ASSESSING THE IMPACT OF INSTITUTIONAL AUTONOMY IN ACHIEVING GLOBAL RANKINGS: A CASE STUDY OF IIT-DELHI

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ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence
AICTE	All India Council for Technical Education
API	Academic Performance Indicator
ARWU	Academic Ranking of World Universities
CEO	Chief Executive Officer
CSIC	Spanish National Research Council
EAIE	European Association of International Education
EC	European Commission
EU	European Union
EUA	European University Association
CHERPA	Consortium for Higher Education and Research Performance Assessment
CWUR	Center for World University Rankings
GER	Gross Enrolment Ratio
GO	Graduation Outcomes
HEEACT	Higher Education Evaluation and Accreditation Council of Taiwan
IHEP	Institute for Higher Education Policy
ICC	Implementation Core Committee
IISER	Indian Institute of Science Education and Research
IIT	Indian Institute of Technology
IREG	International Ranking Expert Group
MHRD	Ministry of Human Resource Development
MoU	Memoranda of Understanding
NIRF	National Institutional Ranking Framework
NIT	National Institute of Technology
NCR	National Capital Region
NGO	Non-Government Organization
NKC	National Knowledge Commission
NPE	National Policy on Education
NTU	National Taiwan University
PPP	Public Private Partnership
PR	Perception

OI	Outreach and Inclusivity
QS	Quacquarelli Symonds
RatER	Rating of Educational Resources
RP	Research and Professional Practice
RPI	Research Performance Index
RUR	Round University Ranking
SPSS	Statistical Package for the Social Sciences
SRC	Shanghai Ranking Consultancy
THE	Times Higher Education
TLR	Teaching, Learning and Resources
UAE	United Arab Emirates
UGC	University Grants Commission
UNESCO-CEPES	UNESCO European Centre for Higher Education (UNESCO-CEPES
URAP	University Ranking by Academic Performance
US	United States
WCU	World Class Universities
WUR	World University Rankings

CHAPTER I INTRODUCTION

1.1 Introduction

Higher education in India and the world is at a challenging juncture. There is a fast-growing demand for it (Rodionov, Rudskaia, & Kushneva, 2014), as also increasing access to it leading to a phenomenon called 'massification'. Simultaneously, there is a growing trend of internationalisation of higher education (Varghese, 2015), and so an increase in the importance attached to global rankings of the educational institutions across the world. The results of these rankings contribute to a comparative assessment of education quality. They also help to enhance the esteem and reputation of the respective institution. They influence the competitive education markets in a global sense, and to understand the real-world impacts of the educational institutions on society, economy and polity via their comparative performances and outputs. The recognition of the presence and spread of the educational institutions at the global scale is getting progressively significant for the institutions worldwide. For the Indian setting, the need and importance of global rankings are even higher given its emergence as a knowledge-based economy with the second biggest education sector in the whole world with 35.7 million enrolled students. This follows only that of 41.8 million in China. Moreover, India reached 26.3% Gross Enrolment Ratio (AISHE 2018-19) with 51,649 tertiary learning institutions and she is set to further attain 32% of it by 2020 (Brookings, 2019), and needless to mention that rankings in academics have become a significant part of the tertiary education arena (World Economic Forum, 2015). Another prominent cause for why rankings have become eminent is that it offers evident objective inputs for the debates and deliberations of what comprises quality in higher education. Even the governing bodies and agencies of tertiary education institution utilise rankings to devise policies towards achieving excellence (IREG 2015). In addition, right now, there is no measure to evaluate enough the education quality in an international comparison other than these ranking systems (University World News, 2018). Due to these considerations, the global ranking holds indispensable importance in tertiary education.

The reviewed literature shows that academic excellence is integral to achieving such global rankings for an institution. Also, while academic quality, excellence and innovation are to be enhanced, the institutional autonomy plays a facilitating role in it. Shankaran & Joshi (2016) argue that higher education in India is embroiled by the multiplicity of controls and interferences from the government and owing to that the result is quantitative of number

alone, devoid of excellence and innovation. The Indian *New Education Policy* draft of 2019 also highlights the phenomenal need of the institutional autonomy in higher education for excellence enhancement in academia. Many studies emphasise the greater role of institutional autonomy at the academic, financial and administrative levels for promoting competencies of students and staff towards institutional output, research impact, skills development, pattern of funding and diversity management, among others. According to the literature survey, firstly, the elimination of rigid and redundant bureaucratic procedures will act as a growth stimulant. Secondly, the award of autonomy in full will cause to enhance fund mobilisation; attract both foreign faculty and students; facilitate collaborations with industries and academic circles; invest adequate freedom in the institutional pursuits to match market and social demands; constructing an ecosystem excelling in innovation and creativity. On the whole, the degree of institutional autonomy is reported to be the extent of standards and quality in the institutions. All of these, have a telling effect in getting rankings besides such efficiency and strength are closely related to the building of world-class competent institutions. On account of this relevance, and the literature gap of missing link between possessing autonomy and getting ranking, this research has been undertaken to evaluate the impact of institutional autonomy in the achievement of global rankings in the context of Indian Institute of Technology, Delhi. The qualitative result finds that academic autonomy drives to the institutional excellence overall, and, statistically, the administrative autonomy facilitates such a process in the setting of IIT-Delhi. It is also found that the relationship between autonomies is mutualistic and interdependent in the functioning of the IIT-Delhi.

1.2 Rationale for Rankings in Higher Education

The Berlin principles, which is a set of sixteen principles that have been agreed upon as being criteria of what is called efficient ranking and what is to be regarded with respect to ranking, on the Higher Education Institutions ranking state that rankings are to be rendered with comparative information for enhanced understanding of higher education while it could not be the sole evaluator of higher education. It yields market-oriented devices and perspectives for the institutions (Clarke, 2007) that can complement the pursuits of the government, accrediting bodies, and the review agencies. In a study by the European Association of International Education (EAIE), it was found that 35% of educationists expressed that enhancing institutional esteem and reputation through global rankings is one among the three top causes for internationalising higher education (European Association of International Education (EAIE), 2015). The international rankings contribute to the government in the

domains of tertiary education policy formulation, financial and resource allocation to the institutions deemed as the potential to become world-class, and for categorising universities to know their global competitiveness.

Besides, it has an influencing role over public perception and popular opinion. It aids the institutions to explore prospective partners domestic and foreign besides the prospective students to make informed comparisons via finding the study course and study destination that is internationally evaluated (Hazelkorn, 2014). It opens up a wide series of creative avenues as plausible opportunities for the learners, teachers, researchers and scholars worldwide. As the developing countries aptly invest prime importance on education for its growth and development, the rankings would assist such nations to figure outright partners for collaboration, as in the case of Brazil's 'Science Without Borders' which is a joint programme of its Ministry of Education (MEC) and its Ministry of Science and Technology (MCT) that intends to send one lakh students to the world's top universities listed in the Quacquarelli Symonds and Times Higher Education rankings, and in the episode of India's partnering institutions that must be within the top 500 positions (UGC Guidelines, MHRD, GoI, 2018). The Guardian observed that the global rankings are, now, becoming decisive in immigration policies as foreign students are perceived as a commercial business (Hutton, 2016). The maturing demands for rankings are spurred by the growth in higher education such as increasing rates of enrolment, and participation, higher costs, and the prospects of students as consumers who intend value for money (Clarke, 2007).

Rankings impact the behaviour and practices of the universities, as their increased standing enhance the visibility, publicity, and so the reputation of the institutions. It has enduring functions in the students' journey from early short-listing to final tie-breaks as found by the QS survey, in 2014, elucidating that about 70% of the prospective students defined ranking as 'essential' / 'very important', and only marginal 2% of them responded that they would not refer to rankings at all. It is a trending way an employer distinguish between two candidates of identical skills and experience sparking better employability aspects (QS Intelligence Unit Survey, 2015). Rankings pave way for the collection of readily available educational data and its publication (Rauhvargers, 2011) resulting in open access to general consumers and the common public as well. The effects of rankings can inspire competition and trigger debates in academia, and focusing on the critical factors bringing top notches in rankings, which in turn translates into required policy changes in universities (Rauhvargers, 2011).

A study of Trends in Higher Education Marketing, Recruitment, and Technology (2014) exhibit that university branding needs continuous efforts and consistent data for the enrichment of the institutional profile and the rankings cause them to make both ends meet in creating credibility and hallmark. The quality of the students studying has a direct link towards the outcome of the universities (Hazelkorn 2014). It is the ranking table that plays importance in absorbing brilliant students getting enrolled, as they prefer to enter the top universities for better educational services, and thereby obtaining raised public profile through sustaining or strengthening the rank. Moreover, rankings lead to comprehensive publication with standard publishers around the issues of national and international importance, as chalked out in the criteria list. Lastly, rankings have the potential to pull in prominent scholars worldwide paving the way to building world-class institutions and this can be demonstrated in the words of the president of Yale University, Richard C. Levin stated that the "world-class institutions attain their edge by gathering scholars who are globally prolific experts and leaders in their disciplines" (The Newyork Times, 2010).

1.3 About Ranking Systems

Since the dawn of the twenty-first century, the trend of global rankings in tertiary higher education has been emerging as an unavoidable player by uniting diverse students population for a variety of courses and programmes in the institutions, this is in a way, facilitating globalised education. It results in fast-growing of ranking agencies, both private and public, published through magazines, websites, research parks, think tanks, academicians, and even government organisations. The below-identified rankings have been done based on combinations of a set of factors such as grants, endowment funds, student admission and satisfaction, research potential and excellency, domains of expertise, internationalising nature, research output, awards obtained, graduate employment, industry partnership, repute of the institution, public opinion, and the like. It is the ARWU (Academic Ranking of World Universities) initiated by the University of Shanghai Jiao Tong and presently conducted by Shanghai Ranking Consultancy (SRC) from the year 2003. ARWU is widely known for ranking criteria majorly on research criteria among indicators involving the number of articles published by Nature or Science, the number of Nobel prize recipients, and the winners of Field Medal. The Quacquarelli Symonds produces QS WUR (World University Rankings) since 2004, has centred upon a set of data consisting academics survey, citation per faculty member, pupil-teacher ratio, and the number of international staff and student. The Times Higher Education (THE) brings out the annual THE-QS World University

Rankings in collaboration with the QS for the years 2004 till 2009. Subsequently, it parted with the British educational company, QS and joined hands with the Canadian multinational media conglomerate Thomas Reuters for a new set of academic ranking at the global scale. It adds to the measures from 6, that was considered between 2004 and 2009, to 13 specific performance indices which are classified under five broad indicators overall for the final ranking.

Amongst these widely influential ranking systems, there is a group of rankers world over researching and publishing their results such as the UAE-based publisher of the Centre for World University Rankings (CWUR), that does not depend upon surveys or university data but assesses the educational quality, training of the students, honour of the individual faculty, and the research performance. The Netherland based CWTS Leiden Rankings prepared and issued by the Centre for Science and Technology, Leiden University, put up a set of bibliometric indicators that supply statistics at the university level on citation impact, scientific collaboration and newly introduced indicators from 2019 are open access publishing and gender diversity. The Russia-based rating agency called Global University Ranking employs RatER (Rating of Educational Resources) which is the non-commercial and independent agency found in March 2005 to oversee higher professional education for ranking on the lines of academic performance, research output, staff expertise, availability of resources, socially important acts of graduates, global tasks, and its perception.

The U-Multirank is yet another ranker endorsed by the European Commission and launched on 13 May 2014 grounding its measurements on key five areas such as research performance, teaching and learning quality, international orientation, partnerships with industries and start-ups, and regional involvement. The Turkey-based University Ranking by Academic Performance (URAP) was undertaken by the Informatics Institute, Middle East Technical University since 2010, focuses on academic quality and its indicators centralise upon research impact, scientific productivity, number of citations, articles, research quality, international collaboration and acceptance. The Madrid based Cybermetrics Lab which is a unit of the Spanish National Research Council (CSIC) produces Webometrics also called Ranking Web of Universities, employs the apriori scientific method to build composite indicators that rank institutions by weighing their scholarly contents, visibility, impact, and publications of the universities on the website. The Round University Ranking (RUR) which is the Moscow based world university ranking that assesses the effectiveness of the institutions on twenty

indicators along with four key areas such as teaching, research, diversity and financial stability. Australia based High Impact Universities Research Performance Index (RPI) examines the research performances of the institutions by measuring publications, citations, and promoting simplicity, transparency and fairness.

The G-factor International University Ranking is an objective form of peer review that measures the university system through the eyes of Google search engine, and thus analyses the number of links to the institution's website from the websites of other leading international universities for final ranking. National Taiwan University (NTU) publishes the Performance Ranking of Scientific Papers for the World Universities since 2012 as a followup of the Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT) which originally started publishing from 2007 to 2011, by using bibliometric methods for analysing and ranking the scientific paper performance on the criteria of research productivity, impacts and its excellence. The Professional Ranking of World Universities instituted by Paris School of Mines in 2007 that analyses the efficiency of each university in producing leading entrepreneurs figured from the list of Fortune Global 500. The Best Global Universities Ranking was launched by the U.S News and World Report in 2014 annually for providing insights into how institutions are compared globally, based on the statistics and metrics data derived from Thomson Reuters which calculates indicators like research repute, publications and its impacts, and a number of cited papers. Therefrom the origin of major ranking systems around the world is depicted in the tabular form as below:

Table 1.1: Evolution of Different Global Rankings Systems

ORIGIN	DIFFERENT RANKING SYSTEMS AROUND THE WORLD				
2003	ARWU - Academic Ranking of World Universities				
2004	Webometrics	QS - Quacquarelli Symonds & THE - Times Higher Education			
2007	Mines Paris Tech	HEEACT - Higher Education Evaluation and Accreditation Council of Taiwan			
2008	World's Best Colleges and Universities				
2009	Global universities ranking	LEIDEN	High performance universities	Scimago	RatER - Rating of Educational Resources
2010	URAP - University Ranking by Academic Performance	THE - Times Higher Education	QS - Quacquarelli Symonds		
2011	U-multirank	QS - Quacquarelli Symonds Stars	QS - Quacquarelli Symonds Stars		
2012	QS - Quacquarelli Symonds Young universities	THE - Times Higher Education Young universities	THE - Times Higher Education Academic reputation	U21	QS Best student cities ranking
2013	CWUR - Centre for World University Rankings				

Source of Table1.1: Compiled from https://www.eua.eu/downloads/publications/global%20university%20rankings%20and%20their%20impact%20-%20report%20ii.pdf

1.3.1 Annals of Global Ranking

The practice of ranking institutions set out from 1870 by a way of the US Bureau of Education commission publishing an annual report of classified statistical data for education institutions. Subsequently, rankings developed with its proponents such as James Catelli, Raymond Hughes, Chesley Manly, Hayward Keniston, Allan Cartter (Shastry, 2017). Later on, several commercial media and research institutions released their own rankings and kinds of ranking methodologies proliferated worldwide (Toutkoushian, 2011) Mmantsetsa Marope, the former Director of Division for Basic to Higher Education and Learning at UNESCO Headquarters in Paris and Peter J. Wells who was a Programme Specialist with UNESCO's Division for Teacher Development and Higher Education observed that the university ranking system dates back with the publication in England of *'Where We Get Our Best Men',* circa 1900, which examined the profile of the nation's most eminent men of the time with specific reference to the institutions they studied, and as a consequence providing a university list ranked according to the number of distinguished alumni produced (Myers & Robe, 2009 as noted by Marope & Wells, 2013).

Then in the record, the US News and World Report for the first time publicly came out with the information about undergraduate programmes in American Higher Education Institutions through 'America's Best colleges' in 1983, and it was followed by the Times Good University Guide published in 1993 in the United Kingdom promoting deliberations on the institutions fared better and worse in the list. Comparatively, the later emergence of diverse lists, league tables, subject-specific, ranking indicators for private-public institutions around the globe started perceivable at the end of the twentieth century. The present wave of enthusiasm over rankings has begun from Asia in the year 2003 with the structured ranking of universities by Shanghai Jiao Tong University in China and later published by the Chinese consultancy called Academic Ranking of World Universities (ARWU) from 2009 to till date. Immediately the following year of Shanghai Ranking witnessed the birth of joint ranking from 2004 to 2009 with the publishers consisting of Times Higher Education-QS World University Ranking and this is followed by the announcement of its own versions of QS with pre-existent methodology and the TIMES rankings with newly framed methodology. Thenceforward, there is no turning back for the scheme of global institutional ranking and widely received universal appeal.

1.3.2 Evolution of a National Framework for Ranking in India

The data-oriented ranking of institutions in higher education has become a hallmark with the heightening of globalization in higher education (Mukherjee, 2016). In this backdrop, amid a lack of indigenous ranking and parameters that are conducive to the Indian context and evenly relevant for diverse educational institutions in India, a central committee consisted of 16 members under the chairmanship of the Union Secretary of higher education was established on 29th October 2014 which recommended a framework for performance measuring and ranking universities nationwide annually and study programmes along with the organisation structure for implementing the country's ranking framework at the all-India level (NIRF India Rankings, 2016).

It was decided to propose a national-level framework in order to measure performance, to rank the higher education institutions and to suggest the organizational structure fitting the institutional mechanism in India. Through the process, the National Institutional Ranking Framework (NIRF) was started during the 2014-15 phase and was launched in 2016 for ranking based on objective criteria that determine universities and colleges on five groups of parameters, that is, (1) Teaching, Learning and Resources (TLR), (2) Research and Professional Practice (RP), (3) Graduation Outcomes (GO), (4) Outreach and Inclusivity (OI) and (5) Peer Perception (PR) for the promotion of competitive excellence in the Indian higher educational institutions. The methodology of NIRF conceive of separate category and domain-specific rankings for colleges and universities in their disciplines respective of engineering, management, pharmacy, medical, law and architecture and the Ministry have found an Implementation Core Committee (ICC) to examine the implementation of rankings under the overall NIRF mechanism. As a consequence, eventually, the framework was sanctioned by the Indian Ministry of Human Resource Development and launched on 29th September 2015 for ranking India-based academic institutions with an intent to enhance excellence in Indian tertiary education in a competitive manner.

1.4 World University Rankings and its Policy Implications

In the present scenario, it has been too familiar for policy planners, makers and higher education leaders to examine and define their targets, goals and strategies concerning the global ranking for the institutions of learning (Hazelkorn, 2013). Rankings strengthen

competition among institutions and bring out necessary policy change in universities that are striving to enhance their standing in the rank tables through easily readable information and so becoming a basis of fund allocations, and for framing national-regional level higher education policies (Rauhvargers, 2011).

Inter-institutional rankings leverage new institutional decision-making process through improved data-oriented decision making since rankings prompt institutions to better document and report; increased participation in discussions and deliberations on measuring institutional success as in deliberating new routes of measuring and reporting indicators of success; improved teaching-learning practices through modifications in practices proportional to student learning and the outcome, right identification and timely replication of the best models by usage of rankings (Impact of Rankings, 2019).

In general, international rankings have brought out debate and elicited double layers of policy response at the EU and national level. The first type of response aims at improving the position of national or state level institutions with respect to the existing rankings; the second kind is to formulate new ways of assessing the quality aspects. The European Commission has formed a network with CERPA (Consortium for Higher Education and Research Performance Assessment) for designing and put into the test for a multi-dimensional ranking system that would make an alternative system to and overcome the boundaries and delimitations of the ARWU and THES rankings (Saisana, d'Hombres, Saltelli). However, the Institute for Higher Education Policy states that prior to using college rankings in the construction of the public policy, the policy formulators are in the position to deem the effects of rankings that potentially can have on institutional practices, on the perception of educational quality, and post-secondary equity outputs. Rankings have also had an influence on the aspects of government policy (Issue Brief, September 2009).

1.5 About the Research

A research purpose holds vital importance in a study in order to answer the research problem at hand (Creswell, 2012, p. 60). The purpose of research, here, was to broadly assess the relation between institutional autonomy and achievement of rankings, especially to assess whether institutional autonomy is a facilitating factor for enhancing academic excellence and so the ranking position at the global scale. This was undertaken by examining the relationship

between institutional autonomy and the achievement of global rankings in the context of Indian Institute of Technology, Delhi using the case-study method. It was conducted with the reference to the QS World University Rankings, which is a yearly publication of university rankings, published by the Quacquarelli Symonds (QS) global education network. The rationale for the selection of the case study is, firstly, the IIT-Delhi is the only technical institution that has chiefly featured for thirteen times out of eighteen of the QS edition, excluding only five years of 2003,2005, 2006, 2007 and 2014. This naturally bestowed a sound foundation to conduct elaborative research to find the answer the phenomenon of what made so. Secondly, the reviewed literature reported that institutional autonomy plays an essentially vital role in getting rankings, and at the same instant, lacks the hierarchical categorisation between the types of institutional autonomy in attaining rankings. This literature gap was filled by this research undertaken between types of autonomies. Thirdly, to study the extent of the autonomy between its types, the IIT-D just became a perfect fit due to the fact that it had started its existence with full autonomy and required research within its types of autonomy in the academic, financial and administrative fields.

1.5.1 Research Objectives and Questions

The well-defined research objectives would facilitate to identify the kind of study that is most suitable to undertake for the comprehensive research. Aim and objectives of the research would impact the depth and the overall direction of the research. In this study, the aim and objectives are as given below. The central aim was to assess the role of institutional autonomy in achieving the global ranking for the higher education institution in India and the following four objectives are accomplished through this research process.

1. To explore the significance of institutional autonomy in the global rankings for higher education in India
2. To determine the type of institutional autonomy that carries higher weight in achieving World University Ranking
3. To find out the relation between academic, financial and administrative autonomy in attaining global ranking, and
4. To examine the impact of institutional autonomy to be at the competitive edge for the achievement of international ranking.

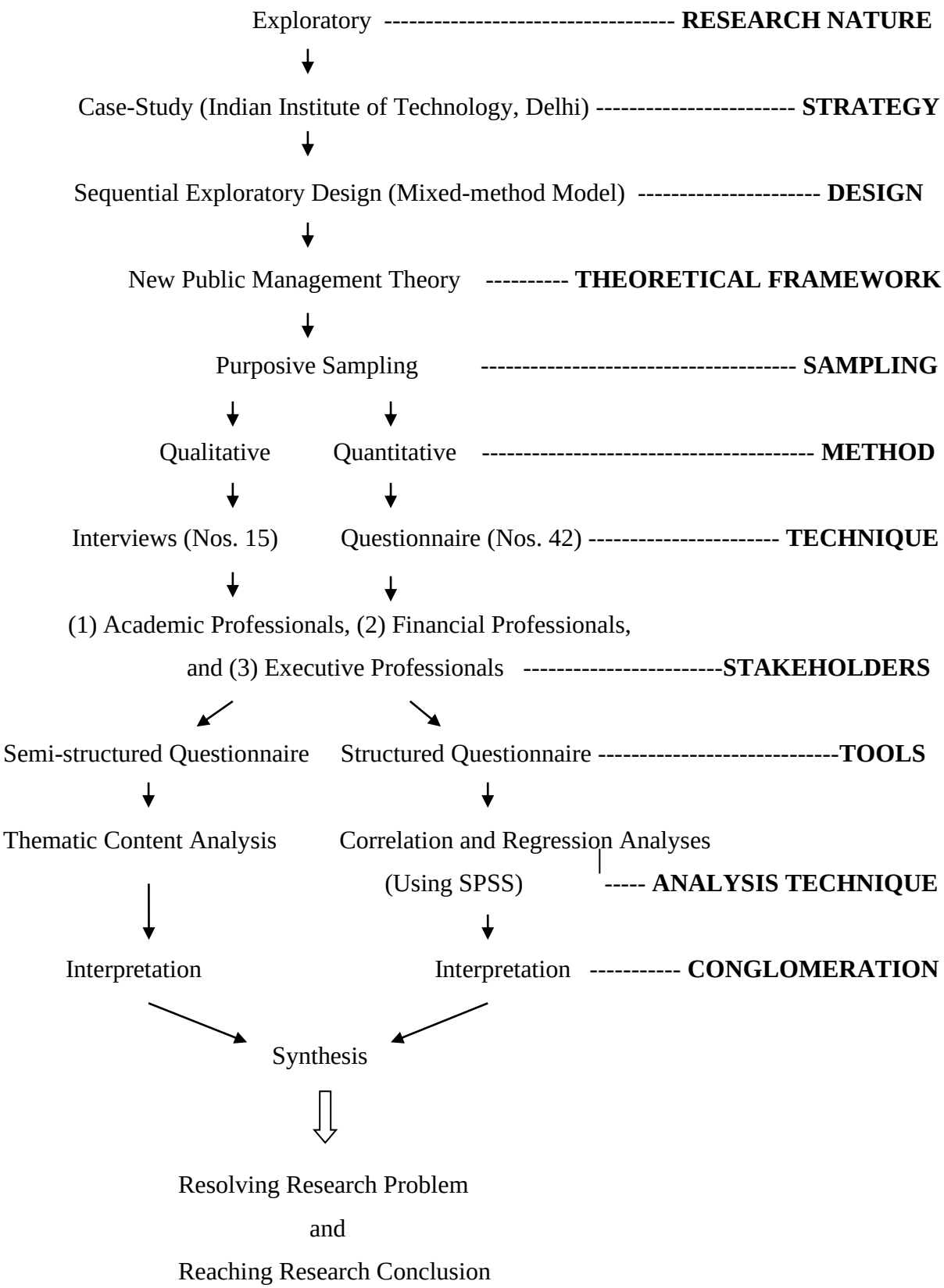
Research questions pointedly narrow the goal into certain specific questions that to be answered or addressed in the study (Creswell, 2012, p. 58). It has to be appropriate for study through the methods of social research and should be devised in a way that one could apply one or more of the existing research methods in getting answers (Flick, 2015, p. 50). Flick points out that the research questions could emerge from practical issues or they could emerge from social settings. He writes that it should be deep-rooted theoretically and ready to be studied empirically as well. These are accomplished in this dissertation with the research questions formulated as follows:

1. What particular type of institutional autonomy that secures institutions to break into internationally recognised global rankings?
2. What is the relationship between autonomies and achievement of institutional rankings?
3. Specifically, does any certain type of autonomy contribute more to achieving better academic rankings?

