,21	(Dalkrani & Dimitriadis, 2018; Khan et al., 2019)
H ₆	<i>The promotion system has a direct positive impact on the performance of academic professionals. (H₆)</i>	ProSy→PAP	1,2,7,11,13,1 5,18, 20	(Asim, 2013; Azman et al., 2016)
H ₇	<i>The sound working environment has a direct positive impact on the performance of academic professionals. (H₇)</i>	SWE→PAP	2,6,12,13,18	(Bashir et al., 2020; Hansen et al., 2019)

H ₈	<i>The faculty development program has a direct positive impact on the performance of academic professionals. (H₈)</i>	FDP→PAP	1,2,6,9,13,17,19	(Bae et al., 2022; Bilal et al., 2017)
H ₉	<i>Job satisfaction has a significant positive influence on the performance of academic professionals. (H₉)</i>	JobSat→PAP	1,2,3,4,5,7,9,11,12,14,16,17,18,20,21	(Abuhashesh et al., 2019; Bhardwaj et al., 2021; Katebi et al., 2022)
H ₁₀	<i>The pay structure has a significant positive impact on the performance of academic professionals through job satisfaction. (H₁₀)</i>	PaySt→JobSat→PAP	2,6,8,11,15,21	(Bakotić, 2016; Khan et al., 2019)
H ₁₁	<i>The promotion system has a significant positive impact on the performance of academic professionals through job satisfaction. (H₁₁)</i>	ProSy→JobSat→PAP	7,11,15, 20	(Gohari et al., 2013; Khan et al., 2019; Sinniah et al., 2022)
H ₁₂	<i>The sound working environment has a significant positive impact on the performance of academic professionals through job satisfaction. (H₉)</i>	SWE→JobSat→PAP	2,6,12,	(Janib et al., 2021; Kaur, 2018; Khan et al., 2019; Pawirosumarto et al., 2017c)
H ₁₃	<i>The faculty development program has a significant positive impact on the performance of academic professionals through job satisfaction. (H₁₃)</i>	FDP→JobSat→PAP	1,9,19	(Khan et al., 2019; Li et al., 2018)
H ₁₄	<i>Motivation has a significant positive moderating role in the relationship between job satisfaction and the performance of academic professionals. (H₁₄)</i>	Mot*JobSat→PAP	2,4,6,7,9,11,15,17,21	(Asante Boadi et al., 2019; Bashir et al., 2020; Fernet et al., 2010)

Source: Field study, 2022 and secondary literature review

5.3 THE MEASUREMENT OF CONSTRUCTS

The constructs of the research model were evaluated using both reflective and formative indicators, as described in Chapter 3. This study used a six-point Likert scale, with one (1) being the least and six (6) being the most positive, to determine the indications for each construct. The literature review has discussed the applications of the constructs in various research contexts. The subsequent part describes the construct measurement items used in the current study.

5.3.1 Career Planning Dimensions

5.3.1.1 Pay structure (PaySt)

Pay structure or compensation structure differs from profession to profession and also from discipline to discipline (Asadullah, 2006; Jawaad et al., 2019). In this study, the researcher emphasizes the pay structure of academic professionals at public universities. Compensation structure or pay structure has been widely discussed in human resource management (Balkin, 1989; Brown et al., 2017; Gupta & Shaw, 2014; Shaw & Zhou, 2021). However, this study conceptualizes pay structure as the dimensions of academic professionals' career planning, which is a combination of attractive salary packages, bonus and allowances, increments, medical support, study-leave policy, transportation facility, separate pay scale, and good welfare facilities, etc. These items were taken from existing HRM and job satisfaction literature (see Table 5.2). Among the five items, three indicators i.e., 'satisfactory salary package' and 'bonus and allowances,' and 'paid-study-leave policy,' were taken from Ashraf (2020). Besides, one indicator, 'increased number of increments,' is borrowed from Ehsan Malik et al. (2012). The other one indicator, 'medical support,' is taken from Kornberg et al. (2010) and Li et al. (2020). Participants in the field study provided their feedback regarding pay structure in relation to the aforementioned aspects of the designated study area. There is a lack of empirically validated integrated measurements of pay structure in the existing Human Resource Management (HRM) literature. Therefore, additional investigation is required to examine the significance of pay structure, specifically in relation to the aforementioned dimensions within the field of HRM study.

5.3.1.2 Promotion system (ProSy)

In this study, the promotion system is considered an important dimension of the career planning of academic professionals. However, the promotion system or its procedures vary across the organizations and professions (Božović et al., 2019; de Oliveira et al., 2019; Diaz-Carrion et al., 2019). Therefore, this study investigates the promotion system of academic professionals as their career planning dimensions, which consist of a fair chance of promotion, sue-time promotion, definite publication requirement, promotion facility on study leave, bureaucratic complexity, rebate facility for promotion, service tenure, and students' evaluation system, etc. The indicators utilized in this study were derived from established literature on HRM and job satisfaction, as presented in Table 5.2. Among the six different indicators, the first indicator, 'fair chance of promotion,' is received from Russen et al. (2021) and Takahashi (2006). The second one, the 'due time promotion system,' is carried out from Nguyen et al. (2015). The third indicator, 'definite publication requirement,' is derived from Bak & Kim (2015) and Owusu et al. (2016). The fourth one, 'promotion facility on study leave,' is extracted from Bashir & Gani (2020) and Okpara (2006). The fifth indicator, 'bureaucratic complexity,' is taken from Jokinen & Pehkonen (2017) and Stephens et al. (2008). Finally, the sixth indicator, 'rebate facility for promotion,' is adapted from Guarino and Borden (2017). Field study participants offered their thoughts on the promotion system in light of the aforementioned criteria and parameters. In the current Human Resource Management (HRM) literature, integrated metrics of the promotion system are lacking. As a result, further research on the significance of the promotion system is needed, especially in regard to the aforementioned dimensions of HRM research with quantitative investigation.

Table 5. 2: Dimensions of career planning

Constructs	Measures	References
Pay Structure (PaySt)	satisfactory salary package	(Ashraf, 2020)
	bonus and allowances	(Ashraf, 2020; Chevaillier, 2001)
	increased number of increments	(Ehsan Malik et al., 2012)
	medical support	(Kornberg et al., 2010; Z. Li et al., 2020)
	paid-study-leave policy	(Ashraf, 2020)
	transportation facility	(Ashraf, 2020; Daggett & Gutkowski, 2003)
	separate pay scale	(Matherly, 2019)
	child education allowance	(Konopaske & Werner, 2005)
	full medical support (i.e., CMH)	(Ling et al., 2018; Zameer et al., 2014)
	telephone allowance	(Ling et al., 2018; Marinucci et al., 2013)
	good welfare facilities	(Ashraf, 2020)
Promotion System (ProSy)	fair chance of a promotion	(Russen et al., 2021; Takahashi, 2006)
	due-time promotion system	(Nguyen et al., 2015)
	definite publication requirement	(Bak & Kim, 2015; Owusu et al., 2016)
	promotion facility on study leave	(Bashir & Gani, 2020; Okpara, 2006)
	bureaucratic complexity	(Jokinen & Pehkonen, 2017; Stephens et al., 2008)
	rebate facility for promotion	(Guarino & Borden, 2017)
	unique rules and regulations	(Chen, 2015)
	fair treatment	(Said et al., 2017)
	service tenure	(Prottas et al., 2017)
	students evaluation system	(Badri et al., 2006)
Sound Working Environment (SWE)	well-furnished room	(Mittal et al., 2018; Peng & Ke, 2015)
	ICT facility	(Nuere & de Miguel, 2021)
	politics-free environment	(Arefin et al., 2020)
	security from harassment	(Gilani et al., 2014; Park et al., 2021)
	recreational and refreshment	(Mohammadiaghdam et al., 2020)
	collaborative teaching aid	(Hernández-de-Menéndez et al., 2019)
	access to academic resources	(Bilimoria et al., 2006; Pogodzinski, 2014)
	availability of staff facility	(Ngabonzima et al., 2021)
	daycare centre	(Rui, 2019)
	teaching assistant	(Mwesigwa et al., 2020)
	funding opportunity	(Tourangeau et al., 2014)
	fully automated system	(Naser et al., 2017)
	multimedia classroom	(Scafuto et al., 2017)
	availability of classroom	(Griffin et al., 2009)
	collaborative laboratory facility	(Lam, 2020)
	uninterruptable internet services	(Brunet et al., 2020; Delbari et al., 2021)

	working conditions	(Ashraf, 2019)
	well-being of employees	(Ashraf, 2019)
	safe working	(Ashraf, 2019)
Faculty Development Program (FDP)	training on recent research tools	(Buzzard et al., 2011; Larraz et al., 2017)
	career development program	(Bocciardi et al., 2017)
	collaboration with foreign university	(Jin et al., 2011)
	financial assistance for attending conference	(Gutman et al., 2020)
	self-assessment-based training	(José Tarí, 2006)
	current curriculum-based training	(Al-Shwabkah et al., 2016)
	foundation training program	(Fukkink et al., 2019; A. Islam, 2012)
	learning and training opportunities	(Hanaysha & Tahir, 2016)
	memorandum of understanding (MoU)	(Morrison et al., 2019)
	assist in attending foreign training	(Park et al., 2018)
	faculty exchange program	(Otieno & Otieno, 2016)
	collaboration among faculties	(Wade-Benzoni et al., 2006)
	orientation or socialization program	(Genilo, 2021; Taormina, 2009)
	training and development	(Hanaysha & Tahir, 2016)

Source: Field study, 2022 and secondary literature

5.3.1.3 Sound working environment (SWE)

Academic professionals enjoyed different working environment-related facilities during the various stages of employment on the basis of their designation. This study considered SWE as a key dimension of the career planning of academic professionals (Huang et al., 2018; Liritzis et al., 2021). Therefore, this study addresses the SWE of academic professionals as their career planning dimensions. The indicators used in this study were extracted from existing literature on HRM and job satisfaction, as presented in Table 5.2. Out of the seven different indicators, the first indicator, 'well-furnished room,' is carried from Mittal et al. (2018) and Peng & Ke (2015). The second one, 'ICT facility,' is borrowed from Nuere & de Miguel (2021). The third indicator, 'politics-free environment,' is derived from Arefin et al. (2020). The fourth one, 'security from harassment,' is extracted from Gilani et al. (2014) and Park et al. (2021). The fifth indicator, 'recreation and refreshment,' is brought from Mohammadiaghdam et al. (2020). The sixth indicator, 'collaborative teaching aid,' is adapted from Hernández-de-Menéndez et

al. (2019). Finally, the seventh one, ‘access to academic resources,’ is borrowed from Bilimoria et al. (2006) and Pogodzinski (2014). Field study participants offered their thoughts on the SWE in light of the aforementioned criteria and parameters. In the current Human Resource Management (HRM) literature, integrated metrics of the SWE are lacking. As a result, more research on the significance of the SWE is needed, especially in regard to the aforementioned dimensions of HRM research.

5.3.1.4 Faculty development program (FDP)

The fourth and final key dimension of career planning of academic professionals is the faculty development program (De Villiers, 2017). FDP is crucial for conducting effective classes, research and publication, and other administrative activities (Hair et al., 2020; Morrison et al., 2019; Pham et al., 2019). Moreover, this study focuses on the FDP of academic professionals as their career planning dimensions. The indicators used in this study were extracted from existing literature on HRM and job satisfaction (see Table 5.2). However, among the seven different indicators, the first indicator, ‘training on recent research tools’ is taken from Buzzard et al. (2011) and Larraz et al. (2017). The second one, ‘career development program’, is brought from Bocciardi et al. (2017). The third indicator, ‘collaboration with foreign universities,’ is derived from Jin et al. (2011). The fourth one, ‘financial assistance for attending the conference,’ is extracted from Gutman et al. (2020). The fifth indicator, ‘self-assessment-based training,’ is taken from Tarí (2006). The sixth indicator, ‘current curriculum-based training’ adapted from Al-Shwabkiah et al. (2016). Finally, the seventh one, the ‘foundation training program,’ is borrowed from Fukkink et al. (2019) and Islam (2012). Responding to the aforementioned criteria and parameters, field study participants provided feedback on the FDP. Integrated measures of the FDP are currently absent from the HRM literature. Therefore, the current study is interested to determine the significance of the FDP, particularly in the aforementioned areas of HRM study.

5.3.2 Job Satisfaction (JobSat)

The concept of job satisfaction has been extensively studied in relation to organizational behavior and job design (Bashir et al., 2020; Mustafa & Ali, 2019). In relation to job satisfaction, Herzberg et al. (1959) established the concept known as the “two-factor theory”. He argued that dissatisfaction and happiness were unrelated events (Frederick et al., 1959). Furthermore, the occurrences were associated with extrinsic and intrinsic elements referred to as “motivators,” whilst internal characteristics such as job experience were associated with satisfaction (Bashir et al., 2020; Guan & Frenkel, 2018). The indicators used for job satisfaction in this study were extracted from existing literature on HRM and job satisfaction and performance (see Table 5.3). Among the seven different indicators, the first

indicator, ‘enthusiastic job,’ is taken from Toropova et al. (2021), Second one, ‘feeling self-esteemed’, is borrowed from Ashraf (2020). The third indicator, ‘receiving regards,’ is derived from Alshaikhmubarak et al. (2020) and Ashraf (2020). The fourth one, ‘feeling proud to teach,’ is extracted from Ashraf (2020). The fifth indicator, ‘financial benefits,’ is received from Alrawashdeh et al. (2021) and Di Maria et al. (2019). The sixth indicator, ‘non-financial benefits,’ is adapted from Bustamam et al. (2014) and Hernaus et al. (2012). Finally, the seventh, ‘socially recognized job,’ is borrowed from Ashraf (2020). Participants in the field study provided responses regarding their level of job satisfaction based on the aforementioned criteria and factors. Therefore, further research is needed, especially in the aforementioned fields of human resource management, job satisfaction, and performance research, to assess the significance of job satisfaction with empirical supports.

Table 5. 3: Job satisfaction relationship

Constructs	Measures	References
Job Satisfaction (JobSat)	enthusiastic job	(Toropova et al., 2021)
	feeling self-esteemed	(Ashraf, 2020)
	receiving regards	(Alshaikhmubarak et al., 2020; Ashraf, 2020)
	feeling proud to teach	(Ashraf, 2020)
	financial benefits	(Alrawashdeh et al., 2021; Di Maria et al., 2019)
	non-financial benefits	(Bustamam et al., 2014; Hernaus et al., 2012)
	socially recognized job	(Ashraf, 2020)
	satisfaction of being a teacher	(Toropova et al., 2021)
	noble profession	(Paul et al., 2020)

Source: Field study, 2022 and secondary literature

5.3.3 Motivation (Mot)

Motivation is a term borrowed from the fields of psychology and behavioral science (Bryan et al., 2021; Bucchi et al., 2012; Henrich & Muthukrishna, 2021; Tremblay et al., 2009). Motivation is the main driving force behind a person’s behavior (Gorsuch, 1997; Tokan & Imakulata, 2019). In HRM, employees are motivated when they are stimulated, inspired, and induced to perform to the best of their ability (Endriulaitienė & Morkevičiūtė, 2020; Jose et al., 2021). Since motivation is a psychological concept, it cannot be imposed on employees. It comes naturally from within the employees, as it is the desire to perform the task. However, this study focuses on the Motivation of academic professionals as it moderates the association

between job satisfaction and performance (see Table 5.4). Among the six indicators, the first indicator, ‘interdependence and freedom,’ is taken from Hanaysha and Tahir (2016). The second one, ‘getting recognition,’ is borrowed from Choi (2016). The third indicator, ‘incentive for quality publication,’ is derived from Sayogo and Pardo (2013). The fourth one, ‘community appreciation,’ is extracted from Javaid et al. (2020). The fifth indicator, ‘coworker support,’ is taken from Alonso-Tapia and Ruiz-Díaz (2022). Finally, the sixth indicator, ‘decision-making power,’ is adapted from Canhilal et al. (2016) and Hanaysha and Tahir (2016). These items were also supported by data from field studies in explaining the motivation for career planning and the performance of academic professionals.

Table 5. 4: Motivation relationship

Constructs	Measures	References
Motivation (Mot)	interdependence and freedom	(Hanaysha & Tahir, 2016)
	getting recognition	(Choi, 2016)
	incentive for quality publication	(Sayogo & Pardo, 2013)
	community appreciation	(Javaid et al., 2020)
	coworker support	(Alonso-Tapia & Ruiz-Díaz, 2022)
	decision-making power	(Canhilal et al., 2016; Hanaysha & Tahir, 2016)
	financial motivation	(Bustamam et al., 2014)
	enhancing performance	(Paloyo et al., 2016)
	quality publication	(Palali et al., 2018)
	appreciation for contribution	(Javaid et al., 2020)
	authority	(Hanaysha & Tahir, 2016; Zareen et al., 2015)

Source: Field study, 2022 and secondary literature

5.3.4 Performance Factors

One of the most important parts of the present research model is the performance relationship. The performance relationship between the actors is formed by teaching, research and publication, administrative tasks, and managing external funds, according to the available literature (Amrutha & Geetha, 2020; Rehman & Iqbal, 2020). This study doesn’t look at how well the survey is doing at getting answers related to performance. Instead, the performance is based on data about teaching, research and publication, administrative, and managing external funds from outside sources. Thus, the subsequent parts discuss the measures of teaching, research and publication, administrative, and managing external funds as the first-order latent constructs.

5.3.4.1 Teaching (Tea)

Faculty teaching performance refers to how well educators carry out their instructional obligations and contribute to their student's learning experiences (Stronge, 2018). Teaching is regarded as one of the key performance activities of academic professionals (Biasutti et al., 2021). It encompasses various aspects related to the effectiveness and quality of their teaching methods, classroom management, communication, engagement with students, and overall impact on student learning outcomes (Cheng et al., 2019; Lazarides & Buchholz, 2019; Virtanen et al., 2015). However, this study focuses on teaching as the performance of academic professionals (see Table 5.5). Among the six different indicators, the first indicator, 'reasonable teaching load,' is taken from Ishak et al. (2009) and Redding et al. (2019). The second one, 'proper supervision of students,' is borrowed from Amzat (2017) and Kuwaiti et al. (2019). The third indicator, 'co-curriculum involvement,' is derived from Hashim (2012). The fourth one, 'proper students' evaluation,' is extracted from Svanström et al. (2008). The fifth indicator, 'engaging class,' is brought from Forsey et al. (2013). Finally, the sixth indicator, 'knowledge in teaching contents,' was adapted from Bain & Mirel (2006). However, these indicators are also supported by data from field studies that examine the teaching performance of academic professionals.

5.3.4.2 Research and publication (RP)

Academic professionals' research and publication performance refers to their scholarly output and contributions to the academic community through research, publications, and other forms of dissemination of knowledge (Compagnucci & Spigarelli, 2020; Guthrie et al., 2019). This aspect of their work is crucial in advancing knowledge in their respective fields and is often a significant factor in evaluating their academic impact and career progression. The second most important performance indicator for academic professionals is their involvement in research and publication. However, this study focuses on the research and publication as the performance of academic professionals (see Table 5.5). Among the six different indicators, the first indicator, 'success research collaboration,' is received from Ishak et al. (2009) and Ponds (2009). The second one, 'research fund or amount of grant,' is extracted from Rybníček et al. (2019). The third item, 'quality publication,' is derived from Palali et al. (2018). The fourth, 'dedicated laboratory,' is extracted from Baekgaard et al. (2015). The fifth indicator, 'interest in research work,' is taken from Naderi Anari (2012). Finally, the sixth indicator, 'regular attend and arrange seminars and conferences,' is adapted from Tian et al. (2009). The indicators relating to research and publication performance are also backed up by the field study data.

Table 5. 5: Dimensions of performance

Constructs	Measures	References
Teaching (Tea)	reasonable teaching load	(Ishak et al., 2009; Redding et al., 2019)
	proper supervision of students	(Amzat, 2017b; Kuwaiti et al., 2019)
	co-curriculum involvement	(Hashim, 2012)
	proper students' evaluation	(Svanström et al., 2008)
	engaging class	(Forsey et al., 2013)
	knowledge in teaching contents	(Bain & Mirel, 2006)
	multiple assessment system	(Liang, 2013)
	maintaining regularity	(Anderson, 2006)
	essence of sound environment	(Maamari & Majdalani, 2019)
	interactive class	(Sharma & Srivastava, 2019)
	comprehensive delivery	(Izumi et al., 2021)
	multiple experiential techniques	(Ishak et al., 2009)
Research and Publication (RP)	success research collaboration	(Ishak et al., 2009; Ponds, 2009)
	research fund or amount of grant	(Rybníček et al., 2019)
	quality publication	(Palali et al., 2018)
	dedicated laboratory	(Baekgaard et al., 2015)
	interest in research work	(Naderi Anari, 2012)
	regular attend and arrange seminar and conference	(Tian et al., 2009)
	frequency of publication	(Kuperberg & Stone, 2008)
	completion of project	(Aje et al., 2009; Mudrak et al., 2018)
	required qualification	(Lee, 2018; Podolsky et al., 2019)
	appointment of research assistant	(Lutter & Schröder, 2016)
	regular write academic paper	(Taylor et al., 1984)
	quality publication	(Palali et al., 2018; White et al., 2012)
	involvement in research work	(Ishak et al., 2009; Ramsden, 1994)
	investment of time	(Cruz-Castro & Sanz-Menéndez, 2010)
Administrative (Adm)	general administrative activities	(Guarini et al., 2020; Pogodzinski, 2015)
	ability of handling situation	(Carreri & Dordoni, 2020; Roy, 2011)
	sense of duty	(Martín-Sempere et al., 2008; Westoby et al., 2021; Yusuf et al., 2020)
	logistic support	(Becuwe et al., 2016; Fernando et al., 2020)
	sound management capacity	(Argento et al., 2020; Perez et al., 2011)
	harassment-free environment	(Bondestam & Lundqvist, 2020; Eyre, 2000; Ward, 2021)
	financial incentive	(Guarini et al., 2020)
	separate office room	(Grinkevich et al., 2020; Morton, 2012)
	excess of admin duties	(Pogodzinski, 2015)

Managing External Fund (MEF)	collaboration with firm	(Bertello et al., 2022; Lee, 2000; Qian et al., 2020; Westlund et al., 2021)
	fund hunting	(Denney, 2021; Lomas, 2004)
	project bringing capacity	(Connolly et al., 2020; Sauermann et al., 2020; Taylor et al., 1984)
	collection of external research grant	(Feldman, 1987; García-Martín et al., 2020; Ngongalah et al., 2021)
	manage sponsorship	(Codd, 2005; Rothaermel & Thursby, 2005; Ryan & Fahy, 2012)
	fund collection capacity	(Horan & O'Regan, 2021; Rossi, 2009)
	frequency of getting research grant	(Feldman, 1987)
	Bring new project	(Day, 1998)
	Motivation	(McDonald, 2007)

Source: Field study, 2022 and secondary literature

5.3.4.3 Administrative (Adm)

The administrative performance of academic professionals refers to their effectiveness and efficiency in carrying out administrative responsibilities and tasks within academic institutions (Castro & Tumibay, 2021; Mansour et al., 2015; Melo et al., 2010). These administrative duties can vary depending on the roles and positions held by the academic professionals, such as department chairs, deans, program coordinators, or other administrative positions (Allison & Ramirez, 2020; Kruse, 2022). However, this study focuses on the administrative activities as the performance of academic professionals (see Table 5.5). Among the six different indicators, the first indicator, 'general administrative activities,' is retrieved from Guarini et al. (2020) and Pogodzinski (2015). The second one, 'ability of handling situation,' is borrowed from Carreri & Dordoni (2020) and Roy (2011). The third indicator, 'sense of duty,' is derived from Martín-Sempere et al. (2008), Westoby et al. (2021), and Yusuf et al. (2020). The fourth one, 'logistic support,' is extracted from Becuwe et al. (2016) and Fernando et al. (2020). The fifth indicator, 'sound management capacity,' is fetched from Argento et al. (2020) and Perez et al. (2011). Finally, the sixth indicator, 'harassment-free environment,' is adapted from Bondestam & Lundqvist (2020), Eyre (2000), and Ward (2021). Field study participants offered their thoughts on the administrative activities in light of the aforementioned criteria and parameters. In the current Human Resource Management (HRM) literature, integrated metrics of administrative activities are lacking. As a result, more research on the significance of administrative activity is needed, especially in regard to the aforementioned dimensions of HRM and performance-related study.

5.3.4.4 Managing external fund (MEF)

Managing external fund performance of academic professionals involves overseeing and ensuring the effective use and management of funds acquired from external sources, such as research grants, contracts, donations, or other sources of external funding (Pereira et al., 2020; Philbin, 2010). However, this study focuses on managing external funds as the performance of academic professionals (see Table 5.5). Among the five indicators, the first indicator, ‘collaboration with firm,’ is taken from Bertello et al. (2022), Lee (2000), and Qian et al., 2020; Westlund et al. (2021). The second indicator, ‘fund hunting,’ is taken from Denney (2021) and Lomas (2004). Besides the third indicator, ‘project bringing capacity’ is borrowed from Connolly et al. (2020), Sauermann et al. (2020), and Taylor et al. (1984). Therefore, the fourth indicator, ‘collection of external research grants’, is taken from Feldman (1987), García-Martín et al. (2020), and Ngongalah et al. (2021). Finally, the fifth indicator, ‘manage sponsorship,’ is taken from Codd (2005), Rothaermel and Thursby (2005), and Ryan and Fahy (2012). In response to the aforementioned criteria and parameters, field study participants provided their feedback on the MEF. Integrated measures of the MEF are currently absent from the HRM and performance-related literature. Therefore, more study is required to determine the significance of the MEF, particularly in the aforementioned areas of HRM and performance study.

5.4 DEVELOPMENT OF QUESTIONNAIRE FROM MEASUREMENT ITEMS

In the preceding part, the researcher reviewed the different constructs that are relevant and made informed assumptions about the relationships among them, leading to the formation of 14 hypotheses. As described in Chapter 3, quantifiable data was collected to evaluate the hypotheses. Thus, a quantitative survey was carried out with the use of standardized questionnaire. The questionnaire has been divided into two parts in order to represent the research’s hypotheses and objectives. The demographic profile of the respondents is discussed in Section A, and the research model variables are presented in Section B. The data obtained in Section B were employed to analyze the theoretical connections among the components of the study model. The development of Section B of the questionnaire took into consideration all notions that were theoretically supported and contextualized. Similarly, the measurement items employed in the questionnaire for each construct were developed and customized based on existing scholarly literature and the results of field studies. The keywords that are used for each item of the measurement are derived from previous research as well as data from field studies. After being positioned inside their appropriate constructs, the measuring items were subsequently incorporated into the questionnaire. To enhance the comprehensibility

of the questionnaire, additional explanatory statements pertaining to the subject matter were incorporated for each measurement item.

Besides, section A of the questionnaire included various socio-demographic variables. The inclusion of these variables in the questionnaire aimed to enhance understanding of the demographic profile of the respondents and ascertain the need for comparing the results of the Section B variable analysis or using any of the variables as the control variable. Finally, there were eleven distinct dimensions (constructs) in Section B of the quantitative questionnaire, in addition to eight socio-demographic variables in Section A. Each construct had between five and seven measurement items applied to it in order to collect the necessary information. As it was noted, the initial questionnaire was fine-tuned by pre-testing. The feedback provided by participants during the pre-testing phase was considered for the development of the final iteration of the questionnaire (see Appendix B). The final questionnaire received approval from the relevant authority of the Institute of Bangladesh Studies (IBS), University of Rajshahi. After ensuring that all the necessary conditions for developing the quantitative questionnaire in this study, the final iteration of the questionnaire was prepared for the purpose of data collection.

5.5 CHAPTER SUMMARY

The hypotheses were displayed in this chapter in accordance with the study model. The existing literature and field study findings supported the development and justification of the hypotheses. In this study, there were nine different hypotheses that described the relationship between the research model's constructs. In this chapter, four additional hypotheses were developed to estimate the mediation effect. As a result, the rest of the hypothesis (1) was designed to assess the moderation effect. In this chapter, researcher looked at the specific elements that can be utilized to assess each construct. The items used for the measurements were selected based on prior research and empirical evidence. Finally, this chapter focuses on the development of the final version of the questionnaire.

CHAPTER 6: QUANTITATIVE DATA ANALYSIS AND RESULTS

6.1 INTRODUCTION

The chapter starts with a look at the pilot study data, which displays the chapter's overall trend. The data analysis is divided into two sections: descriptive statistics to know about the demographic profiles of respondents followed by SEM analysis for assessing the reliability and validity statistics and evaluating the structural relationships. Prior to data analysis, the data screening procedures (i) treatment of fragmented responses and missing data, (ii) test of non-response bias, and (iii) test of common method bias are discussed. After the data preparation process is finished, the refined dataset is used for socio-demographic and structural equation modeling (SEM) analysis. The analysis related to the demographic variables is conducted using SPSS software, while the analysis of the structural equation model (SEM) is performed using the Smart PLS software (www.smartpls.com). The study of structural equation modeling (SEM) can be categorized into two main sections: (i) measurement part and (ii) structural part.

Partial least squares structural equation modeling (PLS-SEM) has become a prominent multivariate analysis technique employed by researchers in the field of human resource management (Hair et al., 2013a). As a result, this study uses SEM analysis for career planning and performance of academic professionals.

6.2 PILOT STUDY

In order to reduce the amount of ambiguity in the data collection procedure, the pilot study was carried out. Due to the dispersion of respondents across the country, the pilot study survey employed both face-to-face interviews and online techniques. For the sake of conducting an analysis of the data, a total of 47 replies stemming from the research area were collected. The participants involved in the pilot study survey were afforded the chance to offer feedback on many aspects of the questionnaire's intricacy, encompassing its comprehensive material and the structure of the response category. Several inconsistencies in the questionnaire, both in terms of word choice and general question structure, were noted by respondents. The ambiguities were in regard to the pay structure, the sound working environment, and performance issues such as administrative and managing external funds. Another issue was raised regarding the length of the questionnaire. The respondents were concerned that the average amount of time it took them to answer each questionnaire was roughly 25 minutes.

The analysis of pilot study data were mainly confined to estimating the mean and standard deviation scores. The pilot survey was carried out to determine the

trend of the collected data. The results show that some variables had lower mean scores (PaySt) and higher SD values (see Table 6.1). These findings reveal flaws in the questionnaire that may hinder respondents' capacity to make informed choices. These questions were reworded and rephrased in light of the feedback received from the respondents as well as the findings from the descriptive statistics. However, no efforts were made to shorten the questionnaire because all of its sections were deemed necessary for the current research context. Respondents were urged to set aside more time for taking part in the final survey in order to answer all questions.

6.2.1 Descriptive Statistics of the Pilot Study

The goal of the pilot study was to check for ambiguities in the questionnaire, but it also performed another important function. In addition to this, a pilot survey was carried out with the purpose of determining the patterns of the collected data. For this reason, the data was evaluated based on mean and standard deviation (SD) scores, amongst other instances. As indicated in the preceding section, the collective findings reveal a downward trajectory in the average scores of pay structure (PaySt) and an increase in the standard deviation scores for most of the measurement items (see Table 6.1). Therefore, the observed pattern in the data may not provide substantial findings warranting further investigation. At this point, researcher reevaluated the questionnaire and made adjustments to the question phrases, such as switching to passive voice, flipping positive statements to negative ones, or modifying certain items while leaving others the same, to reduce the likelihood of biased outcomes (Arndt & Crane, 1975; Sen, 2015).

Table 6. 1: Descriptive statistics of pilot study data

Constructs	Items	Items Keywords	Mean	SD
Pay structure	PaySt1	Satisfactory salary package	3.00	1.083
	PaySt2	Bonus and allowances	3.15	1.161
	PaySt3	Number of increments	3.06	0.987
	PaySt4	Medical support	3.00	1.268
	PaySt5	Paid-study-leave policy	4.30	1.382
Promotion system	ProSy1	Fair chance of promotion	4.57	1.098
	ProSy2	Due-time promotion system	5.09	1.139
	ProSy3	Definite publication requirement for promotion	5.15	0.932
	ProSy4	Promotion facility even on study leave	5.13	1.055

	ProSy5	Eradicate bureaucratic complexity	5.09	1.060
	ProSy6	Rebate facility for promotion	4.98	1.093
Sound working environment	SWE1	Well-furnished room	5.13	1.013
	SWE2	ICT facilities	4.72	0.949
	SWE3	Politics free sound environment	5.15	1.197
	SWE4	Security from students' harassment	5.02	0.944
	SWE5	Recreational and refreshment facility	4.70	1.178
	SWE6	Collaborative teaching aid facility	5.26	0.820
	SWE7	Access to academic resources	5.30	0.954
Faculty development program	FDP1	Training on recent research tools	5.23	1.005
	FDP2	Career development programs	5.06	0.942
	FDP3	Collaboration with foreign university	4.74	1.242
	FDP4	Financial assistance to attend int. conferences	5.32	0.783
	FDP5	Self-assessment-based training	5.17	1.028
	FDP6	Training based on the current curriculum	4.85	1.179
	FDP7	Foundation training program	5.30	0.907
Job satisfaction	JobSat1	Enthusiastic job	4.81	0.992
	JobSat2	Feeling self-esteem to teach	4.91	0.952
	JobSat3	Receiving regard from others	4.74	0.920
	JobSat4	Feeling proud to teach	5.28	0.713
	JobSat5	Getting substantial financial benefits	4.06	1.205
	JobSat6	Non-financial benefits	5.00	0.956
	JobSat7	Socially recognized job	5.15	1.021
Motivation	Mot1	Opportunities for interdependence and freedom	4.91	1.120
	Mot2	Getting recognition	5.17	0.963
	Mot3	Incentives for quality publication	5.19	1.035
	Mot4	Community appreciation for contribution	4.53	1.158
	Mot5	Coworker support	5.04	1.021
	Mot6	Decision-making power	4.77	1.047
Teaching	Tea1	Reasonable teaching load	5.00	0.978
	Tea2	Proper supervision of students	5.19	0.992
	Tea3	Co-curriculum involvement	5.11	0.938
	Tea4	Proper student evaluation	5.30	0.907
	Tea5	Engaging class	5.11	0.914
	Tea6	Sound knowledge on teaching content	5.30	1.020
Research and publication	RP1	Research collaboration	5.19	0.924
	RP2	Research fund or grant	5.32	0.958
	RP3	Quality publications	5.09	0.974
	RP4	Dedicated laboratory	5.26	0.966
	RP5	Interest in research work	5.17	0.963
	RP6	Attend and arrange seminars	5.17	0.868

Administrative	Adm1	General administrative activities	4.49	1.081
	Adm2	Ability to handle the situation	4.96	0.932
	Adm3	Sense of duty	5.21	0.954
	Adm4	Logistic support	5.19	1.014
	Adm5	Handsome financial incentive	5.11	0.961
	Adm6	Sound management capacity	5.32	0.935
Managing external fund	MEF1	Collaboration with firms	5.00	0.956
	MEF2	Project-bringing capacity	4.96	1.141
	MEF3	Collection of external research grants	4.83	0.916
	MEF4	Managing sponsorship	4.89	1.026
	MEF5	Religious and festival vacation policy	4.70	0.907

Source: Pilot study, 2023

6.2.2 Demographic Profile of the Pilot Study Respondents

In addition to the structured questions, respondents were required to answer eight demographic questions including age, gender, marital status, educational qualification, designation, service tenure, university category served, and monthly income in the area (see Table 6.2).

