

Antecedents and Outcomes of Idiosyncratic Deals in Academic Supervisor-Scholar Relationships in India

A Doctoral Dissertation Submitted in Partial Fulfillment of the Requirements for the Award of the degree of

**DOCTOR OF PHILOSOPHY
IN
MANAGEMENT**

**BY
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DECLARATION

I, Bramhani, hereby declare that this thesis entitled “**Antecedents and Outcomes of Idiosyncratic Deals in Academic Supervisor-Scholar Relationships in India**” in fulfillment of the requirements for the award of Degree of Doctor of Philosophy in Management Studies, is the outcome of an original study, free of plagiarism, undertaken by me, under the supervision of Prof. P. Jyothi, Dean and Professor, School of Management Studies, University of Hyderabad.

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Below are the details of Publications, Conferences & Coursework pursued during PhD.

A. Journal and Book Chapters Published

- a. Rao, B. & Polepeddi, J. (2019), “Neurodiverse Workforce: Inclusive Employment as an HR Strategy”, Strategic HR Review [*Emerald Publishing*][*Accepted*]
- b. Rao, B. & Polepeddi, J. (2019), “HR Disruption: Embracing the Digital Future of HR”, International Journal of Supply Chain Management, Special Issue [*SCOPUS*][*Accepted*]
- c. Rao, B. (2019), “Relationship between Leader’s Empathic Disposition and Authorization of Idiosyncratic Deals: A Study in the Context of IT Industry in India”, Journal of Indian Business Research; DOI: 10.1108/JIBR-09-2018-0253. [*SCOPUS & ABDC (C)*][*Accepted*]

- d. Rao, B. & Kunja, S. (2019), "Individual Cultural Orientation as a Determinant of Psychological Contract Fulfilment", *Management Research Review [SCOPUS & ABDC (C)] [Accepted]*
- e. Chandra.R & Rao, B. (2019), "Women Entrepreneurship in India: A Gendered View on Entrepreneurship", *International Journal of Supply Chain Management, Special Issue [SCOPUS] [Accepted]*
- f. Chandra.R & Rao, B. (2019), "Work-Life Balance, Family Support & Job Satisfaction among Working Women in India: The Mediating Effect of Role Stress", *International Journal of Applied Business and Economic Research, Vol. No.1 [UGC-Listed] [Accepted]*.
- g. Polepeddi, J. & Rao, B. (2016), "Guru-Shishya Parampara: A Potential Driver of Manager-Subordinate Relationship Dynamics in Modern Organisations", In M. Subramaniam, Dr.N. Panchanatham (Ed.). Bonfring Publications, pp 63-67, ISBN 978-93-85477-67-6.(2016) *[Book Chapter]*

B. Conferences and Workshops

- a. Presented paper entitled "*From Excuses to Execution: Narratives on Role of Digital Innovations in Inclusion of People with Cognitive Disabilities in Indian Academic Institutions*" at Conference on Excellence in Research and Education (CERE) held at IIM, Indore on May 3-5, 2019.
- b. Presented paper entitled "Predicting I-deals Success through Empathic Disposition: A Conceptual Paper" at 5th International HR Conference on Rewiring HRM in a globalized workplace: Challenges of Diversity, Employment Relations and Skills' at KJSIMR, Mumbai on February 2nd & 3rd, 2018.
- c. Presented paper entitled "Individualism-Collectivism: An Individual Difference Predictor of Psychological Contract Fulfillment" at *FORE International OB & HR Conference* held on November 24-25, 2016 at FORE, Delhi.
- d. Attended a four day National Level Workshop on "Quantitative Research Methodology" at TISS, Mumbai from Nov 11-14, 2016.
- e. Attended Workshop on "Introduction to Systematic Reviews and Meta-Analysis" at School of Medical Sciences, University of Hyderabad, from 5-7 February 2018

Further, the student has passed the following courses towards fulfilment of the coursework requirement for PhD:

Course Code	Name	Credits	Pass / Fail
1. MB-106	Quantitative Methods	3	Pass
2. MB-301	Organizational Behaviour	3	Pass
3. MB- 203	Human Resource Management	3	Pass
4. MB-207	Research Methodology	3	Pass
5. -	Academic Writing		

**Signature of
Research Supervisor**

(Prof. P. Jyothi)

**Signature of
Dean, School of Management Studies**

(Prof. P. Jyothi)

DEDICATION

.....to my parents, for making me who I am today!

.....to my husband, Sanjeev for his love & support!

*.....to my kids Likhit & Satvik for being little bundles
of joy!*

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ॐ श्री गणेशाय नमः

(Praise to Lord Ganesha)

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Bramhani

ABSTRACT

The objective of the present study is to explore idiosyncratic deals under the lens of Theory of Prosocial Reasoning, Self-determination theory and Signaling Theory and examine additional antecedents and outcomes of idiosyncratic deals (i-deals) in the context of academic supervisor-scholar relationships. Two conceptual models are proposed. Model 1 or the antecedent model tests the relationship between two dimensions of empathy i.e. perspective-taking and empathic-concern and three types of i-deals i.e. task & work responsibility, schedule flexibility and location flexibility i-deals with prosocial motivation as the moderator. Model 2 investigates the relationship between i-deals and dropout intentions among scholars through the intermediate processes of competence-need satisfaction, perceived trust, academic self-concept, motivation and perceived stress. To test the proposed hypotheses, data was obtained through survey method employing structured questionnaire in both online and in-person mode. Data was collected from 317 supervisors and 797 research scholars across Central Universities, IIMs, IITs, NITs and Other Ivy league institutions selected based on latest NIRF rankings. Data was subjected to demographic analysis and moderation analysis using SPSS and Process Macro and structural equation modelling using AMOS. Results indicated that perspective-taking positively relates to all the three types of i-deals whereas empathic-concern relates positively with only task and work responsibility i-deals. Prosocial motivation moderated the relationship between empathy and task and work responsibility i-deals such that at higher levels of prosocial motivation enhanced the possibility of authorization task i-deals in the presence of cognitive and affective empathy dimensions. The authorization of i-deals also related positively to supervisors' perceived outcomes in terms of improved performance, increased motivation and better work-life balance. Further, i-deal receipt related negatively to dropout intentions indicating reduction in intention to dropout on receiving i-deals as it leads to competence-need satisfaction and greater perceived trust which in turn lead to higher academic self-concept, motivation and reduced stress. The present study makes a theoretical contribution by advancing theories of prosocial motivation and i-deals theory in a novel context as well as extends a practical solution for effective management of supervisor-scholar relationship in academic institutions.