1.5.2 Outline of Research Methodology

Following design and methodology were employed, in this research, to address the chief objective of assessing the impact of institutional autonomy in the attainment of rankings globally, and the same is discussed elaborately in chapter III with justification for its adoption. The nature of research is exploratory by using the case-study method with Indian Institute of Technology as the study case. New Public Management theory was chosen, here, as a matching theoretical framework for external governance i.e., to explain the relationship between the IIT and the government. It used the mixed-method model of the sequential exploratory design with interviews from 15 respondents and survey questionnaire from 42 informants through the channel of purposive sampling choosing from all the three domains of academics, finance and administration. Thematic content analysis was put into the analysis for extracting shreds of evidence from the interviews, and statistical analyses of Pearson Product-Moment Correlation and Step-wise Regression was employed for the quantitative survey questionnaire database. It is further depicted as follows:

Fig 1.1 Schematic Depiction of Adopted Research Methodology



Source: Characterisation of the researcher for the adopted research methodology

1.6 Structure of the Dissertation

In the first chapter of this dissertation, the idea and practice of global rankings are introduced in order to set a stage for the consequent chapters. The second chapter of this dissertation renders a short history of autonomy and its different types in order to contextualize the inquiry. The existing literature and the literature gap is identified over the role of institutional autonomy in achieving global rankings. Since no considerable research exists on the relational effects between institutional autonomies and the achievement of rankings, this very research gets highlight. The third chapter delineates the research design, plan and methodology with a description of data, sample, variables, and identification strategy used. Chapters four serves as the actual statement of the facts by merely presenting the obtained result to make readers draw their own inferences and construct their explanation. Subsequently, analysis and interpretation of data is done under chapter five by commenting on and explaining the results to make derivations and inferences. Eventually, a final conclusion and suggestions are arrived at in the sixth chapter of this dissertation.

CHAPTER II SURVEY OF LITERATURE

2.1 Introduction

India's ambition to become a second-biggest economic system in the world in 2050 appears rational with the rate of the working population stands large at 962 million in 2030 possessing the younger demographic dividend with an average of 29 years of age in 2020, it is primarily essential to impart quality education and skills to the young minds of the country. Considering the sector of tertiary education, the GER (Gross Enrolment Ratio) surged to 24.5% in 2015-16 from the previous 20.8% in 2011-12, and it describes the need for focusing for its progressive growth. Taking cues from the successful institutions around the world, it is found that educational institutions which work on the broader lines of autonomous governance, transparent practices and competitive outcomes performed better than the ones with no or little autonomy. On the other hand, the status of autonomy to the educational institutions are well recognised for the establishment of the world-class universities in the action plan of the NITI Ayog, and so an entry into the World University Ranking systems. It also highlighted three components needed in order to construct such world-class institutions and they are as follows – grant of autonomy to administer themselves with little external influences focused on funding governmentally depending on the prospects of the institutions and oversights such as determinants, weights responsible for the indicators of academic rankings globally.

In addition to this, it observed to decentralise the constituent colleges to be freed from the directives of its parent institutions for the independence in the academic domain. It recommended a tiered system of three firstly as the result-oriented granting, as seen in China's Beijing and Qinghua universities and National University of Singapore and Nanyang Technological University which are the more research-intensive ones obtaining substantial funds from the government, of the Indian institutions. Secondly, institutions wholly devoted to the vocational and employment aspects and finally the rest of institutions that do not come under the purview of the former two tiers. On the part of the federal states, further deconcentrating of the academic administration is envisaged in the document through the scheme of shared incentivisation. (Chapter 20, Education and skill development, p.131-140).

2.2 Debates and Deliberations on Global Rankings

Rankings assist in analysing and comparing the current position of the institutions and evaluate the future global positioning grounded on the criteria set by ranking groups. The IREG (International Ranking Expert Group) was instituted in the year 2004 by the international organisation UNESCO European Centre for Tertiary education Learning and Washington's Institute of Tertiary education Policy whose members are expertise, rank deciders and jurists. The rankings to be reviewed periodically based on the 16 principles specified in the Berlin Principles of Ranking of Tertiary education, and for that purpose IREG framed 20 base-points as Ranking Audit Module to carry out the task. The major criticism of such ranking trend is that they take into consideration only the premier institutions which are confined in number and geographical spread, and so limited by the brand name and fame of the institutions incomprehensively.

Moreover, different ranking organisations employ different methodologies to rank the educational institutions. For cases, Shanghai Ranking Consultancy Academic World Rankings, based on China, emphasises on a number of Nobel prize winners, highly repeated writers/authors in citations and publications in the journal Nature of Science. Quacquerelli Symonds, based on the United Kingdom, applies the criteria of citations per paper amongst domestic ranking performance (NIRF in India), reputation survey performance, geographical balancing, and direct case submission. The second drawback is that large schools of arts, schools of Social Sciences and humanities departments remain (un)underrepresented showing the partialities present in the system, and tilting towards the STEM streams.

Elsevier brought out a caution that excessive reliance on rankings for allocation and distribution of funds could generate malign effects in the tertiary education sector (Taha, 2012 as cited by the report). The publication and research output in the neglected disciplines are in the form of book publishments rather than research articles, paper as plausible in the STEM subjects. As the document notes down that equalising importance to the research books produced by the communities of arts, humanities and Social Sciences, has become effective measures to incorporate the abandoned areas of study. According to Philip Bhaty, rankings are crude in nature, prone to subjectivity since the decision makers, rank providers play a considerable role in the ranking processes, but are useful in stamping the institutional performances and in setting the target plans strategically.

Moreover, it shows that the rankings become beneficial for the institutions to better their behaviour patterns along with improvement in the overall stature and reputation of the institutions. It is also used for students to choose their desired learning institutions by university wise or discipline wise; for collection, collation and dissemination of data on the student and institutional successes at the national level that is assistive for the policy planners and formulators in the sector. As the international rankings focus almost on the research outputs, it becomes a must for institutions to concentrate on the research activities while attentive to the teaching-learning process, extra-curricula and related functions (Bekhradnia, 2016). Universities shall be automatically considered to be under the 12B section of University Grants Commission (UGC) Act, 1956, and there is no need of examination or inspection by the Commission will be required for the same. Institutions could start off campuses, online programmes, recruit off land teaching staff, open research parks, incubation centres, mobilise funds, allocate seats, frame evaluation guidelines and so forth on their own under the realm of the UGC. (Gazette of India, p.8).

2.2.1 Indian Perception of Rankings

The University Grants Commission in June 2012 announced that the foreign universities that signed for a bilateral programme with the Indian Institutions should be figured in the top 500 list of the THE (Times Tertiary education) Ranking or the Shanghai Academic World University Rankings or the Quacquerelli Symonds World University Rankings to ensure that the qualitative institutions alone take part in the courses offered bilaterally. And, increasingly educational institutes commenced employing the ranks for systematic analysis, strategical planning, and structured policymaking. (EU Report on rankings, 2013). Salmi views that amongst different methodologies used in the academic rankings, the commonly recurring themes for grading are quality of education in the institution, international outlook, research activities, prestige and persuasion it made on the sector, and society.

To create a world-class university, the principal components of highly qualified instructors, curious and interested students, excellent quality of research, adequate facility for teaching, learning, researching, and extra-curricula tasks are absolute with academic freedom emerged out of autonomy given by the institutions (Altbach, 2004). Liu's definition of the world-class university is the one which is with standard education and research internationally

benchmarked on the diverse disciplines and does effort to serve the public needs and goods at national and international scales.

These conditions are general forces that appear to exist in all societies and are necessary for the differentiation and autonomy of institutions (Abrutyn, 2009, p. 454). Drawing on Ashby, elaborated six specific freedoms associated with institutional autonomy such as freedom to be self-governing, freedom to exercise corporate financial control, freedom to make their own staffing decisions, freedom to select their own students, freedom to decide on their own curricula, freedom to assess and certify the academic performance of their own students. These freedoms also form part of the construct of institutional autonomy (Hayden and Thiep, 2007, p. 80). Institutional autonomy requires significant governance and leadership expertise at the institutional level, as well as an infrastructure capable of providing adequate and timely information about operations, finances and levels of risk associated with key governance decisions (Hayden and Thiep, 2007, p. 82).

2.3 Steps for Quality and Standardisation

India in her eleventh plan equated ways to establish fourteen world-class educational institutes to be an exemplar of excellence for the rest of institutions, and for making global knowledge economy. The consolidation of research grants has been put forward for bringing such standardised institutions with the critical look of a situation taking towards zero-sum game (deem et al, 2008 as in the report) because the institutions of excellence could function at the price of underperforming institutions (Tertiary education Forum, March 2010). After a decadal duration, international rankings, that started its way from China, became a decisive factor in the realms of educational performances and policy making. The IREG (International Ranking Expert Group) defines the applications of the rankings such as to inform the demands of the consumers with the easily interpretable data about the institution, to create an atmosphere of competition, to provide rationales for earmarking grants, to distinguish between various departments, disciplines and courses.

It also conduces to the definition of quality in tertiary education institution in the particular country context and contributes to the tasks taken by the public and independent accrediting bodies for the assessment of the quality (Berlin Principles). Through the adoption of criteria and results of the rankings, tertiary education institutions and the policy-formulators at

government level afford them legitimacy, and as a result, paving the way for their wider adoption and embracing by society. At the same time, they legitimize their own value systems in which certain aspects of a university's function, namely research production, are more highly prized than others. On the other side, the private investment in education arena appears to be the most reasonable for increasing the overall national income proportionately invested in education (Ordorika and Lloyd, 2015).

Likewise, collaborations and handholdings between the private sector and tertiary education institutions besides the strengthening of connections between curriculum formation and staff requirements should be considered critical tools towards enhancing productivity and creating more opportunities for enrolment in good quality tertiary education (QS 2012). Thus the academic rankings have become one of the influencing voices in recent years.

2.3.1 Shifts in the Vantage Point of Rankings

Rankings in academia is not only the add-ons to students' choice but increasingly revolving around geopolitical positioning of the universities in the states and countries. The world academic rankings are an indispensable expression of the globalised tertiary education market and the global economy. They are warranty to the fact that ability versus disability to contend has become an influential driver in itself. Rankings are undoubtedly an 'accelerator' of tertiary education reform, an eminent share of the 'policy assemblages' (Lim and Oergberg, 2017, 2, 4). In this respect, they have succeeded in changing the discourse around knowledge, society and the economy (Magalhães and Amaral 2009). Rankings are an invariable outcome and metaphor for the geopolitics of tertiary education. Rankings predominantly measure basic research and dissemination in limited fields and in a traditional way. They render a competitive edge to the elite institutions and countries which gain from the accumulated public-private wealth and investment over decades, if not centuries (Hazelkorn, 2009).

They reflect the structure of the global economy and world science. They are, as Cantwell (2016) argues, a 'report card' on disparities in resources and the unevenness in the global production of knowledge, the effect of which is to legitimise such inequities. Doing well in rankings has been variously described by Andrei Fursenko, Russian Minister for Education and Science (quoted in Kishkovsky 2012), as equivalent to an 'instrument of competitive battle and influence' and defined by The Irish Times (Editors, 2009) as 'a key element in

taking towards attract investment'. If, as Castells (1996) observed, tertiary education is the 'engine of the economy', then how it is administered and managed necessarily comes to the fore, along with concerns of the quality, performance and productivity (Hazelkorn, 2017).

2.4 Primacy of Academic Autonomy for Excellence

The Indian Education Commission of 1964- 66 pointed out that the academic freedom for teachers is a crucial necessity for the building up of intellectualism in our country. Until and unless such an ecosystem emerges, it is nearly implausible to achieve excellence in the tertiary education system. With stakeholders such as the students, teachers, staff members and management being co-partners in bringing up the quality of tertiary education, it is evident that they share a major responsibility. Hence, the Education Commission of 1964-66 recommended institutional autonomy, which, in essence, is the medium for improving academic excellence (12th plan period 2012-2017, the UGC guidelines). In an era with the emergence of internationalisation of education, the concept of the knowledge economy and the world-class institutions are one and the same.

This derives from the enhanced significance that tertiary education assumes in a knowledge economy as the lifeblood of human capital base, which is nothing but the skilled workforce and innovative knowledge (Cookson, 2007). Thus, it is important to ascertain that tertiary education institutions are continually pushing the boundaries of knowledge and innovation, as noticed by Yeravdekar and Tiwari, 2014. The idea of world-class university is closely interlinked with global education rankings of academic institutions (Altbach, 2010) notes the dictionary definition of world-class refers to "ranking among the frontmost in the world; and it is of global standards of excellence" (Altbatch, 2016 The gap found in the survey of literature is that no study defines the phenomena where which type of autonomy, among academic, financial and administrative autonomy, that facilitates academic autonomy, as observed by Yeravdekar and Tiwari, 2014.

2.4.1 Manifestations of Autonomy on Rankings

The evolution of global rankings is perceived to have commenced in the year 2003 with the very publication of the"Academic Ranking of World Universities" (ARWU) brought out by Shanghai Jiao Tong University. Time Higher education (THE) Supplement World University

Ranking (in cooperation with QS, and later with Thomson Reuters). It was immediately the following year, in a way that Europe's response to the ARWU (Rauhvargers, 2011, p. 19).
The remarkable discourses generated by the two ranking system has eventually resulted in growing of multiple international rankings (Salmi et al, 2007) as viewed by Yeravdekar and Tiwari, 2014. It has repeatedly documented that the idea of world-class university depends on research potential and excellence (Altbach et al, 2004). It is concerned whether autonomy improves the utilization of resources in universities and enjoy more flexibility, autonomy over allocation of government subsidies. It seems there is now increasing freedom for universities to allocate government funds. As one university administrator remarked: 'In the past, the Government gave a certain sum of money which was stipulated to buy tables or desks. Now, it starts to change. The governments give the money, and leave to decide how it should be allocated.' (Varghese and Martin, 2014, p. 76). The autonomy to open new study programmes has been criticized by private universities who fear that this will enable public universities to poach potential students. (Varghese and Martin, 2014, p. 94). Private foundations and non-government organizations increasingly opposed to the reform, perceiving it as a further attempt by the government to liberalize tertiary education and give in to market pressure, especially as some of the autonomous universities increased their tuition fees. This criticism is not fully true. It should be mentioned that many autonomous institutions have cross-subsidy policies that ensure access to the poor. (Varghese and Martin, 2014, p. 99). The belief has grown among the public that autonomy is identical to the liberalization and commercialization of education. This bitter lesson needs to be considered with all earnest for the future development of tertiary education.

With more financial resources available from the government purse, a pro-poor policy can be developed that is in line with giving wider autonomy and more direct accountability. (Varghese and Martin, 2014, p. 104). The resultant findings suggest that internal administration models have no or little influence on the plan and execution of strategic processes. In the sum, the argumentation is that the matter of institutional autonomy is intricately connected to how various policy devices at the ground level are formulated and executed (Frolich, Christensen, Stensaker, 2018).

2.5 Institutional Autonomy as a Facilitator for Rankings

Institutional self-governance that was not accompanied by, for example, academic freedom, individual academic autonomy, institutional sovereignty and a capacity for institutional self-determination would truly be a hollow form of institutional autonomy (Hayden and Thiep, 2007, p. 84). Institutional autonomy legitimates academic identity, particularly as expressed through freedom to pursue truth 'through the disciplined creativity and originality of individuals' (Maassen & et al, 2017). It also provides a strong measure of protection for academic freedom. (Hayden and Thiep, 2007, p. 84). Autonomy encompasses three areas such as academic, institutional and financial autonomy. Academic autonomy is the fully invested freedom for the faculty members to perform their functions freely that could lead to a wealth of brilliance, creativity and intellect. Institutional autonomy also comprises functional freedom, the freedom of decision-making along with its constituents.

Financial autonomy refers to the freedom to collect, collate and utilise the resource according to its discretion and prior norms. (Pandey, 2004, p.79). It is high fortune time for new insights on the implications of institutional autonomy to institutions providing tertiary education (Swaminathan, 2014). Here it may be noted that the Honorable Supreme Court of India had delivered judgments calling forth, Article 19 (1) (g) of the Indian Constitution, which requires providing new guidelines for providing autonomy in an actual manner. (Shankaran and Joshi, 2016, p.4). Ranking draws public and political attention to the contribution, impact and benefit of tertiary education on society and for individuals. Developing countries use rankings to measure quality when external quality assurance systems are weak or non-existent and/or as a gauge and/or symbol of global competitiveness and engagement in/with world science – all of which are applaudable goals (Hazelkorn, 2017). The author of this working paper also observes the argument of Cantwell (2016) that it is a 'report card' on disparities in resources and the unevenness in the global production of knowledge, the effect of which is to legitimise such inequities. Academic autonomy and institutional freedom are inextricably interwoven, and universities had to have "freedom from external interference in (a) who shall teach, (b) what we teach, (c) how we teach, and (d) whom we teach" (Rayevnyeva & et al, 2018).

It has tried to incorporate citations, publications and not just research but for teaching, degrees produced, inter-connections with industry, and steps towards internationalization. (Altbach, 2012).The IREG (International Ranking Expert Group) was instituted in the year 2004 by the UNESCO European Centre for Tertiary education (UNESCO-CEPES) which is based in Bucharest and the IHEP (Institute for Tertiary education Policy) which is based in Washington, DC. Rankings respond to the demands from consumers for easy interpretation of the stature of the institutions, serve the purpose of rationalised funding allocation and defines the quality of the learning sites (Berlin Principles, 2006). Progressive market-orientation and universal character of the educational institutions all over the world have made the stakeholders such as students, staff members, university organisations, governments, and industries to keep a sharp eye in the ranking place of the institutions. (Savitz-Romer & et al, 2009).

2.6 Reflections on the literature

Autonomy is the free function of an extent to which the parts of corporate and external players are structurally and nominally independent of other sets of corporate players (Abrutyn, 2009, p. 450). Institutional autonomy is a sociocultural evolutionary process, as such, the conditions that propel institutional autonomy can be delineated. The existing literature indicates that academic excellence is inevitable for the effective functioning of institutions, and significantly to meet the targets and goals. The quality and standards in the academic activities can be ensured with the investment of the fuller independence on the academic domain. The criteria and indicators specified by ranking agencies are met only with the autonomy available both in letter and spirit to the institutions. When autonomy is essential for attaining positions in the ranking system, there is a vacuum on the classification of different autonomy types in a hierarchical fashion to achieve the same. Building up the accomplished institutions and universities necessitate an auxiliary governance model through which educational centres derive autonomy to meet their targets and objectives, whether in the areas of research, teaching or learning, added with the full level of accountability (Raza, 2009). The Ranking mechanism, to a large extent, measure research excellence, productivity and innovation. This is the gentle outcome of the institutions to evaluate, indeed, the potential indicators for it such as funding, publications, Nobel prizes, and so forth in the research domain. The gap found in the survey of literature is that no study defines the phenomena where which type of autonomy, among academic, financial and administrative autonomy, that

facilitates the academic autonomy. This provides a firm ground for this research to define which type of autonomy that facilitate the academic autonomy, between financial and administrative domains, for achieving rankings.

CHAPTER III RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The main research problem which this dissertation attempts to explore is; “What is the role of institutional autonomy to facilitate the higher education institutions in getting QS WUR ?” The term `research problem` could be explained as the substantive area of focus for the research (Flick, 2017). In order to explore this main research problem, other research questions are framed such as “How do the kinds of institutional autonomy that play a decisive role in the QS World University Rankings?”; “What type of institutional autonomy that contributes more to the QS WUR ?” which focus on more specific aspects of the institutional autonomy. In doing so, I have operationalised three concepts to form the core of this study.

Like Porta and Keating indicates that operationalization is the act of taking a concept and converting it into a thing that can be studied via qualitative and quantitative observations. (2008). In this study, the concepts of ‘academic autonomy, ‘administrative autonomy and ‘financial autonomy’ are operationalised. While this operationalisation is significant, it is also discerned that the manner in which an investigator raises a research question is equally mattered because it, to a large extent, influences the research plan that is employed to answer it (Flick, 2017). In this chapter, the description and justification of the methods employed to both collect and collate data for answering the problem are discussed. The research methods of case study through interviewing and survey questionnaire is selected to analyse the above problem of the study.

3.2 Design and Framework

A general understanding of research is collecting, collating and examining information in a systematic manner. Once the research objectives are set, the immediate step is to determine the research design that better accommodates objectives of the research. Based on this, the research methodology and sampling techniques are chosen (Kumar, 2018). This is applied in order to achieve insight into a particular phenomenon towards conducting a profound exploration of a subject; define a phenomenon, occurrence or incident where the numerical relationships are evaluated to the extent by which two variables function; and to constitute cause and effect relationship between two selected variables to understand how each performs (Pratap, 2018).

The exploratory design is an examination of a subject topic in order to obtain advance insights. It is employed for a research study while the investigator has no available past studies or only a few data for reference, and is carried out when a topic is needed to be handled in depth (Stebbins, 2001). The aim of this design is to dig into the research issue at hand by rendering the investigator to set a firm basis for the exploration of the ideas and concepts. It describes how the relationship between two or more aspects of a phenomenon in the study and it is qualified by its flexibility to conduct the research (Kumar, 2018).

3.2.1 Theoretical Framework of New Public Management

Theories in research are devised to articulate, anticipate and understand the phenomenon in the study and to challenge or to expand the existing knowledge within the demarcation of the decisive boundary (Camp, 2001). The theoretical framework is a pattern of design that can agree or espouse a theory of the research. The New Public Management theory is an approach to administer the public service organizations and is applied in the governmental public service agencies, organisations and institutions. The chief characteristics of New Public Management theory is hands-on-approach, explicit precise standards, output-oriented, handholding of the private, greater independence and use of money (Frederickson, 1991). This theory was considered as the gold standard for the reforms in administration in the decade of 1990. Rationale behind this backing was that when the government channelised private-players were in place instead of red-tapism, it will efficiently promote the work (Farazmand, 1999).

Subsequently, the principles of NPM was referred to as a resolution for the management issues and ills in the viewpoint of organization and policy formulation in educational and care services reform. In the discussion of Prof. Chrishtoper Cropper Hood (1991), it could be analysed in seven categories such as (1) Management through active hands-on approach enabling leaders to freely manage and cause discretion, (2) Cost-Effectiveness which aimed at low cost and higher outcome efficiency, (3) Output Control via undertaking performance-based evaluations, (4) Decentralisation on the lines of adaptability to the situations devoid of organisational hindrances, (5) Competition for better progress, developments at both intra-level and inter-level, (6) Private sector involvement by setting a working environment up to attain the intended aim of the organisation, and (7) Performance Standards management towards excelling on the goals, objectives and targets set. These traits become fitting to this study and enable to analyse and generate data in a meaningful fashion.

3.3 Mixed-method Approach

The boundary between quantitative and qualitative nature is not rigid and these two could influence each other well. The qualitative research is based upon a subject-to-subject relationship as in unstructured or in semi-structured research interviews. The informant may get impacted by the researcher and the other way around. This leads to issues over the reliability of the collected data from the study field. There is a space between the researchers and the informants while gathering quantitative data. Here, a point to be noted that the researcher role is as a spectator and hence does not impact the research circumstances. For instance, the survey research where each respondent has to relate to the way the queries are formulated and the different categories, but not under the direct influence of the researcher herself/ himself. On the other side, the emphasises that in qualitative research interpretation and the attention to context is more important than in quantitative research (Bryman, 2012 & Flick 2017).

This study provides research on one unit; the organisation of the IIT-Delhi. Nonetheless, it is also taken into consideration of the social, historical context of IITs with the literary aid of IIT ACT OF 1961 and its consequent amendments. All the questions framed in the questionnaire are close-ended, allowing informants to respond in a purposive manner. The data on kinds of institutional autonomy is not readily quantifiable given that every domain is unique in its space. And so, this research uses a mixed qualitative-cum-quantitative approach to understand the phenomena involved and answer the research problem.

3.3.1 Case study

The term `method` can be defined as a set of processes and procedures for collecting, collating and analyzing the data, and the case study design, which is one among the important research designs in qualitative research, is based on the supposition that the case selected and researched is untypical among the cases of a specific type. Hence a single case could generate insight into the incidents, occurrences and circumstances that are existent from where the case is derived for the study. Thus the case identified has become the basis of a comprehensive exploration of the dimension that a researcher intends to ascertain in the process. This is a method by which a specific instance or a few rationally selected cases are analysed and reported in-depth. And to be known as a case study, it is a must to consider the study population in total as a single entity (Ranjith Kumar, 2011).

The unit of analysis in this study is the Indian Institute of Technology, Delhi. On the line with the definition of a single unit of analysis, and given the collection of comprehensive data information involved, this study can be rightly categorised as a case study. Nonetheless, there is a necessity to further clarify the units of analysis. The dataset would be garnered from the three domains, such as academic, finance and administrative, from the total fifteen departments of the selected institution namely: Applied Mechanics, Biochemical Engineering and Biotechnology, Chemical Engineering, Chemistry, Civil Engineering, Computer Science & Engineering, Design, Electrical Engineering, Humanities & Social Sciences, Management Studies, Materials Science & Engineering, Mathematics, Mechanical Engineering, Physics, Textile & Fibre Engineering.

3.3.2 Triangulation of methods

Alan Bryman proposes that a case study research could be conducted in a number of ways either by a qualitative approach or by a quantitative approach or a mixture of both two (Bryman, 2012). In this study, a mixed-method approach is used by using semi-structured interview via a qualitative, and by survey questionnaire via a quantitative method. This approach reflects the open-ended nature of the research problem and the goal of understanding the interviewee's qualitative evidence and how they corroborate with the quantitative generalisation.

The policy analysis paves a way to researchers with a powerful instrument to comprehend the utility of research evidence in the policymaking.