According to the analysis of the socio-demographic data, the vast majority of respondents were aged between 30-39 years (55.3%), 17% of them were from 40 to 49 years, and 14.9% of them were from 20 to 29 years. Besides, only 8.5% and 4.3% were from both 50 to 59 years and 60 to 69 years, respectively. Again, with respect to gender, almost 72.3% were male, and the rest of them were female, which is quite representative in the context of university teaching in Bangladesh. However, among the respondents, the majority of them were married (83%); only a few respondents (14.90%) were unmarried, and only one respondent was in other category.

In relation to the education domain, the majority of the respondents have completed their post-graduation (36.2%); only 4.3% of them have their master's research/MPhil degree, 25.5% have PhD degrees, and 21.3% have their post-doctoral degree, but only a few respondents have only their graduate degree (12.8%). Besides, almost 38.3% of respondents were assistant professors, 27.7% were lecturers, and nearly 17% of them were associate professors and professor's category. These findings reveal that participants of this study were highly educated and socially recognized in society.

Table 6. 2: Demographic statistics of the pilot study samples

Demographic profile	Classification	Number (frequency)	Percentage
Age	20-29	7	14.90
	30-39	26	55.30
	40-49	8	17.00
	50-59	4	8.50
	60-69	2	4.30
	Total	47	100
Gender	Male	34	72.30
	Female	13	27.70
	Total	47	100
Marital status	Married	39	83.00
	Unmarried	7	14.90
	Others	1	2.10
	Total	47	100
Education	Graduate	6	12.80
	Post-graduate	17	36.20
	Masters research/MPhil	2	4.30
	PhD	12	25.50
	Post-doctoral	10	21.30
	Total	47	100
Designation	Professor	13	27.70
	Associate professor	8	17.00
	Assistant professor	18	38.30
	Lecturer	8	17.00
	Total	47	100
Service tenure	1-5	10	21.30
	6-10	17	36.20
	11-15	8	17.00
	16-20	4	8.50
	21-25	2	4.30
	26-30	4	8.50
	31-35	1	2.10
	36-40	1	2.10
	Total	47	100
Serving university category	General university	14	29.80
	Science and technology	13	27.70
	Engineering and technology	11	23.40
	Agricultural university	9	19.10
	Total	47	100
Monthly income	Tk. 40,000 or below	8	17.00
	Tk. 40,001-60,000	14	29.80
	Tk. 60,001-80,000	11	23.40
	Tk. 80,001-1,00,000	5	10.60
	Tk. 1,00,001 or above	9	19.10
	Total	47	100

Source: Pilot study, 2023

Therefore, among the total respondents, about 21.3% of academic professionals' service length was between 1 to 5 years, 36.2% were between 6 to

10 years, and 17% were between 11 to 15 years. Besides, almost 8.5% of service length was between 16 to 20 years and 26 to 30 years, and only 4.3% were between 21 to 25 years of service experience. But only a few academic professionals had more than 30 years of service experience. The researcher of this study found only one respondent was both between 31 to 35 years and 36 to 40 years of service duration. Almost 29.8% of academic professionals were from general universities, 27.7% were from science and technology, and almost 23.4% were from engineering and technology, and 21% were from agricultural university categories. So, the university selection was equitable in the current study.

Again, with regard to the monthly income, 17% of the academic professional's income was Tk. 40,000 or below, another 29.8% of income ranges between Tk. 40,001-60,000, which reveals the maximum in number, 23.4% income were ranges between Tk. 60,001-80,000, about 10.6% of income were ranges between Tk. 80,001-1,00,000, and only 19.1% of income were above the one lakh/ Tk. 1,00,001 or above.

6.3 CONDUCTION OF SURVEY

The final data was gathered by a combination of both online and offline survey techniques (through email, phone calls, Whatsapp, and text messages) and in-person face-to-face interviews utilizing a pre-designed survey questionnaire. The primary target was to gather a total of 550 responses from academic professionals employed at various public universities. However, it was possible to reach 525 respondents. In-person interviews were conducted by a data collection team consisting of eight members, including three university faculty and five thesis students of the Department of Marketing, University of Rajshahi through supplying survey questionnaires to the academic professionals.

The data collection team faced challenges in obtaining the desired number of samples as a result of respondents' lack of willingness and disinterest in participating in the survey. At the outset of the supplying survey questionnaire to the respondents, the response rate was very poor. At this point, the researcher believed that this low response rate could have an impact on the overall findings of the study. Therefore, adjustments were made to the ways in which data were collected, and the researcher then committed himself to communicate person to person over the phone and requested them to voluntarily participate in the survey questionnaire since a large group of professionals didn't check their mail daily. As a result of communicating over the phone, the response rate began to rise gradually. However, it is important to note that most of the responses were collected through an online system (supplying Google forms via emailing and over phone calling). This resulted in a total of 459 completed survey responses for analysis (not

including pilot study results). In the first phase, the researcher received a total of 202 surveys, and in the second phase, this study received a total of 257 responses. Table 6.3 provides an in-depth explanation of the data administration procedure.

Table 6. 3: Distribution and management of survey data

Response	Number	Percentage
Target sample size	550	100
Total responses except pilot study	478	86.91
First wave data	202	36.72
Second wave data	257	46.72
Total unusable data	19	03.45
Total usable data	459	83.45

Source: Survey data, 2023

6.3.1 Data Characteristics and Treatments

The initial dataset contained unsuitable answers, limiting the usefulness of PLS software for analysis. The return of partial answers, missing numbers, and the presence of outliers in the initial data set were all frequent problems. As a result, there were necessary modifications to the dataset to enhance the quality of the data (Batista & Monard, 2003; Kandel et al., 2011; Thomas & Rajabi, 2021). At this point, 7 cases were discovered with a total of 19 missing values, which were replaced in the data set by the value -99 (Wong, 2013).

Out of a total of 478 surveys, there were three situations (3) that were determined to have incomplete responses; as a result, these cases were eliminated from the data set. During the process of looking for outliers, it was discovered that 16 of the instances had values that were abnormally high or low, as well as irregular patterns of response (including one example that was missing six data). Because of this, 16 cases were removed from the final data set in order to improve the quality of the data. After missing value modifications, the final data set consisted of 459 responses.

6.3.2 Assessment of Sampling Error and Nonresponse Bias

The issue referred to as non-response bias is fairly common and can potentially damage an investigation's capacity to reflect the community as a whole adequately. The present study employed a non-parametric technique to investigate the potential non-response bias.

Table 6. 4: Mann–Whitney test

Constructs	Items	Z-value	Significance
Pay Structure (PaySt)	PaySt3	-0.384	0.701
Promotion System (ProSy)	ProSy5	-0.545	0.586
Sound Working Environment (SWE)	SWE2	-0.128	0.898
Faculty Development Program (FDP)	FDP1	-1.288	0.198
Job Satisfaction (JobSat)	JobSat7	-0.769	0.442
Motivation (Mot)	Mot6	-0.186	0.852
Teaching (Tea)	Tea4	-0.35	0.727
Research and Publication (RP)	RP1	-0.771	0.441
Administrative (Adm)	Adm4	-0.919	0.358
Managing External Fund (MEF)	MEF2	-0.684	0.494

Source: Survey data, 2023

In this particular instance, the Mann-Whitney test was utilized. This test is used to determine the degree to which two distinct samples differ from one another. In the SPSS data sheet, the early responses (n=202) are listed as group 1, while the late responses (n=257) are listed as group 2. This analysis was conducted based on the hypothesis that there are differences in the replies offered by the two groups regarding the particular measurement items being measured. Table 6.4 displays the findings of the Mann-Whitney test that was conducted.

The results indicated that the z-scores for all examined items were not statistically significant, leading to the acceptance of the null hypothesis and rejection of the alternative hypothesis. This shows that neither set of data differed from the other in terms of responses. Therefore, it might be argued that the data set did not suffer from non-response bias. To that end, the data set could be used for further study.

6.3.3 Common Method Bias Test

Common method bias is a significant concern in behavioral research due to its propensity to introduce measurement mistakes that may compromise the validity of empirical findings. This is due to the fact that it is one of the most commonly used research methods (Chang et al., 2020; Kock et al., 2021; Podsakoff et al., 2003). The existence of common method bias (CMB) can be defined as “the use of the same method to measure correlations between variables” (Schwarz et al., 2008). Another obstacle that needed to be overcome for this research was the presence of

common method bias in the overall data collection. At the beginning of the study, the researcher made an effort to eliminate common method bias. The presence of CMB in the data set constituted an additional obstacle for this investigation. At the commencement of the investigation, the researcher expressed a concern regarding the mitigation of potential common technique bias. Consequently, every step, including selecting the sample, developing the questionnaire, and other relevant phases of the research process, was conducted with care. For example, the study's samples were carefully chosen from the study site and were associated directly with public university teaching professionals. Furthermore, participants were informed at the outset that the anonymity of their responses would be upheld, ensuring their ability to provide candid and truthful answers to all inquiries. Based on the findings of the field study, which indicate satisfactory levels of literacy and English proficiency among the respondents, there is no need to translate the questionnaire into the native language of the participants for its completion. This survey was conducted primarily online and partially through a face-to-face personal interview, so the researcher and data collection team were able to answer any questions and provide any further information. Fourthly, this study attempted to eliminate double-barreled questions that removed the confusion of the respondents.

Table 6. 5: Test of common method bias

Constructs' relationship	Path coefficients (β)	Significance level
Marker -> Performance	-0.273	0.000

Note: $\beta = -0.273$ and $p = 0.000$

The existing body of literature has proposed many strategies to address method variance issues, such as employing multiple regression and partial correlations (Ganster et al., 1983; Polanin et al., 2021), partial correlation technique (Klipstein et al., 2021; Lindell & Whitney, 2001), confirmatory factor analysis (CFA) approach (Mishra, 2016; Podsakoff et al., 2003; Sureshchandar, 2021), and unresolved latent method construct (Kock et al., 2021; Richardson et al., 2009; Williams et al., 1989, 2010). This study employed the CFA marker technique to assess the presence of common method bias. Richardson et al. (2009) proposed the utilization of the CFA marker methodology as a means to address both congeneric and non-congeneric common method variance (CMV), along with accounting for random mistakes in both the marker and substantive components. To investigate the effect of the common method bias, data were collected for a marker variable (i.e., smoking consequences) that was uncorrelated and irrelevant to the ultimate dependent variable (i.e., performance due to career planning dimensions and job satisfaction) of the study from a theoretical standpoint (Richardson et al., 2009). The findings of the common method bias test are shown in Table 6.5. The results demonstrate that the connection between the marker variable and the ultimate

dependent variable is significantly negative ($\beta=-0.273$ and $p=0.000$), which indicates that the data set does not contain any common method bias.

6.3.4 Demographic Profiles of the Survey Study Respondents

In Table 6.6, the demographic data of the study samples are displayed. Like the pilot study, the respondents were also asked to fill out eight demographic questions about themselves, including their age, gender, marital status, education, designation, service length, university category served, and average monthly income of their profession. The classification of age and service length was measured by using this equation of $(2^k=n \text{ and } i \geq H-L/k)$, where k is equal to the number of classes and class interval ($i \geq$) is greater than or equal to the highest value minus the lowest value divided by number of classes (Lind et al., 2021).

The demographic profile of the respondents reveals that 47.30% (217) of the academic professionals were aged between 30-39 years, which holds the majority in number, besides 25.50% (117) professionals were aged ranges from 20-29 years, which carries the second highest in number. At the same time, 19.80% (91) of respondents were in the 40-49 years range. Moreover, 24 respondents (5.20%) were aged between 50-59 years, and only 9 respondents (2%) were 60-69 years ranges. Furthermore, only one respondent (0.20%) was in the class of 70-79 years ranges.

Among the 459 respondents, there were 311 males and 148 females, which carried the 67.80% and 32.20% respectively. From this information, it is clearly revealed that both male and female academic professionals' ratios were quite representative. Besides, from the total respondents, only 17.20% of respondents (79) were unmarried, whereas the majority of the respondents 81.30% were married (373), while only 7 respondents (1.5%) were in others (divorced) category.

Therefore, with regard to the educational qualifications, 31 respondents were graduates (6.80%), 192 were post-graduate, which contained the majority in numbers (41.80%). Besides, 105 respondents were masters research/MPhil (22.90%), and 103 respondents had their PhD degree (22.40%). But only 28 respondents have their post-doctoral degree (6.10%).

On the other hand, 176 respondents were assistant professors (38.34%), carried the majority percentage, and 119 respondents were lecturers (25.92%), holding the second maximum. Besides, this study took 86 professors and 78 associate professors, which contained 18.74% and 17%, respectively.

Table 6. 6: Demographic profile of the survey study samples

Demographic profile	Classification	Number (frequency)	Percentage
Age	20-29	117	25.50
	30-39	217	47.30
	40-49	91	19.80
	50-59	24	5.20
	60-69	9	2.00
	70-79	1	0.20
	Total	459	100
Gender	Male	311	67.80
	Female	148	32.20
	Total	459	100
Marital status	Married	373	81.30
	Unmarried	79	17.20
	Others	7	1.50
	Total	459	100
Education	Graduate	31	6.80
	Post-graduate	192	41.80
	Masters research/MPhil	105	22.90
	PhD	103	22.40
	Post-doctoral	28	6.10
	Total	459	100
Designation	Professor	86	18.74
	Associate professor	78	17.00
	Assistant professor	176	38.34
	Lecturer	119	25.92
	Total	459	100
Service tenure	1-5	203	44.20
	6-10	106	23.10
	11-15	65	14.20
	16-20	35	7.60
	21-25	28	6.10
	26-30	14	3.10
	31-35	6	1.30
	36-40	2	0.40
	Total	459	100
Serving university category	General university	146	31.80
	Science and technology	129	28.10
	Engineering and technology	93	20.30
	Agricultural university	91	19.80
	Total	459	100
Monthly income	Tk. 40,000 or below	118	25.70
	Tk. 40,001-60,000	163	35.50
	Tk. 60,001-80,000	83	18.10
	Tk. 80,001-1,00,000	62	13.50
	Tk. 1,00,001 or above	33	7.20
	Total	459	100

Source: Survey data, 2023

Moreover, in this study, the service tenure was grouped into eight class intervals. On which, 203 respondents (44.20%) had service tenure between 1-5 years, 106 respondents (23.10%) had experience of 6-10 years, and 65 of the total respondents (14.20%) were in the 11-15 years of experience. The demographic profile of the academic professionals clearly mentioned that the first three class intervals contained the maximum number of respondents. Again, 35 respondents (7.60%) service duration of 16-20 years, and 28 respondents (6.10%) had a service length in the 21-25 years class interval. Therefore, only a few respondents were in the last three class intervals, where 14 respondents (3.10%) experienced between 26-30 years, 6 respondents (1.30%) had a service duration of 31-35 years, while only 2 respondents (0.40%) service length was ranged from 36-40 years.

Furthermore, among the total samples, 146 respondents were from general university category (31.80%), which contained the maximum in numbers, and 129 respondents were from science and technology university category (28.10%), which carried the second maximum value. Whereas another 93 respondents were from engineering and technology university category (20.30%), and the rest of the 91 respondents were from the agricultural university category (19.80%).

Finally, with regard to the monthly income of the professionals, 25.70% of respondents (118) income was Tk. 40,000 or below, and 35.50% means the majority of the respondents (163) income ranges from Tk. 40,001-60,000. Besides, 83 respondents (18.10%) were in the range between Tk. 60,001-80,000 income and another 62 respondents (13.50%) income were Tk. 80,001-1,00,000 ranges, while the rest 33 respondents (7.20%) range of income were Tk. 1,00,001 or above.

6.3.5 Descriptive Statistics of the Survey Study

This study also measured the descriptive statistics of the survey data concerning mean and standard deviation (SD) of items associated with different constructs of the model (see Appendix D, Table 11). All the items were measured on a scale of 6 points, where the highest mean was 5.73 for Mot1 and the lowest was 3.39 for JobSat5. At the same time, the standard deviation of most of the items was closer to 1, and the rest of the items were slightly above 1, which represented a minor deviation from the average response. This study's standard deviation ranged from 0.638 to 1.651, on which the lowest standard deviation begins from (Mot1) and highest from (ProSy2).

6.3.6 Confirmatory Factor Analysis (CFA)

Under this study, the measurement items of a construct were adapted from the qualitative study as well as the existing literature. So, it was important to assess whether the measurement items of the construct are consistent with the nature of context or not. Thus, this study conducted confirmatory factor analysis in order to test whether the observed items of the study appropriately represent the constructs or not. Confirmatory factor analysis refers to a multivariate tool that is used to test how well the measured items represent the construct (Bandalos & Finney, 2018; Zakrzewska-Bielawska, 2021). This study carried out principal component analysis with the assistance of the IBM SPSS 26 application program to confirm the measurement items associated with each construct (See Appendix D).

The first scale measured in this study was pay structure, which consisted of five items adapted from different literature (see Chapter 5, Table 5.2, Page-111). To confirm this scale in career planning context, this study conducted confirmatory factor analysis where the result of the study indicated that all the items of pay structure are quite satisfactory to represent the construct. Because the value of 71.502% variance represents how much the pay structure scale and the respective items have in common, with a value of 50% or above considered acceptable (Bandalos & Finney, 2018). Regarding the factorial weight, the individual contribution of each item has to explain the construct. All the items present a high level of contribution. The Principal Component Analysis (PCA) showed that one component was extracted, and the solution could not be rotated; this suggests that all the items fit into a single construct (see Appendix D, Table 1).

The items of the promotion system were adapted from the previous studies conducted in various literature (see Chapter 5, Table 5.2, Page-111). In this study, six items were taken to represent the construct in the career planning context. This study explained a 51.675% variance, which is accepted since it is above 50%. Concerning the factorial weight, all items had significant contributions to the construction of the promotion system. This analysis further suggests that all the items fit this construct because only one component is extracted and cannot rotate the solution (see Appendix D, Table 2).

Again, the items of sound working environment were also adapted from existing literature (see Chapter 5, Table 5.2, Page-111). Initially, this study considered seven items to represent the sound working environment as a dimensions of career planning. However, the result revealed that two components were extracted from the PCA where the variance explained by the single construct was 43.830%, which is below 50%, indicating that all the items were not fit for this construct. After that, this study deleted a low-loading item (SWE7) and then carried out the analysis again. The result of this analysis also revealed a variance of 50.949%, but again, two components were extracted from the PCA, so it doesn't represent the construction of the construct. Hence, this study again deleted another low-loading item (SWE6) and carried out the analysis. Therefore, the result of the study revealed a variance of 60.645%; only one component was extracted from the analysis, and the solution could not be rotated (see Appendix D, Table 3). Thus, this study suggested that the rest of the items were fit to a construct (SWE).

The seven items of the faculty development program were adapted from the existing literature (see Chapter 5, Table 5.2, Page-111); this scale aimed to represent the FDP as the dimensions of career planning of academic professionals. So, in order to test the validity of this construct, whether it is fit or not, this study carried out PCA. The result of the confirmatory factor analysis revealed a variance of 49.668, which is very close to 50%; besides, only one component was extracted from the PCA and couldn't rotate the further solution (see Appendix D, Table 4). Hence, this analysis suggests that all the items associated with this construct successfully define and fit with the FDP.

The seven items of job satisfaction were adapted from several studies in the past (see Chapter 5, Table 5.3, Page-114), aimed to measure the job satisfaction of academic professionals. The output of principal component analysis suggested that all the items couldn't represent the construct because the test of this analysis explained a variance of 46.415%, which is less than 50%, and two components were extracted from the PCA, which couldn't fit with a single construct. Therefore, this study deleted a low loading items (JobSat6) from the construct and carried out further analysis. The results of this study revealed a variance of 52.818%, which is satisfactory for representing the construct. Besides, one component was extracted

from the PCA and couldn't rotate the solution, revealing the suitability of the items to define the construct (see Appendix D, Table 5).

The motivation scale, which consists of six items (see Chapter 5, Table 5.4, Page-115), was adapted to evaluate the moderating role in the relationship between job satisfaction and the performance of academic professionals. The findings of PCA explained a variance of 51.157%, which is a good representation of the construct. Additionally, only one component was extracted from the analysis, and there was no need for further rotation to construct the construct (see Appendix D, Table 6).

This study employed teaching as a formative measurement construct to measure the performance of academic professionals. Six teaching items were adapted from previous literature (see Chapter 5, Table 5.5, Page-117) for this construct. The PCA analysis revealed a variance of 51.472%, indicating a strong representation of the construct. Furthermore, it is worth noting that the study yielded only one component, indicating that there is no requirement for additional rotation in the creation of the construct (see Appendix D, Table 7). Consequently, all items of this construct significantly contributing to the formation of teaching as the dimension of performance of academic professionals.

The performance of academic professionals was assessed in this study using research and publication as a formative measurement concept. The building of this construct involved the adaptation of six educational elements from various earlier literature sources (see Chapter 5, Table 5.5, Page-117). The principal component analysis showed a variance of 58.206%, which suggests that the construct is well-represented. Note that there is no need for extra rotation in building the construct, as the investigation only provided one component (see Appendix D, Table 8). Hence, research and publication is appropriately defined by its associated items.

Administrative was used as a formative measuring concept to examine the performance of academic professionals in this study. Six administrative items drawn from various preceding literature sources were adapted in constructing this construct (see Chapter 5, Table 5.5, Page-117). The construct appears to be adequately represented, as the principal component analysis revealed a variance of 58.206%; because the inquiry only yielded one component, additional rotation in constructing the construct is unnecessary (see Appendix D, Table 9). Thus, all the

items contributing to the formation of the Adm as the performance dimension of academic professionals.

The last scale measured in this study was managing external fund as a formative construct, which consisted of five items adapted from different literature (see Chapter 5, Table 5.5, Page-117). Principal component analysis showed a variance of 63.283%; therefore, the concept seems well-represented. Extra constructional rotation is superfluous since the investigation delivered a single component (see Appendix D, Table 10). So, the items associated with this construct significantly represent the MEF as the dimension of performance.

6.4 STRUCTURAL EQUATION MODELLING (SEM) ANALYSIS

This study first analyzed the respondents' demographic information before moving on to structural equation modelling. In reality, there are two primary components to SEM analysis: the measurement model and the structural model. The purpose of the measurement phase was to check the precision and accuracy of the instruments utilized for assessing the study model's structures. After the thorough analysis of the measurement model, a structural analysis was performed to examine how the various components in the research model related to one another. Table 3.4 details the recommended order for performing SEM analysis and obtaining estimates.

As specified in the entire SEM model (see Figure 6.1), the measuring element of the model included 61 first-order reflective-type measurements (indicators) organized into 10 constructs. In addition to that, this model contained ten hypothetical relationships that portrayed the structural pathways of the model. On the other hand, the arrow links from Tea→ Performance, RP→ Performance, Adm→ Performance, and MEF→ Performance indicate the second-order formative measures of the performance relationship (Perf), and thus, they were not included within the framework of the structural relationship.

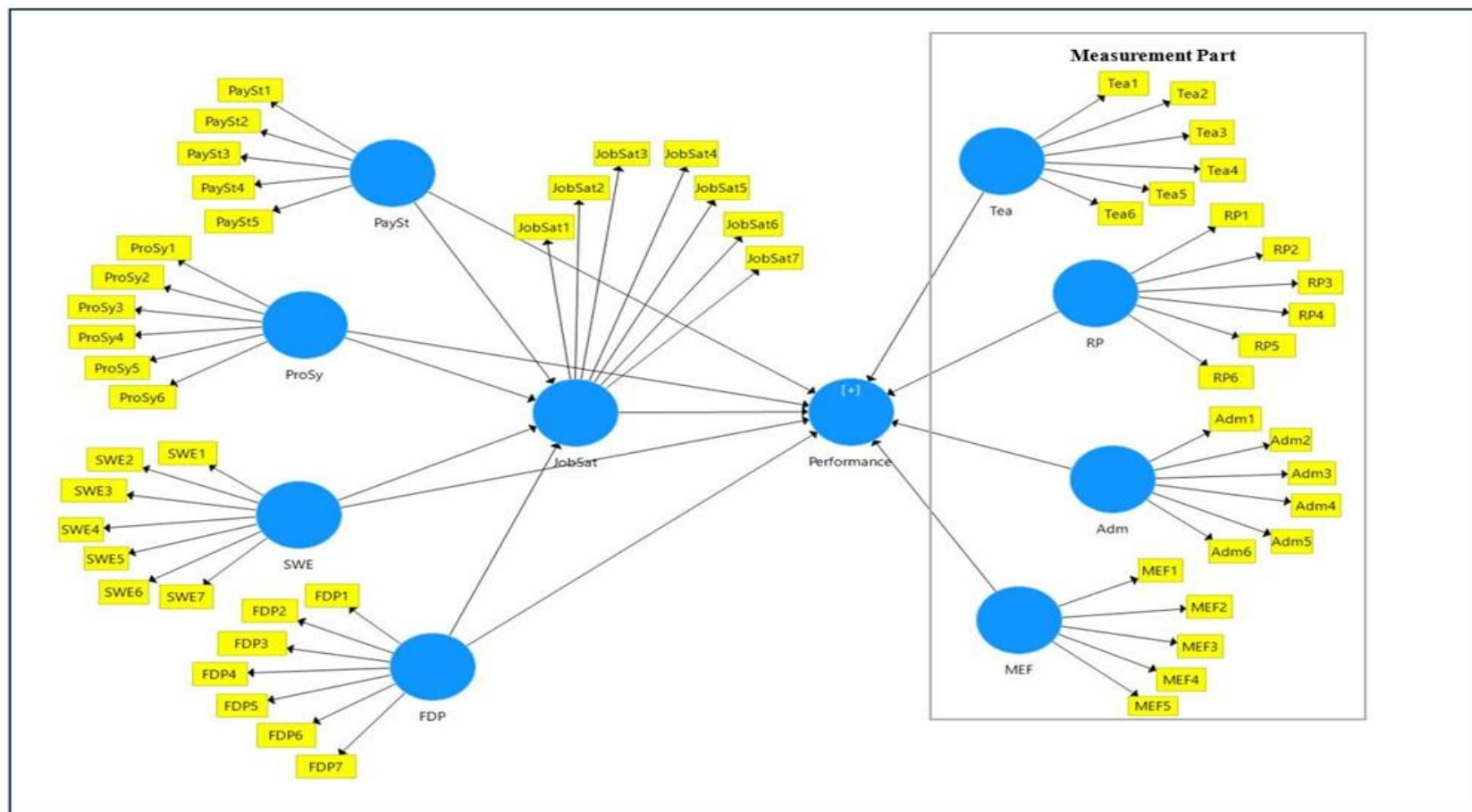


Figure 6. 1: Full SEM Model

6.4.1 Assessment of the Measurement Model

All of the components and items that were taken into consideration for the career planning and performance model were included in the evaluation of the measurement model (see Figure 4.3). This model consisted of 11 different measuring constructs, one of which was a second-order construct that could either be reflecting or formative in its character. Furthermore, the assessment of the reflective model involved evaluating the reliability of the indicator, including its internal consistency reliability, convergent validity, and discriminant validity at both the item level and construct level. These evaluations are presented in Table 3.4. The formative model was evaluated based on the absolute contribution (loadings) of the indicators, the relative contribution (weights) of the indicators, and a test of multicollinearity concerns, as shown in this Table. The assessment of the measurement model is broken down into its component parts and presented in the following sections.

6.4.1.1 Assessment of the reflective measurement model

The study model consisted of 10 first-order reflective type factors, including (PaySt), (ProSy), (SWE), (FDP), (JobSat), (Mot), (Tea), (RP), (Adm), and (MEF). There were 5 to 7 measurement items for each of the factors. The reflective model was assessed by analyzing the validity and reliability of the indicators for its representative construct (Hair et al., 2011a, 2013a; Ringle et al., 2020).

6.4.1.1.1 Reliability

This study looked at the reliability of indicators as well as the reliability of their internal consistency. The first is conducted at the indication level, while the second is carried out on the construct level.

6.4.1.1.1.1 Indicator reliability

The loading scores were used to calculate an assessment of the indicator's reliability. A loading of 0.40 is considered appropriate in exploratory investigations, despite the fact, the recommended value in this context is ≥ 0.70 (Hair et al., 2013a). However, the minimal loading score that is considered acceptable in this study is 0.70 or above. Some of the indicators were removed from the data set because of lower loading score than the recommended score of 0.70 (see Table 6.7, 6.8, 6.9). Besides, this study accepts the scores closed to 0.70 such as, 0.698, 0.694, 0.683 and other above of 0.65.

Table 6. 7: Assessment of indicators' reliability after deleting 3 items from Confirmatory factor analysis (CFA)

Constructs	Items	Items Keywords	Loading 1	CR	AVE	Alpha
Pay structure	PaySt1	Satisfactory salary package	0.880	0.926	0.714	0.900
	PaySt2	Bonus and allowances	0.860			
	PaySt3	Number of increments	0.909			
	PaySt4	Medical support	0.772			
	PaySt5	Paid-study-leave policy	0.797			
Promotion system	ProSy1	Fair chance of promotion	0.611	0.859	0.513	0.805
	ProSy2	Due-time promotion system	0.445			
	ProSy3	Definite publication requirement for promotion	0.854			
	ProSy4	Promotion facility even on study leave	0.794			
	ProSy5	Eradicate bureaucratic complexity	0.754			
	ProSy6	Rebate facility for promotion	0.761			
Sound working environment	SWE1	Well-furnished room	0.705	0.830	0.425	0.753
	SWE2	ICT facilities	0.790			
	SWE3	Politics free sound environment	0.766			
	SWE4	Security from students' harassment	0.653			
	SWE5	Recreational and refreshment facility	0.724			
Faculty development program	FDP1	Training on recent research tools	0.766	0.865	0.486	0.815
	FDP2	Career development programs	0.810			
	FDP3	Collaboration with foreign university	0.417			
	FDP4	Financial assistance to attend int. conferences	0.721			
	FDP5	Self-assessment-based training	0.766			
	FDP6	Training based on the current curriculum	0.625			
	FDP7	Foundation training program	0.698			
Job satisfaction	JobSat1	Enthusiastic job	0.759	0.848	0.457	0.790
	JobSat2	Feeling self-esteemed to teach	0.847			
	JobSat3	Receiving regard from others	0.638			
	JobSat4	Feeling proud to teach	0.814			
	JobSat5	Getting substantial financial benefits	0.413			
	JobSat7	Socially recognized job	0.683			
Motivation	Mot1	Opportunities for interdependence and freedom	0.702	0.863	0.512	0.809
	Mot2	Getting recognition	0.756			
	Mot3	Incentives for quality publication	0.677			

	Mot4	Community appreciation for contribution	0.731			
	Mot5	Coworker support	0.717			
	Mot6	Decision-making power	0.706			
Teaching	Tea1	Reasonable teaching load	0.657	0.863	0.513	0.809
	Tea2	Proper supervision of students	0.755			
	Tea3	Co-curriculum involvement	0.599			
	Tea4	Proper student evaluation	0.770			
	Tea5	Engaging class	0.761			
	Tea6	Sound knowledge on teaching content	0.739			
Research and publication	RP1	Research collaboration	0.745	0.893	0.582	0.856
	RP2	Research fund or grant	0.786			
	RP3	Quality publications	0.732			
	RP4	Dedicated laboratory	0.771			
	RP5	Interest in research work	0.763			
	RP6	Attend and arrange seminars	0.779			
Administrative	Adm1	General administrative activities	0.484	0.855	0.502	0.797
	Adm2	Ability to handle the situation	0.763			
	Adm3	Sense of duty	0.790			
	Adm4	Logistic support	0.771			
	Adm5	Handsome financial incentive	0.656			
	Adm6	Sound management capacity	0.738			
Managing external fund	MEF1	Collaboration with firms	0.707	0.894	0.630	0.851
	MEF2	Project-bringing capacity	0.824			
	MEF3	Collection of external research grants	0.859			
	MEF4	Managing sponsorship	0.840			
	MEF5	Religious and festival vacation policy	0.726			

Source: Survey data, 2023

Table 6.7 represents that some of the items (e.g., ProSy1, ProSy2, SWE4, FDP3, FDP6, JobSat3, JobSat5, Mot3, Tea1, Tea3, Adm1, and Adm5) exhibit lower loadings in comparison to the established cut-off threshold. Considering the minimal standard for acceptable loadings, all indicators of inadequate loadings were removed from the data set, and additional investigation was carried out (Hair et al., 2011a). At this point, it was discovered that all of the indicators that were taken into consideration for the second round of PLS algorithm analysis had loadings greater than or equal to 0.70, which was consistent with what was anticipated in this study (see Table 6.8). However, the dataset was modified by removing an additional item (Mot1) after the initial cross-loading, and additional tests were conducted. As soon as the third round of algorithms had been executed, the optimal loading items had

been obtained (see Table 6.9). But after the first cross loading one item (Mot1) was further deleted from the dataset, and experiments were carried further out.