Keywords: Empathy, idiosyncratic deals, supervisor-scholar relationships, doctoral attrition.

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LIST OF ABBREVIATIONS

AGFI	Adjusted Goodness of Fit Index
AMOS	Analysis of Moment Structure
ANOVA	Analysis of Variance
ASC	Academic Self-Concept
AVE	Average Variance Extracted
BPNWS	Basic Psychological Needs at Work Scale
CB-SEM	Covariance-based Structural Equation Modelling
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CLF	Common Latent Factor
CMB	Common Method Bias
CMIN	Chi Square
CNS	Competence-need satisfaction
CR	Composite Reliability
CSR	Corporate Social Responsibility
EC	Empathic-concern
EFA	Exploratory Factor Analysis

EO	Entrepreneurial Orientation
FWE	Family-Work Enrichment
GFI	Goodness of Fit Index
OB	Organizational Behaviour
OCB	Organizational Citizenship Behaviour
HARP	Heightening Awareness of Research Philosophy
HEI	Higher Education Institutions
HR	Human Resource
HRM	Human Resource Management
IBM	International Business Machines
IIM	Indian Institute of Management
ILM	Internal Labour Market
IRI	Interpersonal Reactivity Index
IWB	Innovative Work Behaviour
IT	Information Technology
IIT	Indian Institute of Technology
KMO	Kaiser-Meyer-Olkin
LF	Location Flexibility
LLCI	Lower Limit Confidence Interval

LMX	Leader Member Exchange
MHRD	Ministry of Human Resource Development
MLE	Maximum Likelihood Estimation
MO	Motivation of Scholar
NFI	Normed Fit Index
NIRF	National Institute Ranking Framework
NIT	National Institute of Technology
OA	Organizational Ambidexterity
PCA	Principal Component Analysis
PLS-SEM	Partial Least Square
PM	Prosocial Motivation
POS	Perceived Organizational Support
PS	Perceived Stress
PT	Perspective-taking
RMSEA	Root Mean Square Error of Approximation
RPC	Research and Professional Practice
SD	Standard Deviation
SE	Standard Error
SDT	Self Determination Theory

SEM	Structural Equation Modelling
SF	Schedule Flexibility
SPSS	Statistical Package for Social Sciences
TB	Trust Belief
TLI	Tucker-Lewis Index
TMX	Team-Member Exchange
TWR	Task and Work Responsibility
ULCI	Upper Limit Confidence Interval
USA	United States of America
WLB	Work-Life Balance

CHAPTER 1

INTRODUCTION

The present chapter introduces the foundational idea of this thesis – “Idiosyncratic deals” or “i-deals” and provides an overview of its concept and other related aspects owing to the novelty and possible unfamiliarity of the concept to the reader. The chapter further positions the idea within the broader horizons of the academic disciplines and puts forth the motivation behind this study. The chapter also mentions the theoretical and practical contributions of the research followed by the structure guiding this thesis.

1.1 Background: Emergence of Individualistic Societies

Customization of work in modern day organizations is deeply influenced by ancient trends and philosophies. An 18th century philosopher Kant suggested that individuals are the end and not the means to reach the end and the dignity of an individual cannot be disrupted to achieve the end. This era thrived on the idea of individual experiences and defined society as the existence of human beings as individuals rather than groups (Oyserman et al., 2002). Scientific research too focused on individual rights and pursuit of self-interests and contrasted the idea of collectivism that endorses the idea of individual sacrifice for the collective good. This rise of individualistic society in 1900s, along with the emerging capitalism in the post-World-War Western world led to a wave of neoliberal political ideology. This ideology strived for economic freedom of individuals and organizations by de-regularization of markets, free market led distribution of resources, non-interference of government and profit maximization for individuals

(Van Apeldoorn & Overbeek, 2012). With profit maximization as the goal, individuals were believed to make balanced strategic choices, but instead it pushed individuals to pursue self-interests and created a divide between wealth possessors and the poor which in turn lead to unequal distribution of resources (Sedlacek, 2011). Consequently, people who perform better had better access to resources than people with lower performance, a process described as Matthew Effect (Hornung et al., 2011). For instance, employees with greater skills and knowledge are in a position to seek i-deals, as they have alternate employment opportunities whereas individuals with low employability cannot negotiate customized work arrangements.

I-deals have emanated from a larger societal phenomenon of individualization, which emphasizes on autonomy and individual responsibility. Furthermore, individualization has marginalized personal and professional success to the individual-level to such an extent that the relevance of trade unions in modern workplace is weakening (Godard, 2014). With corporates dominating the government policy decisions, individuals can seldom rely on organizations for their well-being, and therefore, depend upon their own abilities and knowledge to seek personalized work modifications.

1.2 Introduction to the study

A wave of transformational changes in cultural and societal trends in recent times has forced contemporary workplaces to make relevant changes both in process management and in people management. Managing people is a critical organizational issue as people are the most complex asset that the organization needs to manage due to the involvement of human nature. But emerging trends of the society such as individualism (Oyserman et al., 2002), “psychologicalization” of employment relations (Godard, 2014), an emphasis on employee’s self-reliance for career development (Olson,

2013) etc. - have all placed individual employee in the center of employer-employee relationship and has put additional responsibility on individuals to manage their professional life on their own along with balancing their personal lives.