Besides generating an informed understanding of the values, interests and real contexts underpinning the policy formulation process (Browne, Coffey, Cook, Meiklejohn, & Palermo, 2018). In order to lessen the biases in the interview and survey data collection, the route to ensure rectification, here, called policy analysis is adopted for the wholistic research of the topic to answer the research problems. Within the setting of typical case study research, this set of combination of research methods could be defined as methodological triangulation, which comprises multiple investigators, data sources and its collection methods to support and substantiate the emerging results (Merriam, 2002). One of the possible disadvantages of this qualitative research method is the closeness of the researcher to the informants. 3.4

3.4 Sampling Technique and Size

Factors of time and cost are important issues when selecting samples. It is the process of selecting a few elements from a sampling population. In a way, it is a trade-off between accuracy and resources and through sampling, one could make an estimate of the information of interest. In other words, it could be described as the 'population' and as the entire set or subset of entities that consist of the group we are intended to do focus (Kumar, 2018). The population selected in this study can be grouped into three such as expertise from the academics, the financiers, and the decision-makers. And so the purposive sampling has become the appropriate fit for this study. The chief consideration in purposive sampling is the judgement as to who could provide the best information to achieve the goals of the research.

As an investigator, one approaches those people who in her/his opinion are probably to possess the needful information and also, importantly, be willing to share it with the investigator. This type of purposive sampling, otherwise called judgmental sampling is extremely useful when one wants to construct a reality, define a phenomenon or develop something about which only a little is known (Kumar, 2018). For aptly matching to these background with little availing literature, and to unearth reality, the purposive sampling is selected, here. This sampling strategy is more common in qualitative research, but when one uses it in quantitative research, selects a preplanned number of people who, in the judgement of the investigator, are best positioned to provide with the needed information for the study (Kumar, 2018). By this sampling, 42 respondents for the questionnaire survey and 5 interviewees each from academic, financial and administrative domains were reached out and thus the primary quantitative and qualitative data were collected.

Here, the semi- structured interviewing is used as the main method to gather qualitative data for this thesis. The semi-structured interviews can be loosely structured that refers to there are themes which to be addressed to the interviewees rather than a series of pre-planned questions. The questions posed are open-ended and the themes categorised within the frame of the research questions. (Bryman, 2012). And the collection of primary data is employed by using in-depth interviews with key informants are to get more information about the perceptions and perspectives (Creswell, 2012) on the intended topic. In this sense, the data may be influenced by both the researcher and researched and so the conclusions inferred. In order to mitigate the unintended biases, triangulation research method as above are utilised in this study.

3.5 Data Sources and Analysis

This research employs both Primary and Secondary data. The former is the data collected by the researcher, generally from the group of people identified for the study. In this research, a well-structured questionnaire is devised to assess the importance of the academic, financial and administrative autonomy on the twenty-five major institutional activities based on the review of the literature. The survey questionnaire, formulated upon a 5-point Likert scale, obtained forty-one respondents comprising 27, 7 and 7 respectively from academics, finance and administrative domains across the disciplines and the collected data is analysed by running Pearson product-moment Correlation and Step-wise Multiple Regression with the use of SPSS software. In addition to that, a semi-structured interview protocol with the selected respondents five each from three domains totalling to fifteen in-depth interviews conducted, later applied for thematic content analysis. The Secondary Data, which is an analysis and synthesis of the primary data that was compiled other than the researcher, here, involves an elaborate review of literature from the sources such as the IIT Act of 1961 and its amendments of 1963, 2012 and 2016; Annual budget reports and Annual Convocation Reports from 2010-2011 to 2017-2018; related national and international journals, published books, e-journals, research papers, magazines and newspapers for answering the framed research questions towards the significance of institutional autonomy in achieving global rankings.

3.5.1 Data Collection Plan

A proposal, along with an application, that discussed the potential value and objectives of this research was submitted to the Hon'ble Director, Deputy Director of Operations, and the Security Officer at Indian Institute of Technology, Delhi to conduct this research. This proceeded with the letter of Introduction and recommendation letter forwarder by the revered supervisor from the parent institution. The survey questionnaires were circulated, by both in-person and online for the responses. It is to document, here, that prior permission was received from their office to fulfil the interview protocols. Purpose of the study and the benefit for the institution was highlighted to the stakeholders while ensuring anonymity towards reliability and confidentiality. Then it is put into the thematic content analysis which is one of the chief methods in evaluating the qualitative data. It is employed, in this study to extract information from the secondary literary sources and from the interview. This is the

process of examining the manifest and latent contents of interviews in order to distinguish the central ideas and themes that come forth from the responses.

3.5.2 Data Analysis Tool

Correlation Calculation - The Pearson product-moment Correlation is a commonly used model in social science as a measure of a linear running relationship between two quantifiable variables. For the sound result, the values should always be between -1.0 and 1.0 and if the resultant number becomes greater than 1.0 or less than -1.0 merely imply that there is a significant defect in the analysis of correlation. The result of a correlation of -1.0 indicates a perfect negative correlation when a correlation of 1.0 states a perfect positive correlation. On the other side, a correlation of 0.0 shows no linear relationship at all between the selected two variables. In this study, the correlation between Academic and Financial, Academic and Administrative and Financial and Administrative autonomy is analysed to determine the statistical relationship between these three variables, here, such that characterised difference in the value of a variable is obtained by the systematic change on the other variable correlated.

There are several types of correlation coefficients, but the one used here is Pearson correlation (r). This measures the direction and strength of the linear relationship between two variables. The correlation coefficient is expressed as follows:

$\rho_{xy}=\sigma x\sigma y\text{Cov}(x,y)/\ \sigma x\sigma y$

Where ρ_{xy} is Pearson product-moment correlation coefficient,

Cov(x,y) is covariance of variables x and y,

σx is standard deviation of x, and

σy is standard deviation of y

Regression Analysis - In the statistical procedure, the analysis of regression is a set of steps to estimate the relationships between a dependent a variable which is otherwise known as the outcome variable, and one or more independent variables which are considered as the predictors or covariates in order to determine the characteristic strength of the relationship between one dependent variable (usually denoted by Y) and a series of independent variables.

It is of two types such as the simple linear regression and the multiple linear regression. The distinction between these two types is that the latter employs two or more independent variables to predict the results whilst the former applies a single independent variable to extrapolate the outcome of the dependent variable Y. This study utilises step-wise multiple linear regression with two independent variables of financial autonomy and administrative autonomy to explain the dependent variable of academic autonomy.

The general form of each type of regression, here, is used to infer causal relationships between the independent (financial and administrative) and dependent (academic autonomy) variables -

In the Multiple Linear Regression: $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + ... + b_tX_t + u$

Where Y is the variable used to predict (i.e., dependent variable of academic autonomy),
X is the variable used to predict Y (i.e., two independent variables of financial and administrative autonomy),
a is the intercept,
b is the slope, and
u is the regression residual.

Thematic Content analysis - one of the chief methods of evaluating qualitative data. It is employed, in this study to extract information from the secondary literary sources and from the interview. This is the process of examining the manifest and latent contents of interviews in order to distinguish the central ideas and themes that come forth from the responses.

3.5.3 Issues of Reliability and consistency

The high-quality tests are inevitable to evaluate the internal consistency and reliability of a test or scale in the study. When the Likert scale is engaged, the Cronbach Alpha is a usually used index for testing reliability. It is a must that it should be estimated this quantity to add validity and veracity to the interpretation of their data. (Tavakol, Dennick, 2011). Only if the items in the test gets correlated with each other, the value of alpha gets increased. Nevertheless, a high coefficient alpha does not refer to a high degree of internal consistency, invariably. It is due to the fact that alpha is affected by the length of the test. If the test length is too short or too high, the value of alpha is also reduced or increased respectively.

The formula for Cronbach's alpha is:

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$$

Where N is the number of items,

$\bar{c}$ is the average covariance between item-pairs, and

$\bar{v}$ is the average variance.

A rule of thumb for interpreting alpha for dichotomous questions (i.e., those questions possibly with two answers) or Likert scale questions as employed in this research is as described in the following table:

Table 3.1: Thumb Rule for Interpretation of Internal Consistency through Alpha (α) Value

INTERNAL CONSISTENCY	CRONBACH ALPHA (α) VALUE
Excellent Consistency	Alpha ≥ 0.9
Good Consistency	$0.9 >$ Alpha ≥ 0.8
Acceptable Consistency	$0.8 >$ Alpha ≥ 0.7
Questionable Consistency	$0.7 >$Alpha ≥ 0.6
Poor Consistency	$0.6 >$Alpha ≥ 0.5
Unacceptable Consistency	$0.5 >$ Alpha

Table 3.1 Source: Compiled from https://www.statisticshowto.com/cronbachs-alpha-spss/

Note: In general, a score of more than 0.7 is usually alright. All the same, the higher values between 0.90 and 0.95 are favoured.

3.6 Consideration of Research Ethics

This research follows the four principles, formulated by Uwe Flick, of (1) non-maleficence, (2) beneficence, (3) self-determination and (4) justice (Flick, 2017). In the study field, firstly, every effort is taken to avoid harming participants in any slightest manner such as not inquiring a thing when it is noticeably witnessed the respondent's unwillingness or

discomfort on certain questions. Secondly, benefits of the research on human individuals at a considerable extent is earnestly that this research may likely to enhance and better the functioning and even policy-formulation process at the institutional level. Thirdly, ensuring the self-determination of the research informants through regarding highly the viewpoints and perspectives of them by quoting as it is in this dissertation. Finally, all the people who made a contribution to this dissertation are treated equally and respectfully in lines of egalitarianism. In addition to that, informed consent from the appropriate ones is set as a general norm by obtaining through a competent authority in a volunteer manner (Allmark 2002, as cited by Flick, 2017). Last and importantly, the promise of confidentiality, anonymity and data protection is parallelly valued throughout this research.

CHAPTER IV WORKING OF AUTONOMY AND RANKING IN AN INSTITUTIONAL SCENARIO: A CASE STUDY OF IIT DELHI

4.1 Introduction

This chapter documents the research findings that provide both qualitative and quantitative data and its statistical analyses. The actual statement of observance and gathered database are presented in the form of tables, wheresoever necessary, for a comfortable reach to the readers. It projects precise and exact details in order to make readers draw their own inferences and constructs. To serve these purposes, the information collected through in-depth interviews, structured survey questionnaire, and review of secondary literature are portrayed firstly in the numeral form followed by the contextual analysis of the same describing its meaning in verbal form. Besides the interpretation part of it is put on hold and not to be processed, here, which will be the core of the following chapter on the discussion.

4.2 Performance Indicators of Quacquarelli Symonds and Trajectory of IIT-Delhi

In this section, firstly, the criteria (Table 4.1) and performance indicators (Table 4.2) used by the Quacquarelli Symonds are presented to analyse the standing of IIT-Delhi to achieve ranking position. And based on the themes of these indicators, the survey questionnaire (as given in the appendix) was also prepared and conducted to obtain the results portrayed in this chapter. On a similar line, the analysis of secondary literature was undertaken from the sources such as Annual Budget Reports, Annual Convocation Reports, IIT Acts of 1961 and its subsequent amendment acts of 1963, 2012 and 2016, and its related publication both at the institutional and governmental levels. The findings from the same are as follows:

Table 4.1: Criteria, Indicators and Weightage Given in the Quacquarelli Symonds Rankings

CRITERIA	INDICATORS	WEIGHTAGE	
		IN 2004	FROM 2005 ONWARDS
ACADEMIC PEER REVIEW	Composite score based on responses collected through the survey from peer review. This is done on the academic reputation	50 %	40 %
EMPLOYER REVIEW	Collected from the employer survey. Expertise respondents are asked to name the institutions that have the best qualified graduates/researchers/faculty.	-	10 %
CITATIONS PER FACULTY	Rate of citation per faculty member as per the *Thomson Scientific* (2004-2006) and later *Scopus* (2007 onwards) databases.	20 %	20 %
FACULTY STUDENT RATIO	Number of students per teacher as an indicator of the conditions of education.	20 %	20 %
INTERNATIONAL STUDENTS	Number of students from foreign land enrolled in the institution.	5 %	5 %
INTERNATIONAL FACULTY	Number of researchers and professors abroad who are employed by the institution.	5 %	5 %

Table 4.1 Source: Compiled from https://www.universityrankings.ch/methodology

The above criteria and weightage are further based and selected on the following twelve major performance indicators of the participating institution in the ranking system. And it is shown in the following table:

Box 4.2 Performance Indicators In *Quacquarelli Symonds* World University Rankings

PERFORMANCE INDICATORS
IN *QUACQUARELLI SYMONDS* WORLD UNIVERSITY RANKINGS

- Research,
- Teaching,
- Nurturing Employability,
- International Outlook,
- Infrastructure,
- Online/Distance Learning,
- Social Responsibility,
- Innovation,
- Arts&Culture,
- Inclusiveness,
- Subject Ranking, And
- Programme Strength.

Table 4.2 Source: India Higher Education Report of 2016 published by National Institute of Educational Planning and Administration.

From the above two tables, the performances of Indian Institute of Delhi for the academic years such as 2010-11, 2011 -12, 2012-13, 2013-14, 2015-16, 2016-17 and 2017-18 were collected and collated to bring out the following table:

Table 4.3: Performance Highlights of IIT-Delhi in light of Quacquarelli Symonds' Ranking Weightage

Item No	Particulars	2017-18	2016-17	2015-16	2013-14	2012-13	2011-12	2010-11
1.	Total Students on Roll	8754	8330	8536	7863	7848	7777	6734
2.	UG Students on Roll	3861	3790	3806	3624	3590	3519	2971
3.	PG Students on Roll	2447	2027	2286	2265	2605	2569	2356
4.	Research Scholar on Roll	2446	2483	2444	1974	1653	1689	1407
5.	Female Students	1785	1750	1778	1534	1436	1316	1165
6.	Foreign Students	71 (10)	60 (10)	82(13)	78 (9)	78 (9)	17 (5)	39 (10)
7.	New Faculty Joined in the Institution	23	27	23	37	30	24	25
8.	Operational MoUs/Agreements with Foreign Institutions/ Organisations	107	93	88	86	112	114	94
9.	MoUs/Agreements with Indian Institutions/ Organisations	39	42	63	63	60	57	49
10.	Research Articles Published by Faculty & Researchers in International Journals	2070	2070	1661	2484	2400	2320	1958
11.	Articles Indexed in *Scopus* in Science & Techonology, and Social Sciences	1800	1800	1328	1696	1700	1713	1340
12.	New Courses Developed by Faculty	32	38	97	36	8	16	35
13.	New Sponsored Research Project	282 (415.47 Cr)	158 (140.21 Cr)	135 (72.10 Cr)	150 (68.65 Cr)	142 (88.63 Cr)	123 (57.12 Cr)	130 (121.00 Cr)
14.	Consultancy	333	370	360	430	348	420	516

	Jobs	(34.26 Cr)	(36.38 Cr)	(28.69 Cr)	(27.31 Cr)	(18.29 Cr)	(21.10 Cr)	(22.17 Cr)
15.	**Collaborative Projects/Consultancies with International Funding**	37	18	24	31	29	22	12
16.	**Major New Equipment Installed**	44	68	75	61	43	33	34
17.	**Seminars/Conferences/ Workshops/Special Lectures**	157	241	250	148	47	39	51
18.	**Companies Visited for Placement**	373	342	391	370	273	318	225
19.	**Total Job Offers**	829	709	845	822	726	770	755
20.	**Total Placements**	765	774	789	752	797	810	719

Table 4.3 Source: Compiled from the Annual Budget Reports and Convocation Reports of IIT-Delhi

Note: In the above table, *Foreign Students* against serial no. 6 provides the total number of students coming from a number of foreign countries in the bracket; New *Sponsored Research* against serial no. 13 gives a total number of projects with a total INR funding in the bracket; and *Consultancy Jobs* against serial no.14 gives total a number of jobs with a total INR value in the bracket.

4.2 (a) Analysis of the Performance Indicators

The QS WUR system ranks institutions broadly on the already outlined performance indicators such as research, teaching, nurturing employability, international outlook, infrastructure, online/distance learning, social responsibility, innovation, arts&culture, inclusiveness, subject ranking and programme strength. The above twenty areas are selected and studied from the secondary reports of Annual Budget Reports, Annual Convocation Reports, on the basis of the indicators employed by the QS World University Rankings. The items *Total Students on Roll* are gradually surging over a period of time from 6734 in 2010-11 to 8754 in 2017-18; the *UG Students on Roll* is shown a rise form 2971 in 2010-11 to

3861 in 2017-18; the *PG Students on Roll* have shown a moderate increase from 2356 in 2010-11 to 2447 in 2017-18; the *Research Scholars on Roll* have jumped from 1407 in 2010-11 to 2446 in 2017-18; the prospects of *Female Students* on campus have been presenting a measured increase from 1165 in 2010-11 to 1785 in 2017-18; the number of *Foreign Students* enrolled has been abysmal with nominal growth from 39 students who are natives of ten foreign nations in 2010-11 to 71 students hailing from ten foreign countries in 2017-18; the category of *New Faculty Joined in the Institution* is with below moderate gain from 25 in 2010-11 to 23 in 2017-18 but showed a nominal increase of 37 and 30 faculty members in 2013-14 and 2012-13 respectively; the status of *Operational MoUs/Agreements with Foreign Institutions/Organisations* have also shown a ceremonial rise from 94 in 2010-11 to 107 in 2017-18 with the highest such agreement is seen as 112 in the academic year 2012-13; the *MoUs/Agreements with Indian Institutions/Organisations* have in fact diminished from 49 in 2010-11 to 39 in 2017-18 with the highest such agreements reported as 60 in 2012-13; the *Research Articles Published by Faculty & Researchers in International Journals* have shown progress from 1958 in 2010-11 to 2070 in both 2016-17 and 2017-18 academic years; the *Articles Indexed in Scopus in Science & Technology, and Social Sciences* too got improved from 1340 in 2010-11 to 1800 in both academic years of 2016-17 and 2017-18; the *New Courses Developed by Faculty* have projected different trends such as 35 in 2010-11, just 8 in 2012-13, 32 in 2017-18, and with the greatest such number of new courses found like 97 in 2015-16; *the New Sponsored Research Project* has outlined a worth increase in terms of total funding over a period of 130 projects with INR 121.00 crores in 2010-11 to 282 such projects with INR 415.47 crores in 2017-18; the item *Consultancy Jobs* has gradually declined in terms of number of jobs from 516 with INR 22.17 crores in 2010-11 to 333 such jobs with INR 34.26 crores in 2017-18 but the largest number of jobs was reported as 370 with INR 36.38 crores in 2016-17; the number of *Collaborative Projects/Consultancies with International* Funding has documented as 12 in 2010-11 to 37 in 2017-18; the *Major New Equipment Installed* at the institution shows its commitment to building infrastructure with 34 new installations in 2010-11 to 44 in 2017-18; the *Seminars/Conferences/Workshops/SpecialLectures* organised at the institutional premises have grown from 51 in 2010-11 to 157 in 2017-18 with the largest number of such events documented as 241 in the academic year 2016-17; the *Companies Visited for Placement* gets multiplied from 225 in 2010-11 to 373 in 2017-18 with the highest registered as 391 companies visited for placement in the academic year of 2015-16; the *Total Job Offers* extended to the graduating students get enhanced from 755 in 2010-11 to 829 in 2017-

18 with the highest record achieved as 845 job offers in the academic year of 2015-16; *and* the *Total Placements* materialised on-campus stands at 719 in 2010-11 to 765 in 2017-18 with the substantial number recorded as 810 placements for the academic year of 2011-12.

4.3 Working of Institutional Autonomy at IIT-Delhi

This section commences with the major developments witnessed by the Indian Institute of Technology, Delhi (Table 4.4) and the ranking position of the institution since the start of the Quacquarelli Symonds, Times Higher Education and Shanghai Ranking Systems (Table 4.5) in order to present a comprehensive picture of the institution in light of achievement of ranking. It is as follows:

Box 4.4: Major Current Developments at Indian Institute of Technology, Delhi.

Scorecard of IIT-Delhi

- Institution of eminence (IoE in 2018)
- NIRF: Ranked No. 2 in the country (2019); Ranked No.1 (India Today, 2019); Ranked No. 61 (in the world)
- High score in Research and Professional Practice parameter (96.18)
- Research Impact category of QS – 80.6 marks out of 100 – top research university tag, in the world
- It crossed 10,000 student enrolment mark in 2019 with over 2833 PhD researchers on its roll as of now.

Table 4.4 Source: Annual Budget Reports, Annual Convocation Reports of IIT-Delhi.

The institution was recently granted with the aspirational status of Institution of eminence in the year 2018. It was ranked second in the whole country in 2019 and ranked no.1 in 2019 by India Today, and overall held sixty-first position in the world. Moreover, it scored very high in research and professional practice parameter with 96.18. In the research impact category in the Quacquarelli Symonds World University Rankings, it obtained 80.6 marks out of cent per cent which was the top research tag in the world in that academic ranking year. Furthermore, it has crossed the mark of ten thousand students enrolment in the academic year of 2019 with a total number of 2833 researchers on its roll. With this background, an analysis of the ranking position of IIT-Delhi since 2003 in three prominent global rankings such as Quacquarelli Symonds, Times Higher Education and Shanghai ranking systems was undertaken and presented here as follows:

Table 4.5: Position of IIT-Delhi in the QS, TIMES, and SHANGHAI

YEAR	QUACQUARELLI SYMONDS	TIMES HIGHER EDUCATION	SHANGHAI
2003			**451-500** /500
2004	**41**/200		- / 502
2005	- / 201		- / 500
2006	- / 200		- / 500
2007	- / 201		- / 510
2008	**154**/201		- / 503
2009	**181**/200		- / 501
2010	**202**/500		- / 500
2011	**218**/499	- / 200	- / 500
2012	**212**/500	- / 402	- / 500
2013	**222**/500	- / 400	- / 500
2014	-	**351-400**/400	- / 500
2015	**235**/699	- / 401	- / 500
2016	**179**/701	**401-500**/801	- / 500
2017	**185**/915	**401-500**/978	**701-800**/800
2018	**172**/958	**501-600**/1000	**701-800**/1000
2019	**172**/1000	**501-600**/1000	**701-800**/1000
2020	**182**/1001	**401-500**/1001	**451-500** /500

Table 4.5 Source: Compiled from

https://www.universityrankings.ch/results?ranking=QS&region=World&year=all+years&q=

Note: The above table shows the standing of IIT – Delhi along with the size of the total dataset against each year since the inception year of the QS, THE and Shanghai ranking systems.

The semi-structured interview schedule was prepared and sent in advance to the appointed date for the interview in order to provide the respondents with an outline and demands of the research. Through this channel, five respondents each from academic, financial and administrative domain to have fifteen in-depth interview database from the study field. From the introductory consultation, it emerged out that the presence of autonomy in every sphere of institutional activities is intelligible. Thenceforth the interview questionnaire was posted one after another to the respondents for both specific and theme-related responses. As this study has three distinct areas of academics, finance and administration, the respondents were interviewed on the questions more concerned to their existent domain with an aim to capture practical and actual situation occurring at the study field.

From the meetings with academic professionals, it became plain and evident that academicians have the will and freedom to undertake pedagogical activities ranging from producing cutting-edge research of latest use, introducing new teaching methods, nurturing required skills and to build up internationally expected standards among the students. In the words of respondents, academic space is autonomous and independent of external players. It was reported that since academic excellence is the central focus of any institution for being at competitive edge, academic freedom is fully and rightly invested on the members of academia at the institution. The uppermost executive seems to have decentralised the determining power to his associates and subordinates as drawn out from the appointed consultations.

The professionals on the financial realm described that they are independent only on the resources internally generated from various sources such as the collection of charges for academic services from students, conducting online programmes, extending services to external agencies or organisations, making partnerships with institutions or industries, and so forth. Institutional dependency on the public and government allocated funds were also reported in the interview database. For instance in India, unlike western educational institutions, the government's money (i.e., tax-payers' saving) cannot be extended to foreign students in the form of fellowship/scholarship by the executives of the institution. In other

words, the institution is to follow the instructions and norms to spend the public money and cannot expend the fund according to its choice or needs. Financial stakeholders acknowledge the generous course of fund flow from several pathways such as largely from governmental bodies, industry partnerships, alumni contribution and the like philanthropic activities. In sum, the study field has a limited say on the front of finance over its expenditure and seldom times need to follow the formula of spending framed by the donor, more often than not the government.

On the administrative domain, a set of concerns were reported such as no presence of independent appointment board, complete politicisation of top executive appointments, constrained with excess bureaucratisation, and a total overhaul of the institution in every five years when a new political party comes into power at the union government level. It was, too, documented that freedom to function internally is existing to an extent from which all the institutional activities are performed at will and with freedom of choice. According to an informant, the institute has been earnestly attempting to start a new course on Artificial Intelligence (AI) for last three subsequent years but slowed by the red-tapism. The strict and rigid adherence to official formalities can be noticed in the campus activities of constructing a hostel and for which seventeen different bodies one-by-one need to consent for the same. It is found that each academic, financial and administrative domain function under the power and responsibility of a chief which states that every sphere has expertise in governing capacity to run the affairs as both directed and self-planned. Thus the report of interviews indicates a solid presence of an administrator in the form of domain authority in each realm.

4.4 STATISTICAL CORRELATION BETWEEN DEMOGRAPHIC VARIABLES AND TYPES OF AUTONOMY

PEARSON PRODUCT-MOMENT CORRELATION

	DOMAINS	DESIGNATION	EXPERIENCE	QUALIFICATION	TOTAL A	TOTA LB	TOTAL C
DOMAINS	1	-.424(**)	-.234	.315(*)	-.074	-.037	-.216
DESIGNATION	**-.424(**)**	1	.726(**)	.019	.437(**)	.074	.282
EXPERIENCE	**-.234**	**.726(**)**	1	.125	.452(**)	-.069	.124
QUALIFICATION	**.315(*)**	**.019**	**.125**	1	.079	.021	.011
TOTAL A (Academic Autonomy)	**-.074**	**.437(**)**	**.452(**)**	**.079**	1	.545(**)	.651(**)
TOTAL B (Financial Autonomy)	**-.037**	**.074**	**-.069**	**.021**	**.545(**)**	1	.517(**)
TOTAL C (Administrative)	**-.216**	**.282**	**.124**	**.011**	**.651(**)**	**.517(**)**	1

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

4.4(a) ANALYSIS OF CORRELATION OF DEMOGRAPHIC VARIABLES WITH ACADEMIC, FINANCIAL AND ADMINISTRATIVE AUTONOMY

The analysis of the correlation of demographic variables with academic (A), financial (B) and administrative (C) autonomy are as follows:

Domains and Designation: A very high inverse correlation was found between Domains and Designation (-.424**), significant at .01 level indicating higher the designation lower the emphasis on academic and financial autonomy. In other words, the higher executives emphasised on administrative
autonomy.