Table 6. 8: Assessment of indicator reliability after deleting low-loading items (12 items)

Constructs	Items	Items Keywords	Loading 2	CR	AVE	Alpha
Pay structure	PaySt1	Satisfactory salary package	0.884	0.925	0.714	0.900
	PaySt2	Bonus and allowances	0.865			
	PaySt3	Number of increments	0.911			
	PaySt4	Medical support	0.764			
	PaySt5	Paid-study-leave policy	0.790			
Promotion system	ProSy3	Definite publication requirement for promotion	0.845	0.885	0.659	0.827
	ProSy4	Promotion facility even on study leave	0.799			
	ProSy5	Eradicate bureaucratic complexity	0.806			
	ProSy6	Rebate facility for promotion	0.796			
Sound working environment	SWE1	Well-furnished room	0.777	0.876	0.639	0.811
	SWE2	ICT facilities	0.834			
	SWE3	Politics free sound environment	0.822			
	SWE5	Recreational and refreshment facility	0.762			
Faculty development program	FDP1	Training on recent research tools	0.809	0.885	0.606	0.836
	FDP2	Career development programs	0.837			
	FDP4	Financial assistance to attend int. conferences	0.763			
	FDP5	Self-assessment-based training	0.783			
	FDP7	Foundation training program	0.693			
Job satisfaction	JobSat1	Enthusiastic job	0.799	0.883	0.656	0.822
	JobSat2	Feeling self-esteemed to teach	0.879			
	JobSat4	Feeling proud to teach	0.855			
	JobSat7	Socially recognized job	0.694			
Motivation	Mot1	Opportunities for interdependence and freedom	0.707	0.855	0.541	0.787
	Mot2	Getting recognition	0.771			
	Mot4	Community appreciation for contribution	0.749			
	Mot5	Coworker support	0.716			
	Mot6	Decision-making power	0.732			
Teaching	Tea2	Proper supervision of students	0.754	0.862	0.610	0.788
	Tea4	Proper student evaluation	0.810			
	Tea5	Engaging class	0.783			
	Tea6	Sound knowledge on teaching content	0.775			

Research and publication	RP1	Research collaboration	0.749	0.893	0.582	0.856
	RP2	Research fund or grant	0.788			
	RP3	Quality publications	0.718			
	RP4	Dedicated laboratory	0.773			
	RP5	Interest in research work	0.763			
	RP6	Attend and arrange seminars	0.782			
Administrative	Adm2	Ability to handle the situation	0.780	0.863	0.612	0.789
	Adm3	Sense of duty	0.831			
	Adm4	Logistic support	0.772			
	Adm6	Sound management capacity	0.744			
Managing external fund	MEF1	Collaboration with firms	0.716	0.894	0.629	0.851
	MEF2	Project-bringing capacity	0.822			
	MEF3	Collection of external research grants	0.853			
	MEF4	Managing sponsorship	0.834			
	MEF5	Religious and festival vacation policy	0.730			

Source: Survey data, 2023

Table 6. 9: Assessment of indicator reliability after deleting one item from cross-loading

Constructs	Items	Items Keywords	Loading 3	CR	AVE	Alpha
Pay structure	PaySt1	Satisfactory salary package	0.884	0.925	0.714	0.900
	PaySt2	Bonus and allowances	0.865			
	PaySt3	Number of increments	0.911			
	PaySt4	Medical support	0.764			
	PaySt5	Paid-study-leave policy	0.790			
Promotion system	ProSy3	Definite publication requirement for promotion	0.845	0.885	0.659	0.827
	ProSy4	Promotion facility even on study leave	0.799			
	ProSy5	Eradicate bureaucratic complexity	0.806			
	ProSy6	Rebate facility for promotion	0.796			
Sound working environment	SWE1	Well-furnished room	0.777	0.876	0.639	0.811
	SWE2	ICT facilities	0.834			
	SWE3	Politics free sound environment	0.822			
	SWE5	Recreational and refreshment facility	0.762			
Faculty development program	FDP1	Training on recent research tools	0.809	0.885	0.606	0.836
	FDP2	Career development programs	0.837			
	FDP4	Financial assistance to attend int. conferences	0.763			
	FDP5	Self-assessment-based training	0.783			
	FDP7	Foundation training program	0.693			

Job satisfaction	JobSat1	Enthusiastic job	0.799	0.883	0.656	0.822
	JobSat2	Feeling self-esteemed to teach	0.879			
	JobSat4	Feeling proud to teach	0.855			
	JobSat7	Socially recognized job	0.694			
Motivation	Mot2	Getting recognition	0.753	0.846	0.579	0.758
	Mot4	Community appreciation for contribution	0.765			
	Mot5	Coworker support	0.754			
	Mot6	Decision-making power	0.772			
Teaching	Tea2	Proper supervision of students	0.762	0.862	0.610	0.788
	Tea4	Proper student evaluation	0.814			
	Tea5	Engaging class	0.779			
	Tea6	Sound knowledge on teaching content	0.768			
Research and publication	RP1	Research collaboration	0.736	0.893	0.581	0.856
	RP2	Research fund or grant	0.782			
	RP3	Quality publications	0.718			
	RP4	Dedicated laboratory	0.772			
	RP5	Interest in research work	0.775			
	RP6	Attend and arrange seminars	0.790			
Administrative	Adm2	Ability to handle the situation	0.781	0.863	0.612	0.789
	Adm3	Sense of duty	0.830			
	Adm4	Logistic support	0.772			
	Adm6	Sound management capacity	0.743			
Managing external fund	MEF1	Collaboration with firms	0.710	0.894	0.630	0.851
	MEF2	Project-bringing capacity	0.821			
	MEF3	Collection of external research grants	0.856			
	MEF4	Managing sponsorship	0.837			
	MEF5	Religious and festival vacation policy	0.733			

Source: Survey data, 2023

6.4.1.1.2 Internal consistency reliability

Composite reliability (CR) scores were utilized to determine the internal consistency reliability. When all of the constructs were evaluated using the full range of indicators, it was found that the CR scores for each component had a significant amount of variance (Table 6.7). Once the poor loading items were eliminated and additional analysis was performed, it was discovered that the composite reliability scores were decreasing, but not substantially (≥ 0.80) in all cases, ensuring internal consistency among the constructs (see Tables 6.8 and 6.9).

In addition, the internal consistency reliability of constructs is measured by Cronbach's alpha, which indicates how closely related the group of items is. This study discovered that alpha scores for all constructs were greater than the minimum acceptable level of 0.700, (Al-Mohaithef & Padhi, 2020; Bland & Altman, 1997; Høyen et al., 2023).

6.4.1.1.2 Validity

In order to determine validity, convergent and discriminant validity were estimated and compared. The first is evaluated at the construct level, while the second is evaluated at the indicator level as well as the construct level (Hair et al., 2011a).

6.4.1.1.2.1 Convergent validity

Convergent validity is evaluated with the help of the AVE score, and the minimal degree of acceptability for this score is set at ≥ 0.50 (Hair et al., 2013a). However, AVE values were lower than 0.50 in some of the components in the initial study (see Table 6.7). In the second analysis (after removal of the low loading indicators), the AVE values of the majority of factors were between 0.70 and 0.60 (see Table 6.8 and Table 6.9), which guarantees the constructs' convergent validity.

6.4.1.1.2.2 Discriminant validity

In this research, the discriminant validity of the factors and their items is investigated to prove that they are distinct from one another and have their own individual characteristics (Lowry & Gaskin, 2014). This study carried out cross-loading assessments in order to evaluate the discriminant validity of the indicators. According to this estimation, the item loadings should be greater than all of its cross-loadings in order for the indicator to be valid (Hair et al., 2011a).

The cross-loading analysis of the indicators are displayed in Table 6.10. Only one indicator (for example, Mot1) had scores greater than 0.70 but lower than its diagonal ordered other items, as shown by the cross-loadings matrix. As a result, these item was removed once again from the dataset (Lowry & Gaskin, 2014).

Table 6. 10: First cross-loading of the measurement indicators after deleting 12 items

	PaySt	ProSy	SWE	FDP	JobSat	Mot	Tea	RP	Adm	MEF
PaySt1	0.884	0.346	0.447	0.124	0.458	0.125	0.207	0.136	0.214	0.157
PaySt2	0.865	0.299	0.387	0.077	0.395	0.106	0.167	0.087	0.193	0.153
PaySt3	0.911	0.311	0.453	0.103	0.384	0.089	0.173	0.102	0.181	0.191
PaySt4	0.764	0.231	0.341	0.041	0.279	0.026	0.139	0.028	0.136	0.102
PaySt5	0.790	0.290	0.384	0.068	0.337	0.092	0.155	0.113	0.155	0.144
ProSy3	0.320	0.845	0.338	0.203	0.372	0.211	0.246	0.223	0.311	0.223
ProSy4	0.267	0.799	0.320	0.157	0.348	0.173	0.223	0.187	0.286	0.176
ProSy5	0.314	0.806	0.392	0.152	0.374	0.155	0.235	0.143	0.174	0.212
ProSy6	0.239	0.796	0.363	0.158	0.308	0.204	0.207	0.168	0.221	0.217
SWE1	0.264	0.313	0.777	0.147	0.377	0.156	0.170	0.163	0.173	0.162
SWE2	0.454	0.384	0.834	0.215	0.418	0.171	0.259	0.199	0.239	0.221
SWE3	0.373	0.328	0.822	0.168	0.383	0.091	0.227	0.124	0.157	0.185
SWE5	0.437	0.363	0.762	0.041	0.370	0.076	0.090	0.085	0.120	0.056
FDP1	0.082	0.129	0.106	0.809	0.264	0.470	0.444	0.491	0.457	0.329
FDP2	0.054	0.125	0.084	0.837	0.286	0.474	0.427	0.465	0.431	0.321
FDP4	0.040	0.181	0.154	0.763	0.295	0.564	0.448	0.557	0.411	0.340
FDP5	0.059	0.143	0.129	0.783	0.250	0.473	0.388	0.474	0.370	0.325
FDP7	0.166	0.225	0.235	0.693	0.266	0.346	0.351	0.340	0.295	0.245
JobSat1	0.285	0.326	0.294	0.309	0.799	0.261	0.391	0.260	0.381	0.223
JobSat2	0.395	0.364	0.422	0.288	0.879	0.265	0.386	0.274	0.311	0.258
JobSat4	0.408	0.388	0.472	0.282	0.855	0.271	0.310	0.267	0.289	0.225
JobSat7	0.362	0.329	0.386	0.259	0.694	0.217	0.260	0.204	0.263	0.144
*Mot1	0.126	0.189	0.181	0.559	0.276	0.707	0.422	0.605	0.434	0.366
Mot2	0.058	0.135	0.092	0.505	0.212	0.771	0.438	0.715	0.405	0.321
Mot4	0.060	0.127	0.071	0.423	0.188	0.749	0.462	0.678	0.422	0.349
Mot5	0.106	0.206	0.125	0.329	0.251	0.716	0.467	0.661	0.398	0.338
Mot6	0.053	0.181	0.109	0.397	0.232	0.732	0.490	0.621	0.396	0.366
Tea2	0.171	0.204	0.162	0.297	0.266	0.411	0.754	0.457	0.394	0.358
Tea4	0.222	0.244	0.244	0.410	0.362	0.452	0.810	0.462	0.470	0.381
Tea5	0.156	0.205	0.208	0.420	0.285	0.474	0.783	0.511	0.427	0.370
Tea6	0.096	0.223	0.133	0.499	0.377	0.573	0.775	0.594	0.541	0.360
RP1	0.128	0.149	0.236	0.528	0.268	0.649	0.479	0.749	0.440	0.440
RP2	0.061	0.155	0.115	0.553	0.240	0.759	0.475	0.788	0.413	0.337
RP3	0.096	0.179	0.107	0.381	0.208	0.548	0.429	0.718	0.382	0.433
RP4	0.038	0.117	0.117	0.487	0.198	0.713	0.509	0.773	0.471	0.384
RP5	0.109	0.219	0.132	0.354	0.270	0.677	0.550	0.763	0.491	0.414
RP6	0.104	0.205	0.125	0.430	0.245	0.713	0.552	0.782	0.472	0.491
Adm2	0.204	0.199	0.201	0.363	0.313	0.406	0.418	0.430	0.780	0.394
Adm3	0.124	0.295	0.157	0.444	0.332	0.507	0.556	0.520	0.831	0.389
Adm4	0.131	0.242	0.108	0.413	0.251	0.451	0.494	0.479	0.772	0.359
Adm6	0.219	0.211	0.227	0.356	0.308	0.369	0.374	0.387	0.744	0.391
MEF1	0.132	0.204	0.115	0.418	0.184	0.465	0.435	0.501	0.483	0.716
MEF2	0.114	0.229	0.163	0.281	0.223	0.313	0.350	0.370	0.352	0.822
MEF3	0.137	0.239	0.178	0.351	0.199	0.375	0.394	0.440	0.406	0.853
MEF4	0.180	0.215	0.164	0.295	0.240	0.355	0.393	0.452	0.366	0.834
MEF5	0.142	0.112	0.172	0.204	0.209	0.326	0.253	0.344	0.285	0.730

Source: Survey data, 2023 (*Indicator removed to improve discriminant validity)

This study used a square root of the AVE approach to investigate the relationship between first-order latent constructs in order to ascertain discriminant validity at the construct level (Fornell & Larcker, 1981). The association with other diagonal latent components should be lower than that with this score. The results of the construct-level test of discriminant validity are displayed in Table 6.11.

Table 6. 11: Inter-correlation of the first-order latent constructs

Constructs	Adm	FDP	JobSat	MEF	Mot	PaySt	ProSy	RP	SWE	Tea
Adm	0.782									
FDP	0.507	0.779								
JobSat	0.385	0.352	0.810							
MEF	0.489	0.402	0.266	0.793						
Mot	0.559	0.601	0.314	0.473	0.735					
PaySt	0.212	0.102	0.447	0.179	0.109	0.845				
ProSy	0.306	0.207	0.434	0.255	0.228	0.354	0.812			
RP	0.584	0.601	0.312	0.542	0.893	0.115	0.223	0.763		
SWE	0.218	0.182	0.485	0.198	0.156	0.480	0.435	0.181	0.799	
Tea	0.595	0.531	0.419	0.470	0.620	0.202	0.282	0.656	0.237	0.781

Source: Survey data, 2023 (All the constructs satisfy the assumption given by Fornell & Larcker, 1981).

In the instance of discriminant validity at the construct level, the cross-correlational results reveal that all constructs align with the assumption made by Fornell and Larcker criteria. In accordance with the results of the cross-loading analysis, inter-correction analysis was therefore unnecessary. Since only the discriminant validity at the indicator level was problematic, one indicator, Mot1 (see Table 6.10), was eliminated from the data set. The results of the second cross-loading analysis are shown in Table 6.13. At this stage, all indicators supported the suggested cross leading assumption. Consequently, the outcomes ensured that the items were distinct from one another. After that, a review of the discriminant validity at the construct level was also performed. The inter-correlation of the constructs is displayed in Table 6.14. All of the constructs are validated by the cross-loadings study as well as the criteria set by Fornell and Larcker.

Table 6. 12: Inter-correlation of the first-order latent constructs (HTMT)

Constructs	Adm	FDP	JobSat	MEF	Mot	PaySt	ProSy	RP	SWE	Tea
Adm										
FDP	0.619									
JobSat	0.478	0.424								
MEF	0.585	0.463	0.316							
Mot	0.704	0.739	0.392	0.566						
PaySt	0.253	0.115	0.512	0.201	0.126					
ProSy	0.374	0.248	0.525	0.301	0.284	0.402				
*RP	0.705	0.703	0.371	0.628	1.079	0.131	0.266			
SWE	0.274	0.221	0.596	0.237	0.196	0.556	0.531	0.216		
Tea	0.735	0.639	0.510	0.563	0.775	0.242	0.346	0.786	0.295	

Source: Survey data, 2023 (* This construct does not satisfy by the assumption of HTMT)

Table 6. 13: Second cross-loading of the measurement indicators after deleting one (Mot1) item

	PaySt	ProSy	SWE	FDP	JobSat	Mot	Tea	RP	Adm	MEF
PaySt1	0.884	0.346	0.447	0.124	0.458	0.104	0.209	0.135	0.214	0.157
PaySt2	0.865	0.299	0.387	0.077	0.395	0.089	0.168	0.087	0.193	0.153
PaySt3	0.911	0.311	0.453	0.103	0.384	0.066	0.174	0.101	0.181	0.191
PaySt4	0.764	0.231	0.341	0.041	0.279	0.020	0.140	0.029	0.137	0.102
PaySt5	0.790	0.290	0.384	0.068	0.337	0.088	0.156	0.113	0.155	0.144
ProSy3	0.320	0.845	0.338	0.203	0.372	0.209	0.245	0.224	0.311	0.222
ProSy4	0.267	0.799	0.320	0.157	0.349	0.147	0.222	0.187	0.286	0.175
ProSy5	0.314	0.806	0.392	0.152	0.374	0.148	0.236	0.145	0.174	0.212
ProSy6	0.239	0.796	0.363	0.158	0.308	0.191	0.208	0.169	0.220	0.217
SWE1	0.264	0.313	0.777	0.147	0.377	0.128	0.169	0.162	0.173	0.162
SWE2	0.454	0.384	0.834	0.215	0.418	0.136	0.260	0.196	0.239	0.221
SWE3	0.373	0.328	0.822	0.168	0.383	0.088	0.228	0.123	0.157	0.186
SWE5	0.437	0.363	0.762	0.041	0.370	0.061	0.091	0.085	0.120	0.057
FDP1	0.082	0.129	0.106	0.809	0.264	0.425	0.443	0.487	0.457	0.328
FDP2	0.054	0.125	0.084	0.837	0.285	0.423	0.425	0.460	0.431	0.319
FDP4	0.040	0.181	0.154	0.763	0.295	0.502	0.444	0.554	0.410	0.338
FDP5	0.059	0.143	0.129	0.783	0.250	0.438	0.387	0.471	0.370	0.325
FDP7	0.166	0.225	0.235	0.693	0.266	0.318	0.351	0.339	0.295	0.245
JobSat1	0.285	0.326	0.294	0.309	0.799	0.243	0.390	0.261	0.381	0.223
JobSat2	0.395	0.364	0.422	0.288	0.879	0.245	0.385	0.273	0.310	0.258
JobSat4	0.408	0.388	0.472	0.282	0.855	0.248	0.309	0.268	0.289	0.225
JobSat7	0.362	0.329	0.386	0.259	0.694	0.200	0.260	0.204	0.263	0.145
Mot2	0.058	0.135	0.092	0.505	0.212	0.753	0.436	0.709	0.405	0.319
Mot4	0.060	0.127	0.071	0.423	0.188	0.765	0.462	0.676	0.422	0.348
Mot5	0.106	0.206	0.125	0.329	0.251	0.754	0.467	0.671	0.398	0.338
Mot6	0.053	0.181	0.109	0.397	0.232	0.772	0.489	0.627	0.396	0.366
Tea2	0.171	0.204	0.162	0.297	0.266	0.433	0.762	0.460	0.394	0.357
Tea4	0.222	0.244	0.244	0.410	0.362	0.457	0.814	0.464	0.470	0.381
Tea5	0.156	0.205	0.208	0.420	0.285	0.451	0.779	0.511	0.427	0.370
Tea6	0.096	0.223	0.133	0.499	0.377	0.545	0.768	0.594	0.541	0.357
RP1	0.128	0.149	0.236	0.528	0.268	0.578	0.476	0.736	0.440	0.439
RP2	0.061	0.155	0.115	0.553	0.240	0.728	0.472	0.782	0.413	0.335
RP3	0.096	0.179	0.107	0.381	0.208	0.536	0.428	0.718	0.382	0.434
RP4	0.038	0.117	0.117	0.487	0.198	0.707	0.508	0.772	0.471	0.383
RP5	0.109	0.219	0.132	0.354	0.270	0.715	0.549	0.775	0.491	0.413
RP6	0.104	0.205	0.125	0.430	0.245	0.729	0.550	0.790	0.473	0.490
Adm2	0.204	0.199	0.201	0.363	0.313	0.389	0.417	0.431	0.781	0.393
Adm3	0.124	0.295	0.157	0.444	0.332	0.482	0.555	0.521	0.830	0.388
Adm4	0.131	0.242	0.108	0.413	0.251	0.436	0.492	0.480	0.772	0.357
Adm6	0.219	0.211	0.227	0.356	0.308	0.345	0.373	0.387	0.743	0.391
MEF1	0.132	0.204	0.115	0.418	0.184	0.434	0.433	0.499	0.483	0.710
MEF2	0.114	0.229	0.163	0.281	0.223	0.289	0.350	0.372	0.352	0.821
MEF3	0.137	0.239	0.178	0.351	0.199	0.369	0.395	0.441	0.406	0.856
MEF4	0.180	0.215	0.164	0.295	0.240	0.343	0.394	0.454	0.366	0.837
MEF5	0.142	0.112	0.172	0.204	0.209	0.316	0.254	0.343	0.285	0.733

Source: Survey data, 2023

Table 6. 14: Inter-correlation of the first-order latent constructs after deleting one item

Constructs	Adm	FDP	JobSat	MEF	Mot	PaySt	ProSy	RP	SWE	Tea
Adm	0.782									
FDP	0.507	0.779								
JobSat	0.385	0.352	0.810							
MEF	0.487	0.401	0.266	0.793						
Mot	0.532	0.543	0.290	0.450	0.761					
PaySt	0.212	0.102	0.447	0.179	0.091	0.845				
ProSy	0.306	0.207	0.434	0.254	0.213	0.354	0.812			
RP	0.585	0.597	0.312	0.541	0.881	0.115	0.224	0.762		
SWE	0.218	0.182	0.485	0.198	0.130	0.480	0.435	0.179	0.799	
Tea	0.593	0.529	0.418	0.469	0.609	0.203	0.282	0.655	0.237	0.781

Source: Survey data, 2023 (All the constructs satisfy the assumption given by Fornell & Larcker, 1981).

Table 6. 15: Inter-correlation of the first-order latent constructs after deleting one item (HTMT)

Constructs	Adm	FDP	JobSat	MEF	Mot	PaySt	ProSy	RP	SWE	Tea
Adm										
FDP	0.619									
JobSat	0.478	0.424								
MEF	0.585	0.463	0.316							
Mot	0.683	0.680	0.367	0.551						
PaySt	0.253	0.115	0.512	0.201	0.108					
ProSy	0.374	0.248	0.525	0.301	0.271	0.402				
*RP	0.705	0.703	0.371	0.628	1.082	0.131	0.266			
SWE	0.274	0.221	0.596	0.237	0.167	0.556	0.531	0.216		
Tea	0.735	0.639	0.510	0.563	0.780	0.242	0.346	0.786	0.295	

Source: Survey data, 2023 (* This construct does not satisfy the assumption of HTMT)

In structural equation modeling (SEM), the Heterotrait-Monnotrait ration (HTMT) is a superior technique over the Fornel and Larker criteria (Ali et al., 2020). The HTMT test demands the computation of a ratio, specifically the average correlations between constructs divided by the geometric mean of the average correlations between items belonging to the same constructs (Voorhees et al., 2016). The Heterotrait-Monnotrait ration values close to 1 indicate a lack of discriminant validity. Henseler et al. (2015) indicate that 0.85 and 0.90 is a reasonable starting point for analyzing HTMT ratios despite the fact that the precise HTMT ratio that

would result in a discriminant validity violation is subject to some degree of interpretation. Although this study could not satisfy the assumption of HTMT, but besides the Fornel and Larker criterion, in order to seek the discriminant validity at the construct level, this study also used the Heterotrait-Monnotrait ratio (HTMT). All the constructs used in this study could satisfy the HTMT criterion except a single construct. The findings of the analysis (Table 6.12 and Table 6.15) show that all the values are less than the criteria of 0.90 (Henseler et al., 2015) except a single construct, which confirms that the constructs used in this study are different from each other.

6.4.1.2 Assessment of the formative measurement model

The study integrates a second-order formative construct, particularly performance (Perf), with four first-order reflecting constructs (i.e., Tea, RP, Adm, and MEF) (see Figure 6.1 and Figure 6.2). In this two-step process, the researcher substituted the scores of the corresponding latent variables for the first-order constructs and then calculated (Perf) at the second-order level (Hair et al., 2013a; Ringle et al., 2012). The results of the second-order formative constructs are presented in Table 6.16. A loading of formative indicators of 0.50 or higher is considered to be statistically significant (Hair, et al., 2021a). The study's findings demonstrate that the loadings and weights of the formative constructs of Perf exhibit statistical significance except for the weights and t-value of MEF_C.

Table 6. 16: The second-order formative constructs measurement

Constructs	Indicators	Loadings	t-value	Weights	t-value
Performance	Tea_C	0.839	17.691	0.328	3.630
	RP_C	0.884	15.851	0.425	3.825
	Adm_C	0.827	21.457	0.358	4.911
	MEF_C	0.630	9.964	0.085	1.053

Source: Survey data, 2023

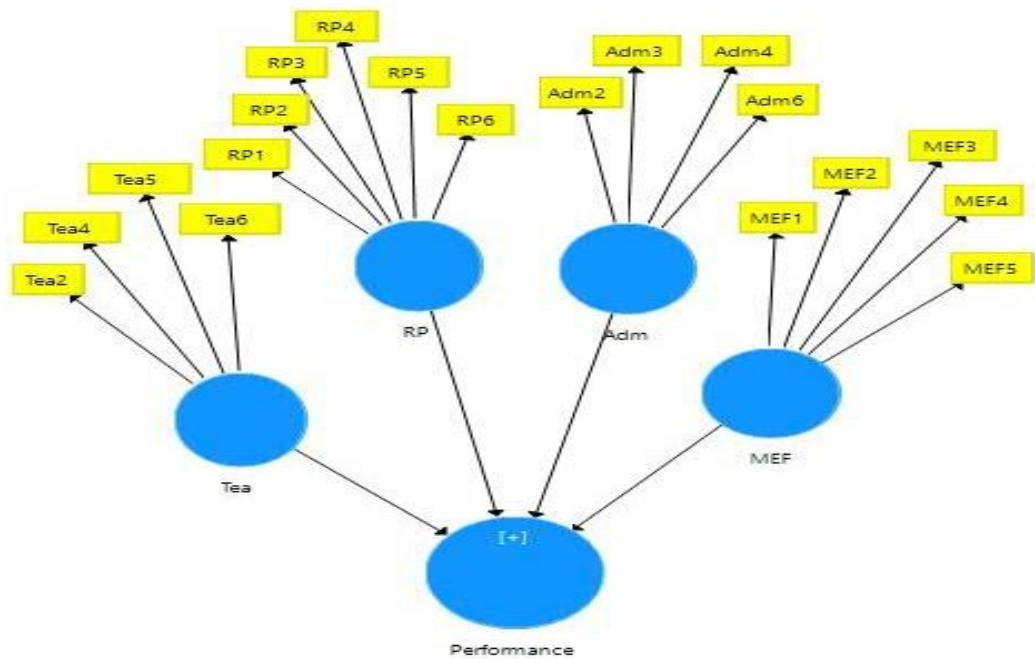


Figure 6. 2: Second-order formative model

6.4.1.2.1 The collinearity issue assessment

Additionally, the formative indicators were examined for multicollinearity issues. The assessment for collinearity was performed using IBM SPSS software. Table 6.17 displays the results of the test for collinearity. The findings suggest that there are no concerns regarding multicollinearity when considering the second-order formative indicators, as tolerance scores were greater than 0.20 (> 0.20) and variable influential factor (VIF) values were less than 5 (< 5) in all cases (Hair et al., 2013a).

Table 6. 17: The multicollinearity issue assessment in higher-order formative model

Constructs	Indicators	Tolerance	VIF
Performance (Perf_C)	Tea_C	0.529	1.889
	RP_C	0.485	2.063
	Adm_C	0.579	1.726
	MEF_C	0.666	1.502

Source: Survey data, 2023

6.4.2 Assessment of Structural Model

After finishing the investigation of the measurement model and refining the measurement indicators, the researcher analyzed the structural model to describe the genuine links between the constructs. In order to evaluate the structural model, the research articulates t-values based on the relevance of the path loadings, path coefficient, and overall model (Hair et al., 2011a, 2013a; Lowry & Gaskin, 2014; Park et al., 2019). The predictive power of the research model was estimated by calculating the proportion of variance explained (R^2) for each construct as part of the structural evaluation of the model (Hair et al., 2013a). Furthermore, this study also examines the effect size, predictive significance, and nomological network of the constructs. (Ali, 2017; Ballestar et al., 2016; Pace & Brannick, 2010; Ringle et al., 2012). Since the bootstrapping technique can leverage the complexity of the investigation, the bootstrapping strategy in SmartPLS (with 5000 samples) was used for analyzing the link among the variables of the research model. (Al Issa, 2020; Lowry & Gaskin, 2014).

6.4.2.1 Determination of coefficient

In PLS-SEM, the coefficient of determination (R^2) is used as a scientific criterion for determining effect size (f^2). The degree to which an endogenous latent construct can be explained by its associated exogenous latent construct (or constructs) is denoted by the R^2 value of the construct. In a similar vein, the value of the f^2 effect size gives a mechanism by which to measure the relevance of each external latent construct in relation to the relevant endogenous latent construct (or constructs). With consideration given to the preceding assertion, one may make the case that f^2 is reciprocal to R^2 (Afum et al., 2020; Ballestar et al., 2016). The scores of R^2 and f^2 effect size for the study model are presented in Table 6.18 and Table 6.19, respectively.

The R^2 values of the construct span from substantial (0.66) to moderate (0.33) to weak (0.19) in these three category (Suhartanto, 2016). The R^2 values JobSat (0.397) and Perf (0.464), which are between the substantial and moderate levels. However, with regard to Ballestar et al. (2016), this score is still high for the present study because the data for this research was acquired from a variety of different groups in the study area.

Table 6. 18: Determination of coefficient (R^2) and cross-validation redundancy (Q^2)

Constructs	R^2	Q^2
Job Satisfaction (JobSat)	0.397	0.248
Performance (Perf)	0.464	0.273

Source: Survey data, 2023

Hair et al. (2013) found that f^2 values of 0.02, 0.15, and 0.35 represent low, moderate, and high effect levels, respectively. Based on the data presented in Table 6.19, it can be concluded that the exogenous latent construct (PaySt) has a minimal impact on the endogenous latent construct (JobSat). The effect size (f^2) of 0.048 shows that ProSy also has a weak effect on JobSat. Similarly, the f^2 of SWE and FDP are 0.069 and 0.092, respectively, which also shows a weak effect on JobSat. On the other hand, the f^2 value of FDP is 0.48, which indicates a very strong effect on Performance. Again, the f^2 of ProSy (0.019) indicates very little effect on Performance. But the f^2 value of PaySt, and SWE are 0.002, and 0.000 respectively which indicates barely any effect on perf. This finding is appropriate with the t-value and p-value of the corresponding hypothesis (see Table 6.20). Besides, f^2 value of JobSat (0.028) on Performance shows weak relationship.

Table 6. 19: Effect size (f^2) and (q^2)

Constructs	Job satisfaction		Performance	
	f^2	q^2	f^2	q^2
PaySt	0.070	0.033	0.002	0.015
ProSy	0.048	0.024	0.019	0.026
SWE	0.069	0.032	0.000	0.011
FDP	0.092	0.045	0.489	0.275
JobSat			0.028	0.009

Source: Survey data, 2023

6.4.2.2 Predictive relevance test

Predictive relevance is measured by using the cross-validation redundancy (Q^2) and q^2 effect size to indicate the structural relationship's capacity for making accurate predictions (Hair et al., 2013a). Q^2 represents a method of reorganizing data for estimating the most applicable model based on the underlying structures (Suhartanto, 2016). The statistical evidence supporting the hypothesized correlations is strengthened by the findings of both Q^2 and q^2 , respectively (Ballestar et al., 2016). The predictive relevance analysis investigates the manner in which each exogenous latent construct explains its associated endogenous latent constructs (Hair et al., 2013a). In order to determine the predictive relevance blindfolding procedure can be carried out by using an omission distance value between 5 to 10 (Chin et al., 2020; Gim et al., 2015). In this study, omission distance $G=6$ was considered. Different literature suggests that the Q^2 value is greater than zero ($Q^2 > 0$), indicated that there is a predictive relevance between the exogenous and endogenous construct (Hair et al., 2013a; Ogiemwonyi et al., 2020). In Table 6.18, it was discovered that the performance of exogenous latent constructs had moderately higher predictive relevance ratings. The presence of Q^2 scores greater than 0 in the model suggests that the external latent constructs possess a certain level of predictive power over their respective endogenous latent constructs.

Besides, the outcomes of the q^2 effect size represent that, $\text{PaySt} \rightarrow \text{JobSat}$ (0.033), $\text{ProSy} \rightarrow \text{JobSat}$ (0.024), $\text{SWE} \rightarrow \text{JobSat}$ (0.032), $\text{FDP} \rightarrow \text{JobSat}$ (0.045) have a small predictive relevance (see Table 6.19). This study observed a range of cases and identified a varying degree of predictive significance between exogenous latent constructs and their corresponding endogenous latent constructs, with the findings generally indicating a weak to moderate relationship. Similarly, the findings of the q^2 effect size show that $\text{PaySt} \rightarrow \text{Performance}$ (0.015), $\text{ProSy} \rightarrow \text{Performance}$ (0.026), $\text{SWE} \rightarrow \text{Performance}$ (0.011), and $\text{JobSat} \rightarrow \text{Performance}$ (0.009) have a small predictive relevance (see Table 6.19). In all other instances, this study observed weak to moderate predictive significance between exogenous latent constructs and their associated endogenous latent constructs. On the other hand, the finding of the q^2 effect also reveals that $\text{FDP} \rightarrow \text{Performance}$ (0.275) has a significant predictive relevance (see Table 6.19) between external latent constructs and their associated endogenous latent constructs.

6.4.2.3 The path co-efficient (β), t-statistics and p-value

Based on the path coefficients, t-values, and p-values, this study analyzed the hypothesized correlations between the constructs (Hair et al., 2013a; Ringle et al., 2012). A positive result for the path coefficient implies that the relationship being studied follows a positive pattern. In contrast, the presence of negative coefficient values indicates the existence of a negative association. In addition, the t-values and the p-values are used to establish whether or not the relationship in the path is significant or not significant. For the purpose, the PLS bootstrapping technique was carried out with 5000 repetitions (samples), as suggested by Hair et al., (2011a). The values of the path coefficient (β), as well as the t-values and the p-values for the structural connections in the research model, are displayed in Figure 6.3 and Table 6.20, respectively.

The results revealed that among the nine hypotheses of structural relationship seven of them were supported as their beta value (β), t-value, and p-value are within the accepted level. Whereas, rest of the hypotheses (H_5 and H_7) were not supported as their t-value, and p-value are not within the accepted level, even though their beta value were positive (see Table 6.20).

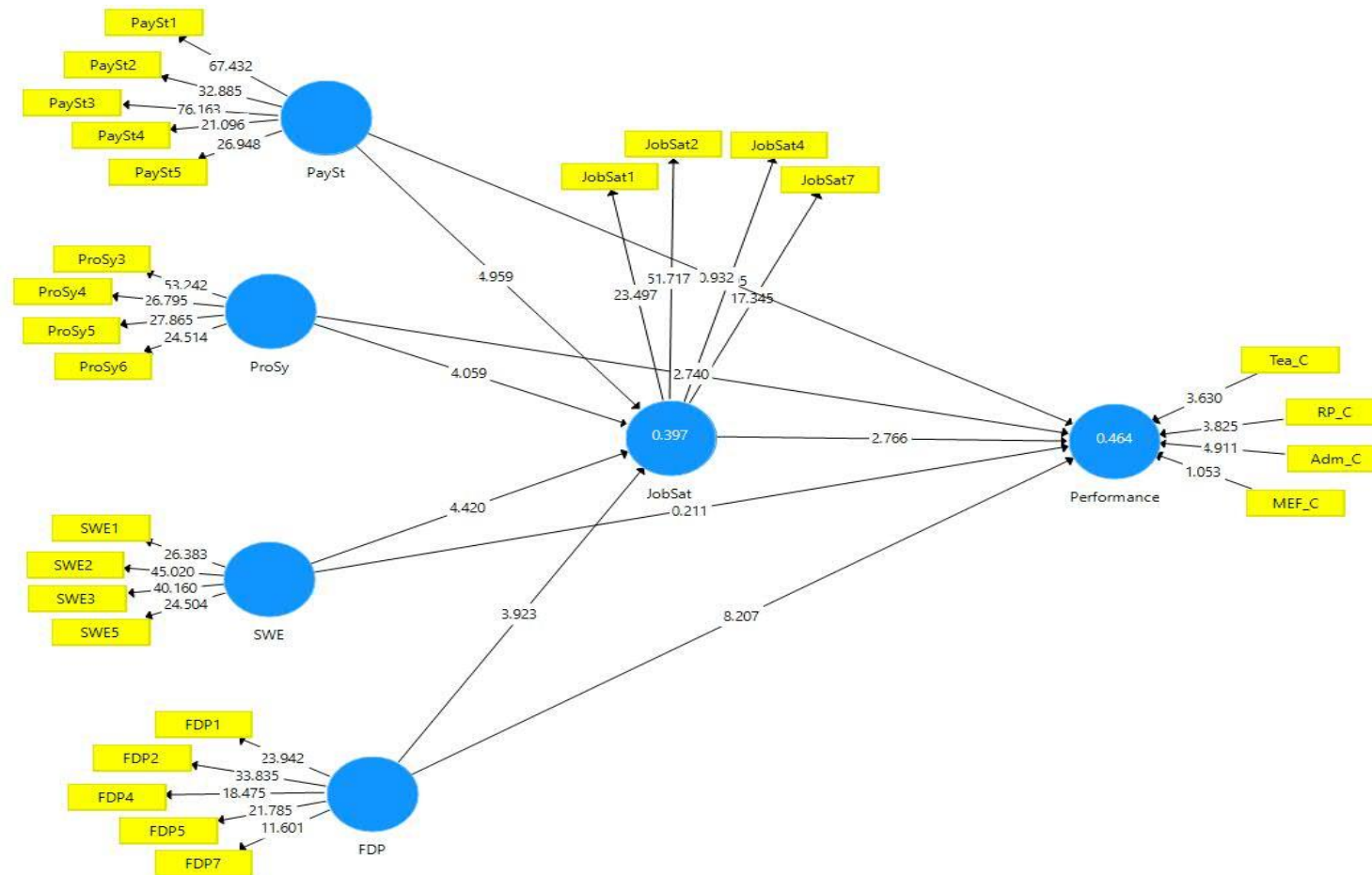


Figure 6. 3: t-values from PLS bootstrapping

Table 6. 20: Path coefficient (β) values, t-values, and p-value (Structural Model)

Hypothesis	Relationship	Standardized path coefficients (β)	t-value	p-value	Comment
H ₁	PaySt -> JobSat	0.239	4.959	0.000	Supported
H ₂	ProSy -> JobSat	0.194	4.059	0.000	Supported
H ₃	SWE -> JobSat	0.247	4.420	0.000	Supported
H ₄	FDP -> JobSat	0.242	3.923	0.000	Supported
H ₅	PaySt -> Performance	0.042	0.932	0.351	Not supported
H ₆	ProSy -> Performance	0.117	2.740	0.006	Supported
H ₇	SWE -> Performance	0.010	0.211	0.833	Not supported
H ₈	FDP -> Performance	0.550	8.207	0.000	Supported
H ₉	JobSat -> Performance	0.158	2.766	0.006	Supported
Note: Significant: t-value 1.65 @ Significant level 10%, 1.96 @ significant level 5%, and 2.58 @ significant level 1%, Note: *p<0.05=*, **p<0.01=**, ***p<0.001=***					

Source: Survey data, 2023

6.4.2.4 Nomological validity test

The nomological validity of a research model reveals the theoretical foundation of the model and the factual basis for assessing the connections between the constructs (see Figure 6.4). Moreover, the connection between these two models is spelt out (Henseler et al., 2015; Lee et al., 2021; Ulaga et al., 2021). It describes how the formative latent construct is related to other latent constructs in the study model, as well as the nature and significance of those relationships. Before assessing the validity of nomological networks, including the focal construct with its antecedent and consequence latent constructs, it is crucial to establish the hypothesized connections between these constructs. Furthermore, the obtained results must be substantiated by path coefficients that exhibit statistical significance, indicating values that are notably greater than zero. (Andreev et al., 2009).