Individuals, hence, tend to negotiate customized work arrangements and resources with their employers, that are important but beyond existing organizational policies and regulations. These negotiations also give the opportunity to the employer to understand employees' needs, inner beliefs and motivations which serve as foundational inputs in designing HR policies and practices. The outcome of such customized negotiations are beneficial to both the organization and the individual and is referred to as "Idiosyncratic deals" (I-deals) by Rousseau (2001, 2005).

With a theoretical underpinning in social exchange theory and a fundamental emphasis on the exchange relationship between the employer and the individual employee, i-deals construct emerges from organizational psychology perspective and finds its way into strategic HRM by significantly influencing the HRM practices in modern workplaces through greater customization of work arrangements and moderating the employer-employee or manager-subordinate relationships.

Research indicates that similar relationships are evidenced in the field of academia where research supervisor and doctoral scholar have an exchange relationship that is complex and has an impact on professional and personal lives of both the parties (Deuchar, 2008; Vilkinas, 2002). Hence, this thesis has set out to investigate supervisor-scholar relationships under the lens of idiosyncratic deals and study the predictors and consequences of i-deal negotiations in this dyadic relationship.

Past research has explored multiple employee-related, leader-related and work-related predictors of i-deals and their impact on employee behaviours and attitudes. This thesis intends to shed light on additional leader-related antecedents – *empathic-concern*

and *perspective-taking* of leader, which may possess a predictive ability towards academic i-deals. Also, this research evaluates context-specific outcomes of i-deals in Higher Education Institutions in India that offer doctoral courses to assess the role of academic i-deals in lowering the dropout intentions among scholars, as reported under media reports recently.

1.3 Broad research area

I-deals as a concept has developed from multiple disciplines and more narrowly from the disciplines of OB and HRM. The core process of i-deals is embedded within the exchange relationship between the organization and the employee and they are expected to gradually make the employee-employer relationship stronger (Rousseau, 2001). This dyadic association draws upon multidisciplinary standpoints of employment relations and OB (Boxall, 2013) and the endeavour to understand its dynamics is the nucleus of the academic study of HRM.

Researchers in the past have proposed that although i-deals theory has predominantly been developed from the social exchange perspective, application of new theoretical perspectives is crucial for the advancement of research in the field of i-deals (Liao et al., 2016). The view is in tandem with what several researchers have often indicated, that researchers must cross the frontiers created between OB and HRM disciplines as a multitude of ideas has emerged from the amalgamation of theories from both the disciplines (Boxall, 2013). Hence, the present research sets out to integrate multiple theoretical perspectives from the fields of Psychology (Theory of Pro-social Reasoning, Social Penetration Theory), OB (Self-determination theory), and HRM

(Signaling theory) and explore i-deals. Overall, this study is positioned between OB and HRM, integrating critical theoretical perspectives from these areas.

1.4 Idiosyncratic deals

1.4.1 The Concept

Modern workplaces have experienced a paradigm shift in ways careers of individual employee progresses. From organization-dependent careers to “boundaryless” careers to protean careers, employees today are increasingly taking over the responsibility of managing their careers and well-being. This shift is a result of constant changes in societal trends such as greater individualization, increased focus on balancing work and non-work related lives, diversification of market demands, shift of power to competitive and talented employees and higher pressures on organization to maintain flexible workforce to adapt quickly to ever-changing market conditions (Bal & Jansen, 2015; Rousseau, 2005).

These elements are encouraging a greater number of employees to negotiate personalized work elements with their employers, thus leading to a greater emergence of non-standard work arrangements and greater personalization of HR practices. These individual agreements have been researched scientifically by OB researchers in the context of *idiosyncratic deals*, or *i-deals* that constitute employee negotiated terms of employment and have been conceptualized as “*voluntary, personalized agreements of a non-standard nature negotiated between individual employees and their employers regarding terms that benefit each party*” (Rousseau, 2001, 2005; Rousseau, 2006).

1.4.2 Unique Characteristics of I-Deals

- (i) I-deals are *negotiated by individuals* and can be initiated by either an individual employee or the organizational representatives such as immediate supervisor, manager or top management. But, these are observed to be initiated dominantly by the employee who negotiates a specific, idiosyncratic arrangement (Rousseau, 2005). These are different from organization-wide arrangements such as flexible work schedules, teleworking etc. that are part of the HR system and fall under collective labour agreements and are available to every employee to facilitate greater flexibility and better work-life balance (Allen et al., 2013). But in every organization, only a few employees are valued higher than others owing to their performance and high knowledge, skills, and other characteristics. As these employees become self-aware of their importance for the organization, they display a tendency to negotiate specific work arrangements with their employers.

The present thesis explores employer-related antecedents of i-deals which will improve our understanding of what factors contribute to their initiation and subsequent authorization.

- (ii) They are *heterogeneous in nature*. As the arrangements obtained differ from those of other employees performing similar work, these create heterogeneity among employees working within the same organization and within the teams (Rousseau, 2001). This heterogeneity may propagate perceptions of organizational injustice and inequality as not all employees are eligible or successful in negotiating i-deals which may be due to the difference in the outcomes being negotiated by different employees or the procedures used by the organizations to come to decisions regarding i-deals (Greenberg et al., 2004). This heterogeneity hints towards measurement issues, since

every negotiated i-deal may be different and therefore difficult to measure for researchers.

Hence, present thesis limits its scope to the two most dominantly negotiated i-deals – flexibility and TWR i-deals and though acknowledges the presence of - keeps away from – investigating several other possible forms of negotiations.

(iii) I-deals are *reciprocally favorable*. Both employers and employees receive the benefits of i-deals negotiation. Employees find developmental opportunities, flexibility, work-life balance etc., and employers achieve required level of productivity and greater employee engagement.

(iv) I-deals have *varied scope*. Few employees intend to modify only one job element, while others may wish to alter multiple aspects of their jobs such as schedule, location, salary etc.