Domains and Qualification: A high inverse correlation is found between Domains and Qualification (.315**), significant at .05 level indicating that the professionals with post-doctoral qualification emphasised on academic autonomy.

Designation and Domains: A very high inverse correlation between Designation and

Domains (-.424**), significant at .01 level indicating higher the designation lower the emphasis on academic and financial autonomy. In other words, the higher executives emphasised on administrative autonomy

Designation and Experience: A very high positive correlation between Designation and Experience (.726**), significant at .01 level indicating those who are with higher qualification have higher experience. The professors and executives reported having long years of experience.

Designation and Academic Autonomy: A very high positive correlation between Designation and Academic Autonomy (.437**), significant at .01 level indicating higher designation professionals have a higher emphasis on academic autonomy. In other words, higher-level executives and professors emphasised on academic autonomy.

Experience and Designation: A very high positive correlation between Experience and Designation (.726**) significant at the 0.01 level, indicates higher qualification have higher experience. The professors and executives are reported to have long years of experience.

Experience and Academic Autonomy: A very high positive correlation between Experience and Academic Autonomy (.452**) significant at the 0.01 level, indicates that the professionals with a higher number of years of experience emphasised on the importance of academic autonomy.

Qualification and Domains: A high positive correlation between Qualification and Domains (.315*) significant at the 0.01 level, indicates that higher the qualification higher the domains the respondents possess. In other words, professionals with higher qualification tend to have the top academic domain.

Academic Autonomy and Designation: A very high positive correlation between Academic Autonomy and Designation (.437**) significant at the 0.01 level, indicates that higher academic leads to a higher position. In other words, those who have higher designation emphasised academic domain.

Academic Autonomy and Experience: A very high positive correlation between Academic Autonomy and Experience (.452**) significant at the 0.01 level, indicates that higher the academic sphere higher the experience is. In other words, professionals with higher experience stressed upon academic freedom.

Academic Autonomy and Financial Autonomy: A very high positive correlation between Academic Autonomy and Financial Autonomy (.545**) significant at the 0.01 level indicating higher the financial autonomy more the academic autonomy. Higher academic autonomy resulted when higher financial autonomy is provided.

Academic Autonomy and Administrative Autonomy: A very high positive correlation between Academic Autonomy and Administrative Autonomy (.651**) significant at the 0.01 level, indicates that both types of autonomy have a mutual relationship with each other.

Financial Autonomy and Academic Autonomy: A very high positive correlation between Financial Autonomy and Academic Autonomy (.545**) significant at the 0.01 level indicates that both types of autonomy have a mutual relationship with each other.

Financial Autonomy and Administrative Autonomy: A very high positive correlation between Financial Autonomy and Administrative Autonomy (.517**) significant at the 0.01 level, indicates both types of autonomy have a mutual relationship with each other.

Administrative Autonomy and Academic Autonomy: A very high positive correlation between Administrative Autonomy and Academic Autonomy (.651**) significant at the 0.01 level, indicates both types of autonomy have a mutual relationship with each other.

Administrative Autonomy and Financial Autonomy: A very high positive correlation between Administrative Autonomy and Financial Autonomy (.517**) significant at the 0.01 level, indicates both types of autonomy have a mutual relationship with each other.

4.4.1 CRONBACH ALPHA RELIABILITY

The high-quality tests are essential to determine the internal consistency of items selected and the reliability of the Likert scale used. When the Likert scale is engaged, the Cronbach Alpha is a generally used index for testing reliability. It is a must that it should be estimated this quantity to add validity and veracity to the interpretation of their data. (Tavakol, Dennick,

2011). As the items in the test correlated with each other, the value of alpha, too, increased indicating a high degree of internal consistency as shown in the table below:

RELIABILITY FOR A

Reliability Statistics

Cronbach's Alpha	N of Items
.925	25

RELIABILITY FOR B

Reliability Statistics

Cronbach's Alpha	N of Items
.962	25

RELIABILITY FOR C

Reliability Statistics

Cronbach's Alpha	N of Items
.942	25

4.4.2 STATISTICAL CORELATION OF ACADEMIC AUTONOMY (A) WITH FINANCIAL AUTONOMY (B)

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24	B25
A1	.295	.456(**)	.352(*)	.321(*)	.229	.124	.128	.371(*)	.414(**)	.414(**)	.341(*)	.406(**)	.365(*)	.345(*)	.363(*)	.223	.465(**)	.345(*)	.532(**)	.379(*)	.493(**)	.479(**)	.378(*)	.342(*)	.020
A2	.292	.474(**)	.427(**)	.258	.288	.171	.224	.350(*)	.474(**)	.474(**)	.301	.405(**)	.400(**)	.376(*)	.397(**)	.231	.490(**)	.366(*)	.547(**)	.390(*)	.585(**)	.410(**)	.411(**)	.366(*)	.074
A3	.419(**)	.459(**)	.220	.311(*)	.230	.109	.177	.232	.285	.285	.337(*)	.310(*)	.268	.347(*)	.370(*)	.311(*)	.483(**)	.306(*)	.365(*)	.464(**)	.290	.398(**)	.290	.083	-.200
A4	.534(**)	.479(**)	.509(**)	.283	.433(**)	.294	.381(*)	.365(*)	.558(**)	.558(**)	.382(*)	.390(*)	.477(**)	.309(*)	.332(*)	.340(*)	.244	.393(*)	.443(**)	.204	.400(**)	.327(*)	.274	.335(*)	-.068
A5	.397(*	.356(*)	.386(*)	.412(*	.399(*	.364(*)	.411(*	.447(*	.418(*	.418(*	.439(*	.279	.449(*	.308(*)	.308(*)	.366(*)	.391(*)	.389(*)	.290	.310(*)	.464(*	.314(*)	.354(*)	.462(*	.039

	*)			*)	*)		*)	*)	*)	*)	*)		*)								*)			*)	
A6	.463(**)	.394(**)	.442(**)	.260	.400(**)	.463(**)	.348(*)	.240	.405(**)	.405(**)	.329(*)	.247	.319(*)	.137	.136	.583(**)	.192	.345(*)	.225	.234	.333(*)	.097	.244	.197	-.004
A7	.140	.226	.227	.362(*)	.380(*)	.288	.210	.317(*)	.361(*)	.361(*)	.318(*)	.122	.269	.265	.280	.253	.309(*)	.332(*)	.453(**)	.224	.315(*)	.254	.205	.247	-.024
A8	.285	.393(**)	.247	.460(**)	.405(**)	.275	.213	.314(*)	.330(*)	.330(*)	.420(**)	.226	.293	.442(**)	.466(**)	.243	.342(*)	.431(**)	.586(**)	.408(**)	.434(**)	.451(**)	.424(**)	.314(*)	-.064
A9	.285	.215	.258	.384(*)	.346(*)	.157	.231	.235	.308(*)	.308(*)	.413(**)	.074	.427(**)	.245	.289	.032	.373(*)	.138	.240	.206	.100	.447(**)	.215	.071	-.147
A10	.300	.248	.293	.363(*)	.372(*)	.149	.245	.218	.305(*)	.305(*)	.407(**)	.086	.464(**)	.247	.292	.026	.379(*)	.141	.259	.211	.105	.439(**)	.224	.074	-.150
A11	.142	.046	.009	.034	.018	.024	-.073	-.015	.164	.164	.021	.130	.161	.174	.224	.033	.178	.112	.343(*)	.136	.038	.095	.079	-.126	-.248
A12	.303	.272	.288	.154	.063	.012	.079	.319(*)	.353(*)	.353(*)	.243	.305(*)	.304	.169	.188	.111	.172	.297	.491(**)	.270	.262	.287	.231	.176	-.075
A13	.070	.126	.112	.160	.130	.136	.274	.300	.220	.220	.180	.040	.316(*)	.140	.195	.144	.245	.236	.393(*)	.125	.204	.331(*)	.048	.183	-.183
A14	.255	.146	.215	.181	.206	.081	.213	.314(*)	.202	.202	.263	.018	.385(*)	.228	.280	.067	.228	.209	.278	.163	.077	.393(*)	.116	.168	-.110
A15	.244	.137	.210	.191	.211	.095	.225	.314(*)	.183	.183	.252	.005	.380(*)	.231	.283	.075	.231	.208	.259	.163	.072	.388(*)	.112	.166	-.110
A16	.371(*)	.244	.366(*)	.197	.296	.398(**)	.268	.086	.193	.193	.280	.204	.244	.202	.233	.366(*)	.145	.260	.143	.242	.069	.137	.023	.151	-.179
A17	.211	.218	.305(*)	.367(*)	.335(*)	.242	.463(**)	.405(**)	.299	.299	.316(*)	.192	.509(**)	.382(*)	.413(**)	.269	.468(**)	.323(*)	.332(*)	.254	.309(*)	.391(*)	.082	.317(*)	-.197
A18	.483(*	.464(*	.458(*	.516(*	.545(*	.497(*	.397(*	.473(*	.490(*	.490(*	.568(*	.468(*	.497(*	.517(*	.538(*	.462(*	.526(*	.540(*	.603(*	.510(*	.549(*	.438(*	.468(*	.332(*)	-.07

	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)	*)		8
A19	.238	.305(*)	.203	.074	.168	-.043	.135	.144	.099	.099	.272	-.034	.216	.194	.241	-.028	.174	.152	.236	.068	.085	.179	-.089	-.068	-.238
A20	.382(*)	.232	.298	.377(*)	.250	.167	.202	.344(*)	.357(*)	.357(*)	.330(*)	.339(*)	.248	.279	.303	.246	.480(**)	.342(*)	.405(**)	.496(**)	.362(*)	.381(*)	.302	.147	-.154
A21	-.056	-.051	-.035	.122	.128	.186	.129	.085	.161	.161	.058	.073	.279	.146	.166	.093	.257	.224	.448(**)	.075	.051	.183	-.039	.159	-.015
A22	.329(*)	.355(*)	.383(*)	.443(**)	.486(**)	.357(*)	.383(*)	.367(*)	.395(**)	.395(**)	.374(*)	.459(**)	.524(**)	.467(**)	.494(**)	.244	.515(**)	.398(**)	.560(**)	.411(**)	.413(**)	.401(**)	.437(**)	.343(*)	-.067
A23	.217	.049	.104	.053	.090	-.037	.012	.002	.293	.293	.112	.057	.179	.066	.120	.045	.135	.223	.287	.121	.042	.169	-.012	.046	.078
A24	.009	-.135	.024	.001	.062	-.009	.087	.005	.123	.123	.009	-.032	.263	.030	.080	-.117	.073	.077	.233	.095	-.107	.198	.016	.213	.032
A25	.009	-.135	.024	.001	.062	-.009	.087	.005	.123	.123	.009	-.032	.263	.030	.080	-.117	.073	.077	.233	.095	-.107	.198	.016	.213	.032

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

4.4.2(a) ANALYSIS OF THE CORRELATION OF ACADEMIC AUTONOMY (A) WITH FINANCIAL AUTONOMY (B)

The first row-wise correlation analysis of academic and financial autonomy areas showed that *Generating Cutting-Edge Research among Students* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 8 financial areas of B2 - Producing Research Impact among Faculty (.456**), B9 - Admitting Foreign Students (.414**) , B10 - Recruiting Foreign Faculty (.414**), B12 - Undertaking Measures for Curriculum Updates (.406**), B17 - Equipping Students with Professional Experience (.406**), B19 - Bringing in World-class Infrastructure Facilities (.532**), B21 - Undertaking Socially Responsible Actions for the disadvantaged (.493**), and B22 - Fostering Innovative Learning Environment(.493**).

In other words, *Generating Cutting Edge Research among Students* was found to be higher with the financial autonomy in the areas of Producing Research Impact among Faculty, Undertaking Measures for Curriculum Updates, Equipping Students with Professional

Experience, Bringing in World-class Infrastructure Facilities, Undertaking Socially Responsible Actions for the disadvantaged, and Fostering Innovative Learning Environment. To conclude it, for *Generating Cutting-Edge Research among Students*, the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Generating Cutting-Edge Research among Students* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 11 financial areas of B3 - Introducing New Teaching Methods (.352*), B4 - Developing Problem Solving Skills of Students (.321*), B8 - Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.371*), B11 - Reviewing the Student-Teacher-Ratio (.341*), B13 - Making Industry-Institution Interactions (.365*), B14 - Signing MoU with Domestic Companies (.345*), B15 - Engaging in Agreement with Foreign Companies (.363*), B18 - Developing Overall Personality of the Students (.345*), B20 -Conducting Online Learning Programmes (.379*), B23 - Bringing in Inclusive Classroom for the Specially-abled (.378*), and B24 - Promotion of Arts (.342*). To conclude it, for *Generating Cutting-Edge Research among Students*, the financial autonomy in the above areas would be much essential.

The second row-wise correlation analysis of academic and financial autonomy areas showed that *Producing Research Impact among Faculty* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 12 financial areas of B2 – Producing Research Impact among Faculty (.474**), B3 – Introducing New Teaching Method (.427**), B9 Admitting Foreign Students – (.474**), B10 – Recruiting Foreign Faculty (.474**), B12 – Undertaking Measures for Curriculum Updates (.405**), B13 – Making Industry-Institution Interactions (.400**), B15 – Engaging in Agreement with Foreign Companies (.397**), B17 - Equipping Students with Professional Experience (.490**), B19 – Bringing in World-class Infrastructure Facilities (.547**), B21 – Undertaking Socially Responsible Actions for the Disadvantaged (.585**), B22 – Fostering Innovative Learning Environment (.410**), and B23 – Bringing in Inclusive Classroom for the Specially-abled (.411**). To conclude it, for *Producing Research Impact among Faculty*, the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Producing Research Impact among Faculty* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 5 financial areas of B8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.350*), B14 – Signing MoUs with Domestic Companies (.376*), B18 – Developing Overall Personality of the Students (.366*), B20 – Conducting Online Learning Programmes (.390*) and B24 – Promotion of Arts (.366*). To conclude it, for *Producing Research Impact among Faculty*, the financial autonomy in the above areas would be much essential.

The third row-wise correlation analysis of academic and financial autonomy areas showed that *Introducing New Teaching Methods* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 5 financial areas of B1 – Generating Cutting-edge Research among Students (.419**), B2 – Producing Research Impact among Faculty (.459**), B17 – Equipping Students with Professional Experience (.483**), B20 – Conducting Online Learning Programmes (.464**), and B22 – Fostering Innovative Learning Environment (.398**). To conclude it, for *Introducing New Teaching Methods*, the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Introducing New Teaching Methods* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 8 financial areas of B4 – Developing Problem Solving Skills of Students (.311*), B11 – Reviewing the Student-Teacher-Ratio (.337*), B12 – Understanding Measures for Curriculum Updates (.310*), B14 – Signing MoUs with Domestic Companies (.347*), B15 – Engaging in Agreement with Foreign Companies (.370*), B16 – Creating Network with the Expertise in the Study Field (311*), B18 – Developing Overall Personality of the Students (.306*), and B19 – Bringing in World-class Infrastructure Facilities (.365*). To conclude it, for *Introducing New Teaching Methods*, the financial autonomy in the above areas would be much essential.

The fourth row-wise correlation analysis of academic and financial autonomy areas showed that *Developing Problem Solving Skills of Students* as an academic autonomy area was found

to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 9 financial areas of B1 – Generating Cutting-edge Research among Students (.534**), B2 – Producing Research Impact among Faculty (.479**), B3 – Introducing New Teaching Methods (.509**), B5 – Enhancing Organisational Ability of the Students (.433**), B9 – Admitting Foreign Students (.558**), B10 – Recruiting Foreign Faculty (.558**), B13 – Making Industry-Institution Interactions (.477**), B19 – Bringing in World Class Infrastructure Facilities (.433**), and B21 – Undertaking Socially Responsible Actions for the Disadvantaged (.400**) . To conclude it, for *Developing Problem Solving Skills of Students,* the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Developing Problem Solving Skills of Students* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 10 financial areas of B7 – Promoting an Attitude of Serving Others (.381*), B8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.365*), B11 – Reviewing the Student-Teacher-Ratio (.382*), B12 – Understanding Measures for Curriculum updates (.390*), B14 – Signing MoUs with Domestic Companies (.309*), B15 – Engaging in Agreement with Foreign Companies (332*), B16 – Creating Network with the Expertise in the Study Field (.340*), B18 – Developing Overall Personality of the Students (.393*), B22 – Fostering Innovative Learning Environment (.327*), and B24 – Promotion of Arts (.335*). To conclude it, for *Developing Problem Solving Skills of Students,* the financial autonomy in the above areas would be much essential.

The fifth row-wise correlation analysis of academic and financial autonomy areas showed that *Enhancing Organisational Ability of the Students* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 11 financial areas of B1 – Generating Cutting-edge Research among Students (.397**), B4 – Developing Problem Solving Skills of the Students (.412**), B5 – Enhancing Organisational Ability of the Students (.399**), B7 – Promoting an Attitude of Serving Others (.411**), B8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of students (.447**), B9 – Admitting Foreign Students (.418**), B10 – Recruiting Foreign Faculty (.418**), B11 – Reviewing the Student-Teacher-Ratio (.439**), B13 – Making Industry-Institution Interaction (.449**), B21 – Understanding Socially Responsible Actions for the Disadvantaged (.464**), and B24 – Promotion of Arts (.462**). To conclude it,

for *Enhancing Organisational Ability of the Students*, the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Enhancing Organisational Ability of the Students of Students* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 11 financial areas of B2 – Producing Research Impact among Faculty (.356*), B3 – Introducing New Teaching Methods (.386*), B6 – Bringing in Effective Decision Making Capacity (.364*), B14 – Signing MoUs with Domestic Companies (.308*), B15 – Engaging in Agreement with Foreign Companies (.308*), B16 – Creating Network with the Expertise in the Study Field (366*), B17 – Equipping Students with Professional Experience (.391*), B18 – Developing Overall Personaity of the Students (.389*), B20 – Conducting Online Learning Programmes (.310*), B22 – Fostering Innovative Learning Environment (314*), and B23 – Bringing in Inclusive Classroom for the Specially-abled (.354*). To conclude it, for *Enhancing Organisational Ability of the Students*, the financial autonomy in the above areas would be much essential.

The sixth row-wise correlation analysis of academic and financial autonomy areas showed that *Bringing in Effective Decision Making Capacity* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 8 financial areas of B1 – Generating Cutting-edge Research among Students (.463**), B2 – Producing Research Impact among Faculty (.394**), B3 – Introducing New Teaching Methods (.442**), B5 – Enhancing Organisational Ability of the Students (.400**), B6 – Bringing in Effective Decision Making Capacity (.463**), B9 – Admitting Foreign Students (.405**), B10 – Recruiting Foreign Faculty (.405**), and B16 – Creating Network with the Expertise in the Study Field (.583**) . To conclude it, for *Bringing in Effective Decision Making Capacity*, the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Bringing in Effective Decision Making Capacity* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 5 financial areas of B7 – Promoting an attitude of Serving Others (.348*), B11 – Reviewing the Student-Teacher-Ratio (.329*), B13 – Making Industry-

Institution Interactions (.319*), B18 – Developing Overall Personality of the Students (.345*), and B21 – Undertaking Socially Responsible Actions for the Disadvantaged (.333*). To conclude it, for *Bringing in Effective Decision Making Capacity*, the financial autonomy in the above areas would be much essential.

The seventh row-wise correlation analysis of academic and financial autonomy areas showed that *Promoting an Attitude of Serving Others* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with a single financial area of B19 – Bringing in Worl-class Infrastructure Facilities (.453**). To conclude it, for *Promoting an Attitude of Serving Others,* the financial autonomy in the above area would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Promoting an Attitude of Serving Others* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 9 financial areas of B4 – Developing Problem Solving Skills of the Students (.362*), B5 – Enhancing Organisational Ability of the Students (.380*), B8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.317*), B9 – Admitting Foreign Students (.361*), B10 – Recruiting Foreign Faculty (.361*), B11 – Reviewing the Student-Teacher-Ratio (318*), B17 – Equipping Students with Professional Experience (309*), B18 – Developing Overall Personality of the Students (332*), and B21 – Undertaking Socially Responsible Actions for the disadvantaged (315*). To conclude it, for *Promoting an Attitude of Serving Others*, the financial autonomy in the above areas would be much essential.

The eighth row-wise correlation analysis of academic and financial autonomy areas showed that *Conducting Brainstorming Activities for Enhancing Critical Thinking of Students* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 12 financial areas of B2 – Producing Research Impact among Faculty (.393**), B4 - Developing Problem Solving Skills of Students (.460**), B5 – Enhancing Organisational Ability of the Students (.405**), B11 – Reviewing the Student-Teacher-Ratio (.420**), B14 – Signing MoU with Domestic Companies (.442**), B15 – Engaging in Agreement with Foreign Companies (.466**), B18 - Developing Overall Personality of the Students (.431**), B19 - Bringing in World-class

Infrastructure Facilities (.586**), B20 – Conducting Online Learning Programmes (.408**), B21 – Undertaking Socially Responsible Actions for the disadvantaged (.434**), B22 - Fostering Innovative Learning Environment (.451**), and B24 - Promotion of Arts (.424**). To conclude it, for *Conducting Brainstorming Activities for Enhancing Critical Thinking of Students,* the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Conducting Brainstorming Activities for Enhancing Critical Thinking of Students* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 5 financial areas of B8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.314*), B9 – Admitting Foreign Students (.330*), B10 – Recruiting Foreign Faculty (.330*), B17 - Equipping Students with Professional Experience (.342*), and B24 – Promotion of Arts (.314*). To conclude it, for *Conducting Brainstorming Activities for Enhancing Critical Thinking of Students*, the financial autonomy in the above areas would be much essential.

The ninth row-wise correlation analysis of academic and financial autonomy areas showed that *Admitting Foreign Students* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 3 financial areas of B11 – Reviewing the Student-Teacher-Ratio (.413**), B13 - Making Industry-Institution Interactions (.427**), and B22 – Fostering Innovative Learning Environment (.447**). To conclude it, for *Admitting Foreign Students,* the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Admitting Foreign Students* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 5 financial areas of B4 – Developing Problem Solving Skills of Students (.384*), B5 – Enhancing Organisational Ability of the Students (.346*), B9 – Admitting Foreign Students (.308*), B10 - Recruiting Foreign Faculty (.308*), and B17 – Equipping Students with Professional Experience (.373*). To conclude it, for *Admitting Foreign Students*, the financial autonomy in the above areas would be much essential.

The tenth row-wise correlation analysis of academic and financial autonomy areas showed that *Recruiting Foreign Faculty* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 3 financial areas of B11 – Reviewing the Student-Teacher-Ratio (.407**), B13 - Making Industry-Institution Interactions (.464**), and B22 – Fostering Innovative Learning Environment (.439**). To conclude it, for *Recruiting Foreign Faculty*, the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Recruiting Foreign Faculty* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 5 financial areas of B4 – Developing Problem Solving Skills of Students (.363*), B5 – Enhancing Organisational Ability of the Students (.372*), B9 – Admitting Foreign Students (.305*), B10 - Recruiting Foreign Faculty (.305*), and B17 – Equipping Students with Professional Experience (.379*). To conclude it, for *Recruiting Foreign Faculty*, the financial autonomy in the above areas would be much essential.

The eleventh row-wise correlation analysis of academic and financial autonomy areas showed that *Reviewing the Student-Teacher Ratio* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no considerable financial area. To conclude it, for *Reviewing the Student-Teacher Ratio*, the financial autonomy in no given area would be substantially essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Reviewing the Student-Teacher Ratio* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with a financial area of B19 – Bringing in World-class Infrastructure Facilities (.343*). To conclude it, for *Reviewing the Student-Teacher Ratio*, the financial autonomy in the above area would be essential.

The twelfth row-wise correlation analysis of academic and financial autonomy areas showed that *Undertaking Measures for Curriculum Updates* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-

tailed) with a financial areas of B19 – Bringing in World-class Infrastructure Facilities (.491**). To conclude it, for *Undertaking Measures for Curriculum Updates*, the financial autonomy in the above area would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Undertaking Measures for Curriculum Updates* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 4 financial areas of B8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.319*), B9 – Admitting Foreign Students (.353*), B10 - Recruiting Foreign Faculty (.353*), and B12 – Undertaking Measures for Curriculum Updates (.305*). To conclude it, for *Undertaking Measures for Curriculum Updates*, the financial autonomy in the above areas would be much essential.

The thirteenth row-wise correlation analysis of academic and financial autonomy areas showed that *Making Industry Institution Interactions* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no considerable financial area. To conclude it, for *Making Industry Institution Interactions*, the financial autonomy in no given area would be substantially essential.
Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Making Industry Institution Interactions* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 3 financial areas of B13 – (.316*), B19 – (.393*), and B22 – (331*). To conclude it, for *Making Industry Institution Interactions*, the financial autonomy in the above areas would be essential.

The fourteenth row-wise correlation analysis of academic and financial autonomy areas showed that *Signing MoUs with Domestic Companies* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no considerable financial area. To conclude it, for *Signing MoUs with Domestic Companies*, the financial autonomy in no given area would be substantially essential.
Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Signing MoUs with Domestic Companies* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 3 financial areas of B8 – Conducting Brainstorming Activities for Enhancing

Critical Thinking of Students (.314*), B13 – Making Industry-Institution Interactions (.385*), and B22 – Fostering Innovative Learning Environment (393*). To conclude it, for *Signing MoUs with Domestic Companies*, the financial autonomy in the above areas would be essential.