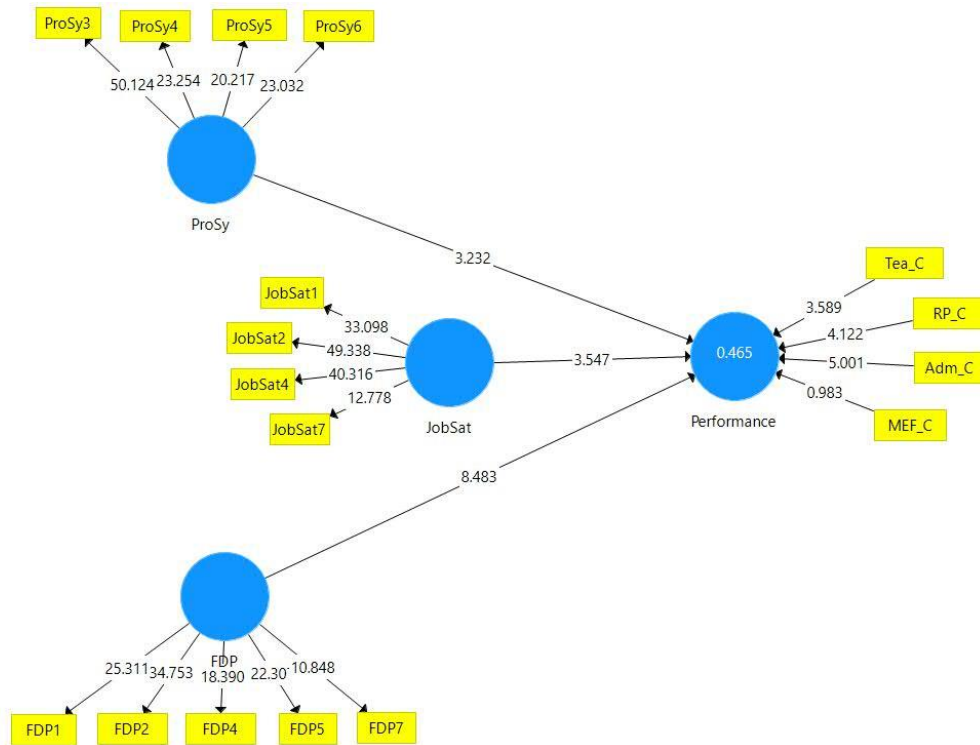


Figure 6. 4: Nomological validity

This study explores the structural pathways of the performance relationship's (Perf) antecedents and consequences to assess its nomological validity as a formative construct. Table 6.21 displays the results of nomological nets, which reveal positive and highly significant relationships between the focal construct and its antecedent and outcome variables, lending credence to the nomological validity of the performance relationship.

Table 6. 21: Nomological validity structural estimations

Path	Coefficient (β)	t-statistics	Standard error	p-value
ProSy->Performance	0.129	3.232	0.040	0.001
JobSat->Performance	0.181	3.547	0.051	0.000
FDP->Performance	0.546	8.483	0.064	0.000

Source: Survey data, 2023 (**Note:** The relationship paths are significant)

6.4.3 Mediation Analysis

This study reveals a direct relationship between PaySt_C to Perf_C, ProSy_C to Perf_C, SWE_C to Perf_C, and FDP_C to Perf_C, the test of the indirect effects of PaySt_C, ProSy_C, SWE_C and FDP_C to Perf_C through JobSat_C were evaluated to figure out the mediation effects of those constructs. Seibert, Silver, and Randolph (2004) argue that mediation must fulfil three essential conditions (Yu & Luo, 2018): there must be a substantial relationship (i) the relationship between the independent variable and the dependent variable, (ii) the relationship between the independent variable and the mediating variable, and (iii) the relationship between the mediating variable and the dependent variable (Seibert et al., 2004). This is also consistent with the study of Baron & Kenny (1986). Nevertheless, contemporary scholarly works have discredited using the BK approach in the context of mediation studies (Rungtusanatham et al., 2014).

Due to this, the review of the mediation literature revealed the mediation among the variables from PaySt_C, ProSy_C, SWE_C and/or FDP_C to Perf_C (Kilduff et al., 2016). This study assessed H_{10} to H_{13} to check out whether JobSat_C mediates the relationship between PaySt_C and Perf_C, between ProSy_C and Perf_C, between SWE_C and Perf_C, and between FDP_C and Perf_C respectively. Therefore, Model 4 of Hayes's PROCESS macro in the SPSS program was used to conduct the mediation analysis for this study (Hayes, 2013).

The findings of the mediation test are presented in Table 6.22. The results reveal that the direct effect and indirect effect from PaySt_C to Perf, from ProSy_C to Perf_C, SWE_C to Perf_C and FDP_C to Perf_C are significant because there isn't a '0' value between the minimum and maximum limit of the confidence interval generated by bootstrapping procedure. The observed substantial and indirect impact implies that the association between the independent and dependent variables is influenced by JobSat_C across all the models (see Figure 6.5, Figure 6.6, Figure 6.7, and Figure 6.8). The findings of the current study showed full mediation between PaySt_C to Perf_C and SWE_C to Perf_C, but a partial mediation exists between ProSy_C to Perf_C and FDP_C to Perf_C (see Table 6.23). As a result, the mediation model of the hypothesized relationships (i.e., H_{10} , H_{11} , H_{12} , and H_{13}) are supported.

Table 6. 22: Results of the mediation test

Effect type	Coefficient (β)	SE	t-value	LLCI	ULCI
PaySt_C→Perf_C					
Direct effect	0.0256	0.0257	0.9961	-0.0248	0.0761
Indirect effect	0.0944	0.0282	3.3475	0.0443	0.1541
ProSy_C→Perf_C					
Direct effect	0.0969	0.0256	3.7852	0.0466	0.1473
Indirect effect	0.0813	0.0266	3.0564	0.0357	0.1386
SWE_C→Perf_C					
Direct effect	0.0408	0.0269	1.5167	-0.0120	0.0936
Indirect effect	0.1026	0.0311	3.2990	0.0474	0.1696
FDP_C→Perf_C					
Direct effect	0.3965	0.0294	13.4864	0.3388	0.4542
Indirect effect	0.0629	0.0207	3.0386	0.0240	0.1050
Note: PaySt_C= Compute PaySt, ProSy_C= Compute ProSy, SWE_C= Compute SWE, FDP_C=Compute FDP, JobSat_C= Compute JobSat, and Perf_C= Compute Perf					

Source: Survey data, 2023

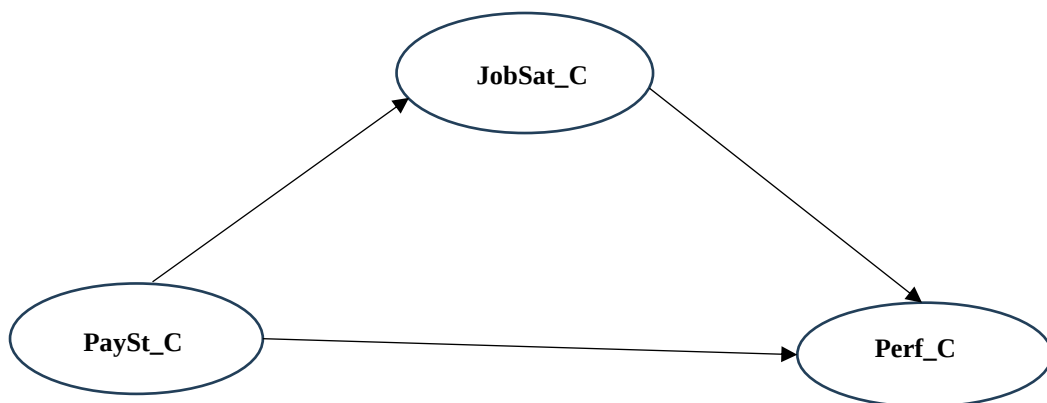


Figure 6. 5: Mediation model PaySt_C to Perf_C.

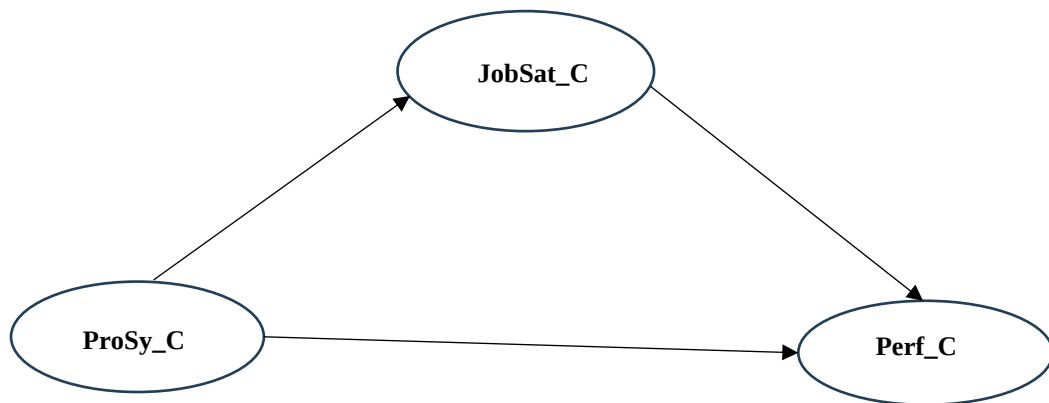


Figure 6. 6: Mediation model ProSy_C to Perf_C.

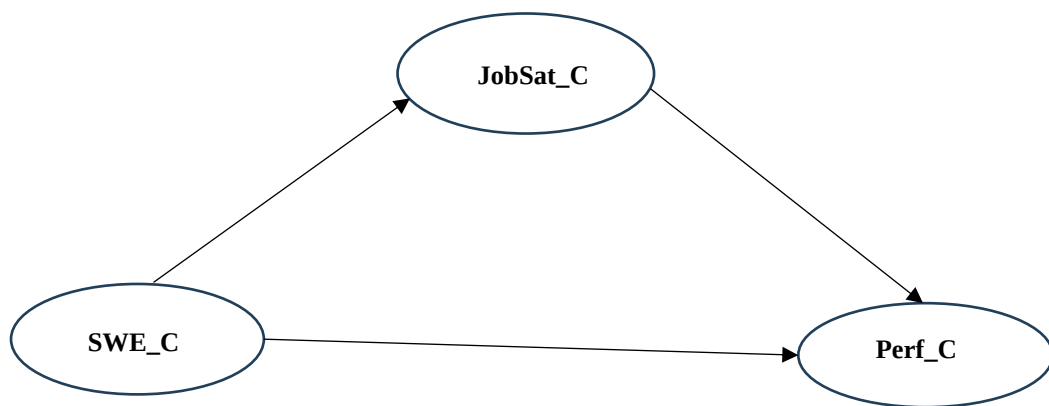


Figure 6. 7: Mediation model SWE_C to Perf_C.

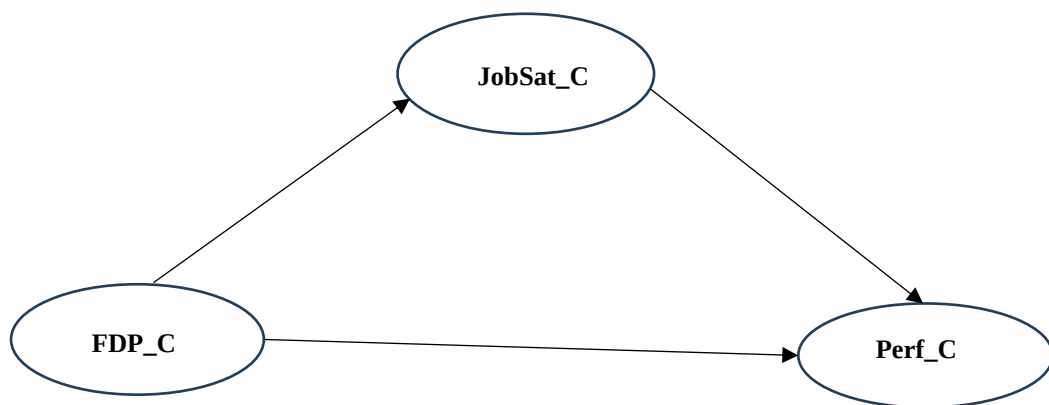


Figure 6. 8: Mediation model FDP_C to Perf_C.

Table 6. 23: Path coefficient (β) values, t-values, and p-value (Mediation & Moderation)

Hypothesis	Relationship	Standardized path coefficients (β)	t-value	p-value	Comment
H ₁₀	PaySt-JobSat-Perf	0.0944	3.3475	0.000	Full mediation
H ₁₁	ProSy-JobSat-Perf	0.0813	3.0564	0.000	Partial mediation
H ₁₂	SWE-JobSat-Perf	0.1026	3.2990	0.000	Full mediation
H ₁₃	FDP-JobSat-Perf	0.0629	3.0386	0.000	Partial mediation
H ₁₄	Mot_C * JobSat $\rightarrow$ Perf	-0.0274	-1.8187	0.0696	Not supported
Note: Significant: t-value 1.65 @ Significant level 10%, 1.96 @ significant level 5%, and 2.58 @ significant level 1%; Note: *p<0.05=*, **p<0.01=**, ***p<0.001=***; Note: Mot_C= Compute Mot					

Source: Survey data, 2023

6.4.4 Moderation Analysis

As a part of the final research model (see Chapter 4), developed in the field study findings, apart from the direct relationship in the research model, this study explores the moderation or interaction effect of motivation on the relationship between job satisfaction and performance of academic professionals. Thus, this study formulated hypothesis fourteen (H_{14}) to test the interaction effect of motivation between X and Y. This study aims to determine if there is a significant difference in the strength or direction of the correlation between job satisfaction and performance across different motivational conditions. Consequently, this study utilized Model 1 in PROCESS macro of Hayes in SPSS software for moderation analysis (Hayes, 2013).

The results of the moderation analysis are presented in Figure 6.9, Table 6.23, Table 6.24, and Table 6.25. The findings of the study reported that the moderating effect of motivation between job satisfaction and performance of academic professionals is as such ($\beta=-0.0274$, $t=-1.8187$, and $p=0.0696$), indicating that motivation does not significantly moderate the relationship between both of the aforementioned latent variables. Besides, the result of the lower limit confidence interval and upper limit confidence interval at 5% alpha value was (LLCI=-0.0570, ULCI=0.0022), which indicates that the interaction effect of motivation at LLCI is negative, but the interaction effect seemed to be positive at ULCI. However, the test of highest order unconditional interaction or effect size of the moderator was 0.0027 (see Appendix C). Whereas the conditional effects of the focal predictor at values

of the moderator at a higher level and lower level were 0.1173 and 0.0990, respectively (see Appendix C).

Hence, the result of this study revealed a little interaction effect of motivation on the association between job satisfaction and performance of academic professionals as p-value is very close to the accepted level. Thus, hypothesis H_{14} was not supported by the current study context.

Table 6. 24: Moderating effect of motivation on job satisfaction and performance

	Coefficient (β)	SE	t	p	LLCI	ULCI
Constant	0.1231	0.3240	0.3799	0.7042	-0.5137	0.7598
JobSat_C	0.2633	0.0834	3.1584	0.0017	0.0995	0.4272
Mot_C	0.8170	0.0610	13.3914	0.0000	0.6971	0.9368
Int_1	-0.0274	0.0151	-1.8187	0.0696	-0.0570	0.0022

Source: Survey data, 2023

Table 6. 25: Conditional effects of the focal predictor at values of the moderator(s):

Moderator: Mot_C	Effect	SE	t	p	LLCI	ULCI
High	0.1173	0.0189	6.2160	0.0000	0.0802	0.1544
Moderate	0.1036	0.0200	5.1855	0.0000	0.0643	0.1428
Low	0.0990	0.0209	4.7281	0.0000	0.0579	0.1402

Source: Survey data, 2023

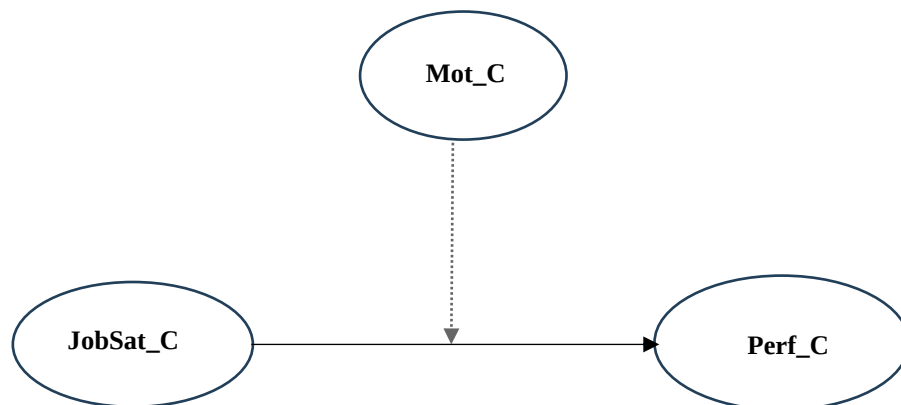


Figure 6. 9: Moderation model of Motivation effect on JobSat_C to Perf_C.

6.4.4 Statistical Power Analysis

The G*Power 3.1.9.2 software is employed to conduct an analysis of the effectiveness of the study model. During the power analysis, this study considers a variety of predictor variables, as well as the level of significance and the effect size (Ali, 2017; Mazen et al., 2017). The statistical power of the model used in this investigation is depicted in Figure 6.10. Because the size of the effect in this study is very modest and the significance threshold is set at 5%, it has been determined that the study needs 64 samples in order to achieve the level of power (80%) that is required by the model (Cohen, 1988; Mazen et al., 1987). Furthermore, in order to obtain 95% model power, 135 samples are needed. The results reveal that this study has substantial power to validate the hypothesized links in the model as it has collected 459 usable samples.

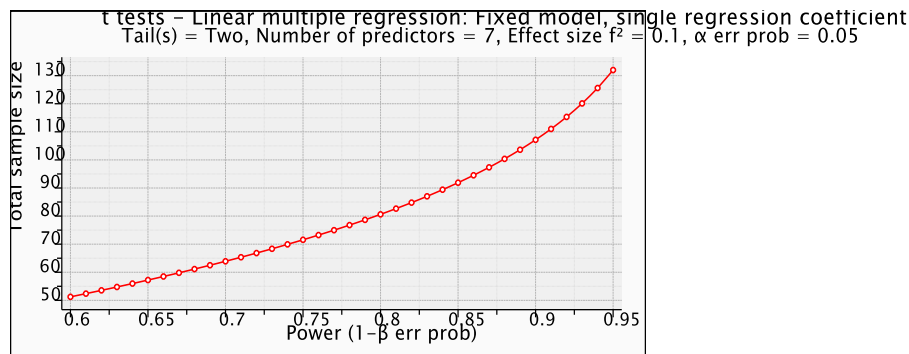


Figure 6. 10: The model statistical power

6.5 CHAPTER SUMMARY

The results of the quantitative research are presented in this chapter. The analysis is broken down into three parts: (i) a look at the pilot study's data, (ii) a look at the respondents' demographic profile, and (iii) a look at the structural equation modeling (SEM) analysis. The findings of the pilot study supplied the researcher with a pattern of data quality. The results from the socio-demographic data assist the researcher to understand the personal details of the respondents. Last but not least, the findings of the SEM analysis reveal the reliability and validity issue of the current study setting which is followed by the hypothesis testing. At this point, seven (7) out of the nine (9) hypotheses were supported by the empirical findings. Additionally, both the mediating and the moderating effects have been investigated in this chapter. A substantial indirect influence has been discovered between the X (PaySt) and Y (Perf) and the X (SWE) and Y (Perf) variables in the mediation analysis, which indicates full mediation. Besides, both direct and indirect effects were observed between the X (ProSy) and Y (Perf) and the X (FDP) and Y (Perf) variables in the mediation analysis, which indicates a partial mediation. Although moderation is not supported in this study, this chapter also presents the moderation effect of motivation (Mot_C) on job satisfaction (JobSat_C) and performance (Perf_C) of academic professionals. Finally, the model statistical power analysis is presented in this chapter. The power analysis results show that, with 459 completed survey data, this study has substantial power to investigate the hypothesized relationships.

CHAPTER 7: DISCUSSION OF THE FINDINGS

7.1 INTRODUCTION

The findings of the study are presented in this chapter, and they are discussed in line with the findings of both quantitative and qualitative study, as well as the context specific situation of the study phenomena. The initial segment of the discourse involves attending the research objectives obtaining quantitative data and testing of the hypotheses. The findings are discussed based on comparing and contrasting with the previous research findings, empirical evidence, and the situational considerations surrounding the study phenomena. In conclusion, the significance of the study's findings is discussed for theoretical, methodological, and practical implications. Hence, this chapter presents the findings based on the research objectives and its respective structural relationships associated with each objective.

7.2 FINDINGS BASED ON RESEARCH OBJECTIVES

This study formulated six different objectives to achieve the overall objective of this study. The first objective is related to exploring the dimensions of career planning, which is mainly based on qualitative field study and secondary literature. However, the remaining five objectives are primarily based on quantitative study. However, objective two is related to CP dimensions and job satisfaction; objective three is based on CP dimensions and performance; objective four is on job satisfaction and performance relationship. Besides, objective five is related to mediating variables, and finally, objective six is related to moderating variable. The following section discussed the findings based on both qualitative study and quantitative study separately.

7.2.1 Findings in Relation to Qualitative Study

In order to explore the key dimensions of career planning and performance of academic professionals, the researcher of this study conducted an extensive literature review. In this stage, more emphasis has to be placed on career planning research, and then emphasis has been placed on job satisfaction and HRM related study. After going through the literature of several studies, this study prepared an interview schedule (a checklist) to conduct in-depth interviews among the academic professionals of different public universities of Bangladesh. The process of exploring the key dimensions of career planning and performance of academic professionals is discussed in detail in the earlier chapter (see chapter 4).

In relation to **Research objective 1**, this study explored four key dimensions of career planning through the help of both qualitative study and secondary literature. In order to explore the dimensions of career planning, this study conducted 21 semi-

structured in-depth interviews among the academic professionals in ten different public universities in Bangladesh. The outline for the semi-structured interviews was comprising of two sections where section A contained the demographic data of the interview participants and section B contained questions regarding the various issues relating to career planning of academic professionals (see chapter 4). All those semi-structured interviews were thoroughly analyzed through the help of NVivo- 12 Pro.

To explore the dimensions of career planning, this study first uploaded the interview in the NVivo software, then thoroughly read each of the interviews again and again to identify key nodes and items of career planning. After identifying the key nodes of career planning, this study coded the items to each node. In this process of identifying nodes and coding, this study explored four important dimensions of career planning, i.e., pay structure (PaySt), promotion system (ProSy), sound working environment (SWE), and faculty development program (FDP). The identification of key dimensions was headed to job satisfaction and motivation by the concept of Herzberg's two-factor theory. These four key dimensions which were identified by the field study were further supported by the secondary literature (Ashraf, 2019; Azman et al., 2016; Bilal et al., 2017; Chanana & Sangeeta, 2021; Jawaad et al., 2019). However, this study also identified several sub-dimensions or items of these four key dimensions. Such as, the researcher explored six items or child nodes under both the pay structure and promotion system node. Besides, this study explored eight items or child nodes under the SWE node and seven items or child nodes under the FDP node. Furthermore, this study also explored seven and six items under the node of job satisfaction and motivation, respectively.

Besides, after exploring the dimensions of career planning of academic professionals, this study exploring the performance dimensions of academic professionals. In this study, the researcher explored four performance dimensions or nodes of academic professionals, which are teaching, research and publication, administrative, and managing external funds act as the second-order formative indicators of performance (Perf) relationship. Besides the field study, these second-order formative performance dimensions were then supported by the secondary literature (Grinkevich et al., 2020; Ito & Watanabe, 2020; Jameel et al., 2020; Jameel & Ahmad, 2020; Mohammadi & Karupiah, 2020; Pietilä & Pinheiro, 2021; Riad Shams & Belyaeva, 2019). Each second-order formative construct has its first-order reflective indicators or items. Under the teaching and managing external fund nodes, this study explored six items or child nodes, and seven items or child nodes were explored under the research and publication, and administrative nodes. The researcher also explored the relationship between the several dimensions of career planning and the dimensions of academic professionals through qualitative field

study. Finally, all the nodes and items explored in this field study process were further supported by secondary literature (see chapter 4). Hence, the **Research objective 1** of this study has been accomplished by utilizing both a qualitative field study and the empirical evidence derived from secondary literature.

7.2.2 Findings in Relation to Quantitative Study

The findings of the quantitative study were designed under five different objectives which is based on the research model to achieve the general objectives of the study. The following section of this study discussed these objectives separately along with the structural relationship associated with each objective.

7.2.2.1 Impact of CP Dimensions on Job Satisfaction

This study explores four key dimensions of career planning, i.e., pay structure, promotion system, sound working environment (SWE), and faculty development program (FDP). All these dimensions have a substantial impact on job satisfaction of academic professionals, that have already been supported by both the qualitative field study data and the quantitative data. The impact of CP dimensions on job satisfaction comprises four different hypotheses designed with reference to Herzberg's two-factor theory. The following sections detail the results and discussion between CP dimensions and the job satisfaction relationship.

This study assesses the effect of career planning dimensions on job satisfaction of academic professionals in different universities. In order to assess this relationship, this study designed **Research objective 2**, which was related to H_1 , H_2 , H_3 , and H_4 . As a part of career planning of academic professionals, the job satisfaction of academic professionals was largely influenced by these four important dimensions of career planning. This study explored how CP dimensions affect the job satisfaction of academic professionals. Thereby forming CP dimensions and job satisfaction relationships. These four hypotheses were based on the concept of two-factor theory. In conclusion, the findings of this investigation demonstrated the connection between career planning dimensions and the job satisfaction of academic professionals. Therefore, this study examined the direct relationship between pay structure to Job satisfaction, promotion system to job satisfaction, SWE to job satisfaction, and finally FDP to job satisfaction. Statistical evidence supports the existence of the aforementioned hypothesized correlations. Academic professionals were also found to be actively improving themselves through various career-planning-related activities, according to the results of the current study. In both qualitative and quantitative investigations, academic professionals were shown to be involved in a variety of various types of career planning. However, these key dimensions of career planning are responsible for job satisfaction or career satisfaction of academic professionals.

Besides, pay structure is important for job satisfaction because it ensures the financial security, attraction for retention, motivation for engagement and career progress of academic professionals. Again, when academic professionals are satisfied with their compensation, their overall job satisfaction increases. Similarly, the promotion system is also responsible for job satisfaction of academic professionals. Such as due-time promotion system, a clear career path, career progression, equity and fairness and professional development is ensured through this promotion system. Therefore, sound working environment also ensures job satisfaction among the academic professionals through collaboration and networking, appreciation, and recognition, reducing work stress, maintaining work-life balance and finally providing health security. Furthermore, faculty development program also crucial for career planning and job satisfaction of professionals for enhancing skills, developing teaching excellence, building professional networking, and personal fulfillment.

All those above-mentioned things are facilitating career planning activities of academic professionals which ultimately leads to job satisfaction of them in the university area. Thus, without participation and cooperation of academic professionals in the career planning activities, the job satisfaction of professionals would be solely hypothetical. In relation to **Research objective 2**, this research, in fact, has developed the pivotal role of CP dimensions on the job satisfaction of academic professionals. Therefore, this objective has been accomplished with the support of both qualitative and quantitative studies as well as secondary literature support. The following section of the study discussed the hypotheses associated with structural relationship in connection with **Research Objective 2**.

7.2.2.1.1 Relationship between pay structure and job satisfaction (H_1)

This research looked into the effect of the pay structure (PaySt) on the formation of the job satisfaction (JobSat) relationship among career planning of academic professionals (H_1). The correlation between PaySt and JobSat has been rigorously investigated through quantitative and qualitative research. According to the results of the quantitative study, there is substantial statistical evidence that the pay structure has a role in developing the job satisfaction relationship. The findings of the study demonstrate a statistically significant and positive path association between the two variables ($\beta=0.239$ and $t=4.959$; $p=0.000$). This empirical evidence strongly suggests that pay plays an important role in shaping the relationships between academic professionals and other stakeholders at public universities in Bangladesh with regard to job satisfaction. Thus, the finding supports H_1 . This finding is consistent with several previous research on job satisfaction (Ashraf, 2020; Mahmood et al., 2019; Zayed et al., 2022).

Most interviewees also believe there is a connection between compensation, job satisfaction, and CP dimensions. Out of 21 interviews, 13 of the interview participants (61.90%) mentioned the effect of CP dimensions on the pay structure and job satisfaction relationships. Moreover, analyzing the respondent's demographic profile lends credence to the above findings. Thus, both quantitative and qualitative research yielded consistent findings on this relationship. However, the study contains different pay structure-related attributes as CP dimensions such as satisfactory salary package, bonus and allowance, increments and many others, which are responsible for the job satisfaction of academic professionals of different universities in the world. Thus, the role of pay structure in forming the job satisfaction relationship is one of the key dimensions of career planning for academic professionals.

7.2.2.1.2 Relationship between promotion system and job satisfaction (H_2)

The promotion system, as a dimension of career planning, is another determining factor of job satisfaction of the academic professionals. The present investigation has discovered empirical evidence that the promotion system (ProSy) directly impacts the job satisfaction (JobSat) relationship. As a CP dimension, the promotion system is found to have a statistically significant link with academic professionals' levels of job satisfaction ($\beta=0.194$ and $t=4.059$; $p=0.000$), lending credence to H_2 . A clear-cut empirical evidence is provided for the relationship between the promotion system and the job satisfaction, suggesting that the promotion system is critical to job satisfaction of the academic professionals. Several other researchers have found similar results, supporting the current findings (Linh, 2018; Robianto et al., 2020; Sinniah et al., 2022; Yousaf, 2020). According to the appeal of Herzberg's two-factor theory, promotion is one of the key antecedents that cause job satisfaction and/or dissatisfaction among academic professionals (Holston-Okoe & Mushi, 2018). Similarly, this study's results imply that the promotion system is on top for career planning and job satisfaction relationship.

In addition, the findings of this field study suggest that academic professionals involve themselves in several career planning activities for their satisfaction in the current profession. Out of the 21 in-depth interview participants, twelve participants (57.14%) supported the role of the promotion system for job satisfaction. Thus, the promotion system is considered another important antecedent of job satisfaction for the career planning of academic professionals. Indeed, several promotional factors drive academic professionals to be involved in career planning. However, interview participation is contingent upon individual benefits (equal opportunity for promotion, timely promotion, and promotion facility while on study leave) secured from the relevant university.

7.2.2.1.3 Relationship between sound working environment and job satisfaction (H_3)

As dimensions of career planning, a sound working environment influences the job satisfaction of academic professionals. This study designed H_3 to investigate the relationship between the sound working environment (SWE) and the job satisfaction (JobSat) of academic professionals in the present study context. The results reveal a statistically significant direct relationship between the SWE and the job satisfaction of academic professionals ($\beta=0.247$ and $t=4.420$; $p=0.000$), which supports H_3 . Thus, the finding provides empirical support for the basic concept of the two-factor theory, as suggested by Herzberg (1959), and is also consistent with other relevant studies in the literature on working conditions and job satisfaction (Anasi, 2020; Rachman, 2021; Robianto et al., 2020; Taheri et al., 2020; Yousaf, 2020).

The quantitative investigation confirmed the findings of the field research. The participants in the interview argued that SWE had a positive impact on job satisfaction in career planning-related activities in the future. Of the 21 in-depth interviews, eleven participants (52.38%) supported the significant positive relationship between SWE and job satisfaction. These findings indicate that, if the facilities related to the sound working environment increase, then the job satisfaction of the faculty will also be increased.

In light of the findings of this study, SWE is considered to be an important antecedent of job satisfaction in the career planning of academic professionals. The SWE contains several items, such as well-furnished rooms, ICT facility, politics-free environment, security from harassment, and access to academic resources etc. The result contributes to the existing body of knowledge on career planning and job satisfaction. From a pragmatic perspective, academic professionals had a very positive opinion on SWE and job satisfaction factors. Having discovered that career planning increases their level of job satisfaction, they planned to take advantage of future opportunities to engage more in career planning activities.

7.2.2.1.4 Relationship between faculty development program and job satisfaction (H_4)

This study further investigated the connections between the faculty development program (FDP) and job satisfaction (JobSat). In this study, FDP is found one of the key dimensions of career planning of academic professionals. In order to investigate the relationship between FDP and JobSat, this study designed H_4 in the career planning context. The results indicate a statistically significant positive relationship between the FDP and job satisfaction for career planning ($\beta =0.242$ and $t=3.923$; $p=0.000$). This empirical result provides strong support for H_4 , as it demonstrates a positive causal connection between these two variables in the present setting.

The above results support the strong empirical basis of the association discussed in the career planning literature (Hariyati & Safril, 2018; Linh, 2018; Shetty, 2012; Smet, 2021). The results of this study contradict those of (Rodrigues et al., 2023; Sesen & Ertan, 2021), which looked into whether or not academic professionals' FDPs were associated with their levels of job satisfaction. This study has strengthened the contribution for extending the two-factor theory by identifying and adding an actual faculty development program component and its many elements. The results of the field research showed significant support for the relationship between the FDP and job satisfaction of academic professionals in career planning. Because, out of 21 interview participants, ten interview participants (47.61%) mentioned the positive relationship between FDP and job satisfaction in career planning. Besides, most participants mentioned that the faculty development program is a must for academic professionals, especially for newly appointed faculties.

So, the findings of this study revealed that as a CP dimension, FDP is regarded as an essential element of job satisfaction in the career planning of academic professionals. This finding contributes to the existing body of knowledge in the field of career planning and job satisfaction research regarding the formation of the relationship between FDP and job satisfaction. In reality, academic professionals are found to be very positive toward the relationship between FDP and job satisfaction.