1.4.3 Members and Timing of I-Deals

In general, i-deals involve two parties – employee and immediate manager, but individually personalized work arrangements or modifications can only be obtained by experienced, high performing employees, and other esteemed employees (Rousseau, 2006). Yet, a greater number of employees may have a scope to negotiate different aspects of their job. For example, each executive employee may usually perform the same duties, but only those executives who make real contribution to their organization and are considered as high performers by their managers, hold a higher possibility to negotiate and receive i-deals (Rousseau, 2001). Therefore, employees with an ability to consistently perform beyond organizational expectations, have greater probability to successfully

discuss i-deals, implying that individual personality traits are critical for predicting outcome of customized negotiations.

Social exchange involved in workplace negotiations may occur between an employee and an organizational agent which may be a team member, senior manager or a direct manager (Shore et al., 2004). But past research has dominantly postulated that social exchanges in the context of idiosyncratic deals, most typically, happen between an individual and an organizational representative such as a direct manager (Greenberg et al., 2004).

Idiosyncratic work arrangements are either negotiated just before the employment, i.e. *ex-ante* based on candidate's qualifications, person-job fit, overall marketability etc. or after employment, i.e. *ex-post* based on better functional skills, knowledge, and abilities. While, the former are generally associated with and driven by external environmental or situational elements, for example, the labour market, the latter are pursued by current organizational employees, and their authorization depend considerably on the LMX quality between the two parties. Though i-deals negotiated post joining a job in a company may be contingently influenced by the market forces, especially the financial ones, they are mostly relationally attributed and provide insight into the level of leader-member exchange quality between the employee-employer dyad (Rousseau et al., 2006).

Hence, this research includes ex-post i-deals within its scope and explores only those exchange relationships between the subordinate and supervisor that are formed after the two parties have worked closely for a few years.

1.4.4 Content of I-deals

The interpersonal relationships in organizations between the worker and the organizational members can be described based on the economic or social transactions between them (Coyle-Shapiro et al., 2004). While economic exchanges involve objective market-driven transactions, involving exchange of concrete resources (fixed bonus, performance pay), social exchanges exist on the foundations of voluntary reciprocity, trust and mutual contribution (Rhoades & Eisenberger, 2002). Research suggests that high-quality workplace relationships are usually based more on social exchange (Rousseau et al., 2009) and less on economic exchange, which encourages employees to view their employers positively.

I-deal content varies on the basis of the type of organizational resource or work arrangement being negotiated between the worker and the supervisor. A set of criteria must be fulfilled by any organizational resource or arrangement to qualify as an i-deal. One specific criterion is – the inclusion of the resource within “zone of negotiability” - that mandates a resource to be of negotiable nature in the work environment (Rousseau, 2001).

In the midst of the zone of negotiability, organizational resources are generally attributed as either– *concrete*, that are valued equally by all the employees, objective in nature and independent of the exchange relationship (e.g. monetary resources such as salary, bonus, rewards) or *particularistic* having significance for a unique individual, subjective in nature and extracts value from the underlying relationship (e.g. task autonomy). Conceptually, these are mechanisms that can draw, retain, and motivate individuals to work by enhancing the quality of their personal and professional lives through right work-family balance, recognition, autonomy and overall career

development (Rousseau et al., 2006). Thus, the primary qualification for a resource to be exchanged as an i-deal is its ability to promote work-life balance, provide recognition, greater control over job and career advancement.

Different researchers have studied i-deals in different sectors and have defined several unique dimensions based on assumptions and criteria mentioned above. Table 1.1 presents broader categories of i-deals.

Table 1.1
I-deal dimensions explored by past researchers

Study	Dimensions	Number of Dimensions
Hornung et al., 2008	Flexibility and Development	2
Anand et al., 2010	Developmental	1
Hornung, et al., 2011	Developmental and Flexibility	2
Lee & Hui, 2011	Reduced Workload, Flexibility and Personal development	3
Ng & Feldman, 2012b	Flexibility and Professional development	2
Liu et al., 2013	Flexibility and Developmental	2
Rosen et al., 2013	SF, TWR, LF, Financial incentives	4
Guerrero et al., 2016	Developmental	1
Oostrom et al., 2016	SF, TWR, LF	3

Thus, it is observed that research has broadly attributed i-deals to be associated with work hours flexibility, reduced workload, job redesign and career opportunities. The identified forms of i-deals support the idea that i-deals are specifically sought or authorized to support employees in achieving well-balanced life or customizing their jobs in alignment with their skills and future career goals.

There exist few areas of concern in defining the content of i-deals. Firstly, the idea of the zone of negotiability though well accepted, lacks clarity regarding its boundaries

as resources being negotiated vary to a considerable extent based on the job and the industry. This concern was addressed by Rosen and colleagues in 2013, who researched i-deals across industries, jobs, identified most commonly negotiated i-deals and found the relative frequencies of their occurrence. This led to categorization of i-deals as – *task & work responsibility, financial, schedule flexibility and location flexibility i-deals*.

1.4.5 Individual Outcomes of I-Deals

Idiosyncratic deals can lead to several favourable employee outcomes, but the impact on a particular outcome varies based on what i-deal being negotiated constitutes, as the i-deal content being negotiated and its subsequent authorization or failure is an indication about the status of employee–employer interpersonal (Hornung et al., 2008). I-deal content may be segmented as: *concrete and universal* when the content does not depend on the interpersonal relationship and is tangible, versus *abstract and particularistic* when the i-deal content depends on the existing dyadic relationship and is open-ended regarding its constituents. Such segmentation determines whether the recipient of an i-deal perceives it as an economic exchange/market transaction or as a socioemotional exchange driven by his/her existing relationship with the employer (Rousseau et al., 2006)

Concrete arrangements are market driven and are more transactional and fail to communicate presence of a superior employment relationship than more abstract i-deals (Rousseau et al., 2009). This can be explained as – for instance, compensation adjustments may be made with limited interactions and signal addressal of internal or external parity issues, in contrast to, the socioemotional concerns of an employer towards the employee.

Abstract i-deals aim to communicate employer's concern for employee well-being and are more open-ended, personalized and are meant to be a long-term support mechanism for the employees. For instance, work-related i-deals such as on-the-job training, strengthen employees' beliefs of organization's commitment towards them and their commitment towards the organization, as such i-deals are an outcome of considerable amount of effort and time by both parties, thus improving the perception towards the LMX quality (Rousseau et al., 2006).