The fifteenth row-wise correlation analysis of academic and financial autonomy areas showed that *Engaging in Agreement with Foreign Companies* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no considerable financial area. To conclude it, for *Engaging in Agreement with Foreign Companies,* the financial autonomy in no given area would be substantially essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Engaging in Agreement with Foreign Companies* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 3 financial area of B8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.314*), B13 – Making Industry-Institution Interactions (.380*), and B22 – Fostering Innovative Learning Environment (388*). To conclude it, for *Engaging in Agreement with Foreign Companies*, the financial autonomy in the above areas would be essential.

The sixteenth row-wise correlation analysis of academic and financial autonomy areas showed that *Creating Network with the Expertise in the Study Field* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with a financial area of B6 – Bringing in Effective Decision Making Capacity (.398**). To conclude it, for *Creating Network with the Expertise in the Study Field,* the financial autonomy in the above area would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Creating Network with the Expertise in the Study Field* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 3 financial areas of B1 – Generating Cutting-edge Research among Students (.371*), B3 – Introducing New Teaching Methods (.366*), and B16 – Creating Network with the Expertise in the Study Field (.366*). To conclude it,

for *Creating Network with the Expertise in the Study Field*, the financial autonomy in the above areas would be much essential.

The seventeenth row-wise correlation analysis of academic and financial autonomy areas showed that *Equipping Students with Professional Experience* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 5 financial areas of B7 – Promoting an attitude of Serving Others (.463**), B8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.405**), B13 - Making Industry-Institution Interactions (.509**), B15 – Engaging in Agreement with Foreign Companies (.413**), and B17 – Equipping Students with Professional Experience (.468**). To conclude it, for *Equipping Students with Professional Experience,* the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Equipping Students with Professional Experience* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 10 financial areas of B3 – Introducing New Teaching Methods (.305*), B4 – Developing Problem Solving Skills of Students (.367*), B5 – Enhancing Organisational Ability of the Students (.335*), B11 – Reviewing the Student-Teacher-Ratio (.316*), B14 – Signing MoU with Domestic Companies (.382*), B18 – Developing Overall Personality of the Students (.323*), B19 – Bringing in World-class Infrastructure Facilities (.323*), B21 – Undertaking Socially Responsible Actions for the disadvantaged (.309*), B22 – Fostering Innovative Learning Environment (.391*), and B24 – Promotion of Arts (.317*). To conclude it, for *Equipping Students with Professional Experience*, the financial autonomy in the above areas would be much essential.

The eighteenth row-wise correlation analysis of academic and financial autonomy areas showed that *Developing Overall Personality of the students* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 23 financial areas of B1 – Generating Cutting-edge Research among Students (.483**), B2 – Producing Research Impact among Faculty (.464**), B3 - Introducing New Teaching Methods (.458**), B4 – Developing Problem Solving Skills of Students (.516**), B5 – Enhancing Organisational Ability of the Students (.545**), B6 –

Bringing in Effective Decision Making Capacity (.497**), B7 – Promoting an attitude of Serving Others (.397**), B8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.473**), B9 – Admitting Foreign Students (.490**), B10 – Recruiting Foreign Faculty (.490**), B11 – Reviewing the Student-Teacher-Ratio (.568**), B12 – Undertaking Measures for Curriculum Updates (.468**), B13 – Making Industry-Institution Interactions (.497**), B14 – Signing MoU with Domestic Companies (.517**), B15 – Engaging in Agreement with Foreign Companies (.538**), B16 – Creating Network with the Expertise in the Study Field (.462**), B17 – Equipping Students with Professional Experience (.526**), B18 – Developing Overall Personality of the Students (.540**), B19 – Bringing in World-class Infrastructure Facilities (.603**), B20 – Conducting Online Learning Programmes (.510**), B21 – Undertaking Socially Responsible Actions for the disadvantaged (.549**), B22 – Fostering Innovative Learning Environment (.438**), and B23 – Bringing in Inclusive Classroom for the Specially-abled (.468**). To conclude it, for *Developing Overall Personality of the students,* the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Developing Overall Personality of the students* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with a financial area of B24 – Promotion of Arts (.332*). To conclude it, for *Developing Overall Personality of the students*, the financial autonomy in the above area would be much essential.

The nineteenth row-wise correlation analysis of academic and financial autonomy areas showed that *Bringing in World-class Infrastructure Facilities* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no considerable financial area. To conclude it, for *Bringing in World-class Infrastructure Facilities,* the financial autonomy in no given area would be substantially essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Bringing in World-class Infrastructure Facilities* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with a financial area of B2 – Producing Research Impact among

Faculty (305*). To conclude it, for *Bringing in World-class Infrastructure Facilities*, the financial autonomy in the above areas would be essential.

The twentieth row-wise correlation analysis of academic and financial autonomy areas showed that *Conducting Online Learning Programmes* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 3 financial areas of B17 - Equipping Students with Professional Experience (.480**), B19 – Bringing in World-class Infrastructure Facilities (.405**), and B20 – Conducting Online Learning Programmes (.496**). To conclude, for *Conducting Online Learning Programmes,* the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Conducting Online Learning Programmes* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 10 financial areas of B1 – Generating Cutting-edge Research among Students (.382*), B4 – Developing Problem Solving Skills of Students (.377*), B8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.344*), B9 – Admitting Foreign Students (.357*), B10 – Recruiting Foreign Faculty (.357*), B11 – Reviewing the Student-Teacher-Ratio (.330*), B12 – Undertaking Measures for Curriculum Updates (.339*), B18 – Developing Overall Personality of the Students (.342*), B21 – Undertaking Socially Responsible Actions for the disadvantaged (.362*), and B22 – Fostering Innovative Learning Environment (.381*). To conclude it, for *Conducting Online Learning Programmes*, the financial autonomy in the above areas would be much essential.

The twenty-first row-wise correlation analysis of academic and financial autonomy areas showed that *Undertaking Socially Responsible Actions for the Disadvantaged* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with a financial area of B19 – Bringing in World-class Infrastructure Facilities (.448**). To conclude it, for *Undertaking Socially Responsible Actions for the Disadvantaged*, the financial autonomy in the above area would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Undertaking Socially Responsible Actions for the Disadvantaged* as an academic autonomy area was found to have *high significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with no considerable financial area. To conclude it, for *Undertaking Socially Responsible Actions for the Disadvantaged*, the financial autonomy in no given area would be essential.

The twenty-second row-wise correlation analysis of academic and financial autonomy areas showed that *Fostering Innovative Learning Environment* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 15 financial areas of B4 – Developing Problem Solving Skills of Students (.443**), B5 – Enhancing Organisational Ability of the Students (.486**), B9 - Admitting Foreign Students (.395**), B10 – Recruiting Foreign Faculty (.395**), B12 – Undertaking Measures for Curriculum Updates (.459**), B13 – Making Industry-Institution Interactions (.524**), B14 – Signing MoU with Domestic Companies (.467**), B15 – Engaging in Agreement with Foreign Companies (.494**), B17 – Equipping Students with Professional Experience (.515**), B18 – Developing Overall Personality of the Students (.398**), B19 – Bringing in World-class Infrastructure Facilities (.560**), B20 – Conducting Online Learning Programmes (.411**), B21 – Undertaking Socially Responsible Actions for the disadvantaged (.413**), B22 – Fostering Innovative Learning Environment (.401**), and B23 – Bringing in Inclusive Classroom for the Specially-abled (.437**). To conclude it, for *Fostering Innovative Learning Environment*, the financial autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas showed that *Fostering Innovative Learning Environment* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 8 financial areas of B1 – Generating Cutting-edge Research among Students (.329*), B2 – Producing Research Impact among Faculty (.355*), B3 – Introducing New Teaching Methods (.383*), B6 – Bringing in Effective Decision Making Capacity (.357*), B7 – Promoting an attitude of Serving Others (.383*), B8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.367*), B11 – Reviewing the Student-Teacher-Ratio (.374*), and B24 – Promotion of Arts (.343*). To

conclude it, for *Fostering Innovative Learning Environment*, the financial autonomy in the above areas would be much essential.

The twenty-third, twenty-fourth and twenty-fifth row-wise correlation analysis of academic and financial autonomy areas showed that *Bringing in Inclusive Classroom for the Specially-abled*, *Promotion of Arts* and *Promotion of Culture* respectively as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no significant financial areas found, and so it is concluded for all the three rows, the financial autonomy in the given areas would not be essential.

Similarly, the row-wise correlation analysis of academic and financial autonomy areas of all the three rows as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with no significant financial areas. To conclude it, for all these three rows, the financial autonomy in the above areas would not be essential.

4.4.3 STATISTICAL CORRELATION OF ACADEMIC AUTONOMY (A) WITH ADMINISTRATIVE AUTONOMY (C)

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25
A1	.408(**)	.452(**)	.533(**)	.331(*)	.248	.298	.388(*)	.243	.419(**)	.431(**)	.374(*)	.475(**)	.450(**)	.631(**)	.646(**)	.215	.337(*)	.370(*)	.467(**)	.352(*)	.492(**)	.268	.251	.338(*)	.338(*)
	.007	.003	.000	.032	.113	.055	.011	.121	.006	.004	.015	.001	.003	.000	.000	.171	.029	.016	.002	.022	.001	.086	.109	.029	.029
	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
A2	.272	.396(**)	.425(**)	.258	.164	.198	.375(*)	.169	.366(*)	.344(*)	.365(*)	.439(**)	.483(**)	.553(**)	.569(**)	.165	.262	.302	.400(**)	.273	.403(**)	.157	.172	.271	.271
	.082	.009	.005	.099	.299	.208	.014	.284	.017	.026	.017	.004	.001	.000	.000	.296	.093	.052	.009	.081	.008	.322	.275	.082	.082
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25
A3	.531(**)	.477(**)	.363(*)	.296	.262	.361(*)	.292	.225	.358(*)	.377(*)	.315(*)	.443(**)	.454(**)	.565(**)	.578(**)	.309(*)	.345(*)	.384(*)	.424(**)	.370(*)	.430(**)	.410(**)	.377(**)	.148	.148

A4	.230	.227	.361(**)	.403(**)	.304	.247	.569(**)	.255	.517(**)	.499(**)	.367(*)	.410(**)	.570(**)	.623(**)	.599(**)	.301	.269	.312(*)	.509(**)	.378(*)	.452(**)	.290	.266	.438(**)	.438(**)
A5	.379(*)	.415(**)	.427(**)	.368(*)	.354(*)	.332(*)	.427(**)	.377(*)	.418(**)	.412(**)	.475(**)	.473(**)	.307(*)	.346(*)	.300	.413(**)	.377(*)	.264	.429(**)	.386(*)	.239	.211	.236	.370(*)	.370(*)
A6	.276	.263	.413(**)	.487(**)	.157	.347(*)	.385(*)	.395(**)	.417(**)	.411(**)	.340(*)	.202	.389(*)	.496(**)	.369(*)	.670(**)	.217	.307(*)	.281	.260	.386(*)	.108	.264	.240	.240
A7	.115	.071	.152	.168	.154	.200	.309(*)	.308(*)	.287	.298	.329(*)	.315(*)	.179	.266	.225	.175	.170	.084	.216	.252	.122	.024	.060	.160	.160
A8	.482(**)	.402(**)	.269	.224	.424(**)	.182	.219	.424(**)	.450(**)	.467(**)	.407(**)	.323(*)	.440(**)	.404(**)	.423(**)	.140	.357(*)	.175	.418(**)	.412(**)	.368(*)	.244	.195	.253	.253
A9	.397(**)	.351(*)	-.048	.401(**)	.173	.124	.280	.375(*)	.074	.118	.342(*)	.116	.248	.217	.234	.279	.390(*)	.237	.227	.359(*)	.284	.366(*)	.314(**)	.141	.141
A10	.380(*)	.374(*)	-.057	.394(**)	.159	.112	.276	.372(*)	.083	.103	.352(*)	.093	.264	.207	.225	.269	.389(*)	.222	.213	.356(*)	.274	.337(*)	.294	.111	.111
A11	.014	.065	.049	.203	.107	.170	.017	.111	.292	.275	.147	.176	.196	.192	.185	-.053	.092	.109	.289	-.086	.163	.287	.050	.118	.118
A12	.294	.298	.377(*)	.505(**)	.231	.258	.298	.427(**)	.565(**)	.542(**)	.298	.436(**)	.394(**)	.452(**)	.473(**)	.220	.480(**)	.370(*)	.568(**)	.161	.197	.337(*)	.311(**)	.397(**)	.397(**)
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25
A13	.245	.155	.196	.385(*)	.368(*)	.155	.408(**)	.195	.353(*)	.370(*)	.164	.314(*)	.446(**)	.389(*)	.374(*)	.121	.167	.251	.388(*)	.268	.363(*)	.320(*)	.169	.413(**)	.413(**)
A14	.375(*)	.267	.303	.377(*)	.312(*)	.182	.333(*)	.300	.210	.229	.248	.323(*)	.315(*)	.297	.320(*)	.211	.384(*)	.438(**)	.506(**)	.383(*)	.203	.271	.222	.473(**)	.473(**)
A15	.354(*)	.247	.278	.366(*)	.307(*)	.176	.316(*)	.283	.200	.218	.245	.325(*)	.302	.280	.269	.184	.369(*)	.433(**)	.500(**)	.395(**)	.196	.292	.230	.451(**)	.451(**)
A16	.315(	.356(	.285	.395(	.226	.525(	.191	.308(	.241	.216	.397(	.134	.262	.309(	.186	.488(	.257	.230	.167	.121	.407(	.172	.047	.123	.123

	*)	*)		**		**		*)			**			*)		**					**						
A17	.296	.281	.320(*)	.370(*)	.372(*)	.320(*)	.300	.230	.320(*)	.311(*)	.478(**)	.274	.264	.290	.279	.126	.233	.157	.423(**)	.404(**)	.214	.134	.116	.407(**)	.407(**)
A18	.456(**)	.405(**)	.361(*)	.416(**)	.283	.274	.484(**)	.390(*)	.431(**)	.445(**)	.468(**)	.409(**)	.436(**)	.614(**)	.591(**)	.447(**)	.277	.234	.428(**)	.288	.427(**)	.328(*)	.271	.319(*)	.319(*)
A19	.371(*)	.409(**)	.118	.366(*)	.284	.302	.142	.387(*)	-.061	-.068	.245	.179	.378(*)	.388(*)	.373(*)	.210	.408(**)	.334(*)	.398(**)	.396(**)	.520(**)	.404(**)	.279	.050	.050
A20	.280	.274	.485(**)	.258	.104	.100	.211	.105	.208	.229	.386(*)	.226	.326(*)	.422(**)	.440(**)	.222	.134	.365(*)	.438(**)	.316(*)	.251	.234	.064	.222	.222
A21	-.134	-.193	.041	.198	.090	.086	-.006	.108	.181	.168	.086	.040	.113	.172	.165	-.039	-.208	-.075	.204	-.050	.096	.160	.066	.300	.300
A22	.247	.329(*)	.158	.264	.316(*)	.154	.208	.093	.432(**)	.379(*)	.546(**)	.276	.434(**)	.316(*)	.341(*)	.107	.271	.070	.270	.162	.350(*)	.187	-.010	.215	.215
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25
A23	-.149	-.075	.056	-.054	-.261	-.058	.009	.010	.187	.153	.107	.062	.049	.052	.050	-.070	-.106	.095	.353(*)	-.041	-.016	-.012	-.097	.002	.002
A24	-.002	.030	.068	.089	.041	.071	.065	.125	.230	.193	.122	.100	-.034	.012	.011	-.101	.115	.256	.145	.046	-.185	.108	.011	.269	.269
A25	-.002	.030	.068	.089	.041	.071	.065	.125	.230	.193	.122	.100	-.034	.012	.011	-.101	.115	.256	.145	.046	-.185	.108	.011	.269	.269

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

4.4.3(a) ANALYSIS OF THE CORRELATION OF ACADEMIC AUTONOMY (A) WITH ADMINISTRATIVE AUTONOMY (C)

The first row-wise correlation analysis of academic and administrative autonomy areas showed that *Generating Cutting-Edge Research among Students* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 11 administrative areas of C1 - Generating Cutting-edge Research among Students (.408**), C2 - Producing Research Impact among Faculty (.452**), C3 -

Introducing New Teaching Methods (.533**), C9 - Introducing New Teaching Methods (.419**), C10 - Recruiting Foreign Faculty (.431**), C12 - Undertaking Measures for Curriculum Updates (.475**), C13 - Making Industry-Institution Interactions (.450**), C14 - Signing MoU with Domestic Companies (.631**), C15 - Engaging in Agreement with Foreign Companies (.646**), C19 – Bringing in World-class Infrastructure Facilities (.467**), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.492**). To conclude it, for *Generating Cutting-Edge Research among Students*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Generating Cutting-Edge Research among Students* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 8 administrative areas of C4 - Developing Problem Solving Skills of Students (.331*), C7 - Promoting an attitude of Serving Others (.388*), C11 - Reviewing the Student-Teacher-Ratio (.374*), C17 - Equipping Students with Professional Experience (.337*), C18 - Developing Overall Personality of the Students (.370*), C20 - Conducting Online Learning Programmes, C24 - Promotion of Arts (.338*), and C25 - Promotion of Culture (.338*). To conclude it, for *Generating Cutting-Edge Research among Students*, the administrative autonomy in the above areas would be much essential.

The second row-wise correlation analysis of academic and administrative autonomy areas showed that *Producing Research Impact among Faculty* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 8 administrative areas of C2 – Producing Research Impact among Faculty (.396**), C3 – Introducing New Teaching Methods (.425**), C12 - Undertaking Measures for Curriculum Updates – (.439**), C13 – Making Industry-Institution Interactions (.483**), C14 – Signing MoU with Domestic Companies (.553**), C15 – Engaging in Agreement with Foreign Companies (.569**), C19 – Bringing in World-class Infrastructure Facilities (.400**), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.403**). To conclude it, for *Producing Research Impact among Faculty*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Producing Research Impact among Faculty* as an academic autonomy area was

found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 4 administrative areas of C7 – Promoting an attitude of Serving Others (.375*), C9 – Admitting Foreign Students (.366*), C10 – Recruiting Foreign Faculty (.344*) and C11 – Reviewing the Student-Teacher-Ratio (.365*). To conclude it, for *Producing Research Impact among Faculty*, the administrative autonomy in the above areas would be much essential.

The third row-wise correlation analysis of academic and administrative autonomy areas showed that *Introducing New Teaching Methods* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 9 administrative areas of C1 – Generating Cutting-edge Research among Students (.531**), C2 – Producing Research Impact among Faculty (.477**), C12 – Undertaking Measures for Curriculum Updates (.443**), C13 – Making Industry-Institution Interactions (.454**), C14 – Signing MoU with Domestic Companies (.565**), C15 – Engaging in Agreement with Foreign Companies (.578**), C19 – Bringing in World-class Infrastructure Facilities (.424**), C21 – Undertaking Socially Responsible Actions for the disadvantaged (.430**), and C22 – Fostering Innovative Learning Environment (.410**). To conclude it, for *Introducing New Teaching Methods*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Introducing New Teaching Methods* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 10 administrative areas of C3 – Introducing New Teaching Methods (.363*), C6 – Bringing in Effective Decision Making Capacity (.361*), C9 – Admitting Foreign Students (.358*), C10 – Recruiting Foreign Faculty (.377*), C11 – Reviewing the Student-Teacher-Ratio (.315*), C16 – Creating Network with the Expertise in the Study Field (.309*), C17 – Equipping Students with Professional Experience (.345*), C18 – Developing Overall Personality of the Students (384*), C20 – Conducting Online Learning Programmes (.370*), and C23– Bringing in Inclusive Classroom for the Specially-abled (.377*). To conclude it, for *Introducing New Teaching Methods*, the administrative autonomy in the above areas would be much essential.

The fourth row-wise correlation analysis of academic and administrative autonomy areas showed that *Developing Problem Solving Skills of Students* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 12 administrative areas of C4 – Developing Problem Solving Skills of Students (.403**), C7 – Promoting an attitude of Serving Others (.569**), C9 – Admitting Foreign Students (.517**), C10 – Recruiting Foreign Faculty (.499**), C12 – Undertaking Measures for Curriculum Updates (.410**), C13 – Making Industry-Institution Interactions (.570**), C14 – Signing MoU with Domestic Companies (.623**), C15 – Engaging in Agreement with Foreign Companies (.599**), C19 – Bringing in World-class Infrastructure Facilities (.509**), C21 – Undertaking Socially Responsible Actions for the disadvantaged (.452**), C24 – Promotion of Arts (.438**), and C25 – Promotion of Culture (.438**) . To conclude it, for *Developing Problem Solving Skills of Students*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Developing Problem Solving Skills of Students* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 4 administrative areas of C3 – Introducing New Teaching Methods (.361*), C11 – Reviewing the Student-Teacher-Ratio (.367*), C18 – Developing Overall Personality of the Students (.312*), and C20 – Conducting Online Learning Programmes (.378*). To conclude it, for *Developing Problem Solving Skills of Students*, the administrative autonomy in the above areas would be much essential.

The fifth row-wise correlation analysis of academic and administrative autonomy areas showed that *Enhancing Organisational Ability of the Students* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 9 administrative areas of C2 – Producing Research Impact among Faculty (.415**), C3 – Introducing New Teaching Methods (.427**), C7 – Promoting an attitude of Serving Others (.427**), C9 – Admitting Foreign Students (.418**), C10 – Recruiting Foreign Faculty (.412**), C11 – Reviewing the Student-Teacher-Ratio (.475**), C12 – Undertaking Measures for Curriculum Updates (.473**), C16 – Creating Network with the Expertise in the Study Field (.413**), and C19 – Bringing in World-class Infrastructure Facilities (.429**). To conclude it, for *Enhancing Organisational Ability of the Students*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Enhancing Organisational Ability of the Students of Students* as an academic autonomy area was found to have *high significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 11 administrative areas of C1 – Generating Cutting-edge Research among Students (.379*), C4 – Developing Problem Solving Skills of Students (.368*), C5 – Enhancing Organisational Ability of the Students (.354*), C6 – Bringing in Effective Decision Making Capacity (.332*), C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.377*), C13 – Making Industry-Institution Interactions (307*), C14 – Signing MoU with Domestic Companies (.346*), C17 – Equipping Students with Professional Experience (.377*), C20 – Conducting Online Learning Programmes (.386*), C24 – Promotion of Arts (370*), and C25 – Promotion of Culture (.370*). To conclude it, for *Enhancing Organisational Ability of the Students*, the administrative autonomy in the above areas would be much essential.

The sixth row-wise correlation analysis of academic and administrative autonomy areas showed that *Bringing in Effective Decision Making Capacity* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 7 administrative areas of C3 – Introducing New Teaching Methods (.413**), C4 – Developing Problem Solving Skills of Students (.487**), C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.395**), C9 – Admitting Foreign Students (.417**), C10 – Recruiting Foreign Faculty (.411**), C14 – Signing MoU with Domestic Companies (.496**), and C16 – Creating Network with the Expertise in the Study Field (.670**). To conclude it, for *Bringing in Effective Decision Making Capacity*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Bringing in Effective Decision Making Capacity* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 7 administrative areas of C6 – Bringing in Effective Decision Making Capacity (.347*), C7 – Promoting an attitude of Serving Others (.385*), C11 – Promoting an attitude of Serving Others (.340*), C13 – Reviewing the Student-Teacher-Ratio (.389*), C15 – Engaging in Agreement with Foreign Companies (.369*), C18 – Developing Overall Personality of the Students (.307*), and C21 – Undertaking Socially Responsible Actions for

the disadvantaged (.386*). To conclude it, for *Bringing in Effective Decision Making Capacity*, the administrative autonomy in the above areas would be much essential.

The seventh row-wise correlation analysis of academic and administrative autonomy areas showed that *Promoting an Attitude of Serving Others* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no given administrative area. Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Promoting an Attitude of Serving Others* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 4 administrative areas of C7 – Promoting an attitude of Serving Others (309*), C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (308*), C11 – Reviewing the Student-Teacher-Ratio (329*), and C12 – Undertaking Measures for Curriculum Updates (315*). To conclude it, for *Promoting an Attitude of Serving Others*, the administrative autonomy in the above areas would be much essential.

The eighth row-wise correlation analysis of academic and administrative autonomy areas showed that *Conducting Brainstorming Activities for Enhancing Critical Thinking of Students* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 12 administrative areas of C1 – Generating Cutting-edge Research among Students (.482**), C2 - Producing Research Impact among Faculty (.402**), C5 – Enhancing Organisational Ability of the Students (.424**), C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.424**), C9 – Admitting Foreign Students (.450**), C10 – Recruiting Foreign Faculty (.467**), C11 - Reviewing the Student-Teacher-Ratio (.407**), C13 - Making Industry-Institution Interactions (.440**), C14 – Signing MoU with Domestic Companies (.404**), C15 – Engaging in Agreement with Foreign Companies (.423**), C19 - Bringing in World-class Infrastructure Facilities (.418**), and C20 - Conducting Online Learning Programmes (.412**). To conclude it, for *Conducting Brainstorming Activities for Enhancing Critical Thinking of Students*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Conducting Brainstorming Activities for Enhancing Critical Thinking of*

Students as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 3 administrative areas of C12 – Undertaking Measures for Curriculum Updates (.323*), C17 - Equipping Students with Professional Experience (.357*), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.368*). To conclude it, for *Conducting Brainstorming Activities for Enhancing Critical Thinking of Students*, the administrative autonomy in the above areas would be much essential.

The ninth row-wise correlation analysis of academic and administrative autonomy areas showed that *Admitting Foreign Students* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 2 administrative areas of C1 - Generating Cutting-edge Research among Students (.397**), and C4 – Developing Problem Solving Skills of Students (.401**). To conclude it, for *Admitting Foreign Students,* the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Admitting Foreign Students* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 7 administrative areas of C2 – Producing Research Impact among Faculty (.351*), C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.375*), C11 – Reviewing the Student-Teacher-Ratio (.342*), C17 – Equipping Students with Professional Experience (.390*), C20 – Conducting Online Learning Programmes (.359*), C22 - Fostering Innovative Learning Environment (.366*), and C23 – Bringing in Inclusive Classroom for the Specially-abled (.314*). To conclude it, for *Admitting Foreign Students*, the administrative autonomy in the above areas would be much essential.