7.2.2.2 Impact of CP Dimensions on Performance

The validity and reliability of the measurement model in this investigation confirmed the career planning and performance relationship, which includes teaching, research and publication, administrative, and managing external funds. The key dimensions of career planning, i.e., pay structure, promotion system, sound working environment (SWE), and faculty development program (FDP), also influence performance, thereby form the link between career planning and performance of academic professionals. The majority of the dimensions have a substantial impact on performance of academic professionals that were established by both the qualitative field study and the quantitative data. The impact of CP dimensions on performance comprises four different hypotheses. These hypotheses are formed on the concept of social exchange theory (SET). The subsequent sections highlighted the result and discussion between CP dimensions and performance relationships.

This study established the “performance relationship” as the multidimensional hierarchical construct in respect to **Research Objective 3**. To examine the effect of CP dimensions on the performance of academic professionals, this study designed

H_5 , H_6 , H_7 , and H_8 . According to theory, the performance relationship is a function of teaching, research and publication; nevertheless, administrative task and managing external funding are also significant aspects of academic professionals' performance that contribute to the formation of performance relationships.

The current investigation uses all four components (i.e., teaching, research and publication, administrative, and managing external funds) as second-order formative indicators to clarify the connection between them and performance. Each second-order formative indicator has its own reflective items at the first-order level. However, the teaching, research and publication, and administrative first-order level constructs are measured by six indicators, whereas managing external funds is measured by five indicators.

This research examined the multicollinearity issue as part of the measuring the performance relationship based on the four formative second-order components. According to the findings of the collinearity analysis, the second-order formative indicators of the performance relationship do not suffer from the multicollinearity issue. The constructs and their corresponding indicators were also validated and found to be reliable in this study. Therefore, the 'reconceptualization' of the performance relationship through teaching, research and publication, administrative, and managing the external funds has been substantiated by data. As a next step, the researcher ran the structural model to check out the hypothesized or path relationships (H_5 , H_6 , H_7 , and H_8 , as mentioned in Table 5.1 between variables and the performance relationship (Perf).

The findings of this study indicate positive and statistically substantial path coefficients for H_6 and H_8 ; nevertheless, the data also revealed positive but negligible path coefficients for H_5 and H_7 and from the performance relationship for the hypotheses. Although the H_5 and H_7 were not supported, this did not imply that there is no relationship between the factors (PaySt to Perf and SWE to Perf), but rather that there is a positive but insignificant relationship between the factors. Field data analysis further supported the use of managing external funds and administrative tasks as the key factors in explaining the observed performance relationship.

The field study data also revealed that the construction and maintenance of the performance relationship, which is the function of academic professionals' career planning in the university, towards career planning and development. The field study participants also held the opinion and supported the relationship between academic professional performance and CP dimensions. In addition, secondary literature indicated a connection between the CP dimensions and the performance of academic professionals. Hence, it can be contended that the **Research Objective**

3 of this thesis has been successfully accomplished with the assistance of the empirical evidence. The following section of the study discussed the hypotheses associated with structural relationship in connection with **Research Objective 3**.

7.2.2.2.1 Relationship between pay structure and performance (H_5)

The objective of this investigation was to evaluate how the pay structure (PaySt) affects the creation of the performance relationship (Perf) in the context of career planning for academic professionals (H_5). The results of the quantitative investigation indicate that there is insignificant statistical evidence supporting the impact of the pay structure on the performance of academic professionals. The study findings indicate a positive, but statistically insignificant, path relationship between the two variables ($\beta=0.042$ and $t=0.932$; $p=0.351$). This empirical evidence suggests that pay structure serves as a precursor to the establishment of performance-based associations of the academic professionals in public universities in Bangladesh. Thus, the finding does not support H_5 . The results of this study are consistent with those of the previous research (Arifin, 2017).

Although the quantitative study does not support this hypothesis (H_5), nearly 50% of the interview participants expressed their support for the influence of pay structure as CP dimensions on performance. Out of 21 interviews, nine of the interview participants (42.86%) mentioned a positive relationship between pay structure and performance among academic professionals. Moreover, the respondent's demographic profile supports the aforementioned argument. Besides, a variety of literature supports the relationship between pay structure and performance of academic professionals (Afrin et al., 2023; Verozika, 2018). Though qualitative study suggests this relationship between pay structure and performance, but an interview participant mentioned that-

“pay or salary does not always bring better performance, because due to the personal problem, job stress, family problem, and disinterest in research work, sometimes decrease the performance of academic professionals with regard to the teaching, research and publication” (extracted from IDI-17, M, 38).

Although this relationship was only supported by the qualitative study, but the researcher argues that the role of pay structure for improving the performance is one of the key dimensions of career planning for academic professionals. So, this study also thought that academic professionals could be affected by the above reasons for which insignificant relationships may arise. Another interview participant stated that-

“some professionals did not perform well in research and publication although they get handsome payment, while some professionals perform well even though they get less payment than that of other professionals, it is because of their interest or disinterest in research work” (extracted from IDI-3, M, 44).

However, this finding has sparked a new line of inquiry in the academic community regarding the true consequences of the relationship between pay structure and performance. Consequently, this finding has been deemed intriguing, necessitating additional research into the true impact of the PaySt and Perf relationship on the career planning and performance of academic professionals.

7.2.2.2 Relationship between promotion system and performance (H_6)

As a dimension of career planning, the promotion system is another element influencing performance. This study reveals conclusive evidence that the promotion system (ProSy) has a significant direct impact on the performance (Perf) i.e., ($\beta=0.117$ and $t=2.740$; $p=0.006$), which supports hypothesis H_6 . This strong empirical evidence suggests the promotion system is essential to for improving performance among career-planning professionals. The result corresponds with the findings of a number of other studies that have been conducted on the topic of employee performance (Aarabi et al., 2013; Gohari et al., 2013; Sinniah et al., 2022). In addition to this, there is also insignificant connection between employees' promotions and their levels of performance (Masum et al., 2015). Based on the foundations of social exchange theory (SET), promotion is one of the key antecedents that results in performance of academic professionals (Priporas et al., 2017; Rodríguez-Sánchez et al., 2021). In a similar manner, the result of this study indicates that the promotion system of the academic professional is an antecedent factor for building the career planning and performance relationship.

The results of the field study provide further evidence in support of the hypothesis testing on the impact of the promotion system on performance. The findings of this field study suggest that the implementation of a promotion system that emphasizes career planning activities among academic professionals leads to the development of performance-based connections among these professionals. In addition, out of the 21 interview participants, eight of them (38.09%) endorsed the idea that promotion system has a role for performance connections.

Besides, the majority of the interviewed participants claimed that they need a fair chance of promotion, due time promotion and promotion facility during the study leave. The researcher thus, believe that the promotion system as the key dimension of career planning, which leads to the performance of academic professionals.

7.2.2.2.3 Relationship between sound working environment and performance (H_7)

From the SET perspective, performance is the result of having sound environmental facilities. The influence of a sound working environment for the performance of academic professionals is an important component of career planning. The purpose of hypothesis (H_7) was to investigate the connection between the sound working environment (SWE) and the performance (Perf) of academic professionals in the present study setting. The results suggest that a statistically insignificant but positive relation exists between the SWE and the performance of academic professionals participating in the career planning process ($\beta=0.010$ and $t=0.211$; $p=0.833$). However, this result does not support H_7 . The present finding exhibits resemblances to the findings documented in the extant literature (Girdwichai & Sriviboon, 2020). Besides, this finding presents a contradiction to the research conducted by several scholars (Bashir et al., 2020; Wilson, 2015), where the authors delved into the connections between the SWE and performance of academic professionals.

Although the quantitative study does not support this hypothesis (H_7), almost 25% of the interview participants favored the influence of SWE and performance relationships. Out of 21 interviews, five of the interview respondents (23.81%) mentioned the influence of CP dimensions on the SWE and performance relationships among the academic professionals. Besides, various literature supports the relationship between SWE and performance of academic professionals (Bashir et al., 2020; Widodo, 2014; Wilson, 2015). Therefore, one of the most important aspects of career planning for academic professionals is to carefully consider the part that SWE plays in the development of the performance relationship. One of the interview participants put his logic that-

“sound working environment do not always ensure the greater productivity or performance of academic professionals, because personal ability varies from person to person, besides willingness is such a factor which is essential for better performance of the employees” (extracted from IDI-11, F, 31).

However, this result has sparked a new academic debate regarding the true implications of the relationship between SWE and performance. Consequently, this finding has been deemed insightful, necessitating further research into the true impact of the SWE and Perf relationship on academic professionals' career planning and performance.

7.2.2.2.4 Relationship between faculty development program and performance (H_8)

This study aimed to explore the relationship between the faculty development program (FDP) and performance (Perf) within the specific context of the current study. This study examines the significance of FDP as a crucial aspect of career planning among academic professionals. This study formulated hypothesis H_8 within the context of career planning in order to examine the relation between FDP and performance. The findings suggest a statistically significant positive relation between the faculty development program (FDP) and the performance of academic professionals in the area of career planning ($\beta = 0.550$ and $t = 8.207$; $p = 0.000$). This robust finding lends credence to hypothesis eight (H_8), as it substantiates the existence of a positive causal connection between the aforementioned variables in the context of the present investigation.

The result is consistent with the present body of knowledge on CP dimensions and performance-based literature (Afsana et al., 2016; Khan et al., 2019; Shoaib et al., 2022). However, this evidence lends credence to the fundamental concept of the social exchange theory (SET), as suggested by George Homans (1958), as well as agreeing with other related studies in the literature on FDP and the performance of the employees.

The results of the field study also provided convincing evidence of the relation between the FDP and the performance with which academic professionals planned their futures. Because 7 of 21 interviewees (33.33%) brought up how FDP affects performance while making career decisions. Additionally, the majority of participants emphasized the importance of a faculty development program for academic professionals, in particular for freshly appointed faculties. Furthermore, this conclusion contributes to the body of literature that has already been accumulated in the field of career planning and performance research concerning the establishment of the relationship that exists between FDP and performance. Finally, the FDP had a very positive association with the performance of academic professionals from a practical aspect.

7.2.2.3 Impact of Job Satisfaction on Performance

This study also showed the relationship between job satisfaction on performance of academic professionals. To prove this relationship, a hypothesis was formed on the concept of two-factor theory. The following section detailed the findings of job satisfaction and performance relationship of the academic professionals.

In accordance with **Research objective 4**, this study formulated the ‘performance relationship’ as the multidimensional hierarchical construct. To examine the effect job satisfaction on the performance of academic professionals,

this study designed *H₉*. According to theory, performance is the result of job satisfaction (Locke, 1970). In this study, job satisfaction is a first-order construct that is measured by seven indicators. Besides, job satisfaction forms the relationship with the career planning dimensions of academic professionals. An academic professional becomes satisfied with his job when he or she becomes satisfied with the pay structure, promotion system, sound working environment, and faculty development program. At the same time, when academic professionals are satisfied with their job, the performance of academic professionals would be enhanced. The connection between job satisfaction and the performance of academic professionals was based on Herzberg's two-factor theory and equity theory of J. Stacy Adams. According to the theory, the inputs and outputs should be balanced to ensure high levels of job satisfaction and performance among university academic professionals (Adams, 1963; Frederick et al., 1959; Yousaf, 2020).

Employees are more likely to be satisfied with their jobs if they are engaged in their work, receive fair compensation, have opportunities for advancement at appropriate times, work in a safe and healthy environment, are able to grow professionally, and have positive working relationships with their superiors and peers. A satisfied employee is more committed to their job. As a result, increased job satisfaction leads to increased employee performance. The university needs to focus on the job satisfaction of its faculty members to ensure long-term growth and better performance.

This study found that job satisfaction has a significant positive effect on the performance of academic professionals. The result is identical to a variety of earlier studies (Afrin et al., 2023; Bashir et al., 2020; Khan et al., 2019; Ramli, 2018). The qualitative field study also supported a positive and significant relationship between job satisfaction and the performance of academic professionals. Hence, it could be suggested that **Research objective 4** has been attained successfully in light of extensive research, both qualitative and quantitative. Besides, the finding of the study is also supported by the existing literature. The following section of the study discussed the hypothesis associated with structural relationship in connection with **Research Objective 4**.

7.2.2.3.1 Relationship between job satisfaction and performance of academic professionals (*H₉*)

Results from the measurement model showed that there is a positive correlation between job satisfaction and performance, with the performance relationship including elements such as teaching, research and publication, administration, and the management of external funds. Similarly, the quantitative results confirmed a favorable and statistically significant relationship between job satisfaction

and performance ($\beta=0.158$ and $t=2.766$; $p=0.006$). This result confirms H_9 , presenting substantial empirical support for the effect of job satisfaction on the performance in this career planning study, which is also backed by the results of previous studies (Afrin et al., 2023; Bashir et al., 2020; Khan et al., 2019; Ramli, 2018).

The survey data also reveals similar findings, showing a positive relationship between job satisfaction and performance relationships. Field study participants pointed out different types of benefits received by the academic professionals from job satisfaction and performance relationships with other career planning actors, especially from the university. Besides, 15 of 21 interview participants (71.43%), supported the relationship between job satisfaction and the performance of academic professionals. Thus, the findings of this study are consistent with the results of previous studies which are also supported both by qualitative and quantitative study.

7.2.2.4 Impact of Mediating Variables

Additionally, this study found the mediating role of job satisfaction between the CP dimensions and the performance of academic professionals. The four key hypotheses were formed in relation to mediating variables. These four hypotheses were designed based on equity theory and social exchange theory. The subsequent sections discuss the mediating effects of job satisfaction based on the study findings.

This study assesses the mediating effect of job satisfaction between the career planning dimensions and performance of academic professionals. **Research objective 5** relates to H_{10} , H_{11} , H_{12} , and H_{13} . As a part of career planning, the job satisfaction of academic professionals was measured. This study also explored how job satisfaction mediates the connections between CP dimensions and performance of professionals. In a nutshell, this study set out the association between CP dimensions and performance of professionals due to job satisfaction. The concept of the study is based on equity theory and social exchange theory.

In this study, the direct relationship between PaySt to Perf, ProSy to Perf, SWE to Perf, and FDP to Perf was examined. The finding of the study revealed that there is no direct relationship between pay structure and performance. But an indirect relationship exists between the PaySt to Perf through job satisfaction. The SWE to Perf also showed identical relationships between each other. Thus, indicate the full mediation. Therefore, the findings of the study also revealed that there is a direct relationship between the promotion system and performance. Besides, an indirect relationship was also found between the ProSy to Perf through job satisfaction. The FDP to Perf also presented similar results between each other. So, partial mediation was found between ProSy to Perf and FDP to Perf (see Chapter 6). Thus, the

hypothesized relationships indicated above have been shown to be positive and statistically substantial.

The field study data and secondary literature also showed that job satisfaction mediates the connections between CP dimensions and the performance of academic professionals. So, in connection to both qualitative and quantitative studies, positive and statistically substantial connections between CP dimensions and the performance of academic professionals through job satisfaction. Therefore, the academic professionals' career planning activities and performance were mediated by job satisfaction. Consequently, **Research objective 5** of this thesis has been accomplished successfully. The following section of the study discussed the hypotheses associated with structural relationship in connection with **Research Objective 5**.

7.2.2.4.1 Relationship between pay structure and performance due to job satisfaction (H_{10})

This research has proved the direct association between pay structure (PaySt) and the performance of academic professionals (PAP) due to job satisfaction in career planning on the basis of both qualitative and quantitative findings. A variety of literature supports that job satisfaction mediates the connections between pay and employee performance (Bakotić, 2016; Gohari et al., 2013; Khan et al., 2019; Robianto et al., 2020). Besides, six of 21 interview participants (28.57%) pointed out that job satisfaction mediates the stated relationship. This research also put importance to investigate the indirect association between PaySt and PAP designing H_{10} . The results of the mediation analysis showed that the relationship between PaySt and PAP had a statistically significant indirect effect of job satisfaction ($\beta=0.0944$ and $t=3.3475$; $p=0.000$).

Beside the empirical findings of the previously mentioned research (see Chapter 5), this study also revealed that job satisfaction mediates the connections between pay structure and the performance of academic professionals. Hence, the findings of this study revealed that there is no direct relationship between PaySt and PAP, but there exists an indirect relationship between PaySt and PAP. Therefore, this study conformed, although there is no direct relationship between PaySt and PAP, but there exists an indirect relationship between the variables through job satisfaction. However, these results indicate full mediation. Thus, this finding supports H_{10} .

7.2.2.4.2 Relationship between promotion system and performance due to job satisfaction (H_{11})

Using both qualitative and quantitative data, this study establishes a causal link between the ProSy and the performance of academic professionals (PAP) through job satisfaction. Several studies have found that job satisfaction mediates the association between promotion systems and employee performance (Gohari et al., 2013; Ratnasari et al., 2019; Sinniah et al., 2022). Again, among the 21 interview participants, four of them (19.05%) directly emphasized this relationship. Based on these findings, the indirect connection between ProSy and PAP was identified H_{11} . The research used a mediation analysis to check this hypothesis. The relationship between ProSy and PAP was found statistically significant ($\beta=0.0813$ and $t=3.0564$; $p=0.000$).

In consistent with the empirical findings of the earlier studies (see Chapter 5), this study further confirmed that job satisfaction mediates the association between academic professionals' performance and the promotion system. This study found that a significant direct relationship exists between ProSy and PAP, as well as an indirect relationship. Hence, the findings of the current study revealed both direct and indirect relationship between ProSy and PAP which indicate partial mediation. So, this finding also supports H_{11} .

7.2.2.4.3 Relationship between sound working environment and performance due to job satisfaction (H_{12})

Quantitative and qualitative data were used to establish a causal link between a sound working environment (SWE) and the performance of academic professionals (PAP) as a result of job satisfaction in strategic planning for their careers. According to a variety of studies, job satisfaction mediates the connections between working conditions and employee performance (Bashir et al., 2020; Kaur, 2018; Robianto et al., 2020; Widodo, 2014). Furthermore, three of the 21 (14.29%) interview participants believed that job satisfaction mediates between the stated relationship. This research indicated that it was important to investigate the indirect association of job satisfaction between SWE and PAP with H_{12} . To test this hypothesis, the researchers utilized a mediation analysis. The mediation study revealed that SWE and PAP had a statistically significant indirect influence on one another ($\beta=0.1026$ and $t=3.2990$; $p=0.000$).

As like the empirical findings of the earlier mentioned studies (see Chapter 5), this study demonstrated that job satisfaction mediates the association between a sound working environment and the performance of academic professionals. This study revealed that there is no direct association between SWE and PAP, but there is an indirect association between these variables. Despite no direct association between SWE and PAP, there exists an indirect relationship between these stated

variables due to job satisfaction. Hence, these results indicate full mediation which supports H_{12} .

7.2.2.4.4 Relationship between faculty development program and performance due to job satisfaction (H_{13})

By employing a combination of qualitative and quantitative data, this study establishes a causal connection between the FDP and the performance of academic professionals (PAP) via job satisfaction. Several studies have shown that there is a connection between FDP and employee performance and that this connection is mediated by job satisfaction. (Khan et al., 2019; Paposa & Kumar, 2019; Shetty, 2012). In addition, three of 21 interviewees (14.29%) specifically emphasized the direct connection between the FDP and PAP. In light of these findings, an indirect connection between FDP and PAP was recognized with H_{13} that needs further investigation. The results of the mediation analysis showed that the FDP and PAP had a statistically significant impact on both directly and indirectly ($\beta=0.0629$ and $t=3.0386$; $p=0.000$).

According to the findings of this study, job satisfaction acts as a mediator between FDP and PAP which is also consistent with the findings of earlier stated studies (see Chapter 5). This study discovered a significant direct relationship between FDP and PAP and an indirect relationship between these variables. Hence, the findings of this study stated that there is a direct relationship between FDP and PAP, while indirect relationship also prevailing between these variables through job satisfaction. Therefore, this study found partial mediation that supports H_{13} .

7.2.2.5 Impact of Moderating Variable

Besides the mediating variable, this study also highlighted the impact of moderating variable on the job satisfaction and performance of academic professionals. The hypothesis related to moderating variable consists of a single hypothesis where motivation moderates the relationship between job satisfaction and performance. The following section presented the result and discussion on moderating variable.

The current study also examines the moderating effect of motivation on the association between job satisfaction and performance. As a result, **Research objective 6** was designed, which is related to H_{14} . As a part of career planning, the motivation of academic professionals was measured by six sub-indicators. The essence of moderation is its ability to illuminate when and how the relationship between two variables changes in response to the level of a third variable (Field-Fote, 2019; Xu et al., 2021). In this study, the moderation effect of motivation refers to how the effect of job satisfaction on the performance of academic professionals fluctuates according to their level of motivation. In conclusion, our research mapped out how motivation might improve academic professionals' job satisfaction and

performance. Herzberg's two-factor theory served as the conceptual foundation for the research.

The finding of the study revealed that motivation insignificantly moderates between the job satisfaction and performance of academic professionals (see Chapter 6). Thus, the hypothesized relationships indicated above have been found to be statistically insignificant. So, there was an insufficient moderating effect of job motivation on the academic professionals' job satisfaction and performance. Therefore, hypothesis fourteen (H_{14}) was not supported by the current study. Although the quantitative part of this study provides an insignificant relationship, but the researcher of this study expected or predicted that motivation moderates between job satisfaction and the performance of academic professionals.

Because, the qualitative field study supported that when employees are highly motivated, their job satisfaction can lead to even higher levels of performance. Conversely, if employees are not adequately motivated, the positive association between job satisfaction and performance might be weaker. Besides, secondary literature also showed motivation moderates between these two factors (Shafi et al., 2020). Besides, secondary literature also stated that motivation does not substantially moderate between both the previously mentioned latent variables (Bashir et al., 2020). So, motivation was not adequately balanced between job satisfaction and performance for the academic professionals. Consequently, **Research objective 6** of this research has been obtained partially. The following section of the study discussed the hypothesis associated with structural relationship in connection with **Research Objective 6**.

7.2.2.5.1 Motivation moderates the relationship between job satisfaction and performance (H_{14})

This research also predicted that motivation moderates the association between job satisfaction (JobSat) and the performance of academic professionals (PAP). The findings of these study showed that job satisfaction and employee job performance were moderated by motivation (Bashir et al., 2020; Shafi et al., 2020; Sinniah et al., 2022). But these studies were carried out on different sectors employees i.e., telecom sectors, software firms, and educational institutions. Besides secondary literature, field study data also revealed that motivation moderates the connections between job satisfaction and the performance of academic professionals. Nine of 21 interview participants (42.86%) directly supported this relationship. In order to test this relationship among the academic professionals of different public universities of Bangladesh, the researcher of this study designed H_{14} . The finding of the study revealed no significant moderating effect of motivation on the direct relationship between job satisfaction and performance of academic professionals ($\beta=-0.0274$

and $t=-1.8187$; $p=0.0696$). However, the negative path coefficient in this relationship indicates a negative impact of motivation on JobSat and PAP relationship. Thus, the result of this study does not support this hypothesis (H_{14}). This study found an insignificant relationship between job satisfaction and the performance of academic professionals through the moderation effect of motivation (LLCI=-0.0570 and ULCI= 0.0022).

Although the findings of the current study did not significantly support the moderation effect of motivation on the direct relationship between JobSat and PAP, the researcher predicted this relationship based on both secondary literature and field study data. As different earlier studies mentioned that motivation act as a moderator between job satisfaction and employee performance (Noorizan et al., 2016; Sinniah et al., 2022; Surajiyo et al., 2021). Although this study showed a negative but insignificant effect of motivation on JobSat and PAP, but this study suggested that there could be an interaction effect of motivation in the future on the direct relationship between job satisfaction and the performance of academic professionals. This result, however, has sparked a new academic debate regarding the actual implications of the relationship between job satisfaction and performance as moderated by motivation. As a result, this finding has been deemed not very insightful, demanding further investigation into the true moderating effect of the association between JobSat and PAP.

7.3 CHAPTER SUMMARY

Findings of the current study have been discussed in this chapter. Results revealed that the majority of the hypotheses were significantly supported by the empirical findings except H_5 , H_7 , and H_{14} . This chapter discusses the leaner relationship between the construct and their mediation and moderation effects. The discussion of the findings is performed in line with the study objectives that are supported by the existing finding, outcomes of qualitative study and the estimation of quantitative investigation.

CHAPTER 8: CONCLUSIONS

This chapter contains a brief overview of the entire study which focusses on concise outcome of each chapter and a summary of the current research. Subsequently, it proceeds to outline the contribution of this study in terms of theoretical, methodological, and practical viewpoints. After that, this study provides the limitations of the current research. And finally, the researcher explicitly outlines the future research directives of the present study.

8.1 OVERVIEW

The current study was carried out to investigate how the various dimensions of career planning influence academic professionals' job satisfaction and how this job satisfaction influences their performance in areas such as teaching, research and publication, administration, and managing external funds.

The study objectives were determined in **Chapter 1** through a review of the study problems and the significance of the research area. In **Chapter 2**, the research model was established after thoroughly examining the existing literature and theoretical frameworks. **Chapter 3** discussed the methodology that would be used for this research, with a particular focus on the justification for using a mixed-methods (qual-QUAN) approach. The findings of the field research data were used to contextualize the basic initial research model and build the extensive study model in **Chapter 4**. The quantitative technique was used in **Chapter 5**, which included formal relationships and hypotheses derived from the study model. This study encompassed the presentation of the outcomes derived from examining quantitative data in **Chapter 6**. The discussion of the findings in **Chapter 7** concentrated on the conclusions derived from the qualitative and quantitative data analysis.

At the beginning of the current chapter (**Chapter 8**), a summary of this research is presented. The study topic, methods, results, analysis, and interpretation of the outcomes are all outlined in the next section of this summary chapter. The following section provides an analysis, from theoretical, methodological, and practical standpoint points, of the study's contribution to previously established information. In the following section, the researcher will talk about some of the restrictions that were placed on this study. In the concluding section of this chapter, some ideas are presented for upcoming research agendas that could be carried out in the future within the scope of the current area of study.

8.2 SUMMARY OF THE CURRENT RESEARCH

Career planning has gained popularity due to its capacity to increase academic professionals' performance through CP dimensions and job satisfaction at the community level. This sector, however, has been affected by a paucity of experimental evidence for assessing the dynamics and impact of CP components at the community level. More precisely, academics and practitioners have done minimal research on effective collaboration between academic professionals and other stakeholders.

The existing research on career planning lacks a foundation in empirical evidence-supported interaction methods that can increase academic professionals' job satisfaction and performance. The purpose of this study was to address the shortcomings of previous career planning studies by creating a comprehensive research model that incorporates two-factor theory, social exchange theory, and equity theory. A mixed-methods qual→QUAN based strategy was used for data collecting and analysis to provide empirical validation of the study model. This study began with a qualitative investigation in which data were collected from a field study conducted at various Bangladeshi public universities. There was a total of 21 in-depth interviews, all of which followed a semi-structured schedule. The acquired field data was analyzed using NVivo for content analysis.

By integrating the variables from the initial study model with the outcomes of the field studies, a more extensive research model was proposed. The model included pay structure, promotion system, SWE, and FDP (CP dimensions) as antecedent constructs, job satisfaction as a mediating construct, measurement constructs (i.e., teaching, research and publication, administrative, and managing external funds) for evaluating the performance connections, which refer to exchange consequences, and motivation as a moderator between job satisfaction and performance of academic professionals.

All the model's components and measures were taken from existing research in the disciplines of career planning and general human resource management, as well as from the literature based on the above mentioned theories and research hypotheses were established according to elicit the patterns of interactions between the components of the final research model.

In the second phase, a questionnaire was used to collect data in a more organized fashion that highlighted the constructs and measures of the model, which had previously been validated by field study findings. The questionnaire also contained certain socio-demographic factors. The questionnaire was pre-tested and revised depending on the results of the pre-testing before the final survey was carried out.

Using the latest modified version of the questionnaire, data has been collected from 459 completed questionnaires.

As a part of data preparation, before going to PLS analysis, the researcher of this study conducted Mann-Whitney test and common method bias test to see if there is any sampling error, nonresponse bias, and CMB in the dataset or not?

The Partial Least Squares (PLS) based Structural Equation Modeling (SEM) technique was employed to analyze the quantitative data. The PLS paradigm is implemented after first examining the measurement model and, subsequently, the structural model. In this study, the validity and reliability of the model were evaluated using a two-stage methodology (Becker et al., 2012). When evaluating the measurement model, certain items were eliminated because they had low-reliability scores. After ensuring the model had enough item reliability, convergent validity, and discriminant validity, the PLS bootstrapping method was used to examine the structural connections.

Seven hypotheses were supported out of the nine possible relationships. According to the study findings, CP dimensions have a positive and significant effect on job satisfaction (H_1 – H_4). Therefore, the performance relationship between the actors is a function of their teaching, research and publication, administrative, and managing external funds. The findings indicate that the CP dimensions and job satisfaction have a favorable and substantial relationship with academic professional performance (H_5 to H_9). Among these five hypotheses, two hypotheses were not supported (H_5 and H_7), but it doesn't indicate that there is no relationship between the pay structure (PaySt) and performance (Perf) of academic professionals and sound working environment (SWE) and performance (Perf) if academic professionals. Rather, it indicates positive but insignificant relationship between the variables. Therefore, from the existing literature and field study findings, the researcher of this study predicted that the relationships between the variables were significant.

The PROCESS macro (Model 4) of Hayes (2013) was applied to the research to investigate the mediation effects of the interactions further. An effect of the mediating variables was found to be statistically significant after testing four additional hypotheses (i.e., JobSat) on the association between CP dimensions and the performance of academic professionals due to job satisfaction (H_{10} to H_{13}). From these hypotheses, two hypotheses (H_{10} and H_{12}) revealed full mediation, and the rest of the hypotheses (H_{11} and H_{13}) showed partial mediation between the variables.

Furthermore, this study then explored the moderation effect of motivation (Mot_C) on the relationship between JobSat and Perf through the utilization of the PROCESS macro (Model 1) of Hayes (2013). The result of the further one hypothesis showed the insignificant effect of motivation on the relationship between job satisfaction and the performance of academic professionals (H_{14}). Thus, this hypothesis was not supported by the empirical evidences, but on the basis of field study data and existing literature, the researcher of this study predicted that there should be a moderating effect of motivation on the association between job satisfaction and performance of the professionals. Finally, this study first explores the dimensions of career planning through the qualitative process, then examines the structural relationship through the quantitative process using PLS-based SEM. Therefore, the overall outcomes of this study have significant theoretical and practical consequences.

8.3 CONTRIBUTIONS OF THE RESEARCH

The present study was not carried out in isolation, it rather conducted in conjunction with several previous studies that focus on career planning. As a result, the facts and conclusions obtained from this research are compatible with but do not reproduce the results of previous investigations. The most significant contributions made by the current investigation can be categorized as either theoretical, methodological, or contextual.

8.3.1 Theoretical Contributions

This research has introduced a unified method for the performance association where the CP dimensions and job satisfaction are considered antecedent factors of performance. Thus, career planning and performance are the ultimate result (outcome) of this research. All of the exogenous variables employed in the study model contribute to a successful outcome for career planning. This model is able to explain the HRM (career planning) process of behavioral exchange by combining the relevant elements and dimensions with the theoretical definitions. The correlations between and among the studied variables have been empirically established. Furthermore, this study has provided empirical support of the connection between CP dimensions and job satisfaction, CP dimensions and performance, and job satisfaction and performance, thereby expanding the scope of the earlier definition of the performance relationship. Consequently, this study provides a logical presentation and explanation of the initiation, formation, and consequences in relationship to attending preperformance of the academic professionals. As a result, this research has contributed to the field of human resource management (HRM) by introducing a behavioral exchange model in the field of career planning. The introduction of new dimensions for the two-factor theory, the social exchange theory (SET), and the equity theory is another

significant result of this research. The empirical justification of the CP dimensions to performance relationship in this study expands the applicability of SET and equity. Besides, the scope of the two-factor theory has been enlarged with the inclusion of CP dimensions in the job satisfaction relationship, which is also empirically justified. Although the two-factor was extensively used in the industrial sectors, this study applied this theory to the university context, which also broadened the scope of this theory. Therefore, the applications of these theories extensively contributed to the existing HRM (career planning) literature.

This research adds to the theory by showing that the two-factor combination of social exchange theory (SET) and equity can account for observed behavioral outcomes. Existing literature on these theories has described the natural behaviors and their consequences. Still, readers had a natural curiosity about what occurred after a given behavior was performed by an individual. Within the present study's framework, the performance of academic professionals is influenced by several factors, namely the dimensions of cognitive presence, job satisfaction, and motivation. Because of this, this extension of the theories' outcomes is also remarkable. Moreover, this model contributes novel understandings of the integrated effects of two-factor theory, SET and equity theory in career planning studies. Therefore, incorporating the abovementioned three theories has strengthened the model's implications.

8.3.2 Methodological Contributions

The present study has employed qualitative and quantitative techniques, precisely aligning with the qual→QUAN guidance. In this regard, a qualitative study was undertaken to discover various elements and dimensions that would contribute to the establishment of the study model. The study employed a quantitative approach to investigate the structural connections among the constructs utilized in the extensive study model. This study uses an enriched research method known as mixed-methods—qualitative and quantitative analysis. This is because qualitative research delves into the specifics of a phenomenon through in-depth analysis, such as an interview, a focus group, or some other similar method. Besides, this study employed PROCESS macro to analyze mediation and moderation effect of job satisfaction and motivation on performance which is considered as a new move in the arena of career planning research.

The results obtained from the qualitative study were utilized in the development of the quantitative study, which aimed to comprehensively investigate the phenomenon under examination. Hence, this study has provided a significant methodological contribution to the field of career planning research in human resource management (HRM). This contribution can serve as a model for future

research endeavors, particularly those that use academic scholars as the primary sources of information for study. The application of mediation analysis is another notable methodological contribution made by this study. This analysis has shown that there is a significant indirect relationship between the independent variables (PaySt, ProSy, SWE, and FDP) and the independent variable (Perf) and that this relationship is mediated by the independent variable (JobSat). Besides the mediation analysis, this study also shows the moderation effect of motivation on the relationship between job satisfaction and the performance of academic professionals. Although moderation was not supported by the present study, it creates the opportunity for future research in this context. Thus, the current study has exposed a new analytical tool for future career planning (HRM) research.

8.3.3 Practical Implications

Research on career planning is becoming increasingly well-known in the field of human resource management in a variety of countries across the globe, including those in Asia, the Americas, and Europe (Fan et al., 2021; Haldorai et al., 2022; Hassan et al., 2022). However, the socio-economic situations in each nation are distinct from one another. At the same time, the character of their educational system and university structure was distinctively different. [Although this research has focused on public universities, the results of this study not only be applied to public universities but also be applied to private universities too. Furthermore, this research may be useful to appropriate authorities, including university administration, and university authorities around the world. This study also helps to formulate need based policies for the academic professionals of Bangladesh.](#) The results of this research can be applied in the real world since they delve into crucial areas of human resource management related to career planning that have the potential to influence one's job satisfaction and one's work performance among academic professionals.

This study demonstrates the practical dimensions of career planning and its various sub-dimensions that can benefit society. Furthermore, this study will assist the responsible authorities (university administrations) in understanding the underlying needs of universities for their academic staff. They would be able to provide suitable facilities for academic professionals through this approach, which will assist them in improving their institution's ranking. This Furthermore, this study informed policymakers (i.e., UGC in BD & Ministry of Education) on the current state of universities, allowing them to establish national policies that will have an impact on the overall education standard of Bangladesh. As a direct consequence of this, the educational system of Bangladesh is likely to gain worldwide recognition. In addition, the administrators and policymakers at the university were aware of the present demands of the academics about the

compensation, promotion, environment, and development program, which assist them in taking appropriate decisions in their institutions. When career planning is practiced in a university, academic professionals would be satisfied with the job, that satisfaction might motivate him to perform his task accurately and fruitfully. Thus, this finding proved that job satisfaction increased the performance of academic professionals. As a result, university could be benefitted from this.