Overall, i-deals constituting financial inducements are concrete, whereas task i-deals involve more relational elements of employment that are more abstract, and satisfy socioemotional needs characterizing good quality interpersonal relationships. Flexibility i-deals are a combination and have both universal and particularistic aspects. While these i-deals signal that the employer identifies employee's non-work related necessities (such as, working from remote location or home to save daily travel time), simultaneously these arrangements are also more transactional with immediate monetary ramifications (Rousseau et al., 2009).

1.5 Other Key Concepts under Study

- ***Task and Work Responsibility i-deals (TWR)***: “Customized opportunities to develop individual skills and competencies and meet personal aspirations for professional or career advancement (e.g. challenging work assignments, individual recognition of performance, special training, career opportunities” (Rousseau, 2006).
- ***Location flexibility i-deals (LF)***: “Flexibility of working from a remote location away from the workplace/main office” (Rosen et al., 2013)

- ***Schedule flexibility i-deals (SF)***: “Flexibility of work schedules and the number of hours worked” (Rousseau & Kim, 2006).
- ***Empathy***: “one’s ability to understand the emotional makeup of other people, and respond to them according to this makeup” (Goleman, 1998).
- ***Empathic-concern (EC)***: “tendency to experience feelings of warmth, compassion, and concern for others; a measure of emotional responsivity” (Davis, 1983b, p.169).
- ***Perspective-taking (PT)***: “the spontaneous tendency to adopt the psychological perspective of other people—to entertain the point of view of others”; taps the non-emotional, or cognitive, type of empathy (Davis, 1983b, p.169).
- ***Prosocial motivation (PM)***: aspiration to support other people (Batson & Shaw, 1991); reflected in tendencies towards helpfulness and empathy (Penner et al., 1997), values and concern for others (Korsgaard et al., 1997), and temporary focus on the goal of promoting the welfare of other people (Grant, 2007).
- ***Competence need satisfaction (CNS)***: “Individuals’ need to feel effective in interacting with and mastering the environment so as to bring about desired outcomes and manage various challenges, represents an innate, universal psychological need that all individuals have, the satisfaction of which not only promotes psychological health but also allows individuals to thrive in changing environments” (Deci & Ryan, 2000)

- ***Perceived Trust (TB)***: belief or confidence in a person (Dizgah et al., 2011)
- ***Academic Self-Concept (ASC)***: a person's perceptions about him- or herself related to his or her academic abilities (Marsh & Shavelson, 1985, p. 107)
- ***Motivation (MO)***: "student's desire (as reflected in approach, persistence, and level of interest) regarding academic subjects when the student's competence is judged against a standard of performance or excellence" (McClelland, 1961; Wigfield & Eccles, 2002).
- ***Perceived Stress (PS)***: "feelings or thoughts that an individual has about how much stress they are under at a given point in time or over a given time period" (Cohen et al., 1983)

1.6 Motivation for the study

The motivation driving this study emanates from both personal experience and professional orientation. The personal experience that motivates this study is the observation of people around us over the years who constantly discuss the ever-increasing challenges in maintaining work-life balance in the modern world and subsequent need for flexible organizations that are conducive to ensure such a balance. In an endeavor to study this aspect from organizational behavior perspective, the journey to understand existing OB theories and explore novel mechanisms began. It was found that flexible organizations are result of flexible people who can adapt and respond to situations proactively. Individuals working in organizations are the most important organizational resource and interpersonal relationships among them influence all organizational decisions. These

relationships in turn are driven by individual differences in personality, beliefs, values, attitudes, behavior and perceptions. It was well understood that a study on understanding a process that helps in creating a flexible organization that ensures overall well-being of its employees and further investigation into its antecedents and consequences will make a significant contribution.

Moving ahead with the trend of interdisciplinary research, several OB concepts such as workplace wellness, psychological contracts, counterproductive workplace behaviours, flexi-time, protean careers etc., that have been developed using theories from other disciplines such as Psychology, Sociology, Medicine, Neurology etc., were explored. During this search, one specific construct – idiosyncratic deals – seemed relevant to the thought process driving the search for a suitable research problem till this point. There were three reasons for the attractiveness of this concept for the current research – firstly, relevance to the modern workplaces, secondly, the novelty of the concept especially in the Indian context and thirdly, potential for application to different organizational contexts. While, initial exploratory research revealed the need to explore additional antecedents to idiosyncratic deals, it was observed that antecedents specifically leading to authorization of i-deals were lacking. Hence, the study set out to explore antecedents to authorization of i-deals.

The other element motivating this study, as already mentioned, was the researcher's professional orientation. Past researchers of i-deals have established that the nature and content of i-deals vary according to the setting and this may require researchers to start exploring i-deals in context other than IT, Manufacturing, Healthcare and Public Sector companies which were being explored thus far. Owing to the knowledge of challenges related to interpersonal relationships in the field of academia i.e. between doctoral scholars and research supervisors, who share a similar relationship as employee-

employer in organizations, it was felt that application of i-deals to the academic context may contribute significantly to both i-deals literature as well as to the vast literature related to supervisor-scholar relationships. This idea was further strengthened by latest statistics of MHRD revealing the increasing attrition rate among doctoral scholars from Ivy League academic institutions in India (Table 1.2) as well as high doctoral attrition rates across the globe (Table 1.3).

Table 1.2

Number of Ph.D. Dropouts from few top Indian research institutions

Institution	No. of Dropouts (2014-2016)
IIMs	49
IIT Delhi	256
IIT Kharagpur	198
IIT Kanpur	47
IIT Madras	35
IIT Mumbai	34
IIT Patna	22

Source: MHRD, 2016

Table 1.3

Global doctoral attrition percentage

Region	Percentage doctoral attrition
USA	> 50% (National Center for Education Statistics, 2017)
Europe	20-41% (European Commission, 2015)
Australia	33% (Department of Education & Training, 2017)
Others	20-35%

Source: MHRD, 2016

1.7 Problem Statement

Organizations operate successfully on the foundation of quality of interpersonal relationships between its people. To achieve highest level of performance, people must be intrinsically and extrinsically motivated and must be in a sound mental state. Such a condition is achieved when individuals experience an equilibrium between their personal lives.