The tenth row-wise correlation analysis of academic and administrative autonomy areas showed that *Recruiting Foreign Faculty* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with an administrative area of C4 – Developing Problem Solving Skills of Students (.439**). To conclude it, for *Recruiting Foreign Faculty*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Recruiting Foreign Faculty* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 7 administrative areas of C1 – Generating Cutting-edge Research among Students (.380*), C2 – Producing Research Impact among Faculty (.374*), C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.372*), C11 – Reviewing the Student-Teacher-Ratio (.352*), C16 – Creating Network with the Expertise in the Study Field (.389*), C20 - Conducting Online Learning Programmes (.356*), and C22 – Fostering Innovative Learning Environment (.337*). To conclude it, for *Recruiting Foreign Faculty*, the administrative autonomy in the above areas would be much essential.

The eleventh row-wise correlation analysis of academic and administrative autonomy areas showed that *Reviewing the Student-Teacher Ratio* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no considerable administrative area. To conclude it, for *Reviewing the Student-Teacher Ratio*, the administrative autonomy in no given area would be substantially essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Reviewing the Student-Teacher Ratio* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with no considerable administrative area.

The twelfth row-wise correlation analysis of academic and administrative autonomy areas showed that *Undertaking Measures for Curriculum Updates* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 12 administrative areas of C4 - Developing Problem Solving Skills of Students (.505**), C8 - Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.427**), C9 - Admitting Foreign Students (.565**), C10 - Recruiting Foreign Faculty (.542**), C12 - Undertaking Measures for Curriculum Updates (.436**), C13 - Making Industry-Institution Interactions (.394**), C14 - Signing MoU with Domestic Companies (.452**), C15 - Engaging in Agreement with Foreign Companies (.473**), C17 - Equipping Students with Professional Experience (.480**), C19 - Bringing in World-class Infrastructure Facilities (.568**), C24 - Promotion of Arts (.397**), and C25 - Promotion of

Culture (.397**), . To conclude it, for *Undertaking Measures for Curriculum Updates*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Undertaking Measures for Curriculum Updates* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 4 administrative areas of C3 – Introducing New Teaching Methods (.377*), C18 – Developing Overall Personality of the Students (.370*), C22 - Fostering Innovative Learning Environment (.337*), and C23 – Bringing in Inclusive Classroom for the Specially-abled (.311*). To conclude it, for *Undertaking Measures for Curriculum Updates*, the administrative autonomy in the above areas would be much essential.

The thirteenth row-wise correlation analysis of academic and administrative autonomy areas showed that *Making Industry Institution Interactions* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 4 administrative areas of C7 – Promoting an attitude of Serving Others (.408**), C13 – Making Industry-Institution Interactions (.446**), C24 – Promotion of Arts (.413**), and C25 – Promotion of Culture (.413**). To conclude it, for *Making Industry Institution Interactions*, the administrative autonomy in the above areas would be very much essential.
Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Making Industry Institution Interactions* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 10 administrative areas of C4 – Developing Problem Solving Skills of Students (.385*), C5 – Enhancing Organisational Ability of the Students (.368*), C9 – Admitting Foreign Students (.353*), C10 – Recruiting Foreign Faculty (.370*), C12 – Undertaking Measures for Curriculum Updates (.314*), C14 – Signing MoU with Domestic Companies (.389*), C15 – Engaging in Agreement with Foreign Companies (.374*), C19 – Bringing in World-class Infrastructure Facilities (.388*), C21 – Undertaking Socially Responsible Actions for the disadvantaged (.363*), and C22 – Fostering Innovative Learning Environment (320*). To conclude it, for *Making Industry Institution Interactions*, the administrative autonomy in the above areas would be essential.

The fourteenth row-wise correlation analysis of academic and administrative autonomy areas showed that *Signing MoUs with Domestic Companies* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 4 administrative areas of C18 – Developing Overall Personality of the Students (.438**), C19 – Bringing in World-class Infrastructure Facilities (.506**), C24 – Promotion of Arts (.473**), and C25 – Promotion of Culture (.473**). To conclude it, for *Signing MoUs with Domestic Companies*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Signing MoUs with Domestic Companies* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 9 administrative areas of C1 – Generating Cutting-edge Research among Students (.375*), C4 – Developing Problem Solving Skills of Students (.377*), C5 – Enhancing Organisational Ability of the Students (.312*), C7 – Promoting an attitude of Serving Others (.333*), C12 – Undertaking Measures for Curriculum Updates (.323*), C13 – Making Industry-Institution Interactions (.315*), C15 – Engaging in Agreement with Foreign Companies (.320*), C17 – Equipping Students with Professional Experience (.384*), and C20 – Conducting Online Learning Programmes (383*). To conclude it, for *Signing MoUs with Domestic Companies*, the administrative autonomy in the above areas would be essential.

The fifteenth row-wise correlation analysis of academic and administrative autonomy areas showed that *Engaging in Agreement with Foreign Companies* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 5 administrative areas of C18 – Developing Overall Personality of the Students (.433**), C19 – Bringing in World-class Infrastructure Facilities (.506**), C20 – Conducting Online Learning Programmes (.395**), C24 – Promotion of Arts (.451**), and C25 – Promotion of Culture (.451**). To conclude it, for *Engaging in Agreement with Foreign Companies*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Engaging in Agreement with Foreign Companies* as an academic autonomy

area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 6 administrative area of C1 – Generating Cutting-edge Research among Students (.354*), C4 – Developing Problem Solving Skills of Students (.366*), C5 – Enhancing Organisational Ability of the Students (.307*), C7 – Promoting an attitude of Serving Others (.316*), C12 – Undertaking Measures for Curriculum Updates (.325*), and C17 – Equipping Students with Professional Experience (.369*). To conclude it, for *Engaging in Agreement with Foreign Companies*, the administrative autonomy in the above areas would be essential.

The sixteenth row-wise correlation analysis of academic and administrative autonomy areas showed that *Creating Network with the Expertise in the Study Field* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 5 administrative areas C4 – Developing Problem Solving Skills of Students (.395**), C6 – Bringing in Effective Decision Making Capacity (.525**), C11 – Reviewing the Student-Teacher-Ratio (.397**), C16 – Creating Network with the Expertise in the Study Field (.488**), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.407**). To conclude it, for *Creating Network with the Expertise in the Study Field*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Creating Network with the Expertise in the Study Field* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 4 administrative areas of C1 – Generating Cutting-edge Research among Students (.315*), C2 – Producing Research Impact among Faculty (.356*), C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.308*), and C14 – Signing MoU with Domestic Companies (.309*). To conclude it, for *Creating Network with the Expertise in the Study Field*, the administrative autonomy in the above areas would be much essential.

The seventeenth row-wise correlation analysis of academic and administrative autonomy areas showed that *Equipping Students with Professional Experience* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 5 administrative areas of C11 – Reviewing the Student-

Teacher-Ratio (.478**), C19 – Bringing in World-class Infrastructure Facilities (.423**), C20 - Conducting Online Learning Programmes (.404**), C24 – Promotion of Arts (.407**), and C25 – Promotion of Culture (.407**). To conclude it, for *Equipping Students with Professional Experience*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Equipping Students with Professional Experience* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 6 administrative areas of C3 – Introducing New Teaching Methods (.320*), C4 – Developing Problem Solving Skills of Students (.370*), C5 – Enhancing Organisational Ability of the Students (.372*), C6 – Undertaking Bringing in Effective Decision Making Capacity (.320*), C9 – Admitting Foreign Students (.320*), and C10 – Recruiting Foreign Faculty (.311*). To conclude it, for *Equipping Students with Professional Experience*, the administrative autonomy in the above areas would be much essential.

The eighteenth row-wise correlation analysis of academic and administrative autonomy areas showed that *Developing Overall Personality of the students* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 14 administrative areas of C1 – Generating Cutting-edge Research among Students (.456**), C2 – Producing Research Impact among Faculty (.405**), C4 – Developing Problem Solving Skills of Students (.416**), C7 – Promoting an attitude of Serving Others (.484**), C9 – Admitting Foreign Students (.431**), C10 – Recruiting Foreign Faculty (.445**), C11 – Reviewing the Student-Teacher-Ratio (.468**), C12 – Undertaking Measures for Curriculum Updates (.409**), C13 – Making Industry-Institution Interactions (.436**), C14 – Signing MoU with Domestic Companies (.614**), C15 – Engaging in Agreement with Foreign Companies (.591**), C16 – Creating Network with the Expertise in the Study Field (.447**), C19 – Bringing in World-class Infrastructure Facilities (.428**), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.427**). To conclude it, for *Developing Overall Personality of the students*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Developing Overall Personality of the students* as an academic autonomy area

was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 5 administrative areas of C3 – Introducing New Teaching Methods (.361*), C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.390*), C22 – Fostering Innovative Learning Environment (.328*), C24 – Promotion of Arts (.319*), and C25 – Promotion of Culture (.319*). To conclude it, for *Developing Overall Personality of the students*, the administrative autonomy in the above areas would be much essential.

The nineteenth row-wise correlation analysis of academic and administrative autonomy areas showed that *Bringing in World-class Infrastructure Facilities* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 6 administrative areas of C2 – Producing Research Impact among Faculty (.409**), C17 – Equipping Students with Professional Experience (.408**), C19 – Bringing in World-class Infrastructure Facilities (.398**), C20 – Conducting Online Learning Programmes (.396**), C21 – Undertaking Socially Responsible Actions for the disadvantaged (.520**), and C22 – Fostering Innovative Learning Environment (.404**). To conclude it, for *Bringing in World-class Infrastructure Facilities*, the administrative autonomy in no given area would be substantially essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Bringing in World-class Infrastructure Facilities* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 7 administrative area of C1 – Generating Cutting-edge Research among Students (.371*), C4 – Developing Problem Solving Skills of Students (.366*), C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.387*), C13 – Making Industry-Institution Interactions (.378*), C14 – Signing MoU with Domestic Companies (.388*), C15 – Engaging in Agreement with Foreign Companies (.373*), and C18 – Developing Overall Personality of the Students (.334*). To conclude it, for *Bringing in World-class Infrastructure Facilities*, the administrative autonomy in the above areas would be essential.

The twentieth row-wise correlation analysis of academic and administrative autonomy areas showed that *Conducting Online Learning Programmes* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-

tailed) with 4 administrative areas of C3 – Introducing New Teaching Methods (.485**), C14 – Signing MoU with Domestic Companies (.422**), C15 – Engaging in Agreement with Foreign Companies (.440**), and C19 – Bringing in World-class Infrastructure Facilities (.438**). To conclude it, for *Conducting Online Learning Programmes*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Conducting Online Learning Programmes* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 4 administrative areas of C11 – Reviewing the Student-Teacher-Ratio (.386*), C13 – Making Industry-Institution Interactions (.326*), C18 – Developing Overall Personality of the Students (.365*), and C20 – Conducting Online Learning Programmes (.316*). To conclude it, for *Conducting Online Learning Programmes*, the administrative autonomy in the above areas would be much essential.

The twenty-first row-wise correlation analysis of academic and administrative autonomy areas showed that *Undertaking Socially Responsible Actions for the Disadvantaged* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no given substantial administrative area. Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Undertaking Socially Responsible Actions for the Disadvantaged* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with no considerable administrative area.

The twenty-second row-wise correlation analysis of academic and administrative autonomy areas showed that *Conducting Online Learning Programmes* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 3 administrative areas of C9 – Admitting Foreign Students (.432**), C11 – Reviewing the Student-Teacher-Ratio (.546**), and C13 – Making Industry-Institution Interactions (.434**). To conclude it, for *Conducting Online Learning Programmes*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Conducting Online Learning Programmes* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level

(2-tailed) with 6 administrative areas of C2 – Producing Research Impact among Faculty (329*), C5 – Enhancing Organisational Ability of the Students (316*), C10 – Recruiting Foreign Faculty (.379*), C14 – Signing MoU with Domestic Companies (.316*), C15 – Engaging in Agreement with Foreign Companies (.341*), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.350*). To conclude it, for *Conducting Online Learning Programmes*, the administrative autonomy in the above areas would be much essential.

The twenty-third row-wise correlation analysis of academic and administrative autonomy areas showed that *Undertaking Socially Responsible Actions for the Disadvantaged* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no given substantial administrative area. And the row-wise correlation analysis of academic and administrative autonomy areas showed that *Undertaking Socially Responsible Actions for the Disadvantaged* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with an administrative area of C19 – Bringing in World-class Infrastructure Facilities (.353*). To conclude it, for *Conducting Online Learning Programmes*, the administrative autonomy in the above area would be much essential.

The twenty-fourth and twenty-fifth row-wise correlation analyses of academic and administrative autonomy areas showed that *Undertaking Socially Responsible Actions for the Disadvantaged* as an academic autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no given substantial administrative area. Similarly, the row-wise correlation analysis of academic and administrative autonomy areas showed that *Undertaking Socially Responsible Actions for the Disadvantaged* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with no considerable given administrative area.

4.4.4 STATISTICAL CORRELATION OF FINANCIAL AUTONOMY (B) WITH ADMINISTRATIVE AUTONOMY (C)

		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25
B1	Pearson Correlation	.323(**)	.425(**)	.302	.250	.238	.267	.261	.284	.470(**)	.456(**)	.437(**)	.159	.560(**)	.444(**)	.393(**)	.584(**)	.182	.239	.424(**)	.306(*)	.486(**)	.227	.194	.185	.185
B2	Pearson Correlation	.455(**)	.524(**)	.241	.278	.263	.348(*)	.410(**)	.255	.483(**)	.439(**)	.280	.331(*)	.695(**)	.619(**)	.565(**)	.566(**)	.350(*)	.215	.173	.455(**)	.582(**)	.204	.459(**)	.055	.055
B3	Pearson Correlation	.377(**)	.503(**)	.277	.225	.176	.148	.380(**)	.316(*)	.370(**)	.326(**)	.453(**)	.242	.607(**)	.461(**)	.407(**)	.574(**)	.222	.193	.217	.272	.425(**)	.028	.279	.136	.136
B4	Pearson Correlation	.364(**)	.229	.136	.201	.268	.098	.122	.160	.355(**)	.395(**)	.432(**)	.095	.293	.200	.161	.314(**)	.119	-.002	.150	.403(**)	.356(**)	.207	.122	.177	.177
	Sig. (2-tailed)	.018	.145	.390	.202	.087	.537	.443	.311	.021	.010	.004	.550	.060	.204	.307	.043	.454	.987	.344	.008	.021	.188	.442	.262	.262
		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25
B5	Pearson Correlation	.295	.265	.022	.214	.213	.016	.270	.294	.384(**)	.356(**)	.481(**)	.034	.377(**)	.314(**)	.270	.407(**)	.097	-.108	.009	.432(**)	.395(**)	.057	.210	.147	.147
B6	Pearson Correlation	.279	.182	.017	.226	.248	.089	.096	.191	.268	.282	.376(**)	.068	.210	.151	.050	.414(**)	.009	-.052	-.044	.226	.290	.071	.094	.101	.101
B	Pe	.2	.1	.0	.1	.2	.0	.3	.0	.1	.1	.5	.1	.4	.1	.1	.3	-	.1	.0	.3	.1	.	.1	.2	.2

7	arson Correlation	21	60	71	96	93	14	07(*)	96	65	52	02(**)	15	28(**)	91	57	00	.041	04	83	71(*)	84	034	69	44	44
B8	Pearson Correlation	.278	.209	.143	.171	.252	-.039	.266	.125	.251	.280	.340(*)	.213	.397(**)	.299	.287	.314(*)	.082	.184	.161	.246	.151	.075	.207	.212	.212
B9	Pearson Correlation	.047	.107	.136	.094	.115	.149	.377(*)	.155	.640(**)	.650(**)	.370(*)	.197	.490(**)	.447(**)	.429(**)	.439(**)	.109	.034	.212	.133	.251	.055	.317(*)	.406(**)	.406(**)
B10	Pearson Correlation	.047	.107	.136	.094	.115	.149	.377(*)	.155	.640(**)	.650(**)	.370(*)	.197	.490(**)	.447(**)	.429(**)	.439(**)	.109	.034	.212	.133	.251	.055	.317(*)	.406(**)	.406(**)
B11	Pearson Correlation	.442(**)	.356(*)	.208	.258	.274	.250	.269	.450(**)	.416(**)	.436(**)	.483(**)	.349(*)	.483(**)	.458(**)	.440(**)	.555(**)	.268	.158	.139	.493(**)	.502(**)	.261	.527(**)	.286	.286
B12	Pearson Correlation	.143	.198	.212	.193	.197	.098	.134	.215	.512(**)	.494(**)	.420(**)	.187	.400(**)	.468(**)	.450(**)	.395(**)	.147	.068	.077	.183	.324(*)	.099	.358(*)	.304	.304
B13	Pearson Correlation	.248	.259	.091	.331(*)	.220	.042	.384(*)	.205	.414(**)	.373(*)	.394(**)	.167	.416(**)	.326(*)	.348(*)	.354(*)	.078	.123	.145	.341(*)	.236	.131	.420(**)	.437(**)	.437(**)
	Sig. (2-tailed)	.113	.098	.565	.032	.161	.793	.012	.193	.006	.015	.010	.291	.006	.035	.024	.022	.623	.436	.359	.027	.132	.408	.006	.004	.004
		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25
B1	Pears	.33	.32	.07	.12	.19	.05	.14	.16	.19	.19	.38	.13	.38	.34	.32	.20	.10	-.0	.14	.26	.33	.0	.26	.21	.21

4	on Correlation	1(*)	7(*)	7	0	3	6	8	1	3	6	9(*)	3	1(*)	2(*)	8(*)	2	4	37	5	3	3(*)	00	9	2	2
B15	Pearson Correlation	.367(*)	.365(*)	.054	.112	.190	.076	.163	.146	.219	.221	.360(*)	.137	.404(**)	.329(*)	.317(*)	.224	.092	-.041	.171	.251	.358(*)	.022	.253	.225	.225
B16	Pearson Correlation	.295	.218	.193	.214	.256	.279	.268	.142	.470(**)	.475(**)	.385(*)	.164	.444(**)	.327(*)	.203	.524(**)	.064	.087	-.040	.314(*)	.333(*)	-.014	.253	.152	.152
B17	Pearson Correlation	.362(*)	.311(*)	.143	.242	.226	.092	.228	.049	.201	.203	.388(*)	.265	.371(*)	.270	.291	.228	.060	.123	.103	.417(**)	.254	.118	.356(*)	.264	.264
B18	Pearson Correlation	.251	.201	.219	.114	.280	.120	.216	.267	.408(**)	.404(**)	.516(**)	.220	.494(**)	.347(*)	.299	.332(*)	.094	.145	.085	.341(*)	.302	.077	.173	.203	.203
B19	Pearson Correlation	.272	.217	.124	.157	.195	.089	.218	.340(*)	.479(**)	.456(**)	.260	.238	.346(*)	.513(**)	.531(**)	.243	.175	-.020	.238	.176	.342(*)	.127	.291	.237	.237
B20	Pearson Correlation	.607(**)	.544(**)	.449(**)	.294	.416(**)	.216	.100	.352(*)	.239	.238	.584(**)	.373(*)	.381(*)	.250	.240	.267	.231	.307(*)	.258	.434(**)	.337(*)	.256	.165	.165	.165
B21	Pearson Correlation	.369(*)	.380(*)	.318(*)	.205	.107	-.030	.292	.288	.271	.264	.382(*)	.395(**)	.523(**)	.420(**)	.403(**)	.343(*)	.202	.148	.197	.387(*)	.335(*)	.000	.305(*)	.184	.184
B22	Pearson Co	.334(*)	.269	.182	.227	.234	.108	.337(*)	.049	.391(*)	.415(*	.283	.243	.451(*	.308(*)	.328(*)	.268	.148	.225	.164	.431(*	.300	.223	.322(*)	.354(*)	.354(*)

	rrelation										*)			*)							*)						
B23	Pearson Correlation	.328(*)	.389(*)	.338(*)	.238	.272	.011	.337(*)	.283	.461(**)	.453(**)	.557(**)	.346(*)	.564(**)	.315(*)	.334(*)	.320(*)	.321(*)	.267	.075	.350(*)	.284	.187	.318(*)	.296	.296
		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25
B24	Pearson Correlation	-.032	-.004	.283	-.057	.144	.008	.249	.039	.484(**)	.478(**)	.410(**)	.207	.372(*)	.155	.149	.234	-.012	.018	.014	.203	.035	-.087	.199	.471(**)	.471(**)
B25	Pearson Correlation	-.343(*)	-.345(*)	-.036	-.239	-.212	-.225	-.106	-.161	.286	.283	-.050	-.085	-.064	-.128	-.123	.030	-.097	-.134	-.266	-.108	-.251	-.241	.170	.292	.292

4.4.4(a) ANALYSIS OF CORRELATION OF FINANCIAL AUTONOMY (B) WITH ADMINISTRATIVE AUTONOMY (C)

The first row-wise correlation analysis of financial and administrative autonomy areas showed that *Generating Cutting-Edge Research among Students* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 10 administrative areas of C2 – Producing Research Impact among Faculty (.425**), C9 – Admitting Foreign Students (.470**), C10 – Recruiting Foreign Faculty (.456**), C11 - Reviewing the Student-Teacher-Ratio (.487**), C13 - Making Industry-Institution Interactions (.560**), C14 - Signing MoU with Domestic Companies (.444**), C15 - Engaging in Agreement with Foreign Companies (.393**), C16 - Creating Network with the Expertise in the Study Field (.584**), C19 – Bringing in World-class Infrastructure Facilities (.424**), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.486**). To conclude it, for *Generating Cutting-Edge Research among Students*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Generating Cutting-Edge Research among Students* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 2 administrative areas of C1 - Generating Cutting-edge Research among Students (.323*), and C20 - Conducting Online Learning Programmes (.306*). To conclude it, for *Generating Cutting-Edge Research among Students*, the administrative autonomy in the above areas would be much essential.

The second row-wise correlation analysis of financial and administrative autonomy areas showed that *Producing Research Impact among Faculty* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 12 administrative areas of C1 – Generating Cutting-edge Research among Students (.455**), C2 – Producing Research Impact among Faculty (.524**), C7 – Promoting an attitude of Serving Others (.410**), C9 – Admitting Foreign Students (.483**), C10 – Recruiting Foreign Faculty (.439**), C13 – Making Industry-Institution Interactions (.695**), C14 – Signing MoU with Domestic Companies (.619**), C15 – Engaging in Agreement with Foreign Companies (.565**), C16 – Creating Network with the Expertise in the Study Field (.566**), C20 – Conducting Online Learning Programmes (.455**), C21 – Undertaking Socially Responsible Actions for the disadvantaged (.582**), and C23 – Bringing in Inclusive Classroom for the Specially-abled (.459**). To conclude it, for *Producing Research Impact among Faculty*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Producing Research Impact among Faculty* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 4 administrative areas of C1 – Generating Cutting-edge Research among Students (.364*), C9 – Admitting Foreign Students (.355*), C16 – Creating Network with the Expertise in the Study Field (.314*) and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.356*). To conclude it, for *Producing Research Impact among Faculty*, the administrative autonomy in the above areas would be much essential.

The third row-wise correlation analysis of financial and administrative autonomy areas showed that *Introducing New Teaching Methods* as a financial autonomy area was found to

be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 7 administrative areas of C2 - Producing Research Impact among Faculty (.503**), C11 - Reviewing the Student-Teacher-Ratio (.453**), C13 - Making Industry-Institution Interactions (.607**), C14 - Signing MoU with Domestic Companies (.461**), C15 - Engaging in Agreement with Foreign Companies (.407**), C16 – Creating Network with the Expertise in the Study Field (.574**), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.425**). To conclude it, for *Introducing New Teaching Methods*, the administrative autonomy in the above areas would be much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Introducing New Teaching Methods* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 5 administrative areas of C1 – Generating Cutting-edge Research among Students (.377*), C7 – Promoting an attitude of Serving Others (.380*), C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.316*), C9 – Admitting Foreign Students Students (.370*), and C10 – Recruiting Foreign Faculty (.326*). To conclude it, for *Introducing New Teaching Methods*, the administrative autonomy in the above areas would be much essential.

The fourth row-wise correlation analysis of financial and administrative autonomy areas showed that *Developing Problem Solving Skills of Students* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 3 administrative areas of C10 – Recruiting Foreign Faculty (.395**), C11 – Reviewing the Student-Teacher-Ratio (.432**), and C20 – Conducting Online Learning Programmes (.403**) . To conclude it, for *Developing Problem Solving Skills of Students*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Developing Problem Solving Skills of Students* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 4 administrative areas of C1 – Generating Cutting-edge Research among Students (.364*), C9 – Admitting Foreign Students (.355*), C16 – Creating Network with the Expertise in the Study Field (.314*), and C21 – Undertaking Socially Responsible Actions

for the disadvantaged (.356*). To conclude it, for *Developing Problem Solving Skills of Students*, the administrative autonomy in the above areas would be much essential.

The fifth row-wise correlation analysis of financial and administrative autonomy areas showed that *Enhancing Organisational Ability of the Students* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 4 administrative areas of C11 – Reviewing the Student-Teacher-Ratio (.481**), C16 – Creating Network with the Expertise in the Study Field (.407**), C20 – Conducting Online Learning Programmes (.432**), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.395**). To conclude it, for *Enhancing Organisational Ability of the Students*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Enhancing Organisational Ability of the Students of Students* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 4 administrative areas of C9 – Admitting Foreign Students (.384*), C10 – Recruiting Foreign Faculty (.356*), C13 – Making Industry-Institution Interactions (.377*), and C14 – Signing MoU with Domestic Companies (.314*). To conclude it, for *Enhancing Organisational Ability of the Students*, the administrative autonomy in the above areas would be much essential.

The sixth row-wise correlation analysis of financial and administrative autonomy areas showed that *Bringing in Effective Decision Making Capacity* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with an administrative area of C16 – Creating Network with the Expertise in the Study Field (.414**). To conclude it, for *Bringing in Effective Decision Making Capacity*, the administrative autonomy in the above area would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Bringing in Effective Decision Making Capacity* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with an administrative area of C11 – Reviewing the Student-Teacher-

Ratio (.376*). To conclude it, for *Bringing in Effective Decision Making Capacity*, the administrative autonomy in the above areas would be much essential.