The findings of the study also offer new insights into career planning in the human resource management sectors. Besides, the outcomes of this study will motivate university teachers to engage in career planning activities to improve their performance. These results will also help academic professionals enhance their comprehension of career goals, acting accordingly. The current study also discovered that career planning dimensions can influence the job satisfaction or dissatisfaction of academic professionals. As this study followed a mixed method approach; applying both qualitative and quantitative techniques, which could help the generalization of the findings of the current study. Last but not least, if the appropriate bodies make an effort to resolve all of the issues that have been highlighted in this investigation, then academic professionals will feel a greater sense of satisfaction in their job. Consequently, their performance will improve because existing literature indicates that a satisfied employee performs better than a dissatisfied employee (Khan et al., 2012).

8.4 LIMITATIONS OF RESEARCH

The research results are supplemented with a model that is suitable in the context of universities. This model can help career planning stakeholders, national policymakers, and academics understand the requirements of career planning job satisfaction and its consequences (performance). Despite the generalizability of the findings, the following areas have become apparent at the end of this research and cannot be resolved by the present study.

In this study, the researcher only used university libraries, google, Google Scholar, research gate, academia, Scopus, and online library to search the literature for the context of the current study, although there are many other sources of searching literature (i.e., ieee, theired, ieti, and different university library of the world, etc.). Besides, so many studies have been conducted in different languages other than English. So, due to the language barriers, the researcher could not access and use all those literatures. Whereas those literatures were equally important to us. Besides, nowadays, different sophisticated software is used for extensive literature review, but this study could not use such software in this study due to a lack of proper expertise and knowledge regarding that software.

Moreover, due to the limitation of having relevant literature on career planning and performance of academic professionals, this study used literature which are more or less likely to be in business and industrial sectors, which are mainly profit-oriented in nature. Thus, these consequences raise a question: is this study applicable to the nonprofitable organizations like educational sectors of this country? Thus, the researcher of this study tried to see whether and to what extent career planning dimensions matter for the performance of academic professionals. Again, this study was conducted at just ten (10) different public universities in Bangladesh, but it does not take into account private universities, medical universities, off-campus universities, and other higher educational institutions, which narrows the context.

As a mixed-methods study, it does not meet the requirement of the temporal horizon of data collection because it uses qualitative and quantitative data obtained at different points in time (Abraham et al., 2021; Saunders et al., 2012; Zhang et al., 2021). This study employed a cross-sectional design, which is a single-instance approach that may be subject to the inherent limits of observing identical phenomena over time. Hence, the present study is subject to this methodological limitation. Besides, among the various qualitative tools, this study used only a single qualitative tool (i.e., in-depth interviews) to address career planning issues.

In this study, the data were solely collected from academic professionals (i.e., professor, associate professor, assistant professor, and lecturer), but it doesn't consider the other stakeholders, which further restricts the scope of the study. Furthermore, this study did not empirically investigate the involvement of the University Grants Commission (UGC) and the government in the specific field of study. The present study emphasizes the relationship between career planning (CP) dimensions and job satisfaction among stakeholders to enhance the performance of professionals. Therefore, in the current research setting, focusing on the various stakeholders involved in career planning will yield more fruitful results. As a result, the results of the study would be more applicable to a wider range of situations if they were conducted with the participation of all key stakeholders. Besides, this study used IBM SPSS and smartPLS to prepare and analyze the quantitative data, whereas it used NVivo-12 Pro to explore the qualitative data but didn't consider the other quantitative and qualitative software like IBM SPSS Amos and MAXQDA, ATLAS, etc., which may limit the findings of the study.

Again, the analysis has centered on the antecedent components that affect the focal elements that further impact the consequence components. The structural model does not represent the actual process of exchanging goods and services; it clarifies the study model's chronological order of events. Therefore, the study

model limits the concept of the social exchange process to talking about the pros and disadvantages of other trading partners and nothing else. At times, this study didn't focus on the moderating role of demographic variables on the structural model, which could generate better estimation of this study. Besides, this research lacks expertise and knowledge of other data analysis tools (i.e., IBM SPSS Amos, MAXQDA, ATLAS. ti, MonkeyLearn, etc.) that might produce more workable findings.

As the model proposed in this study is a hybrid type, resulting from the combination of two-factor theory, SET and the equity theory, its application and efficacy are subject to testing across various contexts. This study has one empirical test, which could reduce the overall generalizability of the study. Moreover, this study is also not free from the personal limitations of the researcher, which involve lack of personal knowledge and expertise, family crises, physical and mental problems, workload, and depression that might affect the execution of the study. Finally, resource limitations like time and budget constraints might affect the execution of the study. Furthermore, this study was conducted on different public universities (i.e., Bangladesh) and claimed that the results can be applicable to other developing countries with similar settings. However, the generalizability of the findings is subject to study in various parts of the world.

8.5 FUTURE RESEARCH DIRECTIONS

This study has opened new avenues for further research in the field of human resource management (career planning). Future researchers in career planning and performance can explore the following interesting areas of research.

This research empirically defined the performance association in terms of teaching, research and publication, administration, and managing external funds. In this study, these factors were proven to be statistically valid and trustworthy components of the performance association. Since no conclusions can be drawn as there is certainty in the social sciences, more research could focus on expanding the CP dimensions and performance relationship to include other factors in the future. In addition, a longitudinal study can help researchers to go beyond the limitations of the cross-sectional study in career planning research. Because a longitudinal design entails research conducted over time with the same group of people, it would allow for empirical testing of the underlying perception of the phenomena utilized in the present study.

Since the amount of variance explained by the present study is relatively small, there is room to broaden the scope of the current investigation. The current model could be reconstructed by using additional research that considers a wider variety of variables, such as Vacation and Leave Policy (VLP), Education System (ES),

Coworker Relationship (CR), Warrant of Preceding (WP), Day Care Center (DCC), Policy Making (PM), Foreign Degree (FG), Personal Life Style (PLS), Job Freedom (JF), Paternity Leave (PL), Motivation, Social Contribution (SC), Self-derive (SD), Family Support (FS), Work Balance (WB), Social Responsibility (SR), Social Circumstances (SC), Economic Factors (EF), Political Factors (PF), Psychological Factors (PsyF), Educational Achievement (EA), Age, Gender, Standard of Living (SL), Job Satisfaction, Collaboration (C), etc. to explore the effects of career planning and development (at the community level) on academic professionals, which will also enhance their performance.

Again, this study considered only four elements of job satisfaction because qualitative data revealed these factors as the dimensions of career planning. Besides, there are so many variables of job satisfaction like logistic support, opportunities to learn, job security, workload, recognition, job autonomy, management support, and work-life balance etc. But not all those elements are linked with the career planning of academic professionals. However, those variables are very important for the job satisfaction of academic professionals. Hence, future research might be conducted on those variables which were connected to job satisfaction.

This research has provided support for expanding existing equity theory, social exchange theory (SET), and the two-factor theory from the perspective of their outputs. Additional studies could be undertaken to utilize this outcome variable in other situations and locations within the two-factor and SET equity theory framework. Further research may provide more evidence to support expanding these theories. The theoretical approach of career planning research, which is currently immature, has recently opened up new options for future study. Therefore, future studies could aim to deepen our understanding of career planning by testing the effects of incorporating theories like Job Characteristics Theory, the Hawthorne Effect, Human Capital Theory, Self-Determination Theory, Social Cognitive Theory, Agency Theory, Social Learning Theory, and Expectancy Theory into the evaluation of career planning's results.

Finally, the scope of analyzing research data could be broadened to include more factors. Future research could focus on analyzing moderating effects, moderated mediation, and the mediated moderation model in the similar context, while the SEM analysis technique is the primary emphasis of this paper. Furthermore, the study model could be subjected to partial least squares multi-group analysis (PLS-MGA) to evaluate group differences. Additional investigation could be undertaken to employ an alternative modeling approach, such as case-based modeling, instead of structural equation modeling (SEM) analysis. Again, IBM SPSS Amos could be used for SEM analysis in the future. Therefore, this study

could use MAXQDA, ATLAS.ti, MonkeyLearn, etc., for exploring the qualitative data of the study.

Besides, future research could undertake parametric tests like data normality test, confirmatory factor analysis (CFA), explanatory factor analysis (EFA) or principal component analysis (PCA), correlation, and regression analysis to generalize the findings of the study. Therefore, both thematic and content analysis could be applied to analyze the qualitative data from the study. Although the present study explored only four dimensions of career planning for academic professionals, the newer dimensions could be explored if multiple qualitative tools (i.e., FGD, KII, Case Study, Observation) could be applied. In the future, this study could employ an extensive literature review (Bibliographic Databases like PubMed, Scopus, or Web of Science) through the application of sophisticated software, which might provide better insights into the study. At times, if this study could get access to the best library in the world and access to translated copies of the literature of different languages other than English, which are directly related to this field, then actual gaps in the literature will be explored.

Aside from time and financial constraints, the study team lacks proficiency in other qualitative data analytical approaches (FGD, KII, Case Study, etc.) that could produce compelling results. Finally, the excluded university categories (private university, medical university, off-campus university, and other higher educational institutions) need to be under consideration in the future investigation to get more additional dimensions of career planning. This study used a phenomenological approach for collecting qualitative data; other research approaches (i.e., ethnography, grounded theory, case study, and narrative model) could be used in the future to have a better understanding of the context of the current study.

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Appendix A
Institute of Bangladesh Studies
University of Rajshahi
Bangladesh

**CAREER PLANNING AND PERFORMANCE OF ACADEMIC
PROFESSIONALS OF HIGHER EDUCATION IN BANGLADESH**

Informed Consent Form

- ☐ I have received information about this research and have been allowed to pose questions. I believe I comprehend the purpose, scope, and potential risks of participating in this project and consent to participate voluntarily.

INFORMAL AGREEMENT

☐ I do	☐ I do not	consent to being video-recorded
☐ I do	☐ I do not	consent to being audio-recorded
☐ I do	☐ I do not	consent to the preservation and use of my information in future ethically approved research studies linked to this project

Checklist for CP Qualitative Part

Initial Queries

Demographic Profile

Age: Gender: Family income:
Designation: University service length: Marital status:
Last educational qualification: Department:
Name of the university you are serving:

Semi-structured Questions

Career Planning of Academic Professionals

1. What is your understanding regarding the career planning of academic professionals?
2. Do you think there is any relation between career planning and the performance of academic professionals (positive or negative)?
3. What factors do you think are essential when it comes to career planning for academic professionals? And why are these important?

- Probe as necessary.
3. (a) What elements of pay structure do you find necessary? Why do you think? Do they have any effect in any other case?
- Probe as necessary.
3. (b) What elements do you find important in promotion? Why do you think it is important? Do they have any other effect?
- Probe as necessary.
3. (c) What elements of the Sound Working Environment do you find important? Why do you think it is important? Do they have any other effect?
- Probe as necessary.
3. (d) What components of a faculty development program do you find important? And why does it seem important? Do they have any other effect?
- Probe as necessary.
4. What other factors do you think should be considered in terms of job satisfaction? Why do you think these are important?
- Probe as necessary.
5. Do you think that the elements or factors of career planning affect the job satisfaction of academic professionals (positive or negative)?
- 5 (a) What is the relationship between pay structure and job satisfaction (positive or negative)?
- 5 (b) What is the relationship between promotion and job satisfaction (positive or negative)?
- 5 (c) What is the relationship between a sound working environment and job satisfaction (positive or negative)?
- 5 (d) What is the relationship between faculty development program and job satisfaction (positive or negative)?
6. Does job satisfaction have an effect on academic performance (positive or negative)?

7. Which aspects do you think are most important to the performance of academic professionals? (Teaching, Research and Publication, Administration and Funding) Are there any other performance issues besides these?

➤ Probe as necessary.

7 (a) What aspects of teaching do you think an academic professional would consider?

➤ Probe as necessary.

7 (b) Which topics do you think are most important for research and publication?

➤ Probe as necessary.

7 (c) What aspects of administrative performance do you find important?

➤ Probe as necessary.

-What kind of administrative work do you think academic professionals are most involved with?

➤ Probe as necessary.

7 (d) What elements of an external fund do you think are important for an academic professional?

➤ Probe as necessary.

8. What elements or aspects do you find most important in motivation? Why do you think these are important? Does it have any effect on job satisfaction and performance?

➤ Probe as necessary.

9. Does motivation have a role in academic professionals' job satisfaction and performance (positive or negative)?



Appendix B
Institute of Bangladesh Studies
University of Rajshahi
Bangladesh

**CAREER PLANNING AND PERFORMANCE OF ACADEMIC
PROFESSIONALS OF HIGHER EDUCATION IN BANGLADESH**

Survey Questionnaire

- ☐ I have received information about this research and been given the chance to pose questions. I believe I comprehend the purpose, scope, and potential risks of my participation in this project, and I consent to participate voluntarily.

INFORMAL AGREEMENT

☐ I do	☐ I do not	consent to being video-recorded
☐ I do	☐ I do not	consent to being audio-recorded
☐ I do	☐ I do not	consent to the preservation and use of my information in future ethically approved research studies linked to this project

Dear Participants

I am going to conduct a research on “**CAREER PLANNING AND PERFORMANCE OF ACADEMIC PROFESSIONALS OF HIGHER EDUCATION IN BANGLADESH.**” Please give your valuable opinion about the various dimensions of career planning mentioned in this questionnaire. Your information will be kept secret and used for academic purposes.

It would be appreciated if you kindly answered all the following questions.

Regards

(Md. Imran Sheikh)
Assistant Professor
Department of Management
Jashore University of Science and Technology
Jashore-7408, Bangladesh.

.....

Section A: Questions on the demographic profile of the respondents

Please Tick (✓)/ Write where it is necessary.

Q1. Your age:

Q2. Your gender: ☐ Male ☐ Female

Q3. Your marital status: ☐ Married ☐ Unmarried ☐ Others

Q4. Your educational qualification:

☐ Graduate ☐ Post-graduate ☐ Master's research/ MPhil ☐ PhD ☐ Post-doctoral

Q5. Your designation:

☐ Professor ☐ Associate professor ☐ Assistant professor ☐ Lecturer

Q6. Your service tenure/ service length (**years**):

Q7. Your serving university
(category):

☐ General university ☐ Science and technology ☐ Engineering and technology ☐ Agricultural university

Q8. Your monthly income (BDT):

☐ Tk. 40,000 or below ☐ Tk. 40,001-60,000 ☐ Tk. 60,001-80,000 ☐ Tk. 80,001-1,00,000 ☐ Tk. 1,00,001 or above

.....

Section B: Questions relating to the observed variables (**Please Tick the degree of agree or disagree in the following statements**)

Please read the following statements and express how much you agree or disagree with each of the statements, where 1=Strongly disagree, 2=Disagree, 3=Moderately disagree, 4=Moderately agree, 5=Agree, 6=Strongly agree.

Would you please provide your opinion about the following aspects of Pay Structure for job satisfaction and performance issues?

PaySt1	I get a satisfactory salary package compared to other sectors	1	2	3	4	5	6
PaySt2	I get a competitive amount of bonus and allowances compared to other sectors	1	2	3	4	5	6
PaySt3	I get an increased number of increments compared to other sectors	1	2	3	4	5	6
PaySt4	I get medical support from my services	1	2	3	4	5	6
PaySt5	My university has a reasonable paid-study-leave policy	1	2	3	4	5	6

Would you please provide your opinion about the following aspects of the Promotion System for job satisfaction and performance issues?

ProSy1	There is a fair chance of a promotion facility for academic professionals	1	2	3	4	5	6
ProSy2	A due-time promotion system is the essence of academic professionals	1	2	3	4	5	6
ProSy3	My university has a definite publication requirement for the promotion of academic professionals.	1	2	3	4	5	6
ProSy4	I need a promotion facility even on study leave	1	2	3	4	5	6
ProSy5	University needs to eradicate bureaucratic complexity in case of the promotion system	1	2	3	4	5	6
ProSy6	I expect a rebate facility for promotion having a substantial number of quality publications	1	2	3	4	5	6

Would you please provide your opinion about the following aspects of a Sound Working Environment for job satisfaction and performance issues?

SWE1	A well-furnished room with all modern amenities is indispensable	1	2	3	4	5	6
SWE2	My university provides ICT facilities for the academic professional	1	2	3	4	5	6
SWE3	Academic professionals require politics free sound environment	1	2	3	4	5	6
SWE4	I need security from students' harassment	1	2	3	4	5	6
SWE5	I enjoy the recreational and refreshment facility	1	2	3	4	5	6
SWE6	A collaborative teaching aid facility is vital for the academic professional	1	2	3	4	5	6
SWE7	I need access to national and international academic resources	1	2	3	4	5	6

Would you please provide your opinion about the following aspects of the Faculty Development Program for job satisfaction and performance issues?

FDP1	Academic professionals require training on recent research tools and techniques	1	2	3	4	5	6
FDP2	Career development programs need to be addressed by the university authority	1	2	3	4	5	6
FDP3	My university has a collaboration with foreign university	1	2	3	4	5	6
FDP4	Academic professionals need financial assistance to attend the international conference	1	2	3	4	5	6
FDP5	The self-assessment-based training is inevitable for academic professional	1	2	3	4	5	6
FDP6	I need training based on the current curriculum	1	2	3	4	5	6
FDP7	A foundation training program is a must for each newly appointed academic professional	1	2	3	4	5	6

Would you please provide your opinion about the following aspects of Job Satisfaction for performance issues?

JobSat1	I am enthusiastic about my job	1	2	3	4	5	6
JobSat2	I feel self-esteemed to teach here at this university	1	2	3	4	5	6
JobSat3	I receive regard from others in the university	1	2	3	4	5	6
JobSat4	I feel proud to teach at this university	1	2	3	4	5	6
JobSat5	I get substantial financial benefits from my job	1	2	3	4	5	6
JobSat6	Non-financial benefits are also important to me	1	2	3	4	5	6
JobSat7	I feel my job status is socially recognized	1	2	3	4	5	6

Would you please provide your opinion about the following aspects of Motivation for job satisfaction and performance?

Mot1	I have considerable opportunities for interdependence and freedom in my job	1	2	3	4	5	6
Mot2	Getting recognition makes an academic professional more comfortable in his job	1	2	3	4	5	6
Mot3	Academic professionals require incentives for quality publication	1	2	3	4	5	6
Mot4	My university provides community appreciation for national and international contribution	1	2	3	4	5	6
Mot5	I feel coworker support also motivates academic professionals	1	2	3	4	5	6
Mot6	I have the decision-making power in my job	1	2	3	4	5	6

Would you please provide your opinion about the following aspects of Teaching as performance issues?

Tea1	A reasonable teaching load ensures excellent performance	1	2	3	4	5	6
Tea2	Proper supervision of students is an indicator of performance	1	2	3	4	5	6
Tea3	Co-curriculum involvement is a must for a faculty	1	2	3	4	5	6
Tea4	Proper student evaluation is the essence of an academic professional	1	2	3	4	5	6
Tea5	Engaging class ensures more productivity	1	2	3	4	5	6
Tea6	Faculty members must have sound knowledge of their teaching content	1	2	3	4	5	6

Would you please provide your opinion about the following aspects of Research and Publication on performance issues?

RP1	Research collaboration is a must for research and publication	1	2	3	4	5	6
RP2	A research fund or grant is essential for conducting quality research	1	2	3	4	5	6
RP3	Quality publications can ensure superb performance	1	2	3	4	5	6
RP4	A dedicated laboratory is essential for research and publication work	1	2	3	4	5	6
RP5	Interest in research work is a must for an academic professional	1	2	3	4	5	6
RP6	Academic professionals need to attend and arrange seminars and conferences regularly	1	2	3	4	5	6

Would you please provide your opinion about the following aspects of Administrative **issues** for ensuring performance?

Adm1	Academic professionals are required to perform general administrative activities	1	2	3	4	5	6
Adm2	An academic professional must have the ability to handle the situation	1	2	3	4	5	6
Adm3	Academic professionals must have a sense of duty	1	2	3	4	5	6
Adm4	Logistic support for performing administrative activities is needed	1	2	3	4	5	6
Adm5	A handsome financial incentive is needed to perform administrative duties	1	2	3	4	5	6
Adm6	An academic professional must have the sound management capacity	1	2	3	4	5	6

Would you please provide your opinion about the following aspects of Managing External Funds on performance issues?

MEF1	Academic professionals need to collaborate with firms, industries, and company	1	2	3	4	5	6
MEF2	Fund hunting is the extraordinary quality of an academic professional	1	2	3	4	5	6
MEF3	Project-bringing capacity makes an academic professional different from others	1	2	3	4	5	6
MEF4	The collection of external research grants indicates better performance of an academic professional	1	2	3	4	5	6
MEF5	Academic professionals require to manage sponsorship from an industry or company	1	2	3	4	5	6

Would you please provide your opinion about the following aspects of the Smoking Consequences for the young generation of Bangladesh?

SC1	Smoking is the only cause of cancer	1	2	3	4	5	6
SC2	Smoking always causes heart diseases	1	2	3	4	5	6
SC3	Smoking improves your immune system	1	2	3	4	5	6
SC4	Chronic respiratory conditions improve through smoking	1	2	3	4	5	6
SC5	Smoking never leads to diabetes	1	2	3	4	5	6
SC6	Dental problems do not arise from smoking	1	2	3	4	5	6

Thanks for your participation and contribution to my thesis; I think your idea will enrich my view; I am indebted to you.



Appendix C

Model : 1

Y : Perf_C

X : JobSat_C

W : Mot_C

Sample

Size: 459

OUTCOME VARIABLE: Perf_C

Model Summary

R	S-sq	MSE	F	df1	df2	p
0.7910	0.6257	0.1126	253.5780	3.0000	455.00000	0.0000

Moderating effect of motivation on job satisfaction and performance

	Coefficient (β)	SE	t	p	LLCI	ULCI
Constant	0.1231	0.3240	0.3799	0.7042	-0.5137	0.7598
JobSat_C	0.2633	0.0834	3.1584	0.0017	0.0995	0.4272
Mot_C	0.8170	0.0610	13.3914	0.0000	0.6971	0.9368
Int_1	-0.0274	0.0151	-1.8187	0.0696	-0.0570	0.0022

Product terms key: Int_1 : JobSat_C x Mot_C

Test(s) of highest order unconditional interaction(s):

	R ² -Chng	F	df1	df2	p
X*W	0.0027	3.3076	1.0000	455.0000	0.0696

Focal predict: JobSat_C (X)

Mod var: Mot_C (W)

Conditional effects of the focal predictor at values of the moderator(s):

Mot_C	Effect	SE	t	p	LLCI	ULCI
5.3333	0.1173	0.0189	6.2160	0.0000	0.0802	0.1544
5.8333	0.1036	0.0200	5.1855	0.0000	0.0643	0.1428
6.0000	0.0990	0.0209	4.7281	0.0000	0.0579	0.1402

Source: Survey data, 2023



Appendix D

Confirmatory Factor Analysis (CFA)

Table 1: Confirmatory Factor Analysis of pay structure

Items	Component	% of variance
PaySt1	.866	71.502
PaySt2	.856	
PaySt3	.910	
PaySt4	.789	
PaySt5	.802	
Extraction Method: Principal Component Analysis		
a. 1 components extracted		

Source: Survey data, 2023

Table 2: Confirmatory Factor Analysis of the promotion system

Items	Component	% of variance
ProSy1	.597	51.675
ProSy2	.522	
ProSy3	.863	
ProSy4	.790	
ProSy5	.722	
ProSy6	.762	
Extraction Method: Principal Component Analysis		
a. 1 components extracted		

Source: Survey data, 2023

Table 3: Confirmatory Factor Analysis of sound working environment after reducing SWE6 & SWE7

Items	Component	% of variance
SWE1	.731	60.645
SWE2	.786	
SWE3	.801	
SWE4	.763	
SWE5	.811	
Extraction Method: Principal Component Analysis		
a. 1 components extracted		

Source: Survey data, 2023

Table 4: Confirmatory Factor Analysis of the faculty development program

Items	Component	% of variance
FDP1	.795	49.668
FDP2	.830	
FDP3	.266	
FDP4	.713	
FDP5	.780	
FDP6	.685	
FDP7	.707	
Extraction Method: Principal Component Analysis		
a. 1 components extracted		

Source: Survey data, 2023

Table 5: Confirmatory Factor Analysis of job satisfaction after reducing JobSat6

Items	Component	% of variance
JobSat1	.729	52.818
JobSat2	.849	
JobSat3	.681	
JobSat4	.842	
JobSat5	.508	
JobSat7	.697	
Extraction Method: Principal Component Analysis		
a. 1 components extracted		

Source: Survey data, 2023

Table 6: Confirmatory Factor Analysis of motivation

Items	Component	% of variance
Mot1	.703	51.157
Mot2	.759	
Mot3	.680	
Mot4	.731	
Mot5	.714	
Mot6	.703	
Extraction Method: Principal Component Analysis		
a. 1 components extracted		

Source: Survey data, 2023

Table 7: Confirmatory Factor Analysis of teaching

Items	Component	% of variance
Tea1	.653	51.472
Tea2	.778	
Tea3	.621	
Tea4	.775	
Tea5	.764	
Tea6	.699	
Extraction Method: Principal Component Analysis		
a. 1 components extracted		

Source: Survey data, 2023

Table 8: Confirmatory Factor Analysis of research and publication

Items	Component	% of variance
RP1	.748	58.206
RP2	.779	
RP3	.737	
RP4	.769	
RP5	.764	
RP6	.779	
Extraction Method: Principal Component Analysis		
a. 1 components extracted		

Source: Survey data, 2023

Table 9: Confirmatory Factor Analysis of administrative

Items	Component	% of variance
Adm1	.515	50.305
Adm2	.766	
Adm3	.758	
Adm4	.760	
Adm5	.669	
Adm6	.753	
Extraction Method: Principal Component Analysis		
a. 1 components extracted		

Source: Survey data, 2023

Table 10: Confirmatory Factor Analysis of managing external fund

Items	Component	% of variance
MEF1	.653	63.283
MEF2	.841	
MEF3	.873	
MEF4	.850	
MEF5	.738	
Extraction Method: Principal Component Analysis		
a. 1 components extracted		

Source: Survey data, 2023

Descriptive Statistics of the Survey Study

Table 11: Descriptive statistics of survey study data

Constructs	Items	Items Keywords	Mean	SD
Pay structure	PaySt1	Satisfactory salary package	4.50	1.130
	PaySt2	Bonus and allowances	4.28	1.130
	PaySt3	Number of increments	4.28	1.197
	PaySt4	Medical support	4.09	1.247
	PaySt5	Paid-study-leave policy	4.19	1.272
Promotion system	ProSy1	Fair chance of promotion	4.98	1.081
	ProSy2	Due-time promotion system	4.14	1.651
	ProSy3	Definite publication requirement for promotion	4.75	1.095
	ProSy4	Promotion facility even on study leave	4.37	1.245
	ProSy5	Eradicate bureaucratic complexity	4.42	1.300
	ProSy6	Rebate facility for promotion	4.35	1.258
Sound working environment	SWE1	Well-furnished room	4.50	1.330
	SWE2	ICT facilities	4.57	1.190
	SWE3	Politics free sound environment	4.33	1.234
	SWE4	Security from students' harassment	3.98	1.333
	SWE5	Recreational and refreshment facility	4.11	1.209
	SWE6	Collaborative teaching aid facility	5.49	.810
	SWE7	Access to academic resources	5.72	.710
Faculty development program	FDP1	Training on recent research tools	5.54	.841
	FDP2	Career development programs	5.40	.927
	FDP3	Collaboration with foreign university	3.71	1.504
	FDP4	Financial assistance to attend int. conferences	5.67	.820
	FDP5	Self-assessment-based training	5.23	.964
	FDP6	Training based on the current curriculum	4.98	1.167
	FDP7	Foundation training program	5.49	1.056
Job satisfaction	JobSat1	Enthusiastic job	5.13	1.012
	JobSat2	Feeling self-esteemed to teach	4.91	1.081
	JobSat3	Receiving regard from others	4.41	1.177
	JobSat4	Feeling proud to teach	5.06	1.118
	JobSat5	Getting substantial financial benefits	3.39	1.386
	JobSat6	Non-financial benefits	5.13	.983
	JobSat7	Socially recognized job	4.85	1.150
Motivation	Mot1	Opportunities for interdependence and freedom	5.73	.638
	Mot2	Getting recognition	5.66	.749
	Mot3	Incentives for quality publication	5.55	.830
	Mot4	Community appreciation for contribution	5.60	.748

	Mot5	Coworker support	5.58	.793
	Mot6	Decision-making power	5.58	.750
Teaching	Tea1	Reasonable teaching load	5.35	.923
	Tea2	Proper supervision of students	5.23	.833
	Tea3	Co-curriculum involvement	4.86	1.056
	Tea4	Proper student evaluation	5.33	.861
	Tea5	Engaging class	5.20	.958
	Tea6	Sound knowledge on teaching content	5.64	.685
Research and publication	RP1	Research collaboration	5.43	.796
	RP2	Research fund or grant	5.69	.738
	RP3	Quality publications	5.33	.893
	RP4	Dedicated laboratory	5.54	.739
	RP5	Interest in research work	5.45	.822
	RP6	Attend and arrange seminars	5.45	.759
Administrative	Adm1	General administrative activities	4.18	1.313
	Adm2	Ability to handle the situation	5.01	.885
	Adm3	Sense of duty	5.46	.745
	Adm4	Logistic support	5.33	.806
	Adm5	Handsome financial incentive	5.33	.929
	Adm6	Sound management capacity	5.17	.884
Managing external fund	MEF1	Collaboration with firms	5.22	.923
	MEF2	Project-bringing capacity	4.98	1.004
	MEF3	Collection of external research grants	4.98	.957
	MEF4	Managing sponsorship	4.93	1.015
	MEF5	Religious and festival vacation policy	4.58	1.165

Source: Survey study, 2023 (n=459)

Published Articles

EXPLORING THE INFLUENTIAL FACTORS OF JOB SATISFACTION OF ACADEMIC PROFESSIONALS: A STUDY ON SCIENCE AND TECHNOLOGY UNIVERSITIES OF BANGLADESH

By

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ABSTRACT

This study seeks to explore the factors influencing the job satisfaction of academic professionals at science and technology universities in Bangladesh. Among the different categories of public universities, three science and technology universities were randomly selected from three different administrative regions in Bangladesh for this study. The study's data came from a semi-structured survey questionnaire. This study used descriptive statistics and regression analysis to analyze and explore the different factors of job satisfaction associated with Assistant Professors through the application of IBM SPSS-26. This study identified six different factors of job satisfaction of academic professionals in the science and technology universities in Bangladesh, such as job in general, remuneration, work environment, social relationships with colleagues, payoffs, and work stress-related factors. The findings of the study revealed that RS, PS, and SR had a statistically significant impact on job satisfaction, but GJ, WE, and WS had a direct positive but insignificant influence on the job satisfaction of academic professionals. The findings also revealed that academic professionals' job satisfaction and dissatisfaction largely depend on these aforementioned factors. A variety of respondent perceptions were employed to describe the job satisfaction dimensions of academic professionals. There was some overlap in picking the university category. This study, for example, excludes all categories of universities except the science and technology universities in Bangladesh. The research's conclusions enlighten academic professionals about what really matters in terms of job satisfaction. The results also provide a useful framework for the relevant authorities, human resources departments, university administration, and policymakers by diving deep into the most important aspects of different factors of job satisfaction associated with academic professionals. This research uses theoretical assumptions and empirical evidence to build a complete model of the relationships between various factors in the job satisfaction of academic professionals. The findings of this study have real-world implications since they look into important aspects of current dimensions of job satisfaction among academic professionals that have the potential to affect their jobs.

Keywords: Job Satisfaction, Academic Professionals, Science and Technology, Assistant Professor, Quantitative Study, SPSS.

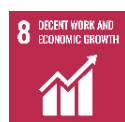
INTRODUCTION

Job satisfaction is a widely discussed and most researched topic in the arena of human resource

management (Chelladurai & Kim, 2022; Saari & Judge, 2004). Job satisfaction is a critical aspect of the modern workplace, reflecting the degree of contentment and fulfillment that employees derive from their work (Felstead & Henseke, 2017). It encompasses various facets, including the nature of the tasks performed, the working environment, relationships with colleagues, and overall job conditions (Arieli et al., 2020). Job satisfaction pertains



This paper has objectives related to SDG



to an individual's outlook or feelings regarding their work (Robbins & Judge, 2018). Job satisfaction among academic professionals is a multifaceted and nuanced aspect within the broader realm of organizational well-being (Oyelami, 2018). As individuals dedicated to the pursuit of knowledge and the development of future generations, academics often find their job satisfaction influenced by a unique set of factors.

The history of studying and understanding job satisfaction can be traced back to the early 20th century, with the field evolving over time as researchers explored different facets of work attitudes (Costanza et al., 2012; Latham, 2012; Steel et al., 2019). The nature of job satisfaction is complex and multifaceted, encompassing various dimensions that collectively contribute to an individual's overall contentment and fulfillment in the workplace. Although it is quite challenging to mention the exact number of studies on job satisfaction, thousands of research articles, academic papers, and studies have explored various aspects of job satisfaction, including its determinants, consequences, and ways to enhance it (Judge et al., 2017; Toropova et al., 2021).

Although a variety of studies have been conducted on job satisfaction, the issue of job satisfaction is quite common, prominent, and new all the time. Because the tests, demands, preferences, and feelings of human beings are changing over time, job satisfaction is a relative term that could be changed over time (Dobrow et al., 2018; Judge et al., 2017). Besides, most of the studies conducted on job satisfaction are mainly industry and company-oriented (Jędrzejczak-Gas & Wyrwa, 2020; Soomro & Shah, 2019). A few studies have been conducted on the job satisfaction of academic professionals, which are related to the job satisfaction of university academics, job satisfaction among university faculty, professional satisfaction of public university teachers, and so on (Cerci & Dumludag, 2019; Rahman & Parveen, 2006; Saha & Awal, 2021; Islam et al., 2019; Sharma & Jyoti, 2009). This study initiated a new variable (i.e., the payoff system) that affects the job satisfaction of academic professionals, which is rarely mentioned in any existing literature.

Moreover, this study tries to investigate how the various aspects of satisfaction influence the job satisfaction of academic professionals. Hence, the researcher is motivated to conduct this study by exploring new dimensions of job satisfaction, especially for university faculty. Therefore, this study certainly contributed to the existing body of knowledge for decision-makers, policymakers, society, and the country as a whole.

Furthermore, this study used an online survey questionnaire method to collect the data from the respondents, and data analysis was solely carried out by IBM SPSS-26. The study found a significant association between the job satisfaction of academics and its various dimensions. Therefore, the paper provides a literature review of the study, research methods, results and discussion, implications, and limitations, and finally concludes the paper by outlining the key findings and importance of job satisfaction research in Bangladesh.

1. Literature Review

The attitude that workers have towards the tasks they perform is a significant factor in determining their job satisfaction. "Job satisfaction" is defined as "the extent to which expectations are met and match the real awards," and it has a strong connection to how an individual behaves while at work. The study on job satisfaction emerged in earnest in the early 1930s and was greatly impacted both by the economic and employment problems of the depression and by the new breakthroughs in attitude assessment (Weiss & Merlo, 2015). This is because both of these crises occurred during the Great Depression.