One of the ubiquitous type of organization that have tremendous influence on how world functions are the Higher Education Institution (HEIs). As organizations, academia also face multiple challenges and one of the most discussed challenge is that of interpersonal relationship between research supervisors and doctoral scholars. Literature suggest unspoken stress and tension in this relationship for both the parties that needs to be addressed.

Organizations can intervene and contribute towards employees' personal and professional well-being by customizing work arrangements suitable to individuals and derive desired level of performance from them. I-deals i.e. employee or employer negotiated terms of employment, have been found to be a functional mechanism that is mutually beneficially for both the organization and the employee. The present study, therefore, takes into consideration the issues mentioned so far and develops a framework for strengthening supervisor-subordinate relationship and tests it empirically. The study applies Theory of Pro-social Reasoning and Signalling theory to understand whether supervisor empathy has an influence on the authorization of i-deals and impact of successful negotiation of i-deals on doctoral attrition rate.

1.8 Research Questions

The research problem in hand may be addressed by answering following research questions:

1. Are i-deals being negotiated in academic relationships i.e. between research supervisors and doctoral scholars?
2. What is the relationship between supervisor empathy and authorization of i-deals?
3. Is there an interaction effect between empathic concern and perspective-taking in predicting successful authorization of i-deals?
4. What type of signaling function could i-deals possess in the context of supervisor-scholar relationships?
5. Can i-deals influence the dropout intentions of doctoral scholars in HEIs in India?

1.9 Aim of the Study

1.9.1 Broad Objective: The primary objective of this research is to explore additional determinants and academia-specific outcomes of idiosyncratic deals.

1.9.2 Specific Objectives: The four specific objectives are:

1. To study the link between empathic concern, perspective-taking of the supervisor and authorization of TWR, LF and SF i-deals with prosocial motivation as moderator.
2. To test the combined effect of EC and PT of supervisor in predicting supervisor authorization of TWR, LF and SF i-deals
3. To test the signaling mechanisms of TWR i-deals and flexibility i-deals by studying
i) competence need satisfaction as an intermediate variable between TWR i-deals and

academic self-concept & student motivation (ii) perceived trust as an intermediate variable between SF and LF i-deals and perceived stress.

4. To empirically evaluate the influence of i-deals on dropout intentions of the scholars.

The ideas and evidence that led to defining the above mentioned objectives will be elaborated in further chapters, which will discuss in detail the relevant literature on motivation behind the problem statements and also provide the supporting evidence to the stated objectives.

1.10 Scope of the Study

It is crucial that any work in the field of academics and research defines its scope clearly, owing to the tremendously large number of studies addressing a multitude of similar and dissimilar constructs, being published at an extremely high frequency. The subject of this thesis i.e. idiosyncratic deals, too has experienced an interesting growth as a research area in terms of both its depth (understanding of multiple aspects of the construct itself) and breadth (relationship with other constructs). This has resulted in recent increase in the number of studies being published in this area thus making it inevitable for scholars to define objectively the scope of the study being conducted by them.

The research scope is defined w.r.t constructs, content and context. The constructs explored in this thesis in relation to the i-deals are empathic-concern and perspective-taking which constitute only two out of four dimensions of empathy. The other two dimensions – personal distress and fantasy have been excluded for relevant reasons explained in next chapters. Further, a logical choice was made to study only two major i-deals i.e. TWR and flexibility (SF and LF) and exclude financial i-deals. Finally, the

decision to limit the study to academic relationships was being made for two reasons – call from past researchers to explore i-deals in varied contexts and possibility of i-deals as a solution to seemingly stressed supervisor-scholar relationships and its subsequent impact on doctoral attrition.

1.11 Major Contributions of the Study

Scientific knowledge progresses by systematically building studies on the ever-strengthening foundation of previous studies, and this accumulation takes our understanding of a new and a higher level. Hence, it is important to know how a study contributes to the existing theory and practice and its relevance to the reader, before exploring it in detail. Thus, an overview of theoretical and practical contributions made by this study is provided here.

1.11.1 Theoretical Formulation

Theoretically, this research provides an alternative perspective to study the concept of the idiosyncratic deals by integrating multiple theories such as Theory of Pro-Social Reasoning, Social Penetration Theory, Self-Determination Theory and Signaling Theory. Secondly, it expands the scope of previous research by suggesting application of i-deals in the field of academia and argues the possibility of the existence of idiosyncratic deals between research supervisors and doctoral scholars and their role in managing the much-discussed complexity of these relationships. Further, this thesis responds to call for examining additional antecedents to i-deals by studying the role of EC and PT of supervisor in authorization of i-deals, which has not been examined by previous

researchers. The study also will stand as one of the earliest studies in the context of India, which is limited so far.

1.11.2 Practical Application

From a practitioner's standpoint, this thesis deals with academia-specific outcomes of i-deals which will enable supervisors to meticulously manage their relationship with the scholars by understanding what message each of these customized work arrangements conveys to the scholar and what impact it will have on the scholar's perceptions and behaviours. The study also guides supervisors in decision-making by helping them understand the relative role their affective and cognitive zones play in negotiating arrangements with individual scholars. Further, this thesis is felicitous as top institutes in India as well as across the globe face high attrition rate among doctoral students which directly impacts economic prosperity, research & innovation and knowledge production of a nation.

1.12 Organization of the thesis

A detailed account of this thesis is presented in six chapters, and the outline is presented in Figure 1.1.

Chapter 1 (Introduction): As an opening chapter, it highlights the key elements of the thesis. It sets the research background, followed by description of motivation behind the study, scope, problem statement, key objectives and theoretical & practical contributions. The overview of the thesis structure is presented in the end.