The seventh row-wise correlation analysis of financial and administrative autonomy areas showed that *Promoting an Attitude of Serving Others* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 2 administrative areas of C11 – Reviewing the Student-Teacher-Ratio (.502**), and C13 – Making Industry-Institution Interactions (.428**). Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Promoting an Attitude of Serving Others* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 2 administrative areas of C7 – Promoting an attitude of Serving Others (307*), and C20 – Conducting Online Learning Programmes (371*). To conclude it, for *Promoting an Attitude of Serving Others*, the administrative autonomy in the above areas would be much essential.

The eighth row-wise correlation analysis of financial and administrative autonomy areas showed that *Conducting Brainstorming Activities for Enhancing Critical Thinking of Students* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with an administrative area of C13 - Making Industry-Institution Interactions (.397**). To conclude it, for *Conducting Brainstorming Activities for Enhancing Critical Thinking of Students*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Conducting Brainstorming Activities for Enhancing Critical Thinking of Students* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 2 administrative areas of C11 – Reviewing the Student-Teacher-Ratio (.340*), and C16 – Creating Network with the Expertise in the Study Field (.314*). To conclude it, for *Conducting Brainstorming Activities for Enhancing Critical Thinking of Students*, the administrative autonomy in the above areas would be much essential.

The ninth row-wise correlation analysis of financial and administrative autonomy areas showed that *Admitting Foreign Students* as a financial autonomy area was found to be *highly*

significantly correlated (** Correlation is significant at the 0.01 level (2-tailed) with 8 administrative areas of C9 – Admitting Foreign Students (.640**), C10 – Recruiting Foreign Faculty (.650**), C13 – Making Industry-Institution Interactions (.490**), C14 – Signing MoU with Domestic Companies (.447**), C15 – Engaging in Agreement with Foreign Companies (.429**), C16 – Creating Network with the Expertise in the Study Field (.439**), C24 - Promotion of Arts (.406**), and C25 – Promotion of Culture (.406**). To conclude it, for *Admitting Foreign Students,* the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Admitting Foreign Students* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 3 administrative areas of C7 – Promoting an attitude of Serving Others (.377*), C11 - Reviewing the Student-Teacher-Ratio (.370*), and C23 – Bringing in Inclusive Classroom for the Specially-abled (.317*). To conclude it, for *Admitting Foreign Students,* the administrative autonomy in the above areas would be much essential.

The tenth row-wise correlation analysis of financial and administrative autonomy areas showed that *Recruiting Foreign Faculty* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 8 administrative areaS of C9 – Admitting Foreign Students (.640**), C10 – Recruiting Foreign Faculty (.650**), C13 – Making Industry-Institution Interactions (.490**), C14 – Signing MoU with Domestic Companies (.447**), C15 – Engaging in Agreement with Foreign Companies (.429**), C16 – Creating Network with the Expertise in the Study Field (.439**), C24 – Promotion of Arts (.406**), C25 – Promotion of Culture (.406**). To conclude it, for *Recruiting Foreign Faculty,* the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Recruiting Foreign Faculty* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 3 administrative areas of C7 - Conducting Online Learning Programmes (.377*), C11 – Fostering Innovative Learning Environment (.370*), and C23 - Bringing in Inclusive

Classroom for the Specially-abled (.317*). To conclude it, for *Recruiting Foreign Faculty*, the administrative autonomy in the above areas would be much essential.

The eleventh row-wise correlation analysis of financial and administrative autonomy areas showed that *Reviewing the Student-Teacher Ratio* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 12 administrative areas of C1 - Generating Cutting-edge Research among Students (.442**), C8 - Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.450**), C9 - Admitting Foreign Students (.416**), C10 - Recruiting Foreign Faculty (.436**), C11 - Reviewing the Student-Teacher-Ratio (.483**), C13 - Making Industry-Institution Interactions (.483**), C14 - Signing MoU with Domestic Companies (.458**), C15 - Engaging in Agreement with Foreign Companies (.440**), C16 - Creating Network with the Expertise in the Study Field (.555**), C20 - Conducting Online Learning Programmes (.493**), C21 - Undertaking Socially Responsible Actions for the disadvantaged (.502**), and C23 - Bringing in Inclusive Classroom for the Specially-abled (.527**). To conclude it, for *Reviewing the Student-Teacher Ratio*, the administrative autonomy in no given area would be substantially essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Reviewing the Student-Teacher Ratio* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with two administrative areas of C2 - Producing Research Impact among Faculty (.356*), and C12 - Undertaking Measures for Curriculum Updates (.349*). To conclude it, for *Reviewing the Student-Teacher Ratio*, the administrative autonomy in the above areas would be much essential.

The twelfth row-wise correlation analysis of financial and administrative autonomy areas showed that *Undertaking Measures for Curriculum Updates* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 7 administrative areas of C9 - Admitting Foreign Students (.512**), C10 - Recruiting Foreign Faculty (.494**), C11 - Reviewing the Student-Teacher-Ratio (.420**), C13 - Making Industry-Institution Interactions (.400**), C14 - Signing MoU with Domestic Companies (.468**), C15 - Engaging in Agreement with Foreign Companies (.450**), and C16 - Creating Network with the Expertise in the Study Field (.395**). To conclude it,

for *Undertaking Measures for Curriculum Updates*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Undertaking Measures for Curriculum Updates* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 2 administrative areas of C21 - Undertaking Socially Responsible Actions for the disadvantaged (.324*), and C23 – Bringing in Inclusive Classroom for the Specially-abled (.358*). To conclude it, for *Undertaking Measures for Curriculum Updates*, the administrative autonomy in the above areas would be much essential.

The thirteenth row-wise correlation analysis of financial and administrative autonomy areas showed that *Making Industry Institution Interactions* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 6 administrative areas of C9 – Admitting Foreign Students (.414**), C11 – Reviewing the Student-Teacher-Ratio (.394**), C13 – Making Industry-Institution Interactions (.416**), C23- Bringing in Inclusive Classroom for the Specially-abled (.420**), C24 – Promotion of Arts (.437**), and C25 – Promotion of Culture (.437**). To conclude it, for *Making Industry Institution Interactions*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Making Industry Institution Interactions* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 7 administrative areas of C4 – Developing Problem Solving Skills of Students (.331*), C7 – Promoting an attitude of Serving Others (.384*), C10 – Recruiting Foreign Faculty (.373*), C14 – Signing MoU with Domestic Companies (.326*), C15 – Engaging in Agreement with Foreign Companies (.348*), C16 – Creating Network with the Expertise in the Study Field (.354*), and C20 – Conducting Online Learning Programmes (341*). To conclude it, for *Making Industry Institution Interactions*, the administrative autonomy in the above areas would be essential.

The fourteenth row-wise correlation analysis of financial and administrative autonomy areas showed that *Signing MoUs with Domestic Companies* as a financial autonomy area was

found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no substantial administrative area. To conclude it, for *Signing MoUs with Domestic Companies,* the administrative autonomy in no given area would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Signing MoUs with Domestic Companies* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 7 administrative areas of C1 – Generating Cutting-edge Research among Students (.331*), C2 – Producing Research Impact among Faculty (.327*), C11 – Reviewing the Student-Teacher-Ratio (.389*), C13 – Making Industry-Institution Interactions (.381*), C14 – Signing MoU with Domestic Companies (.342*), C15 – Engaging in Agreement with Foreign Companies (328*), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.333*). To conclude it, for *Signing MoUs with Domestic Companies*, the administrative autonomy in the above areas would be essential.

The fifteenth row-wise correlation analysis of financial and administrative autonomy areas showed that *Engaging in Agreement with Foreign Companies* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with an administrative area of C13 – Making Industry-Institution Interactions (.404**). To conclude it, for *Engaging in Agreement with Foreign Companies,* the administrative autonomy in the above areas would be very much essential.
Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Engaging in Agreement with Foreign Companies* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 6 administrative areas of C1 – Generating Cutting-edge Research among Students (.367*), C2 – Producing Research Impact among Faculty (.365*), C11 – Reviewing the Student-Teacher-Ratio (.360*), C14 – Signing MoU with Domestic Companies (.329*), C15 – Engaging in Agreement with Foreign Companies (.317*), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.358*). To conclude it, for *Engaging in Agreement with Foreign Companies*, the administrative autonomy in the above areas would be essential.

The sixteenth row-wise correlation analysis of financial and administrative autonomy areas showed that *Creating Network with the Expertise in the Study Field* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 4 administrative areas C9 – Admitting Foreign Students (.470**), C10 – Recruiting Foreign Faculty (.475**), C13 – Making Industry-Institution Interactions (.444**), and C16 – Creating Network with the Expertise in the Study Field (.524**). To conclude it, for *Creating Network with the Expertise in the Study Field,* the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Creating Network with the Expertise in the Study Field* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 4 administrative areas of C11 – Reviewing the Student-Teacher-Ratio (.385*), C14 – Signing MoU with Domestic Companies (.327*), C20 – Conducting Online Learning Programmes (.314*), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.333*). To conclude it, for *Creating Network with the Expertise in the Study Field*, the administrative autonomy in the above areas would be much essential.

The seventeenth row-wise correlation analysis of financial and administrative autonomy areas showed that *Equipping Students with Professional Experience* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with an administrative area of C20 – Conducting Online Learning Programmes (.417**). To conclude it, for *Equipping Students with Professional Experience,* the administrative autonomy in the above areas would be very much essential.
Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Equipping Students with Professional Experience* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 5 administrative areas of C1 – Generating Cutting-edge Research among Students (.362*), C2 – Producing Research Impact among Faculty (.311*), C11 – Reviewing the Student-Teacher-Ratio (.388*), C13 – Making Industry-Institution Interactions (.371*), and C23 – Bringing in Inclusive Classroom for the Specially-abled (.356*). To conclude it, for *Equipping Students with Professional Experience*, the administrative autonomy in the above areas would be much essential.

The eighteenth row-wise correlation analysis of financial and administrative autonomy areas showed that *Developing Overall Personality of the students* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 4 administrative areas of C9 – Generating Cutting-edge Research among Students (.408**), C10 – Producing Research Impact among Faculty (.404**), C11 – Developing Problem Solving Skills of Students (.516**), C13 – Promoting an attitude of Serving Others (.494**). To conclude it, for *Developing Overall Personality of the students,* the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Developing Overall Personality of the students* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 3 administrative areas of C14 – Fostering Innovative Learning Environment (.347*), C16 – Promotion of Arts (.332*), and C20 – Promotion of Culture (.341*). To conclude it, for *Developing Overall Personality of the students*, the administrative autonomy in the above areas would be much essential.

The nineteenth row-wise correlation analysis of financial and administrative autonomy areas showed that *Bringing in World-class Infrastructure Facilities* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 4 administrative areas of C9 – Admitting Foreign Students (.479**), C10 – Recruiting Foreign Faculty (.456**), C14 – Signing MoU with Domestic Companies (.513**), and C15 – Engaging in Agreement with Foreign Companies (.531**). To conclude it, for *Bringing in World-class Infrastructure Facilities,* the administrative autonomy in no given area would be substantially essential.
Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Bringing in World-class Infrastructure Facilities* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 3 administrative areas of C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.340*), C13 – Making Industry-Institution Interactions (.346*), C21 – Undertaking Socially Responsible Actions for the disadvantaged (.342*),.To conclude it, for *Bringing in World-class Infrastructure Facilities*, the administrative autonomy in the above areas would be essential.

The twentieth row-wise correlation analysis of financial and administrative autonomy areas showed that *Conducting Online Learning Programmes* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 6 administrative areas of C1 – Generating Cutting-edge Research among Students (.607**), C2 – Producing Research Impact among Faculty (.544**), C3 – Introducing New Teaching Methods (.449**), C5 – Enhancing Organisational Ability of the Students (.416**), C11 – Reviewing the Student-Teacher-Ratio (.584**), and C20 – Conducting Online Learning Programmes (.434**). To conclude it, for *Conducting Online Learning Programmes,* the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Conducting Online Learning Programmes* as an financial autonomy area was found to have *high significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 5 administrative areas of C8 – Conducting Brainstorming Activities for Enhancing Critical Thinking of Students (.352*), C12 – Undertaking Measures for Curriculum Updates (.373*), C13 – Making Industry-Institution Interactions (.381*), C18 – Developing Overall Personality of the Students (.307*), and C21 – Undertaking Socially Responsible Actions for the disadvantaged (.337*). To conclude it, for *Conducting Online Learning Programmes*, the administrative autonomy in the above areas would be much essential.

The twenty-first row-wise correlation analysis of financial and administrative autonomy areas showed that *Undertaking Socially Responsible Actions for the Disadvantaged* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 4 administrative areas of C12 – Undertaking Measures for Curriculum Updates (.395**), C13 – Making Industry-Institution Interactions (.523**), C14 – Signing MoU with Domestic Companies (.420**), and C15 – Engaging in Agreement with Foreign Companies (.403**), Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Undertaking Socially Responsible Actions for the Disadvantaged* as an academic autonomy area was found to have *high significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 8 administrative areas of C1 – Generating Cutting-edge Research among Students (.369*), C2 – Producing Research Impact among Faculty (.380*), C3 – Introducing

New Teaching Methods (.318*), C11 – Reviewing the Student-Teacher-Ratio (.382*), C16 – Creating Network with the Expertise in the Study Field (.343*), C20 – Conducting Online Learning Programmes (.387*), C21 – Undertaking Socially Responsible Actions for the disadvantaged (.335*), and C23 – Bringing in Inclusive Classroom for the Specially-abled (.305*). To conclude it, for *Undertaking Socially Responsible Actions for the Disadvantaged*, the administrative autonomy in the above areas would be much essential.

The twenty-second row-wise correlation analysis of financial and administrative autonomy areas showed that *Fostering Innovative Learning Environment* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 3 administrative areas of C10 – Recruiting Foreign Faculty (.415**), C13 – Reviewing Making Industry-Institution Interactions (.451**), and C20– Conducting Online Learning Programmes (.431**). To conclude it, for *Fostering Innovative Learning Environment*, the administrative autonomy in the above areas would be very much essential.

Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Fostering Innovative Learning Environment* as a financial autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 8 administrative areas of C1 – Generating Cutting-edge Research among Students (.334*), C7 – Promoting an attitude of Serving Others (.337*), C9 – Admitting Foreign Students (391*), C14 – Signing MoU with Domestic Companies (308*), C15 – Engaging in Agreement with Foreign Companies (.328*), C23– Bringing in Inclusive Classroom for the Specially-abled (.322*), C24 – Promotion of Arts (.354*), and C25 – Promotion of Culture (.354*). To conclude it, for *Fostering Innovative Learning Environment*, the administrative autonomy in the above areas would be much essential.

The twenty-third row-wise correlation analysis of financial and administrative autonomy areas showed that *Bringing in Inclusive Classroom for the Specially-abled* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 4 administrative areas of C9 – Admitting Foreign Students (.461**), C10 – Recruiting Foreign Faculty (.453**), C11 – Reviewing the Student-Teacher-Ratio (.557**), and C13 – Making Industry-Institution Interactions (.564**). And the row-wise correlation analysis of financial and administrative autonomy areas showed that *Bringing in Inclusive Classroom for the Specially-abled* as a financial autonomy area

was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 11 administrative areas of C1 – Generating Cutting-edge Research among Students (.328*), C2 – Producing Research Impact among Faculty (.389*), C3 – Introducing New Teaching Methods (.338*), C7 – Promoting an attitude of Serving Others (.337*), C12 – Undertaking Measures for Curriculum Updates (.346*), C14 – Signing MoU with Domestic Companies (.315*), C15 – Engaging in Agreement with Foreign Companies (.334*), C16 – Creating Network with the Expertise in the Study Field (.320*), C17 – Equipping Students with Professional Experience (.321*), C20 – Conducting Online Learning Programmes (.350*), and C23 – Bringing in Inclusive Classroom for the Specially-abled (.318*). To conclude it, for *Bringing in Inclusive Clasroom for the Specially-abled*, the administrative autonomy in the above area would be much essential.

The twenty-fourth row-wise correlation analysis of financial and administrative autonomy areas showed that *Promotion of Arts* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with 5 administrative areas of C9 – Admitting Foreign Students (.484**), C10 – Recruiting Foreign Faculty (.478**), C11 – Reviewing the Student-Teacher-Ratio (.410**), C24 – Promotion of Arts (.471**), and C25 – Promotion of Culture (.471**). Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Promotion of Arts* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with an administrative area of C13 – Making Industry-Institution Interactions (.372*). To conclude it, for *Promotion of Arts*, the administrative autonomy in the above area would be much essential.

The twenty-fifth row-wise correlation analysis of financial and administrative autonomy areas showed that *Promotion of Culture* as a financial autonomy area was found to be *highly significantly correlated* (** Correlation is significant at the 0.01 level (2-tailed) with no substantial given administrative area. Similarly, the row-wise correlation analysis of financial and administrative autonomy areas showed that *Promotion of Culture* as an academic autonomy area was found to have a *highly significant correlation* (* Correlation is significant at the 0.05 level (2-tailed) with 2 administrative areas of C1 – Generating Cutting-edge Research among Students (.343*), and C2 – Producing Research Impact among

Faculty (.345*). To conclude it, for *Promotion of Culture*, the administrative autonomy in the above area would be much essential.

4.5 STATISTICAL PERFORMANCE OF STEP-WISE REGRESSION

Descriptive Statistics

	Mean	Std. Deviation	N
TOTALA	96.2381	13.98049	42
TOTALB	101.3810	17.07652	42
TOTALC	94.6667	15.21499	42

Correlations

		TOTALA	TOTALB	TOTALC
Pearson Correlation	TOTALA academic	1.000	.545	.651
	TOTALB financial	.545	1.000	.517
	TOTALC Administrative	.651	.517	1.000
Sig. (1-tailed)	TOTALA	.	.000	.000
	TOTALB	.000	.	.000
	TOTALC	.000	.000	.
N	TOTALA	42	42	42
	TOTALB	42	42	42
	TOTALC	42	42	42

Step-wise regression analysis

Model	R	**R Square**	Adjusted R Square	Std. Error of the Estimate					
	R Square Change	F Change	df1	df2	Sig. F Change				
1	.651(a)	.424	.410	10.73881	.424				
2	.695(b)	.483	.457	10.30218	.059				

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	**Sig.**
		B	Std. Error	Beta	B	**Std. Error**
1	(Constant)	39.572	10.566		3.745	**.001**

	TOTALC	.599	.110	**.651**	5.430	**.000**
2	(Constant)	28.764	11.354		2.533	**.015**
	TOTALC	.464	.123	**.505**	3.756	**.001**
	TOTALB	.232	.110	**.284**	2.112	**.041**

a Dependent Variable: TOTALA

Excluded Variables(b)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
		Tolerance	Tolerance	Tolerance	Tolerance	Tolerance
1	TOTALB	**.284(a)**	2.112	**.041**	.320	.733

a Predictors: (Constant), Administrative autonomy
b Predictors: (Constant), Administrative, financial autonomy
c Dependent Variable: ACADEMIC autonomy
b Dependent Variable: TOTALA

4.5(a) ANALYSIS OF STEP-WISE REGRESSION

The regression model focuses on the relationship between a dependent variable and a set of independent variables. The dependent variable is the outcome, where one attempts to predict, by using one or more independent variables. The dependent variable selected, here, is the Academic Autonomy, and the independent variables are Financial Autonomy and Administrative Autonomy. In order to fulfil the third objective of this research, that is, to establish the impact of Financial Autonomy and Administrative Autonomy on academic autonomy. It is premised on the notion that for global ranking, the academic factors/ indicators were found to be critical as reported in studies.

The aim is to ascertain which type of autonomy, among finance and administration, that has facilitating role on the Academic Autonomy. When there is a general notion that financial autonomy augments other autonomy, the academic autonomy facilitates the performance of the institution as it provides the freedom to faculty over generating cutting edge research and designing state of the art curriculum, making required collaboration within and outside the institution and so forth. 42% (R-Square=.424 level of variance in academic autonomy was predicted by the administrative autonomy Beta .284, significant at .041. In other words, it's the part of the model's total variance that is explained by factors that are actually present and isn't due to error variance. % variance explained comes from, the correlation coefficient R-squared**.**

It is found that 42% (R-Square=.424) was significantly and reliably predicted academic autonomy. It was found that 42% of the variance in academic autonomy was predicted by the administrative autonomy followed by financial autonomy 6% (.424 and .483 of R square as cumulative impact). By the above results, the impact of administrative autonomy was found to be higher than financial autonomy to predict academic autonomy.

4.6 Conclusion

In this section, the data extracted from the qualitative interviews and quantitative survey questionnaire is reported. The former is presented under the category of verbal depiction and the latter under the statistical portrayal with the help of tabular columns as framed in this chapter. It does not involve any interpretation or discussion with the projected data of what would the results imply and its causes and the same is preserved for the next chapter that is exclusively for discussing the data. To make the data presentation concise and cogent, firstly, qualitative evidence was put forward at the beginning followed by the quantitative extrapolations both verbally and numerally. Secondly, the findings were structured in a manner closer to research questions that are to be primarily answered in this dissertation. Hence, this chapter is a reportage of the excerpts from secondary literature plus the information from interviews to examine the significance of institutional autonomy followed by the database of correlation analysis to determine the relation between types of autonomy, and finally, the dataset of regression performance to evaluate the impact of institutional autonomy.

CHAPTER 5 AUTONOMY AND RANKINGS: ANALYSIS AND REFLECTIONS

5.1 Introduction

This chapter is to discuss the themes and patterns that come out of the collected and collated data in this research. The major aim, here, is to detect what message and meaning that the researcher can generate through the comparison of obtained findings with the existing literature on the study topic. It is to aggregate qualitative information and statistical data into a complex whole to arrive at a conclusion. In an effort to accomplish this, the key research questions are reposed to get answered with the backing of the literature. It is further taken to identify and connect the research findings with the available body of knowledge in order to justify the results and thereby making a noteworthy contribution to the whole academic discipline.

5.2 Significance of Institutional Autonomy in Attaining Global Ranking

The institutional autonomy majorly consists of academic, financial and administrative spaces and it denotes the capability of the higher educational institutions to draft and execute their own priorities and motives through institutional policy mechanism for teaching, learning, research, fulfilling their mission such as community service, industry coactions, and to meet their vision. According to the *Magna Charta Universitatum* which is translated into English as 'Fundamental Principles', the autonomy in research and educational training is the bedrock of the university life. For resisting intolerance and ever welcome to open dialogue, the academic institutions are an absolute arena besides to enhance the research outcome and impact, innovation and creativity amongst students, and ultimately to enrich their minds with the best knowledge (para. 3). This research highlights two contrasting perception of institutional autonomy. A school of thought argues institutional freedom is a key characteristic of democratic ethos (Leiber, 2017) and the preamble of the *Magna Charta Universitatum* emphasised that the requisite for the academic institutions as to be autonomous and fully independent from politics and economic influences. On the other pole, the institutional autonomy was not seen as a separation from the politics and the government instead considered as a free will to deliver on the mandates built by the government (Mohan, 2016). According to the interviewed stakeholders, it is the unhampered autonomy devoid of any extraneous forces would lead the institution at the forefront in the twelve indicators employed by the QS World University Rankings to rank the institutions. It was reported that when an individual or entity outside the institution, however best, channelises the decision

making, it may not necessarily be institution-centric, and so eventually taking to under efficiency in the institutional outcomes.

The present times demand supra-development of knowledge, scientific inventions and technological innovations (EUA, 2019) to address ever-increasing concerns and issues. Only the cutting-edge research, in universities, colleges like spaces make such demands feasible. To materialise this goal, academic and financial autonomy play a vitally significant role in the educational institutions. Here, the administration too has a considerable part as expressed in the below lines. The review of literature called for the public authorities and government to engage on the lines of trust-oriented dialogues continually; to desist from the internal institutional matters; to warrant the funding decisions unconditionally from the funding councils and bodies; to safeguard the teachers, researchers, and students by investing with adequate institutional freedom (EUA, 2019). It was observed in the interviews that advancing institutional freedom as a cardinal rule may appear challenging given the strong political presence such as in the appointment of top executive professionals; in the financial and other resources allocation by government agencies. Since the university spaces are becoming increasingly significant in responding to the wants and needs of the ever ascending knowledge societies through impactful research findings and innovations, the institutional autonomy has a predominant role to attain the objectives and goals on time. From the interviews, it can be reportedly evident that institutional autonomy evenly shared among academics, financial professionals and executives are nothing but rudimentary to the techno-scientific developments, standard higher education, quality outcomes, and sovereign collaboration which is considered to be evaluated in the ranking systems.

5.3 An Institutional Autonomy that has Higher Weight in the Ranking

The necessity for the institutional autonomy emerged in the background needs such as diversification of higher education, enhancement of excellency, germination of creativity and innovative practices. In India, higher education is encrusted with numerous checks, controls and interferences which are exerted by public authorities and officials (Sankaran, Kizhekepat & Joshi, 2016). At present times, six such functionaries or agencies are in place to exercise controls on education administration. In the policy move, the call for autonomy in higher education was made in draft of New Education Policy, 2016. This status quo bestows the need for the institutional freedom to overcome the concerns and problems of the institution, the surrounding communities, the society, and the humanity at large. The *QS WUR* judge

institutions on the basis of a parameter (QS WUR, 2020) which involves producing latest research; adopting efficient and sound teaching methods; nurturing employment and employability skills among students; building up the international outlook of the institution; bringing up world-class infrastructure; conducting online or distance education services to the needy and interested ones; undertaking socially responsible actions for the disadvantaged; developing innovative and creative practices; promoting arts and culture on the campus; adding inclusive nature to the institutional profile, improving the subject ranking, and the strength of the programmes taught at the institution. Research shows that academic autonomy is central to scientific developments and advancements, standardised quality higher education, collaboration inland and in a foreign land (ScienceDaily, 2020).