The study of organizational psychology, organizational behavior, human resource management, and management sciences all devote significant attention to the topic of job satisfaction (Mira et al., 2019). Over the course of the years, academics have investigated the many facets of job satisfaction. They have done so because they have recognized the impact that job satisfaction has on individual well-being, organizational performance, and the general dynamics of the workplace (Rothausen & Henderson, 2019). Herzberg's

Two-Factor theory provides an engaging framework for considering the theoretical and practical dimensions of employee contentment on the job. As the article puts it, "hygiene factors," including the current work environment, job security, income, and quality of supervision, are more important to disgruntled individuals than other aspects of their jobs (Herzberg et al., 1959). This study was carried out and designed with a conceptual framework based on the basic concept of the two-factor theory. Figure 1 shows the factors influencing job satisfaction of academics.

Numerous studies have been conducted to determine the components that contribute to job satisfaction. Some of these factors are intrinsic, such as the nature of the work, prospects for advancement, and the quality of working relationships with coworkers (Ho & Chen, 2022). Likewise important are extrinsic factors like pay, employment security, and company culture. Many factors, including leadership styles, work-life balance, and the physical

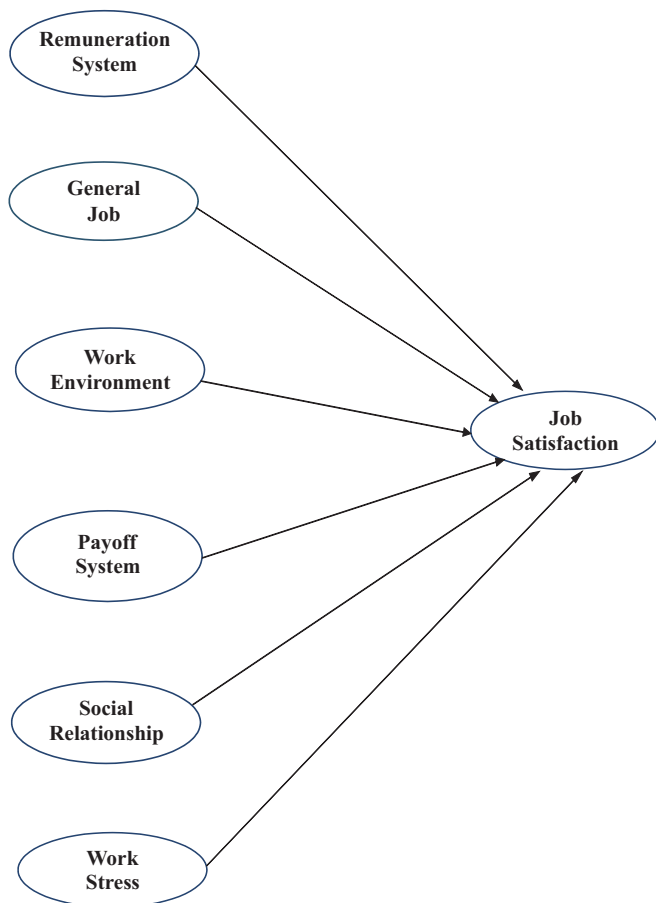


Figure 1. Factors Influencing Job Satisfaction of Academics

workplace itself, have been identified as crucial to a productive workplace. Research on job satisfaction extends across different sectors, including healthcare, education, information technology, and manufacturing. Sector-specific studies highlight unique challenges and opportunities, recognizing that factors influencing job satisfaction can vary based on the nature of the industry and the specific demands of the profession.

A remuneration system refers to the structure and process by which individuals are compensated for their work or services (Patnaik & Padhi, 2012). It encompasses all forms of financial and non-financial rewards provided to employees in exchange for their contribution to an organization (Noorazem et al., 2021). According to the findings of the study, the remuneration system has a direct positive and significant relationship with employee job satisfaction (Jalal & Zaheer, 2017). Another study also stated that financial reward has a positive influence on the job satisfaction of employees (Ahmad & Jameel 2018). But theoretically, there are many reasons to expect both positive and negative relationships between remuneration and job satisfaction, although most of the literature shows a positive relationship between these two factors (Judge et al., 2010). Besides, "general job nature" typically refers to the fundamental characteristics or attributes associated with a particular type of job or occupation (Thomas et al., 2004). It provides a broad overview of the tasks, responsibilities, and expectations commonly associated with a specific role. According to the results of this study, the general nature of the job itself has a direct positive impact on the job satisfaction of employees (Nandan & Krishna, 2013). Another study also found the same result as a positive relationship exists between job satisfaction of academic professionals and general job nature (Thant & Chang, 2021; Yuen et al., 2018).

Therefore, work environment refers to the conditions, atmosphere, and surroundings in which employees perform their job duties (Alegbeleye et al., 2020). It encompasses various factors, both physical and psychological, that influence the overall experience of work. The findings of the study predicted that the work

environment significantly and positively influences the job satisfaction of employees (Alauddin et al., 2019). Another study showed a positive but insignificant association between working conditions and job satisfaction (Masum et al., 2015). Besides, the results of the studies showed a negative relationship between work environment and satisfaction (Langer et al., 2019). Moreover, payoffs refer to the allowances that an academic professional receives for performing exam-related activities. Payoffs should not be confused with the remuneration system like salary or compensation, house rent, bonuses, and other allowances, rather they are somewhat different from it. Job satisfaction of academic professionals largely depends on getting payoffs or exam-related allowances in due time. This study expected that there is a direct positive and significant relationship between job satisfaction in academics and payoffs. This study tries to separate the payoffs from the salary and other forms of remuneration system because academics didn't get this payment with their monthly remuneration.

Again, social relationships with colleagues play a significant role in the workplace, contributing to a positive work environment, collaboration, and overall job satisfaction (Bella, 2023; Raziq & Maulabakhsh, 2015). Building and maintaining healthy social relationships at work involves various aspects, including communication, mutual respect, teamwork, and a supportive atmosphere. This study stated that social relationships with colleagues have a significant positive relationship with the job satisfaction of academic professionals (Vrontis et al., 2019). However, another study showed a negative relationship between them (Nandan & Krishna, 2013). So, the nature of the relationship between these factors is vulnerable. Furthermore, work stress is a common phenomenon that many individuals experience due to various factors associated with their jobs (Singh et al., 2019). It can result from a combination of high demands, pressure, lack of control, and other factors related to the work environment. According to the variety of studies found, there is a direct negative and significant association between work stress and job satisfaction among employees (Gaertner, 1999; Nandan & Krishna,

2013; Ortan et al., 2021; Yuen et al., 2018). Finding hardly any study that showed a positive relationship between work stress and job satisfaction of employees was challenging. Since this study was conducted on academic professionals, besides the fact that the job stress of professionals is relatively lower than that of employees of the industrial sector, this study might get different results than previous literature.

Due to the changing nature of the human mind, research on job satisfaction is quite common and new all the time. Besides, studies on this topic are rarely conducted on academic professionals at science and technology universities in Bangladesh, particularly assistant professors. So, the current study is conducted to address the underlying issues of job satisfaction and its associated factors in different ways to have different results with respect to science and technology universities. Hence, based on the Herzberg two-factor theory, this study proposes a research model and hypotheses.

This study designed six hypotheses which is consistent with the initial research model. The proposed hypotheses are,

H1: There is a positive and significant relationship between the remuneration system and job satisfaction.

H2: There is a positive and significant relationship between general job nature and job satisfaction.

H3: There is a positive and significant relationship between work environment and job satisfaction.

H4: There is a positive and significant relationship between the payoff system and job satisfaction.

H5: There is a positive and significant relationship between social relations and job satisfaction.

H6: There is a positive and significant relationship between work stress and job satisfaction.

2. Method and Materials

2.1 Research Context

This study was conducted on science and technology, which is a single category of public university in Bangladesh. In this study, three science and technology universities were randomly selected to identify the various factors of job satisfaction associated with academic

professionals. Since the beginning of the twenty-first century, the number of science and technology universities in Bangladesh has increased rapidly (UGC, 2021). The academic professionals were facing a wide range of challenges at their newly established university. As such, they have fewer facilities compared to the other previously established universities. Besides, they have to conduct a lot of courses compared to the academic professionals of other category universities in Bangladesh. Sometimes they have to conduct administrative activities that are more clerical in nature, it creates a negative feeling in their inner mind. Now, their job satisfaction is in the state of a question about to what extent they are satisfied with their job-related factors. Although a lot of studies have been conducted on job satisfaction, these issues are common and change very frequently among academic professionals which creates special demand to research this topic. Therefore, this study is conducted to address the current issues of job satisfaction among academic professionals through the concept of Herzberg's two-factor theory.

2.2 Questionnaire Design

The quantitative investigation is carried out in this study by using a survey questionnaire tool. The questionnaire was segmented into two parts. Section A contained respondents' sociodemographic factors, while Section B comprised the different reflective factors associated with the job satisfaction of academic professionals. Each of the latent constructs was evaluated using reflective types of measuring items (Hair et al., 2013; Quoquab et al., 2019). A five-point Likert-type scale was used (i.e., 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree) to measure the items associated with a factor. The existing literature supports the measurement items used in this survey.

2.3 Measures

This study considered seven different factors to form the research model and the hypothetical relationship associated with the model. Among the seven variables, job satisfaction is a dependent variable and the other six are independent variables. The Remuneration System (RS)

was measured by five items adapted from different literature. Then, five measures of General Job (GJ) were extracted from several pieces of literature. The Work Environment (WE) was also measured by five items borrowed from existing literature. Therefore, the Payoff System (PS) was investigated using five items borrowed from practical fields and literature. Moreover, five measures of Social Relationships (SR) with colleagues were adapted from existing literature. After that, five items of work stress were taken from various literature. Finally, the job satisfaction of the Assistant Professor was measured by five items which were adapted from the existing body of knowledge.

2.4 Data Collection

Academic professionals from science and technology universities were approached to participate in the online survey. The assistant professors are chosen randomly among the different academic professionals from the stated university, but their selection procedure was on a random basis (with replacement) over phone calls by using the website of the respective university. Soon after getting the verbal commitment from them, a Google form was sent (survey questionnaire) to their email to collect the data from them. In this situation, respondents were provided enough time to complete the questionnaire. One thing is that the academic professionals were assured that their provided information would be secured and used only for research purposes. In this study, there were a total of 327 assistant professors in three different science and technology universities (UGC, 2021), which are located in three different administrative districts of the country (Dinajpur, Jashore, and Gopalganj). But we selected nearly 25% of the total population which is quite representative. Therefore, a total of 78 responses (23.85%) were collected which contained no missing values. Further, this study considered 78 responses for the final data analysis.

2.5 Data Analysis

This study used IBM SPSS-26 to process the data. After that, descriptive analysis such as mean, standard deviation (SD), and frequency analysis was solely conducted by the

statistical package for the social science application program. To test the overall reliability, both the Cronbach alpha and KMO tests were employed. Besides the overall reliability, the reliability of each factor associated with the model was also confirmed by using Cronbach's alpha. Then, Principal Component Analysis (PCA) was employed by using SPSS software to find out the most influential factors through the extraction process. The PCA also helps to get loadings of different items under each construct. This study carried out a collinearity test to find out the tolerance and VIF scores so that the reliability of the factors could be determined. Finally, this study carried out regression analysis to check the goodness of model fit (Model Summary and ANOVA) and co-efficient statistics to test the hypotheses associated with the study's model.

3. Results

This study considered three science and technology universities to conduct the online survey with the help of Google, which administered a self-completed questionnaire. Therefore, out of the 78 respondents, all of the responses were usable as no missing values were found in the questionnaire. The survey was carried out from early November to the end of December 2022. Moreover, during the data collection period, statistical analysis was employed to detect errors in the study's constructs. Furthermore, this study considered the validity, reliability, multicollinearity, significance, and relevance constructs associated with the study model by assessing and checking the tolerance and VIF scores in SPSS. As a thumb rule, to avoid collinearity issues, VIF should be 5 or lower and tolerance should be 0.20 or more. However, this study didn't contain any collinearity problems among the constructs (Akintimehin et al., 2019; Hair et al., 2013).

3.1 Respondents' Demographic Profile

The descriptive analysis results of the demographic are shown in Table 1. This study showed that more than 69% of respondents (54) were male and nearly 31% were female (24) which indicates a representative sample size for the current study. Therefore, out of the total respondents, most of them were married (88.50%), whereas only 9 of them were unmarried (11.50%), which indicated that the majority of the academics have their personal family life.

Demographic Profile	Classification	Number (Frequency)	Percentage
Gender	Male	54	69.20
	Female	24	30.80
	Total	78	100
Marital Status	Married	69	88.50
	Unmarried	9	11.50
	Total	78	100
Education Qualification	Graduate	1	1.30
	Post-Graduate	64	82.10
	M.Phil.	4	5.10
	Ph.D.	9	11.50
Educational Background	Total	78	100
	Science	25	32.10
	Business Studies	35	44.90
	Humanities	15	19.20
	Mixed	3	3.80
	Total	78	100
Service Length (Years)	2-3 Years	1	1.30
	4-5 Years	42	53.80
	6-7 Years	29	37.20
	8-9 Years	6	7.70
	Total	78	100
Family Members	Less than Three	1	1.30
	Three to Four	29	37.20
	Five to Six	14	17.90
	More than Six	34	43.60
	Total	78	100
Number of Classes (Weekly)	2-3 Credit Hours	10	12.80
	4-5 Credit Hours	25	32.10
	More than 5 Credit Hours	43	55.10
	Total	78	100

Table 1. Demographic Profile of the Respondents

However, in terms of education, the majority of the respondents (82.10%) have completed their post-graduation degree, 9 of them had their PhD degree (11.50%), 4 of them had their MPhil degree (5.10%), but only 1 of them had completed his graduation degree, which represents that they were highly educated and maintained the standard of living.

Therefore, with regard to educational background, more than 30% were from a science background, nearly 45% of them had a business background, about 20% were from a humanities background, and the rest of them had mixed background, which indicated that most of the academic professionals were from science and business background. Besides, with respect to the service length, more than 50% of the respondents were experienced between 4-5 years which represents the highest in number, therefore more than 37% and 7.5% were experienced between 6-7 years and 8-9 years

respectively. However, only one respondent was experienced between 2-3 years, indicating that he was newly appointed as an assistant professor. Thus, with regard to the family members, the majority of the respondents' families consist of more than six members (43.60%), among them 29 of them had three to four members (37.20%) in their family, 14 of them had five to six members (17.90%) in their family but only one of them, had less than three members in his family, that clearly stated that all of the families of academics consisted of multiple members. At last, concerning the number of classes, about 55% of the academics conducted more than 5 credit hours in a week, whereas nearly 32% of the academics conducted 4-5 credit hours, and nearly 13% of the academics conducted 2-3 credit hours in a week. So, the findings of the demographic study showed that academic professionals in science and technology had their course workload pressure.

3.2 Reliability of the Factors and Items

The measurement model contains seven factors with a total of 35 items. The construct reliability was evaluated by the loading value of individual items at the minimum score of 0.70 (Quoquab et al., 2019). This study found item loadings ≥ 0.70 except for two items with 0.671 and 0.691. It is also found that another four items have a lower loading than our cut values, which are 0.465, 0.472, 0.228, and 0.495. Although this study kept all the values needed to run the model, removing those low-loading items from the model might yield better results. Besides, the score of mean and the standard deviation (SD) of the measurement model were found to be between 3.71 and 4.85 and between 0.499 and 1.265, respectively. Therefore, the collinearity statistics for the measurement items were ≤ 2.649 , which indicated that there are no multicollinearity issues in the measurement items. Hence, this study also investigates Cronbach's alpha based on each factor associated with this study. The findings showed that the alpha value of each factor was greater than 0.70, which also indicated the factors' reliability. Table 2 shows the reliability of the factors and items.

3.2.1 Collinearity Statistics

Besides descriptive statistics, this study also investigates

collinearity statistics analysis. The results of the study found that the Variable Influential Factor (VIF) ranges from 1.044 to 2.649, which is less than 5. Again, the tolerance value of this study is higher than 0.20, which clearly indicates that there are no such collinearity issues in the present study's model (Hair et al., 2013). Table 3 shows the collinearity statistics of the computed factors.

3.2.2 Cronbach's Alpha, KMO, and Bartlett's Test

This study measures the overall Cronbach alpha of this research, and its results are presented in Table 4, which indicates that the current study is highly reliable as the alpha value is more than 90% (Sheikh, 2020; Cooksey, 2020; Marshall & Jonker, 2011). The sample adequacy metric developed by Kaiser-Meyer-Olkin has a range that goes from 0 to 1, with values that are closer to 1 being more ideal. The bare minimum is set at 0.60, which is strongly advised. In order to determine whether or not the correlation matrix is an identity matrix, Bartlett's Test of Sphericity is used. KMO reveals the sample adequacy indicated in this example (value of $0.50 < \text{KMO} < 1.0$), which shows that 0.862 for academic professionals at science and technology university is appropriate for the same. According to Bartlett's Test of Sphericity, the chi-square score closest to 255.951 is seen with 10 (df) at a significance level of .000. Consequently, factor analysis is regarded as a valid methodology. Table 5 shows the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity.

3.3 Principal Component Analysis

Principal Component Analysis (PCA) is a widely utilized technique in contemporary data analysis and is employed across various scientific domains (Kurita, 2019). The findings of the study showed that there were a total of seven components extracted from the PCA. Among the seven components, the first component represents the maximum variance of 33.95%, and the seventh component expresses the least variance of 3.77%. Hence, these seven components showed a maximum variance of 73.97%, which represents all 35 items of the present study as shown in Table 6. Table 6 also revealed that the Initial Eigenvalues column and the Extraction Sums of Squared Loadings column are

Constructs	Items	Items Description	Loading	Mean	SD	C.Alpha
General Job (GJ)	GJ1	Suitable Professional Qualification	0.781	4.47	0.922	0.836
	GJ2	Promotion of Personal Ability	0.794	4.36	0.939	
	GJ3	Well Aware-of Job	0.834	4.19	1.094	
	GJ4	Ensuring Job Security	0.839	4.12	1.105	
	GJ5	Availability of Resources	0.671	4.32	1.026	
Job Satisfaction (Job Sat)	JobSat1	Socially Recognized Job	0.793	4.51	0.964	0.801
	JobSat2	Feeling Proud to Teach	0.850	4.32	1.201	
	JobSat3	Satisfied With Job	0.869	4.54	0.976	
	JobSat4	Sufficient Facilities	0.465	4.29	1.118	
	JobSat5	Receiving Appreciation	0.731	4.10	1.265	
Payoffs System (PS)	PS1	Get Sufficient Honorarium	0.914	3.77	0.836	0.809
	PS2	Reasonable Invigilation Fees	0.941	3.69	0.930	
	PS3*	Payoffs Related Payments	0.472	3.71	0.913	
	PS4	Getting Fair Remuneration	0.866	3.73	0.935	
	PS5	Answer Script Evaluation Fees	0.932	3.76	0.885	
Remuneration System (RS)	RS1	Satisfactory Remuneration Packages	0.904	4.90	0.499	0.901
	RS2	Get Medical Support	0.845	4.79	0.709	
	RS3	Research Allowances	0.923	3.83	1.232	
	RS4	Satisfied with the Payment	0.823	4.81	0.757	
	RS5	Recreational Leave With Payment	0.745	4.85	0.560	
Social Relationship (SR)	SR1	Supportive Colleagues	0.751	4.77	0.772	0.831
	SR2	Work as a Team Member	0.819	4.63	0.854	
	SR3	Colleagues Work Timely	0.760	4.65	0.803	
	SR4	Willing to Help Each Other	0.842	4.74	0.780	
	SR5	Working Together Friendly	0.738	4.56	0.877	
Work Environment (WE)	WE1	Hygienic and Clean Environment	0.691	4.67	0.892	0.906
	WE2	Safe Working Environment	0.975	4.74	0.673	
	WE3	Politics Free Environment	0.784	4.65	0.770	
	WE4	Access to Academic Resources	0.714	4.82	0.619	
	WE5*	Recreational and Refreshment Facility	0.228	4.65	0.835	
Work Stress (WS)	WS1*	Increasing Workload	0.495	4.04	1.211	0.767
	WS2	Conduct Courses Outside	0.838	4.69	0.651	
	WS3	Feel Overloaded and Bored	0.867	4.82	0.659	
	WS4	Availability of Staff Facilities	0.842	4.74	0.711	
	WS5	Pressure of Administrative Activities	0.776	4.79	0.611	
N=78						

Table 2. Reliability of the Factors and Items

Factors	Tolerance	VIF	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	
RS_C	0.730	1.370	Bartlett's Test of Sphericity	0.862
GJ_C	0.635	1.575		Approx. Chi-Square
WE_C	0.958	1.044		255.951
PS_C	0.403	2.480		df
SR_C	0.432	2.316		10
WS_C	0.377	2.649	Sig.	0.000

Table 3. Collinearity Statistics of the Computed Factors

Cronbach's Alpha	N of Items
0.919	35

Table 4. Cronbach's Alpha

identical in their respective layouts.

3.3.1 Eigenvalue Plot

The eigenvalues of the adjacency matrix are the eigenvalues of the graph (Ghorbani et al., 2021). The

Table 5. Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity

primary objective of performing Principal Component Analysis (PCA) is to decrease the number of variables. In order to facilitate this process, it would be beneficial to incorporate a criterion for determining the optimal number of components. It is important to note that this number should be smaller than the total number of objects. The components you select must have

Items No.	Total Variance Explained			Extraction Sums of Squared Loadings		
	Total	Initial Eigenvalues % of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.882*	33.949	33.949	11.882	33.949	33.949
2	4.290*	12.257	46.205	4.290	12.257	46.205
3	3.211*	9.173	55.378	3.211	9.173	55.378
4	1.986*	5.676	61.054	1.986	5.676	61.054
5	1.717*	4.904	65.958	1.717	4.904	65.958
6	1.483*	4.238	70.196	1.483	4.238	70.196
7	1.320*	3.770	73.967	1.320	3.770	73.967
8	0.959	2.741	76.708			
9	0.954	2.726	79.434			
10	0.839	2.396	81.830			
11	0.756	2.160	83.990			
12	0.630	1.801	85.791			
13	0.542	1.547	87.338			
14	0.536	1.533	88.871			
15	0.451	1.288	90.158			
16	0.424	1.210	91.369			
17	0.356	1.018	92.387			
18	0.346	0.990	93.376			
19	0.302	0.864	94.240			
20	0.282	0.805	95.045			
21	0.237	0.678	95.723			
22	0.203	0.579	96.302			
23	0.196	0.560	96.862			
24	0.181	0.517	97.379			
25	0.168	0.480	97.860			
26	0.145	0.415	98.274			
27	0.123	0.353	98.627			
28	0.115	0.330	98.957			
29	0.092	0.263	99.220			
30	0.066	0.189	99.410			
31	0.061	0.175	99.585			
32	0.054	0.153	99.738			
33	0.037	0.105	99.843			
34	0.033	0.096	99.938			
35	0.022	0.062	100.000			

Extraction Method: Principal Component Analysis

Table 6. Principal Component Analysis Matrix

eigenvalues larger than one, for example. According to Table 6, for Total Variance explained, the first seven items all have eigenvalues larger than one. The scree plot, which displays the eigenvalue, the amount of variation that can be explained as a function of the number of independent variables, confirms this. Figure 2 shows the Eigenvalue plot.

3.4 Goodness-of-Fit Test

The Chi-square goodness-of-fit test is a statistical hypothesis test that is employed to ascertain the likelihood of a variable originating from a predetermined distribution (Das, 2019). The utilization of this method is frequently employed to assess the extent to which the

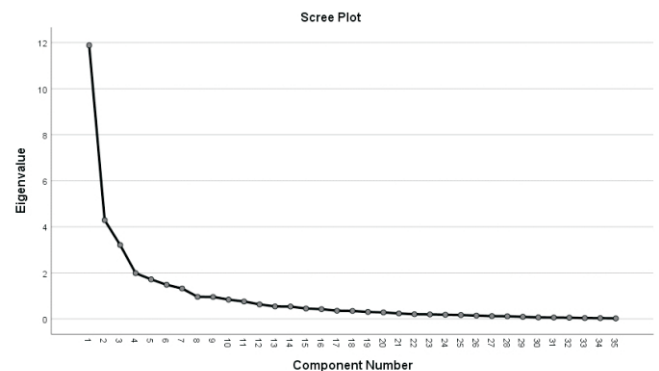


Figure 2. Eigenvalue Plot

collected sample data accurately reflects the characteristics of the entire population (Aslam, 2021). For linear regression models, the R-squared statistic is a

measure of goodness-of-fit. The fraction of the dependent variable's volatility may be attributed to the independent variables. The R-squared statistic provides a straightforward metric for evaluating the correlation between the model and the dependent variable. R-squared is most often used to assess how well a regression model fits the data (Gurumurthy & Mukherjee, 2020). With an R-squared of 53.6%, it may be deduced that around half of the data agrees with the model's assumptions, as shown in Table 7. Typically, a higher R-squared value suggests a more satisfactory model fit.

3.5 ANOVA

The statistical test known as Analysis of Variance (ANOVA) is used to compare the differences in mean scores across more than two groups (Henson, 2015). A one-way ANOVA employs a single independent variable, whereas a two-way ANOVA involves the use of two independent variables. ANOVA results are displayed in Table 8, demonstrating that the model as a whole is significant in predicting job satisfaction due to the statistical significance of the regression. $F(6, 71) = 13.653$, $p < 0.005$.

3.6 Determination of Co-efficient Statistics

In order to find out the coefficient of determination (R^2) and the path coefficient (β), regression analysis was employed. This study found R^2 of endogenous latent constructs for JobSat (53.6%). The standardized beta coefficient is utilized to assess the relative strength of the impact of each independent variable on the dependent variable. The degree of the effect increases as the absolute value of the beta coefficient increases. The beta (β) value and its corresponding t-value and p-value of the hypothesized association among the different factors are shown in Table 9. Table 9 shows the co-efficient statistics.

The finding demonstrates that the remuneration system has a direct positive and statistically significant influence on job satisfaction of academic professionals ($\beta = 0.067$,

$t = 2.196$, and $p = 0.031$), which supports the alternative hypothesis (H1). Besides, the general job nature has a direct positive but insignificant influence on job satisfaction ($\beta = 0.072$, $t = 0.877$, and $p = 0.384$), which does not support the alternative hypothesis (H2). Then, the work environment has a direct positive but insignificant relationship with job satisfaction in academics ($\beta = 0.066$, $t = 0.877$, and $p = 0.384$), which does not support the alternative hypothesis (H3). The findings of the study also indicated that the payoff system has a statistically significant and direct positive association ($\beta = 0.130$, $t = 2.348$, and $p = 0.022$) with academics' job satisfaction. Thus, it supports the alternative hypothesis (H4). In line with the previous hypothesis, the findings also support the alternative hypothesis (H5), which showed that there is a direct positive and statistically significant relationship ($\beta = 0.127$, $t = 2.401$, and $p = 0.019$) between social relationships with colleagues and job satisfaction of academic professionals. However, the result of the study does not support the hypothesis (H6), which states that there is a direct positive but insignificant relationship ($\beta = 0.140$, $t = 0.339$, and $p = 0.735$) between work stress and academic professionals' job satisfaction. Although previous literature showed a negative association between WS and JobSat, this study found a positive relationship between them. Because most of the previous works of literature were industry-based, the level of employees' job stress is comparatively higher than that of academic professionals at the university. Thus, the findings of the study revealed that the job satisfaction of assistant professors of science and technology

	Model	Sum of Square	df	Mean Square	F	Sig.
1	Regression	15.384	6	2.564	13.653	.000 ^b
	Residual	13.334	71	0.188		
	Total	28.718	77			

a. Dependent Variable: JobSat_C

b. Predictors: (Constant), WS_C, WE_C, RS_C, GJ_C, SR_C, PS_C

Table 8. ANOVA

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	R Square Change	F Change	df1	df2	Sig.
1	0.732 ^a	0.536	0.496	0.433	0.536	13.653	6	71	0.000 ^b

a. Predictors: (Constant), WS_C, WE_C, RS_C, GJ_C, SR_C, PS_C

b. Dependent Variable: JobSat_C

Table 7. Model Summary (Goodness-of-Fit Test)

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	95.0% Confidence Interval for B		Correlations		
	B	Std. Error	Beta				Lower Bound	Upper Bound	Zero-Order	Partial	Part
	Constant	0.651		0.517	1.260	0.212	-0.379	1.682			
	RS_C	0.147		0.067	2.196	0.031	0.014	0.281	0.436	0.252	0.178
	GJ_C	0.063		0.072	0.877	0.384	-0.080	0.206	0.478	0.103	0.071
	WE_C	0.012		0.066	0.177	0.860	-0.119	0.143	-0.004	0.021	0.014
	PS_C	0.305		0.130	2.348	0.022	0.046	0.564	0.622	0.268	0.190
	SR_C	0.306		0.127	2.401	0.019	0.052	0.559	0.644	0.274	0.194
	WS_C	0.047		0.140	0.339	0.735	-0.231	0.326	0.589	0.040	0.027

Note: Dependent Variable: JobSat_C

Significance Level: 5% (p-value < 0.05)

Note: RS= Remuneration System, GJ= General Job, WE=Work Environment, PS=Payoffs System, SR=Social Relationship, WS=Work Stress, C=Compute Value.

Table 9. Co-Efficient Statistics

universities is mostly determined by RS, PS, and SR. Although the other three hypotheses were not supported by the current study, it doesn't indicate that there is no relation between GJ and JobSat, WE and JobSat, and, WS and JobSat, rather there exists a direct positive relationship that is statistically insignificant.

4. Discussion

The results of this study support the proposed hypotheses H1, H4, and H5, indicating that the remuneration system, payoff system, and social relationships with colleagues significantly impact the job satisfaction of academic professionals. Previous literature also suggested that there is a positive and significant relationship between remuneration and job satisfaction of employees (Jalal & Zaheer, 2017). Again, job satisfaction of employees is also positively and significantly affected by their social relationships with colleagues (Vrontis et al., 2019). However, it was hard to find any literature which showed the relationship between the payoff system and job satisfaction.

Although this study showed a direct positive and significant relationship between job satisfaction and the payoff system of academic professionals, the results also showed that proposed hypotheses H2, H3, and H6 were not supported in this study. However, it doesn't indicate that the job satisfaction of academic professionals is not affected by the general job nature, work environment, and work stress. Rather, these factors also affected the job satisfaction of academic professionals positively but

insignificantly. The finding of the study is also consistent with previous literature that the general job nature and work environment positively impacted the job satisfaction of academics (Alauddin et al., 2019; Nandan & Krishna, 2013). However, most of the literature depicts a negative association between work stress and job satisfaction among employees (Nandan & Krishna, 2013; Orfan et al., 2021; Yuen et al., 2018). Although this study showed positive but insignificant connections between work stress and job satisfaction of academic professionals, the reason might be that the work stress of academic professionals is comparatively lower than that of employees in the industrial sector. As a result, work stress does not negatively or significantly affect the job satisfaction of assistant professors at the science and technology universities in Bangladesh.

5. Implications of the Study

Although a variety of studies have been conducted on the job satisfaction of employees in different sectors of the country, the concept of job satisfaction is always new in the field of human resource management and organizational behavior. As the test, demand, preference, and feelings of the human mind change over time, the satisfaction of human beings does not remain constant, rather, it also changes over time. As a result, research on job satisfaction is always treated as a new thing in every sector of any country in the world. Though this study was conducted at science and technology universities, the findings of the study could be equally important and applicable to other universities in

the country with regard to the assistant professor. The study's findings also enrich knowledge in the HRM and OB-related sectors. Therefore, this study will support concerned authorities like the administration of the university, the HRM department, and other institutions in the country. Besides, this study will contribute decision-makers, policymakers, and managerial bodies to make appropriate decisions that might ensure their organizational productivity. The present study identified several factors relating to job satisfaction. Among those factors, the payoff system is quite new in this sector, which could add knowledge to the job satisfaction literature. Hence, this study also reveals practical dimensions of job satisfaction that contribute to society. Finally, if the concerned bodies accommodate all those issues that have been introduced in this study, then the satisfaction level of the assistant professor will be enhanced.

6. Limitations and Future Research Directives

In addition to significant advantages, this study is not free from limitations. As such, this study is entirely quantitative, using a very small sample size. This study could benefit if the sample size was increased, and besides, some qualitative data was incorporated. Again, this study solely considers the science and technology university, but it excludes the other category of university in Bangladesh. So, the study area might be enhanced in the future in order to get better results that can be generalized. In the future, smartPLS or AMOS might be used for the data analysis instead of SPSS to get a different result from the study.

Conclusion

This study intends to assess the current dimensions of job satisfaction of academic professionals, especially in science and technology universities in Bangladesh. This study employed PCA and regression analysis to find out the association between the dependent variable and independent variables. The study's emphatical evidence suggests that the job satisfaction of assistant professors is the result of RS, PS, and SR, but that doesn't mean that the other three dimensions (i.e., GJ, WE, and WS) have no impact on job satisfaction. Rather, this study implies that

other factors have little or insignificant but positive influence on the job satisfaction of assistant professors at the science and technology universities in Bangladesh. So, if the RS, GJ, WE, PS, RS, and WS increase, the job satisfaction of academics also increases, either significantly or insignificantly, concerning the factors of job satisfaction and present situations in the study area.

However, the findings of the study significantly contributed to the administration, not only at the science and technology university but also at the other universities in Bangladesh. Besides, it also contributes to the concerned authority and ministry (i.e., UGC in BD, Ministry of Education) of the country with respect to decision-making and policymaking. HR departments of different institutions, industries, and companies might benefit from this study. Although this study is considered a very small area, the findings of the job satisfaction study definitely contributed to the concerned university, society, and country. Therefore, this study recommended that every institution should conduct research on job satisfaction regarding their employees in order to identify the state of their satisfaction level so that they can take immediate steps to ensure better outputs for their organization.

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IDENTIFICATION OF KEY PERFORMANCE DIMENSIONS OF ACADEMIC PROFESSIONALS: A QUALITATIVE EXPLORATION

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ABSTRACT

This study seeks to explore the dimensions of performance of academic professionals in various universities in Bangladesh. This qualitative study used 21 in-depth, semi-structured interviews to collect data from 10 public universities across four administrative regions of Bangladesh. The data was analyzed thematically using the interpretive phenomenological approach in NVivo 12 Pro software. This study has identified four crucial performance characteristics of academic professionals in public institutions in Bangladesh. These dimensions include teaching, research and publication, administrative tasks, and managing external funds. The results also indicated that academic professionals must participate in this activity throughout their careers. A range of respondents' perspectives were utilized to characterize the performance aspects of academic professionals. During the process of selecting the university category, there was some overlap. For instance, this study does not include private universities, medical universities, other specialized universities, and off-campus universities in Bangladesh. There is a better possibility of getting better outcomes if all kinds of universities are included in this study. By outlining the shortcomings of the present study, the article also serves as a rallying cry for additional research. The findings of the study will improve the understanding of the academic professional about the key performance dimensions. The results also offer a useful framework for relevant authorities, HR departments, university administrations, and lawmakers by describing the most important aspects of academic professionals' performance that they must exhibit at different career points. The study sheds light on the possible societal contributions of performance and its various sub-dimensions. This research constructs a comprehensive model of the links between HRM practices, university authority orientation, and academic professionals' productivity based on theoretical assumptions and empirical evidence. This study's results have practical consequences because they examine critical components of academic professionals' performance that may influence their employment.

Keywords: Performance Dimensions, Academic Professionals, Public University, Qualitative Study, Nvivo.