Chapter 2 (Literature Review): The chapter presents an overview of the status quo of i-deals research, drawing on both conceptual and empirical studies. It emphasizes on a

review of i-deals literature, covering aspects such as its origin, definitions, operationalization and theoretical approaches. It advances into the exploration of the determinants and consequences of i-deals and elucidates the conceptual and empirical justification for the variables investigated in this thesis. The chapter further highlights the existing gaps and examines the relevance of this study.

The second part of this chapter presents an account of studies related to research supervisors and doctoral scholars, undertaken so far. It will specifically discuss the positives and negatives of the supervisor-scholar. Further, it discusses the role of supervisors in reducing dropout intentions among doctoral scholars.

Chapter 3 (Theory and Hypotheses Development): The chapter elaborates the theoretical foundation on which the identified research gaps will be addressed and discuss different theories employed in this study. Further, the chapter will sequentially generate and integrate evidence to formulate research questions and hypotheses by propounding two research models – model of predictors (empathic-concern, perspective-taking of supervisors as antecedents to authorization of TWR i-deals and flexibility i-deals) and model of outcomes (a serial mediation model with competence need satisfaction, academic self-concept and scholar motivation as serial mediators between task & work responsibility i-deals and dropout intention; trust and perceived stress as serial mediators between flexibility i-deals and dropout intention).

Chapter 4 (Methodology): The chapter presents a brief argument on the research philosophy (ontology, epistemology, axiological and methodological assumptions) guiding the congruence between the research questions addressed and the methodology adopted is provided. Further, the chapter includes operationalization of all the variables included in the study, discussion on sampling plan, research instrument used for survey,

data collection and analysis tools being employed. The chapter concludes with a discussion on ethical considerations followed throughout the research process such as informed consent, respondent anonymity and data confidentiality.

Chapter 5 (Data Analysis & Results): The chapter will present an elaborate discussion of statistical tools used for conducting analysis and also present the results of statistical tests and their interpretations.

Chapter 6 (Findings, Discussion & Conclusion): This is the concluding chapter and discusses the study results and findings. It further elaborates on implications, existing limitations and suggests research directions for future researchers.

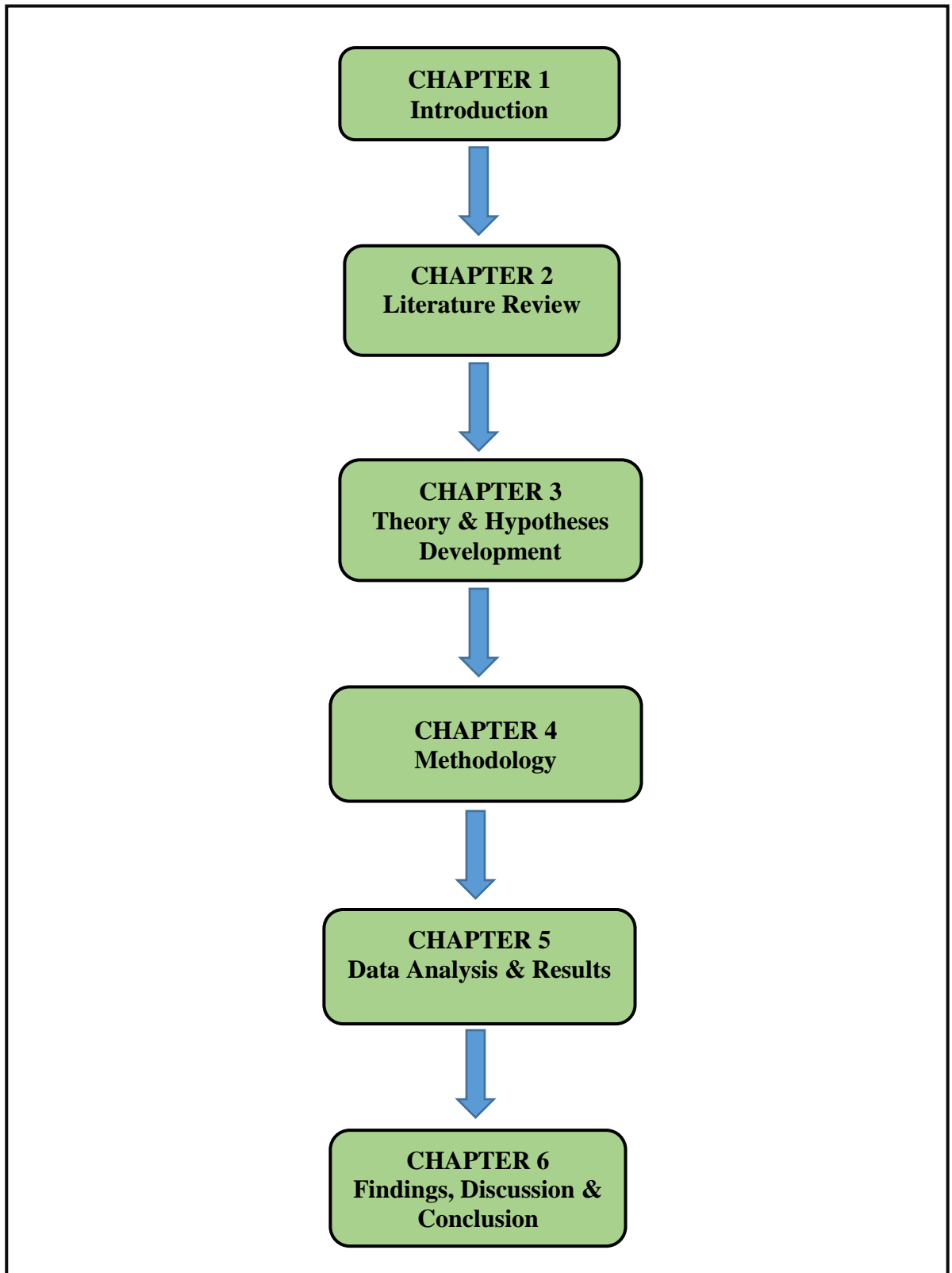


Figure 1.1 : Structure of the Thesis

CHAPTER 2

LITERATURE REVIEW

This section constitutes the literature review. It presents an overview of the prevailing i-deals literature, identifies research gaps and highlight gaps which the present thesis has set out to address. The chapter also enlists the broad and specific objectives of the study.