Often times, academic freedom is defined as a concern majorly between the respective institution and the government of the time. The academic autonomy is beyond this point and it is regarded as the obligation of the individual institution and the ruling regime (Noorda, 2013). Going by the UGC's definition of autonomy, it is the considerable flexibility in the direction of solely academic growth towards enhancing the academic quality, standards and excellence. The point to be noted, here, is that the academics hold the centre stage in the promotion of quality phenomenon and standard criterion for being competitive in the global arena. According to the interviewed respondents, the well-revised updated curriculum, continuous evaluation of the students, industry-driven theoretical and vocational education besides progressive research and timely administrative initiatives are indispensable to reach a competitive edge. Financial and administrative autonomy is also needed but the main component is academia. When the academic domain is enriched to internationally expected standards, the rest of things would follow up in a reflex manner. Thus, it is reportedly reasoned that the academic autonomy is central and advantageous in accomplishing the above performance indicators, along with the share of financial and administrative autonomy.

5.4 Relation between Academic, Financial and Administrative Autonomy in Gaining Ranking

The institutional autonomy is generally viewed as the parameter of freedom that an institution has to possess in order to channelise itself. It is defined as a phasis to which the educational spaces are able to make their choices at will about their day-after-day routine of teaching,

learning and research pursuits in addition to contrive plans for their succeeding days (Bleiklie, 2007). There have been many of late discourses around the institutional autonomy and its implications in the field of higher education. Considering the Indian deliberations, Shri. NR Narayan Murthy lately stressed upon the total freedom to the educational institutions at all levels, and most importantly, it is illuminated by none other than the sixteenth Hon'ble Prime Minister of India himself at the 102nd Indian Science Congress arguing for the higher degree of autonomy to the tertiary education institutions. With these, the significance of institutional autonomy is well-understood for the effective running of the educational sphere. While the idea of institutional autonomy is perceived and gestated, it becomes worth to consider the term governance and self-regulation as, in certain occasions, hastily used in an interchangeable manner. Fielden (2008) delineated that it constitutes the structures, actions, events and occurrences responsible for the designing and directing of individuals, stakeholders and the institution as a whole. The literature review depicts that every domain is essential and has its own merits on the attainment of competitive standing in the global ranking system.

This time is an era of maturing *imagined* global competition (Brankovic, Werron & Ringel, 2018) in every walk of life, and academia is no exception with the mushrooming of ranking systems across the world. Starting from the 19th century and peaked at the start of this second millennium at the international scale provided a pull and push for the sprouting of ranking agencies both private and governmentally. Throughout the history of ranking literature, academic autonomy has been kept high in the contexts of institution, discipline, and country owing to the fact that academic standard is regarded as the matter of international issue with the excellency as the novel yard measure (Brankovic & et al). Institutional excellency, in general terminology, is the highest quality of standard of functioning within the institution. Despite the emerging ground for ranking literature, it is found with no particular literature that assists in making meaning of the intricate and subtle relationship between the achievement of rankings and institutional autonomy. The collected database from the structured survey questionnaire was put into the correlation analysis in order to determine the relationship between academic, financial and administrative autonomy. As per the statistical operation, it indicates that each autonomous domain is interlinked and perform activities in coexistence. In other words, all three types of autonomy functions in mutual relation to each other which meant that the rise of one domain simultaneously enhances the other domain.

Hence, it is statistically concluded that domains of academics, finance and administration are parallelly important to achieve ranking position.

5.5 Impact of Institutional Autonomy in the Achievement of Ranking

The academic rankings have influenced the students, parents and executives on the decisions surrounding the higher education (Jagadesh Kumar, 2015). All over the globe, the higher education arena has been in expansion since the late twentieth century. The diversification and expansion of the sector, especially in the Asian continent, are in substantial surge continually with a record increase in the gross enrolment worldwide. In this scenario, the functionaries and authorities seek to regenerate the sector with fresh initiatives such as awarding autonomy to the tertiary institutions in the form of graded autonomy, institutions of excellence and so forth. The intentions and goals (IIEP Policy Brief, 2013) of investing institutional autonomy on the institution are to enhance quality and standards in the academic courses; to assist the variegation of fund flows via a partnership with business houses, industries and academic circles; to raise the governing efficiency through connecting decision making with real experiences and practices. Therefore, institutional autonomy is patently found as the driver of each institutional domain for its growth and development. The study discovered the need for sound leadership and management (IIEP, 2013, p.7) when the degree of autonomy is enhanced in order to properly and effectively utilising it.

Institutional autonomy, comprising academic, financial and administrative freedom, indicates the independency and power relished by the tertiary higher education institution. It can be rationalised as an enabler of institutions through the efficient and optimal undertaking of teaching-learning, research activities, and societal services extended by the institution. Only the institution's central players and other insiders can be aware of the nature and need of the domains. When the independence is vested upon them, the Achilles' heel will be resolved towards building the strong profile of the institution. As per the description of literature, institutional autonomy is parted into two types of substantive and procedural (Robert Berdahl,1971) autonomy. The former type is with power to make decisions and perform authoritatively at their will but the latter signifies only the freedom to execute freely and not in decision-making. From the interview, it was reported the comprehensive substantive autonomy is a facilitator in fulfilling the performance indicators of the QS WUR system. On the front of impact evaluation, the regression analysis was performed to obtain the statistical

generalisation which depicted the administrative autonomy as an impact maker along with financial autonomy over the academic autonomy in the setting of study field.

5.6 Conclusion

In this chapter, the emerging theme is found out from the results by plunging into the meaning, significance and relevancy of the findings. It is reached through corresponding with the survey of the literature, research questions, and come to the conclusion as above. Institutional autonomy has a considerable role in the effective running of the institution and to meet the educational targets. Academic excellence is above all other consideration to achieve global standards in their pedagogical practices. Fully extended financial freedom is inevitable to build up the institutional profile manifold nationally and internationally. Excess of official procedures and multiple regulatory bodies should be downplayed for the efficient functioning in an appropriately speedy manner. Administrative independence is found to be nurtured well since every institutional domain has a professional at managerial and governing capacity. Thus, the academic autonomy is reported to be a facilitator in achieving competitive standing in ranking among the inter-dependent academic, financial and administrative autonomy.

CHAPTER 6 CONCLUSION AND SUGGESTIONS ON THE WAY FORWARD

6.1 Introduction

This chapter intends to serve the reader to grasp why does this research study matter to them once they are done with reading the whole dissertation. It is not a mere summary of the research problem or a simple reiteration of the chief findings but also the contemplative reflections on the key statements. Thus the section has eight main purposes such as to precisely disclose the solution to the main research problem set at the commencement of this research; to concisely sum up the framed questions and research answers; to explain the major findings of this research in brief for a prompt takeaway of the studied topic; to conclude the study in a determinate manner supported by the qualitative evidence and quantitative generalisations; to acknowledge the bounds and limits of the study in a way not permitting to be repeated in similar studies; to constitute data-driven suggestions for the institution's effectivity towards attaining ranking; to depict the opportunities for future research to overall understand the topic multi-dimensionally; and finally to display the main discovery and knowledge contributed through this research for generating further fresh argumentation and moot points.

6.2 Summary

The goal of the summary is to provide the overall panorama of the chief insights generated from the research. In this section, a cogent depiction of the research questions studied and its causes, the methods employed to compile and collate data, and the concluding remarks with implications are furnished here. The prime concern of this research was to examine the impactful role of the institutional autonomy among academic, financial and administrative on the achievement of global ranking, particularly the QS World University Rankings. The research is set out with these three objectives of, first, inquiring into the significance and substance of the institutional autonomy in the attainment of the academic rankings for the higher education in India. Second, to ascertain the type of institutional autonomy that contributes more to accomplish the ranking position. And lastly, to demonstrate the impact of financial and administrative autonomy on academic autonomy since the academic autonomy is found to be indispensable in the development of institutional excellency.

In this sequential exploratory research design within the New Public Management framework, the simultaneous mixed-method is employed to gather, first off, the qualitative database which was constructed upon fifteen in-depth interviews. It indicates that the academic autonomy antecedes the financial and administrative autonomy in the process of being and becoming an outstanding institution of prominence. The state of being frontmost and primacy among institutional autonomy is thus contributed to academic autonomy. On the other hand, the quantitative analysis of Pearson Product-Moment Correlation and Step-wise Regression is performed with the use of statistical software called SPSS (Statistical Package For the Social Sciences). The second finding is derived through the correlation analysis which showed that each kind of academic, financial and administrative autonomy has reciprocal relation. In other words, when one type of autonomy enhances the other type of autonomy also simultaneously enhances and through this finding, the presence of consistent interrelation between autonomies can be inferred. The third and last research question of this dissertation is on the type of autonomy that facilitates academic autonomy. The step-wise regression performance stated that it is administrative autonomy along with financial autonomy facilitate the academic independence. In sum, academic autonomy plays a predominant role in attaining competitive stand in the ranking system. While the administration is generous to democratise the consolidated power, such as decentralisation and empowering each domain to decide on their own, the prospects of shining academic autonomy become bright. On the whole, institutional autonomy is not a want but a necessity for rankings. Among types of autonomy, the academic autonomy is the *sine qua non* for enhancing ranking position, and to facilitate such master autonomy the administrative autonomy plays an absolutely essential role in the context of the case study undertaken.

6.3 Major Findings

It is reported that Indian Institute of Technology, Delhi is excellent in research front producing innovations and impact through research outputs. In the words of a top executive, IIT-D has reached the world-class standard in the research realm undertaken by the students and teachers of the institute. Since QS WUR majorly focuses on academic reputation with 40% weight based on research and teaching through academic peer review globally, the IIT-D has very bright prospects even to get a better position in years to come. It is also seen through its perennial position in the QS World University Rankings for 13 times out of its total 17 editions. Full autonomy to undertake any research topic of their interest and concern

is perfectly invested on the faculty and researchers at the institution. This adds to the institutions' efforts into being global in their research standards and outcomes.

On the financial front, the institution gains generous funds. Primarily, it has three routes to cumulate the monetary resources through the government of India, Public-Private-Partnership, and from their proud alumni across the world. They could internally generate resources through programmes, online courses according to need and exigencies of time. Yet they have limited say on the public funds, and in certain cases, the flow of funds will be followed by the formula of spending. The institution does not have absolute or total freedom form influence over the public tax-payers money. This could be substantiated with the instance where the top executive cannot extend fellowship/scholarship to the foreign students from the institutional expenditure. On the other hand, International Students is one among the prime criterion in the QS WUR with 10% weight. Hence, it needs to be addressed for getting a front position in the ranking.

Red-tapism is a single most prime concern found at the institution, especially in the administrative domain. This could be explicated through the practice of politicisation of top appointments at the institution while this is handled by a dedicated board in the developed economies. It is also reported that the institution encounters a complete overhaul every five years which is a general tenure for a political party in power in the Indian union government. Moreover, it is constrained with excess bureaucratism in its institutional performances and functions. For instance, the institution has to get permission from multiple authorities to start a course on Artificial Intelligence (AI), if it wants to. It needs to get no-objection certificate and permission from about seventeen different regulators and officials to build a hostel building in its premises. It is found that these measures decelerate the very functioning of the educational activities spread around the campus manifold. It is, too, accounted that there is a presence of an administrator, a governor or a manager in every domain inclusive of academics and finance in the form of the head having overall responsibility. With this observation, this research argues for the extended autonomy to the latter domain for the effective operation towards building up charismatic traits of the institution.

6.4 Conclusion

In this segment, the key insights of this dissertation are put forward in a decisive and conclusive manner citing the findings of the research. It explicates the readers why does the obtained research result, here, is pertinent, admissible and germane to the world of academia as a whole. The central aim of this research was to inquire into the orbit and scope of influence of institutional autonomy on the achievement of global rankings. A mixed-method of both qualitative and quantitative approaches were adopted with the former using fifteen semi-structured in-depth interviews from academic, financial and administrative domains, and thematic content analysis from the existent secondary literary sources. The latter approach employed a structured survey questionnaire for which the data was collected from forty-two respondents from the study field. This study has delivered clear percepts on the phenomenon in the study with the types and nature of decisions that the stakeholders from the domains of academics, finance and administration on a day-by-day institutional routine. Even though this study was a comparatively small-level exploratory research, the confidence range arrived at the alpha reliability test confirmed the internal consistency of the selected items which in turn assured the suitable extrapolation of the procured quantitative dataset. Moreover, the usage of qualitative approach became a double-check and confirmed the quantitative generalisations.

Based on the qualitative analysis, it is seemingly apparent that academic excellence is utmost essential for institutional success and so the attainment of global academic rankings. It was accounted that academic autonomy is pivotally crucial for the efficient running of the institution both in theory and practice. This research concludes that, firstly, academic autonomy as an idea - a policy mechanism - an institutional outlook leverages the process of furthering globally standardised institution finally leads to a competitive edge in the ranking systems. Secondly, each type of academic, financial and administrative domain has a mutually interdependent relationship paving the way to systematic coexistence between the functioning of the domains. Lastly, it is the administrative domain that can facilitate the academic domain to be on par with the internationally leading education institutions taking towards front position in the scheme of ranking.

6.5 Limitations

The main purpose of a research undertaking is not merely disclosing new knowledge but, too, to deal presumptions and to inquire into what is not known. Concerns and limitations may come forth of this process that to be considered and rectified in the furthering of this research. Firstly, the availability of the literature and data for the research questions framed, here. Testimony and evidence on the impact of institutional autonomy comprising academics, finance and administration on the achievement of global rankings is plainly scarce, and to do away with this limit in-depth interviews were carried out to obtain first-hand verbal information and quantifiable data. Secondly, the hapless circumstances and timing of primary data collection. After the third phase of data collection, the respondents were still approached for a further gain in research sample during which the onset of novel COVID-19 talks surfaced, and thereafter immediately stopped meeting the stakeholders and informants in compliance with the circulars of both the parental institution and the study field. Thirdly, the researcher finds that the online mode of data collection could have employed from the start of the data collecting process parallelly to the in-person collection method. Finally, the point of reaching finale was well ambitious and challenging given the lack of adjunct literary materials and the same is cautiously overcome with the qualitative evidence and quantitative extrapolation achieved by this research.

6.6 Suggestions

On the basis of the findings of this research, the below perceptions and viewpoints are proposed in the context of Indian Institute of Technology, Delhi for the achievement and enhancement of the academic ranking positions at the global level, particularly in the Quacquarelli Symonds World University Rankings. Contiguous setting up of fully independent appointment board for IITs in order to decide upon definitely whole the institutional appointments including top executives. This should be established in a way that it completely demarcates the political arena from academic pursuits conclusively due to fact politics may potentially sprout self-vested interests even among the neutrals at the institution. And so it is to be formalised and warranted as a clear norm that accomplished academicians alone hold leading designation in the institutions paving no room to external or internal influences. To bestow the democratic feel and spirit in the academic functioning, a sound election system once for every fixed period with all the involved stakeholders as electors to elect the CEO/Director and the alike prominent heads of the institution. Through this step,

each individual's voice could be heard and valued equally; subsequently cutting back the biases, discrimination and favouritism over the appointments. Whilst significant space for administration in each domain of academics, finance and in administration itself is reported, the autonomy to those with high power and responsibilities could ensure seamless functioning of the institution leading to better academic outcomes, wider target attainments towards maximisation of academic excellence and immensity. Altogether these measures eventually result in competitive standing at a large global scale.

6.7 Furtherance of the Research

The findings from this research have established promising grounds and evidence that academic excellence is inevitable for achieving a global ranking position. With the backdrop of Indian Institute of Technology, Delhi, it is the administrative autonomy along financial autonomy matters most to attain global academic grade. Building up similar research in an entirely new context and location would open an array of prospects over institutional autonomy and global rankings. A design to forward this research by addressing the same research puzzle in a novel condition and settings certainly evoke discussions and debates on the subject studied. In addition, further studies could account the development of a new theory, augmenting evidence or open up the latest phenomena associated with the problem at hand, here.

Furthermore, it would lead to the expansion of a research plan, model, theory and framework along with the consultation of this study. Such an advancing study, on the impactful role of institutional autonomy over the achievement of academic ranking internationally, would be principally recommended with a larger size of the sample to generalise trimly and comfortably. It is also suggested that the sample size be managed with a more or less equal number of male and female respondents if circumstances apply and agree to. As this study undertook the performance of regression only on independent variables of financial and administrative autonomy over a dependent variable of academic autonomy, the further deeper examination may extend the regression analysis between other types autonomy towards exploring another side of this research. And the incurred analysis and obtained evidence probably used to furnish information for the policymakers in the higher education realm based on the data generated.

Appendix

राष्ट्रीय शैक्षिक योजना एवं प्रशासन संस्थान
(मानित विश्वविद्यालय)
17-बी, श्री अरविंद मार्ग, नई दिल्ली 110 016
NATIONAL INSTITUTE OF EDUCATIONAL PLANNING AND ADMINISTRATION
(Deemed to be University)
17-B, Sri Aurobindo Marg, New Delhi 110 016
EPABX 91-11-2656 5600, 2654 4800 Fax 91-11-2685 3041, 2686 5180
E-mail nuepa@nuepa.org Website www.nuepa.org

Dr. Manisha Priyam,
Associate Professor,
Department of Educational Policy.

New Delhi,
30.12.2019.

To: Indian Institute of Technology, Delhi

Letter of Recommendation

Dear Sir/Madam,

Warm greetings.

To whomsoever it is concerned

This is to certify that **Shri. Thiyagarajan M**, with enrolment no. 20181006 in the M. Phil batch of 2018-20 at NIEPA, who pursues his M.Phil dissertation work on *"Role of Institutional Autonomy on QS Rankings – With reference to IIT, Delhi"* under my supervision. He requires data and information relating to the above topic from your esteemed institution. I would request you to grant him the relevant data through interview and questionnaire with administrators, teaching staff, and students as per the requirement of his study. The data collected by him with all decorum and research ethics would be used solely for the research purpose.

Manisha Priyam
30th December 2019

DR. MANISHA PRIYAM,
ASSOCIATE PROFESSOR &
SUPERVISOR

F

Addl-2/6427
14/2/2020

From
Thiyagarajan M,
Enrolment No. 20181006,
National Institute of Educational Planning and Administration (NIEPA), NCERT Campus,
New Delhi – 110 016.

To
The Hon'ble Director,
Indian Institute of Technology (IIT),
New Delhi – 110 016.

Revered Sir,

Sub: a kind requisition for **approval letter** and further instruction for my research study – reg.

Sir, I am obliged much for the enormous knowledge I gained from the priceless meeting offered, on 27 January of 2020, on 'The Role of Institutional Autonomy in Achieving Global Rankings'. Would remain inspiring forever for the acquired knowledge.

Now, I gratefully received advice from the Dean of Planning to obtain *an approval letter* and *further instructions* from the Director's Desk to gather information from other stakeholders at your premier institution. Sir, this study requires (a) *four* interviews each from academic, financial and administrative domains; (b) *fifty* respondents for Survey Questionnaire, in order to contribute and accomplish the study. (A)

from the domains mentioned in (a)

Thus I earnestly appeal you to please provide an approval letter and other instructions to get the approach of the required informants of the study. Thanking you, Sir.

Put up S.O.

Yours obediently,

04.02.2020

14/2/2020

Station: New Delhi
Date: 04 February 2020

THIYAGARAJAN M.
Enrolment No. 20181006.
NIEPA, NCERT Campus.
New Delhi – 110 016.
Mobile: 7669002195
Email: thiyagarajan@niepa.ac.in

Please speak with the concerned people directly or through the respective PAs no special permission is required.

7669002195

thiyagarajan@niepa.ac.in

Attachment:

- Institutional Recommendation Letter

6/2/2020

Mr Thiyagarajan may be allowed to interact with the officials in the domains mentioned at (A) above for a period of about four weeks.

Security Officer 16/02/2020 SCA 14/02/2020

16/2/20

NATIONAL INSTITUTE OF EDUCATIONAL PLANNING ANDADMINISTRATION

Research Title : **ASSESSING THE IMPACT OF INSTITUTIONAL AUTONOMY IN ACHIEVING GLOBAL RANKING: A CASE STUDY OF IIT - DELHI.**

Supervisor : **DR. MANISHA PRIYAM,** Associate Professor of Educational Policy.

Candidate : **THIYAGARAJAN M** Enrolment No. : **20181006 -- M. Phil (2018-2020)**

SURVEY QUESTIONNAIRE

CONFIDENTIAL & FOR ACADEMIC PURPOSE ONLY

Name : Date :

Department : Designation :

Experience : Qualification :

Alma mater : E-mail :

NOTE: Kindly circle/mark the appropriate rating point that best describes the **weightage of each type of autonomy*** needed for **each activity below**, in the *current context* of your institution by using the following 5-point rating scale -

5 – Very Much Important; 4 – Much Important; 3 – Average;
2 – Seldom Important; 1 – Very Seldom Important

Sl. No.	ACTIVITIES	*ACADEMIC AUTONOMY					*FINANCIAL AUTONOMY					*ADMINISTRATIVE AUTONOMY				
1.	Generating Cutting-edge **Research** among Students	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
2.	Producing **Research Impact** among Faculty	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
3.	Introducing New **Teaching** Methods	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
4.	Developing **Problem Solving Skills** of Students	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
5.	Enhancing **Organisational Ability** of the Students	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
6.	Bringing in Effective **Decision Making** Capacity	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
7.	Promoting an **attitude of**	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1

	Serving Others																	
8.	Conducting **Brainstorming Activities** for Enhancing Critical Thinking of Students	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
9.	Admitting **Foreign Students**	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
10.	Recruiting **Foreign Faculty**	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
11.	Reviewing the **Student-Teacher-Ratio**	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
12.	Undertaking Measures for **Curriculum Updates**	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
13.	Making Industry-Institution **Interactions**	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
14.	**Signing MoU** with Domestic Companies	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
15.	Engaging in **Agreement** with Foreign Companies	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
16.	Creating **Network** with the Expertise in the Study Field	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
17.	Equipping Students with **Professional Experience**	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
18.	Developing **Overall Personality** of the Students	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
19.	Bringing in World-class **Infrastructure** Facilities	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
20.	Conducting **Online Learning Programmes**	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
21.	Undertaking **Socially**	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1

	Responsible Actions for the disadvantaged																	
22.	Fostering **Innovative** Learning Environment	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
23.	Bringing in **Inclusive Classroom** for the Specially-abled	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
24.	Promotion of **Arts**	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1
25.	Promotion of **Culture**	5	4	3	2	1		5	4	3	2	1		5	4	3	2	1

NATIONAL INSTITUTE OF EDUCATIONAL PLANNING ANDADMINISTRATION

Research Title: **ASSESSING THE IMPACT OF INSTITUTIONAL AUTONOMY IN ACHIEVING GLOBAL RANKING: A CASE STUDY OF IIT - DELHI.**

Supervisor : **DR. MANISHA PRIYAM,** Associate Professor of Educational Policy.

Candidate : **THIYAGARAJAN M** Enrolment No. : **20181006 -- M. PHIL (2018-2020)**

INTERVIEW	ACADEMIC DOMAIN	CONFIDENTIAL & FOR ACADEMIC PURPOSE ONLY

Date	:	Day	:
Name	:	Department	:
Designation	:	Experience	:
Qualification	:	Alma mater	:
Contact No.	:	E-mail	:

STUDY OBJECTIVE : This study attempts **(1)** to explore the *importance of institutional autonomy* in achieving global rankings **(2)** to determine the *type of autonomy* (among academic, financial and administrative) that matters most to the global rankings, and **(3)** to find out *to what exent* does each autonomy impact the global rankings, the QS WORLD UNIVERSITY RANKINGS in particular.

SCHEDULE

1. What is the **importance of global rankings** for the Indian Institute of Technology (IIT), Delhi?

2. What do you think about the **need of academic autonomy** for achieving global rankings?

3. Could you describe the **current functioning** of **academic autonomy** of this institution?

4. What are the reasons for this institution to **sustain ranking position,** since the year 2008, in the QS WorldUniversityRankings?

5. What academic activities make your **students globally competitive**?

6. What kind of steps that you undertake to constantly **produce new knowledge?**

7. What is the effort you make to **enhance the research potentials** towards impactful publications?

8. How often does the **revision of curriculum** take place for the latest updates?.

NATIONAL INSTITUTE OF EDUCATIONAL PLANNING ANDADMINISTRATION

Research Title: **ASSESSING THE IMPACT OF INSTITUTIONAL AUTONOMY IN ACHIEVING GLOBAL RANKING: A CASE STUDY OF IIT - DELHI.**

Supervisor : **DR. MANISHA PRIYAM,** Associate Professor of Educational Policy.

Candidate : **THIYAGARAJAN M** Enrolment No. : **20181006 -- M. PHIL (2018-2020)**

INTERVIEW FINANCIAL DOMAIN	CONFIDENTIAL & FOR ACADEMIC PURPOSE ONLY

Date	:	Day	:
Name	:	Department	:
Designation	:	Experience	:
Qualification	:	Alma mater	:
Contact No.	:	E-mail	:

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SCHEDULE

1. What is the **importance of global rankings** for the Indian Institute of Technology (IIT), Delhi?

2. What do you think about the **need of financial autonomy** for achieving global rankings?

3. Could you describe the **current functioning** of **financial autonomy** of this institution?

4. What are the reasons for this institution to **sustain ranking position,** since the year 2008, in the QS World University Rankings?

5. How do you distinguish between **public and private funds** that is available to this instituion?

6. What financial activities facilitate your **students to become globally competitive**?

7. What are the ways through which the **internal revenue** of this institution is generated?

8. What is the process do you follow to spend the **public funds** at this institution?

NATIONAL INSTITUTE OF EDUCATIONAL PLANNING ANDADMINISTRATION

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SCHEDULE

1. What is the **importance of global rankings** for the Indian Institute of Technology (IIT), Delhi?

2. What do you think about the **need of administrative autonomy** for achieving global rankings?

3. Could you describe the **current functioning** of **administrative autonomy** of this institution?

4. What are the reasons for this institution to **sustain ranking position,** since the year 2008 in the QS World University Rankings?

5. How are your students trained to meet the **national needs and international expectations**?

6. What are the plans do you draft to make your **students globally competitive**?

7. What are the steps you adopt to undertake **industry-academia collaboration**?

8. What do you think to be substantially done on the **administrative front to achieve global rankings**?

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