INTRODUCTION

Academic professionals are considered the focal part of a university, as they play a significant role in the nation-building activities in any country of the world (Altbach & Balán, 2007; Tsumagari, 2023). The prospects of a country

largely depend on the performance of academic professionals (Altbach, 2013). So, if the quality of academic professionals is poor, it will adversely impact the future generation of the country. Besides, the issue of performance is widely discussed in the arena of human resource management (Cooke et al., 2020; Trullen et al., 2020). The term performance is referred to as describing the degree to which a teacher, student, employee, or institution has accomplished their goals (Ball & Halwachi, 1987; Rofifah et al., 2021; Torlak & Kuzey, 2019). Thus, the



This paper has objectives related to SDG



performance of academic professionals indicates those activities, qualities, and outputs of professionals on which academic professionals performed in their workplace. In our country, the number of public universities has been growing since the 1st decade of the 21st century (Hossain, 2023). Again, the number of academic professionals is increasing rapidly in our country (Zabed Ahmed, 2013). At present, more than fifteen thousand academic professionals are working in different public universities in Bangladesh (UGC, 2021). So, performance issues may arise due to factors such as insufficient training, varying levels of experience among faculty members, and inadequate resources.

Various studies have been conducted on performance issues, but very few studies have been done on the performance of academic professionals. A study has been conducted on performance issues on the motivation of academic staff and performance, motivation, job satisfaction, and performance, work conditions, and job performance, job satisfaction and performance, etc. (Abuhashesh et al., 2019; Alfagira & Bin Zumrah, 2019; Bashir et al., 2020; Girdwichai & Sriviboon, 2020; Stefurak et al., 2020). However, almost no study has been done directly on the performance dimensions of academic professionals. Besides, this study addresses two new dimensions of performance (i.e., administrative and managing external fund) of academic professionals, which are scarcely highlighted by the current body of knowledge. Moreover, this study explores the performance issues so succinctly that it distinguishes this research from previous studies.

Although various forms of research have been conducted about performance, no paper explicitly outlining the aims of this study has been discovered. Thus, this research attempts to fill vital gaps in the literature by investigating the many characteristics of the performance of academic professionals in Bangladeshi public universities. This study is essential because it addresses prevalent challenges that have not been adequately addressed by policymakers or university administrations. Therefore, researchers have attempted to answer the question: What are the dimensions of

academic performance? Why is the performance dimension crucial for academics? How does motivation affect the performance of academic professionals?

Therefore, this study tends to explore various dimensions of the performance of academic professionals due to motivation. This wide-ranging viewpoint assumes that the performance of academic professionals more or less depends on motivation. This study explores the key performance of academic professionals based on their level of motivation. This integrated perspective makes the assumption that academic professionals' motivation influences their performance in several ways. Hence, the current study aims to investigate the performance factors of academic professionals and attempt to determine the impact of motivation on these performance dimensions. Thus, scholars are persuaded to investigate the aspects of academic professionals' performance. The present study has made a noteworthy contribution to the academic community of public universities in Bangladesh by examining the essential aspects of academic professionals' performance. In addition, the results of this study will be vital for the administration of the institution, legislators, human resources department, and other relevant authorities to formulate current rules that guarantee the best possible results. The results of this study may help national policymakers create policies that are relevant currently. Furthermore, by examining many performance dimensions from disparate perspectives, this study adds to the body of knowledge in existing literature and in the field of human resource management.

This study's distinctiveness stems from its methodology, which employs a qualitative (QUAL) approach to investigate performance dimensions through in-depth interviews with participants. Data analysis was conducted using NVivo application software, thereby enhancing the researcher's credibility and relevance. Thus, the researcher anticipated that this work would make a significant methodological contribution. At times, purposive sampling was utilized in this study rather than a random sample because qualitative research requires it. Furthermore, it's possible that individuals chosen at

random lack the necessary understanding of the present study setting. This study looked at four important dimensions of performance, i.e., teaching, research and publication, administrative, and managing external funds, which are significantly affected by the motivation of academic professionals. Lastly, this study conducted in-depth interviews with participants who were academic professionals at several public universities using a qualitative checklist approach.

Hence, the subsequent portion contains a literature review, the methodology of this study, and then results and discussion alongside implications and limitations. Finally, the conclusions of this paper by exploring the main performance dimensions of academic professionals, which are caused by motivation are outlined.

1. Literature Review

1.1 Theoretical Orientation

Based on Herzberg's Two-Factor Theory, we may understand a number of phenomena that pertain to motivation. Frederick Irving Herzberg put forth his "motivational" and "hygiene" component two-factor hypothesis in 1959 (Herzberg, 1968). According to the theory, if hygiene and maintenance-related characteristics were removed, employees' sentiments would be significantly more unfavorable. However, having those attributes would not affect their attitudes. Similarly, if motivational elements did not exist, employee sentiment would remain unchanged; nevertheless, when they do exist, employee sentiment is enhanced (Allaoui & Benmoussa, 2020; Amzat, 2017; Gangwar, 2022). This study explored four dimensions of performance of academic professionals based on the motivational factor of Herzberg's two factors theory, as this factor also impacts performance. However, this study only explored four aspects of performance that are derived from motivation because qualitative research has shown that these aspects are most relevant to the performance of academic professionals. In contrast to its enormous success in the corporate world, Herzberg's idea has been largely ignored in academic circles. So, the researchers in this study wanted to find out if this idea works for other

types of highly trained workers, such as university professors.

1.2 Motivational Factors

A "motivational factor" makes workers more invested in their work, happier, and more productive overall. Autonomy, challenge, recognition, and opportunity for growth are paramount (Davidescu et al., 2020). According to Herzberg, motivating factors are vital for improving employee engagement and performance. They encompass elements like demanding tasks, acknowledgment, room for advancement, independence, etc. (Davidescu et al., 2020; Younies & Al-Tawil, 2020). In order to increase motivation and performance, it is essential to identify what motivates employees. Employers should make it a point to provide their employees with things that will make them happy, engaged, and enthusiastic about their work (Chanana & Sangeeta, 2021; Khaskheli et al., 2020). Companies should prioritize their employees' professional and personal growth to cultivate a productive and enthusiastic work environment.

1.3 Empirical Evidence

The issue of the performance of academic professionals has been a longstanding concern, and it's challenging to pinpoint a specific time when it became prominent as it can vary across regions and academic disciplines (Fuchs et al., 2003; Teichler et al., 2013; Weick & Sutcliffe, 2015). However, discussions around the performance of academic professionals have gained increased attention over the years due to various factors. In recent decades, there has been a growing emphasis on accountability and quality assurance in higher education (Aburizaizah, 2022; Chu & Westerheijden, 2018; Williams & Harvey, 2015). As universities and academic institutions face increased scrutiny from stakeholders, including government bodies, accrediting agencies, and the public, the performance of academic professionals has become a focal point (Baltaru, 2019; Wilson, 2017). This scrutiny often involves assessments of teaching effectiveness, research productivity, and contributions to the academic community (Cadez et al., 2017; Goe et al.,

2008). Moreover, issues such as tenure, promotion criteria, and the changing landscape of academia, including the rise of adjunct and non-tenure-track positions, have contributed to ongoing discussions about the performance and job security of academic professionals (Kezar, 2018; Ott & Cisneros, 2015).

The term "academic performance" refers to the extent to which a learner, instructor, or educational establishment has fulfilled their short- and long-term objectives. Attaining educational benchmarks like high school graduation and bachelor's degrees is referred to as academic achievement (Alipio, 2020; Andres, 2020; Tuero et al., 2022). Academic accomplishment is a complex phenomenon that depends on a number of variables, including socioeconomic background, degrees of engagement and disengagement, learning and study abilities, intrinsic motivation, meta-reflective thinking and learning, and the effectiveness of teachers (Duckworth & Seligman, 2005; Mason, 2017; Youde, 2019). Academic achievement has a major influence on academic self-discipline, transfer, and retention; pre-college academic achievement and pre-college educational advancement have indirect effects on these outcomes; and retention is directly impacted by college commitment and social engagement (Allen et al., 2008; Rhoads, 2020).

This research suggests that self-efficacy is a useful predictor of both motivation and performance (Schunk, 1995). Tests of causal hypotheses have brought attention to the significance of self-efficacy. Researchers found that while intrinsic motivation did influence persistence, the study found no significant difference in performance between the most and least persistent participants (Schunk, 1995; Usher et al., 2019). There is a legitimate assumption that task time and exercise affect performance; however, the second data disproves this (Schmeichel et al., 2018; Vollmeyer & Rheinberg, 2000). Furthermore, these results disprove the hypothesis that academic performance evaluation based on research could lower the quality of instruction (Cadez et al., 2017).

Several pieces of literature have focused on the performance of academic professionals based on

motivation, which explored different performance aspects of professionals (Colomer-Pérez et al., 2019; Hardré, 2012; Tella & Ibinaïye, 2020). The effect of motivation on employee performance was investigated by many different literature (Maryani et al., 2021; Tella & Ibinaïye, 2020; Widarko & Anwarodin, 2022). According to Alfagira (2019), motivation influences the performance of academic personnel in terms of teaching, research, and publication. On the other hand, the findings of these studies investigated various determinants that impact employees' sustainable performance (Afrin et al., 2023; Iptian & Efendi, 2020). However, this study failed to mediate the association between employee motivation and performance (Girdwichai & Sriviboon, 2020).

Besides, the findings of the study revealed that motivated teachers are more likely to engage in effective teaching practices, create positive learning experiences, and contribute to student success (Siegle et al., 2014). Another study stated that the association between motivation and teaching performance is a critical aspect of the educational environment (Amin, 2015). Therefore, a variety of studies predicted that researchers are more likely to demonstrate dedication, creativity, and sustained effort in their scholarly activities, leading to higher levels of research productivity and impactful publications (Beck et al., 2022; Bozeman et al., 2013; Lam, 2011; Perkmann et al., 2013). Again, another study predicted that intrinsic motivation was inversely correlated with work instability, although it was positively associated with intrinsic motivation, performance, and behavioral outcomes. In addition, there were substantial indirect impacts of job insecurity on job performance (Shin et al., 2019).

Furthermore, existing studies also suggest that motivation has an impact on academic staff performance in terms of teaching, research, and publication (Alfagira & Bin Zumrah, 2019). Although very few studies have been conducted on the performance of academic professionals, no studies have addressed the teaching, research and publication, administrative, and managing external fund as the dimensions of the performance of academic professionals at a single time. Again, several scholars separately used the dimensions of performance,

but no one used these dimensions comprehensively. So, to fulfill this gap, the researchers of this study considered motivation as a key driving force in order to address these aspects of performance compressively (Figure 1).

2. Methods of the Study

2.1 Study Area

Since the number of public universities in Bangladesh has increased dramatically in the first quarter of this century, this survey was carried out at ten distinct universities. For this study, we chose to collect data from four types of universities: those specializing in agriculture, general, science and technology, and engineering and technology. Ten universities were chosen purposively from each of the four types of universities since all of those universities are regarded as being indicative of studying the performance qualities of academic professionals in Bangladesh.

2.2 Approach of Research

For the purpose of this research, the qualitative phenomenological method was chosen as the methodology to investigate the numerous aspects of performance exhibited by academic professionals in Bangladesh. The qualitative phenomenological study method is employed to comprehensively understand and interpret a phenomenon as perceived and experienced by the participants involved. Qualitative phenomenology focuses on how individuals understand and make sense of both their personal experiences and the world in which they find themselves (Boadu, 2021). Therefore, the phenomenon of interest can be thoroughly

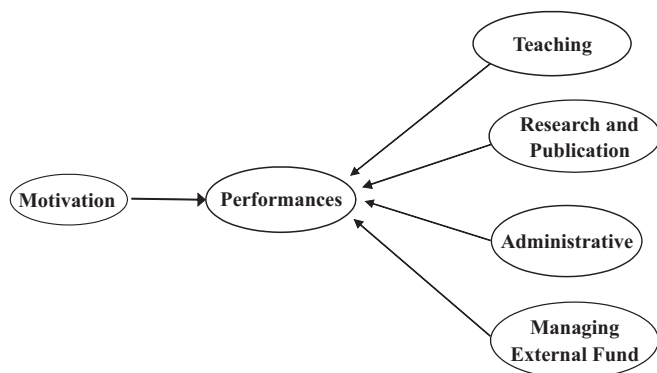
explained by means of qualitative phenomenological studies (Forbes, 2015). Furthermore, phenomenological research is concerned with the exploration of human experiences by analyzing participant explanations, aligning closely with the objectives of the present study (Nieswiadomy & Bailey, 2018).

2.3 Study Design and Participants

While quantitative research typically deals with massive amounts of data in order to draw statistical inferences, qualitative research typically employs relatively small samples (Alam, 2020). According to Crouch and McKenzie, fewer than twenty participants could assist researchers in developing more open and thoughtful conversations by establishing and maintaining personal relationships (Crouch & McKenzie, 2006). As a consequence of this, the optimal size for a variety of qualitative investigations, in terms of the number of respondents to be used, is 15 to 20. Sandelowski (1995) suggests that for qualitative investigations of homogeneous human researchers, a sample size of ten would be sufficient and appropriate (Sandelowski, 1995). According to the researcher, 20 or more people were involved in the qualitative investigation (Green & Thorogood, 2004). In keeping with the other studies, the researchers in the current study selected participants for 21 in-depth, face-to-face interviews using a purposive sample method. In this study, data saturation was reached after the 19th interview; however, two more interviews were undertaken to double-check that the data was indeed complete.

2.3.1 Demographic Profile of the Participants

One of the most significant markers of a person's power and aptitude to work is their demographic features. The demographic information, including the participants' age, gender, marital status, designation, period of university service, etc., is displayed in Table 1. Table 1 also displayed that the majority of participants (10) were between the ages of 30 and 40, 28.57% of participants (6) were below 31 years, and 23.81% of participants (5) were above 40 years. It was found that 15 of the 21 interviewees were male, and six were female. The female



Source: Developed by the Researcher

Figure 1. Performance Dimensions of Academic Professionals

Demographic Profile	Dimensions	Number of Interviewees	Percentage (%)
Age	Below 31 years	6	28.57
	31-39 years	10	47.62
	Above 40 years	5	23.81
	Total	21	100
	Male	15	71.43
Gender	Female	6	28.57
	Total	21	100
	Married	19	90.48
Marital status	Unmarried	1	4.76
	Others	1	4.76
	Total	21	100
Designation (Academic Position)	Professor	5	23.81
	Associate Professor	2	9.52
	Assistant Professor	10	47.62
	Lecturer	4	19.05
	Total	21	100
University service length	Less than 4 years	5	23.80
	4-8 years	7	33.33
	9-13 years	4	19.07
	More than 13 years	5	23.80
	Total	21	100

Source: Field study

Table 1. Demographic Profile of the Participants

and male proportions were 29% and 71%, respectively, which accurately reflects the demographic composition of Bangladesh. Besides, nearly half of the participants (10) were assistant professors, 5 were professors, 4 were lecturers, and 2 were associate professors. It was also found that among the participants, 19 were married, but both unmarried and divorced were (1) equal in number. In terms of service length, 5 had less than four years of experience, seven were 4 to 8 years of experience, four were 9 to 13 years of experience, and the rest of the 5 were more than 13 years of experience.

2.4 Data Collection Technique and Instrument

Participants were interviewed using a semi-structured interview schedule so that in-depth answers could be extracted from their lived experiences and insights (Grossoehme, 2014). In addition, a semi-structured interview is employed to gather more targeted and precise data pertaining to the study inquiry (Berg & Lune, 2017). The data collection process lasted for a total of six months, beginning in April 2022 and ending in September 2022. At the very beginning of the data-collecting process, three interview samples from the study field region were taken into consideration, and then they were brought back to the desk so that the checklist for the

interview schedule could be improved. In qualitative research, it is usual practice to develop the interview schedule further after the initial interviews have been conducted (Hecht et al., 2019). After that, the interview questions were altered by the researchers so that they would be appropriate for use at the public university in Bangladesh. The interviews were recorded by handwriting as well as by utilizing smartphone devices, and the length of each interview ranged somewhere between 60 to 90 minutes.

Before performing the interview, all of the participants were briefed on the purpose of the study and given the opportunity to give their informed consent to contribute their information. In addition, the Institute of Bangladesh Studies offered their approval for the research. Moreover, the participants were assured that their information would be kept anonymous and used solely for research purposes. This research highlighted the significance of taking ethical issues into account because doing so guarantees the participants' safety in the event of any unavoidable circumstances in the future or provides them with legal facilities.

In addition to conducting interviews, the researchers examined the participants' attitudes and expressions, as well as their tone and the atmosphere in which they worked. After that, the researchers transcribed the recorded interviews very carefully and verified them again to ensure that they were accurate. After being informed that their participation in the interview was completely voluntary, all participants gave their verbal consent to take part in it. Out of the total of 21 comprehensive interviews, one was conducted remotely via a Zoom session, while the remaining interviews were conducted in person at the participants' respective workplace locations.

2.5 Data Analysis, Validity, and Reliability

NVivo is considered to be a highly successful tool for doing qualitative data analysis due to its ability to facilitate a comprehensive exploration of the phenomena under investigation (Nyashanu et al., 2020; Siccama & Penna, 2008; Wilk et al., 2019). The NVivo software is utilized for the

purpose of coding, classifying, as well as generating themes and sub-themes (Alam, 2020; Castleberry & Nolen, 2018; Sohel et al., 2021). This program also enables researchers to take advantage of data management and analysis capabilities that are straightforward and easy to understand and operate (Alam, 2020). The interview transcripts were coded, categorized, and grouped thematically using NVivo-12 software, making it easier to manage important information and achieve high-quality coding, which in turn improved the reliability and validity of the findings (Olapane, 2021; Sohel et al., 2021; Zhao et al., 2021).

After returning from the study site, the material gathered through in-depth interviews was meticulously organized. After conducting all interviews, researchers listened to each one recorded electronically in each participant's initial native language (Zhou, 2011). When it was time to analyze the data, all 21 in-depth interviews were transcribed into English. Since the researchers are fluent in both Bengali and English, they are actively involved in the data transcription process, which helps to preserve the interviews' original meaning.

In light of the fact that the purpose of this investigation is to contextualize the fundamental model, the thematic approach was chosen to be the most appropriate analytical method to use (Deterding & Waters, 2021; Siman et al., 2016; Sotiriadou et al., 2014). The present study employed an interpretive phenomenological research design, wherein a thematic approach was adopted to analyze the data, with particular attention given to the four stages of data analysis (Callary et al., 2015). The inductive phase consisted of four distinct steps: (1) the conduction of in-depth interviews, (2) interview transcriptions, (3) using the Nvivo application for the analysis of transcribed interviews, and (4) based on themes and sub-themes to identify the factors and items. During the initial phase, the participants were selected in a purposeful manner by utilizing their cell phone numbers, which were obtained from the university database as well as university websites. Each interview was conducted in the participant's natural environment, and notes were taken by hand and on a smartphone. After that, the

interviews that had been obtained were compiled after returning from the location of the field research with great care. The second stage consisted of the transcription of the data. In order to accurately transcribe the document from Bangla to English, it was necessary to read the document several times once it was collected and put together. During the third phase, the transcribed interviews were imported into the Nvivo software for the purpose of conducting an analysis on the interviews. Hence, the fourth stage of the study encompassed the process of identifying and exploring the factors or their associated aspects. This was achieved through the systematic coding of themes and sub-themes derived from each of the conducted interviews.

3. Results and discussions

The research findings are discussed under four sub-sections by highlighting the key dimensions of the performance of academic professionals in Bangladesh's various public universities. Based on the NVivo analysis, we have demonstrated four key themes, such as teaching, research and publication, administrative, and managing external funds under the performance dimensions of academic professionals in the discussion section related to the study's objective. Therefore, each of these four themes has six to seven sub-themes or sub-dimensions.

3.1 Key Dimensions of Performance

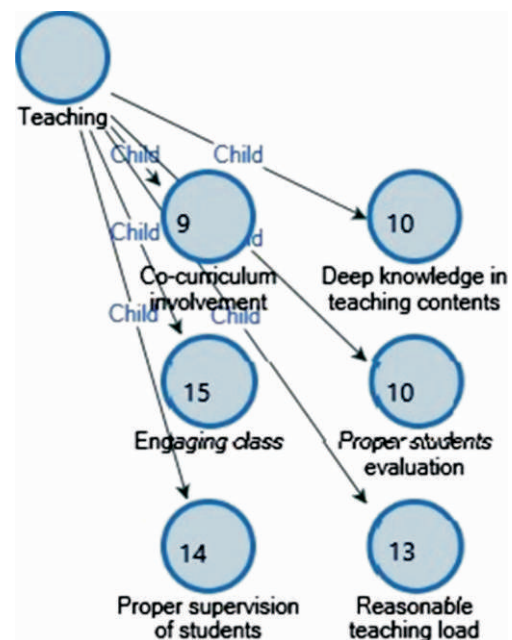
The data from the interviews revealed several aspects or dimensions of the performance of academic professionals. Four of them were identified as key variables associated with the performance of academic professionals. When respondents were asked about performance issues, most participants focused on teaching, research and publication, administrative, and managing external funds (extracted from most of the interview participants except IDI-14). Although there were a few other issues explored under the performance of academic professionals, the majority of participants did not rank all of them equally important. As a result, some variables were eliminated from the initial research model. As a result, the following key issues were explored under the performance dimensions of academic professionals:

3.1.1 Teaching

Teaching performance refers to the effectiveness, competence, and overall quality of a teacher's instructional practices and activities. It encompasses various aspects of a teacher's role in facilitating learning and promoting the intellectual and personal development of students (Kuncoro & Dardiri, 2017). The evaluation of teaching performance often considers a combination of quantitative and qualitative measures to assess how well educators meet educational objectives and contribute to the overall learning experience. Based on the interview data, we know there are six subheadings under the teaching performance of academic professionals that may be investigated in order to evaluate the quality of their teaching. The aforementioned factors encompass a reasonable teaching load, effective student supervision, active participation in co-curricular activities, proper student evaluation methods, an engaging classroom environment, and a comprehensive understanding of the subject matter being taught. Figure 2 explores different items of teaching as performance dimensions. All those items play a significant role in determining the academic performance issues of professionals. The majority of respondents (71.43%) ranked having an engaging or interactive class as very important, with proper supervision of students coming in a close second (66.6%). Third (61.90%) is a reasonable burden of teaching functions. However, engaging class was cited as the key item that was overwhelmingly mentioned (Figure 2) by the majority of interview participants (71.43%). One of the interviewees also mentioned,

"teaching is the first and foremost duty of academic professionals which creates a bridge between the teachers and students" (extracted from IDI-11, Female, Age: 31).

However, some other important issues were also explored as the sub-themes of teaching performance, such as proper students evaluation and co-curriculum involvement. Aside from these, deep knowledge about teaching contents also acts as the sub-themes of



Source: A field study

Figure 2. Sub-Themes of Teaching Performance (Project Map Generated by NVivo)

teaching performance. The following Figure 2 contains interview details about the teaching performance of academic professionals.

3.1.2 Research and Publication

Research and publication performance refers to the effectiveness, productivity, and impact of an academic professional's scholarly activities. This encompasses the individual's ability to conduct meaningful and original research, produce high-quality publications, and contribute to the academic community's body of knowledge (Ryazanova & Jaskiene, 2022). Evaluation of research and publication performance is common in academic settings, particularly for faculty members and researchers. So, Interview data reveals many things associated with the research and publication, i.e., research collaboration, research fund or amount of grant, quality publication, dedicated laboratory, frequency of publication, interest in research work, regular attendance, and arranged seminars and conferences. As the main issues, seven items (child nodes) were explored under the research and publication performance of academic professionals (parent node). The key items of the research and publication on which academic professionals

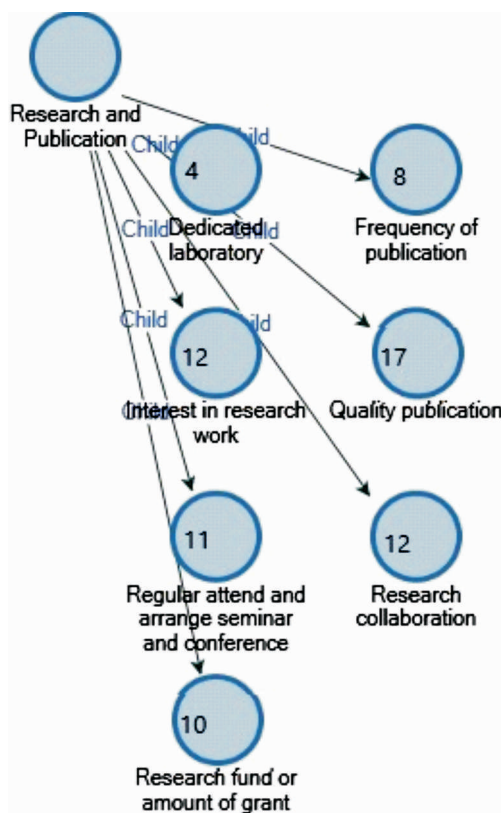
engaged themselves are presented in Figure 3. Thus, the performance of academic professionals is largely influenced by the items of research and publication. Those are the aspects of performance, and they are also the components of RP. The quality of the publication is the most important of the seven factors, with a weight of around 81%. Conversely, the second-place research collaboration group has nearly 60 % academics. During the interview, when participants were queried regarding their research and publication performance, one of the participants said that,

"Research and publication is the key activity of academic professionals which makes an academics different from others" (extracted from IDI-1, Male, Age: 29).

3.1.3 Administrative

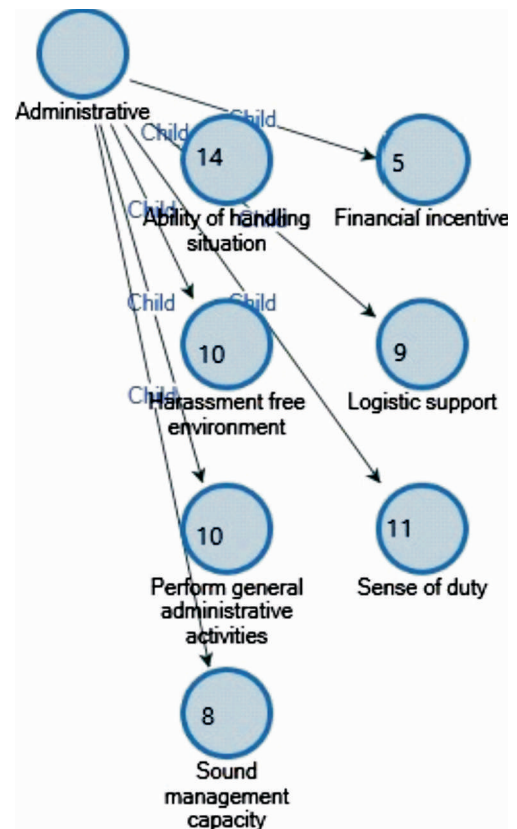
Administrative performance refers to the efficiency and overall competency demonstrated by individuals in administrative roles within an organization. This term is

commonly used in the context of leadership and management positions where individuals are responsible for overseeing and coordinating various aspects of organizational operations. Administrative performance is multifaceted and involves a range of skills and behaviors (Kim et al., 2019; Sintaasih et al., 2019; Tjahjadi et al., 2019). According to the findings of the interviews, there were seven aspects of these elements that can be used to investigate the administrative performance of professionals (Figure 4). The interview data explored administrative items, which are performing general administrative activities, the ability to handle the situation, sense of duty, logistic support, financial incentive, sound management capacity, and a harassment-free environment. The ability to handle the situation was ranked first with a value of 66.67%, while the sense of duty was ranked second with a value of 52.38%. All those sub-themes are essential in determining the administrative performance of academic professionals. One of the



Source: A field study

Figure 3. Sub-Themes of Research and Publication Performance
(Project Map Generated by NVivo)



Source: A field study

Figure 4. Sub-Themes of Administrative Performance
(Project Map Generated by NVivo)

interview participants stated that,

"Administrative task is not the task of academic professionals; rather it is more clerical in nature, so it should be done by administrative staffs" (extracted from IDI-17, Male, 38).

He also claimed that,

"In foreign universities, no such task is done by the academic professionals" (extracted from IDI-17, Male, 38).

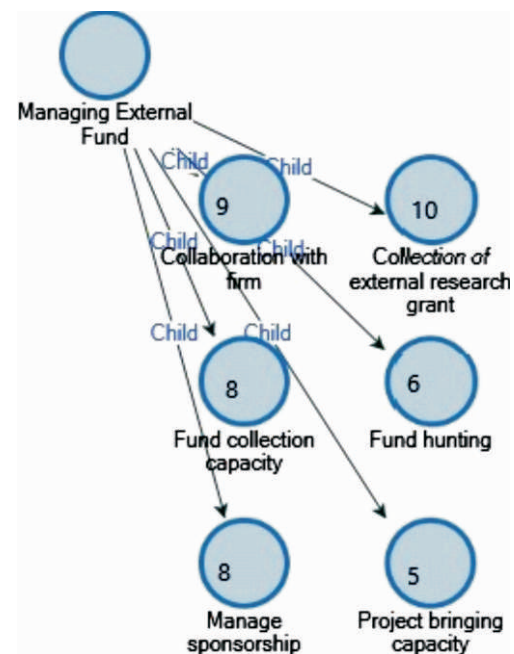
3.1.4 Managing External fund (MEF)

Managing external fund performance typically refers to overseeing and optimizing the performance of investment funds that are sourced from external investors, such as institutional investors, individual investors, or other entities (Bondzi-Simpson & Agomor, 2021; Koch, 2008; Murtinho et al., 2013). This responsibility falls within the domain of fund managers, investment professionals, or financial institutions that handle portfolios on behalf of external clients. The interview data revealed six sub-themes or sub-dimensions of managing external funds. The interview data shows collaboration with firms, fund hunting, a project bringing capacity, fund collection capacity, external research grants, and managing sponsorship. The sub-themes explored under MEF are depicted in Figure 5. Out of all of those things, the collection of external research funds has the highest percentage, with 47.61%, showing that it is the largest one, followed by a collaboration with a firm or industry, which has the second highest percentage, with 42.86%. One of the interviewees stated,

"Managing external funds from the industry or company is the special quality of an academic professional" (extracted from IDI-17, Male, Age: 38).

3.2 Motivation

Motivation refers to the internal or external factors that drive, direct, and energize an individual's behavior or actions toward a specific goal or outcome (Widarko & Anwarodin, 2022). The term "motivation of academic professionals" refers to the driving forces or reasons that inspire individuals working in academia to pursue their roles, engage in research, teach, and contribute to their

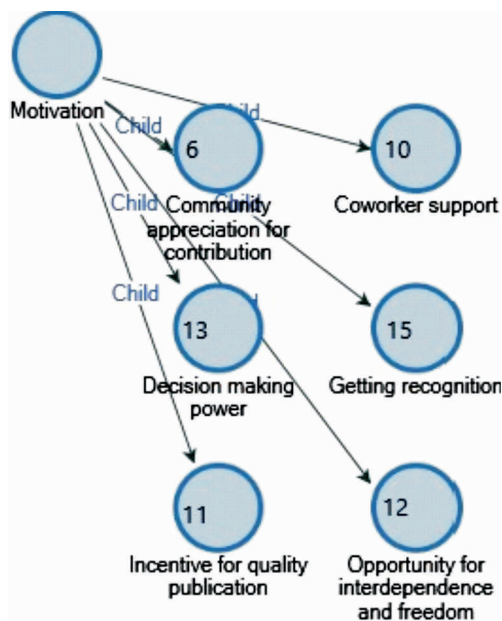


Source: A field study

Figure 5. Sub-Themes of Managing External Fund Performance (project Map Generated by Nvivo)

respective fields (Daumiller et al., 2020; Winter & Sarros, 2002). Motivation in this context encompasses both intrinsic and extrinsic factors that influence an academic professional's commitment, enthusiasm, and dedication to their work. Under the motivation of academic professionals' jobs, there were found to be a total of six different items, which are referred to as child nodes. The data reveals that academic professionals are commonly associated with career development due to their ability to increase motivation and its different items like an opportunity for interdependence and freedom, getting recognition, the incentive for quality publication, community appreciation for contribution, coworker support, and decision-making power. All of these factors motivate professionals to participate in career planning activities. Among all the items, getting recognition contains the maximum value (71.43%), and decision-making power, containing 61.90%, is placed in second position. These dimensions are presented in Figure 6. One of the participants stated his feelings on career planning and job satisfaction as follows,

"I personally believe it is a noble career that provides public service. I am doing it for the benefit of my



Source: A field study

Figure 6. Sub-Themes of Motivation (Project Map Generated by Nvivo)

country and the students" (extracted from IDI- 18).

Another participant mentioned that,

"Never ever lose motivation as it is the fuel of performance" (extracted from IDI-17, Male, 38).

3.3 Implications of the Study

The research on performance has gained popularity in the area of human resource management in different parts of the world, Asia, America, and European countries (Fan et al., 2021; Haldorai et al., 2022; Hassan et al., 2022). However, each country has different socioeconomic conditions. At the same time, their education system and university pattern also varied in nature. Although this study has been conducted in public universities, its findings are applicable not only in this arena but also in private universities. Besides, this study could help concerned authorities, i.e., university administration, human resource departments, and managerial contexts in different parts of the world. Besides, this study will assist concerned authorities, like university administration, human resource department, policymakers, and managerial bodies, in making appropriate decisions in order to ensure the productivity of their institutions. Thus, these research findings will inspire

university faculty to participate in career planning activities to ensure better performance.

3.4 Future Research Directives and Limitations

Apart from substantial merits, this paper has some limitations. Firstly, this study is entirely qualitative, which includes smaller samples. There would be an issue with generalizing the findings of this study. Thus, future studies may include quantitative studies or mixed methods approaches to increase the generalizability of the findings. This research has identified only four factors important to the performance of academic professionals, and future research may explore the other dimensions relating to the performance of academic professionals. Besides, this study focuses only on the public university of Bangladesh and does not include universities from other parts of the world. Therefore, the research field may be expanded in the future to achieve more accurate and generalizable results. Hence, in the future, alternative qualitative data analysis methods may be used instead of Nvivo to provide more sophisticated results.

Conclusion

In this study, we identified the key variables or dimensions of academic professionals' performance and their sub-dimensions, which resulted from the motivation of academic professionals in different categories of public universities in Bangladesh. The findings of the study revealed that the performance of academic professionals largely depends on the level of motivation that they received from the university. When they get recognition from the university, their performance increases with respect to teaching, research, and publication. Again, this study also explored two new dimensions of performance of academic professionals (i.e., administrative and managing external funds), all of which are considered as recent performance issues of professionals. Besides teaching and research, academic professionals are engaged in various administrative activities such as chairmanship, provostship, proctorship, and so on. At the same time, academic professionals are also engaged with managing external funds from the

outside in the form of different projects. Therefore, motivation is very significant for enhancing the performance of professionals, carrying out research and publication-related work, and performing other day-to-day activities.

In conclusion, the multifaceted roles of academic professionals in teaching, research, publication, and administrative responsibilities play a pivotal role in shaping the landscape of higher education. Teaching stands as the cornerstone of academia, where academic professionals impart knowledge, inspire critical thinking, and cultivate the next generation of leaders. Research and publication further underscore the significance of academic professionals in contributing to the body of knowledge within their respective fields. Through rigorous inquiry and scholarly output, they not only advance their disciplines but also bring prestige to their institutions. Administrative responsibilities add another layer to the multifaceted role of academic professionals. Efficient management of academic programs, resources, and personnel is essential for the smooth functioning of institutions. Through effective administration, academic professionals contribute to creating an environment conducive to learning, research, and collaboration. The management of external fund performance represents a critical aspect of sustaining and enhancing academic enterprise. Academic professionals must navigate the complexities of securing external funding, managing budgets, and ensuring accountability in resource allocation. Successful fund management not only supports research initiatives but also strengthens the financial health and sustainability of academic institutions.

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