2.1 Idiosyncratic deals: The Concept

A work of a prolific research mind with an ability to link fictional situations to the real-world scenarios marked the initial conceptualization of the term “idiosyncratic deals” or “i-deals” by Dennise. M. Rousseau in the year 2001. Based on her observations of a corporate scenario explained in the book *Time Bind* written by author Arlie Russell Hoschchild (1997), she explained some critical underlying aspects of modern day work arrangements. Each employee engages in a unique “deal” with his or her employer and hence different deals exist among employees doing equivalent work. Further, these deals or work arrangements are predominantly being initiated and sought by the employees themselves who intend to ask for work arrangements that may fulfil their individual needs and ensure better personal lives while simultaneously contributing to the firm performance.

Organizations too acceded to such requests owing to pro-employee trends such as, an increasing demand for knowledge workers with unique competencies in competitive markets, decreasing standardization of workplace practices and customer demand for

greater customization of products and services. These trends lent greater power to the valued employees for negotiating terms with their employers, congruent to their personal and professional needs. Employers too leveraged the opportunity by providing customized work arrangements to their most skilled and high performing employees and retaining them for long-term in the times of hypercompetitive marketplace and war for talent. Such customized work arrangements being negotiated between employers and employees were named as “idiosyncratic deals”.

Rousseau (2001) theorized i-deals as “*voluntary, personalized agreements of a non-standard nature negotiated between individual employees and their employers regarding terms that benefit each party*”. These are the actual difference in the treatment of different employees by the employers and not just a perceived quality of the exchange relationship between them as defined by psychological contracts. I-deals can either be *objective* wherein an employee is given a higher salary pay, higher position etc. or maybe *subjective* in terms of greater moral support, flexibility in working hours etc. I-deals are customized to an extent that individuals working at the same level may negotiate completely varied elements and end up with variable responsibilities and rewards. This may theoretically indicate issues with equality and fairness thus mandating differentiating i-deals from other related constructs such as favouritism, cronyism, nepotism etc.

While favouritism involves extending a special work-related arrangement or opportunity specifically to an individual belonging to a favoured group in a covert manner, nepotism and cronyism involve prejudice towards a relative or family member and friend or close associate respectively. It is evident that these arrangements are covert, serves self-interest of one particular individual and are based on bias or preferential treatment of specific individuals which is in complete contrast to the basis of i-deals - which are transparent, based on shared values, and legitimate in terms of serving the

functional needs of both the employee and the employer. But despite its legitimacy, i-deals often contain an inherent risk to propagate a sense of injustice or inequity within the workplace owing to its customized nature.

I-deals become functional based on two major elements: zone of negotiability and worker & firm factors (Rousseau, 2001). Zone of negotiability refers to the spectrum of work conditions that are negotiable between the employee and the employer and varies across organizations and cultures. While different national cultures have varying breadth of zone of negotiability owing to the difference in the extent to which each country has pre-specified conditions of employment, organizations based on their available resources and constraints define their negotiable work conditions. These are further shaped by government factors such as industry laws on collective bargaining and societal factors such as people's tolerance for unequal outcomes such as rewards, opportunities etc. Worker related factors promoting increased negotiations of i-deals are greater value-creation by the employees, mobility of knowledge workers, growing trend of customization and increased competition for talented workers in the marketplace.

Organizations can respond to impact of above factors on idiosyncratic deals by meticulously following practices that will encourage negotiation and authorization of effective i-deals. This involves using performance-based rewards over mobility-based rewards, proactively differentiating between negotiable and non-negotiable work arrangements, clearly defining the responsibilities, deliverables and performance requirements and making negotiated i-deals transparent to other employees with a relevant explanation. Overall, i-deals present a mutually beneficial arrangement for the employee and the firm and become a conventional trend wherever there is a presence of highly marketable workers with knowledge, skills and willingness and ability to negotiate, more prominently in knowledge-oriented organizations.

2.2 Formation of I-deals

Rousseau et al. (2009), studied the differential effects of idiosyncratic work arrangements on employment relationship based on the time of negotiation and the content of i-deals in a hospital setting and found that ex-post i-deals i.e. i-deals negotiated after hire are dominant and have a superior influence on the exchange relationship in comparison to the ex-ante i-deals which are negotiated before or during the hire. The results showed that while ex-post i-deals are relationship-based are positively related to social interchange and negatively to financial exchange, ex-ante i-deals that are market-based had no association with the employer related social exchange.

2.3 Measurement of I-deals

The construct of i-deals, since the time of its inception, has been measured using different scales. While initial scales lacked scientific development, gradually researchers employed structured scale development process to develop a scale with high statistical reliability and validity.

Hornung, Rousseau and Glaser (2008) explored precursors and outcomes of developmental and flexibility i-deals in a German government organization where they used Rousseau and Kim (2006) measures in a German translated survey form. 887 employees were asked to indicate the degree to which they had “asked for and successfully negotiated individual arrangements different from their peers”. Developmental elements included were “On-the-job activities,” “Training opportunities,” “Special opportunities for skill development,” and “Career development.” Flexibility elements included were included “Flexibility in starting and ending the workday” and

“Individually customized work schedule.” The scale is extensively used by several researchers till date (Guerrero, Bentein & Lapalme, 2013)

Hornung, Rousseau and Glaser (2009) studied i-deals from supervisor’s perspective wherein they adapted Rousseau and Kim (2006) measure. The managers who participated in the study reported if their employees had “asked for and successfully negotiated individual conditions that deviate from official regulations or standards applying to peers in comparable positions” on a five-point scale. The study explored three types of i-deals each measured using two items. Questions measuring development i-deals were related to “individual opportunities for career development” and “challenging work assignments and goals”. Questions measuring SF i-deals were related to “special flexibility in working hours” and “customized work schedules”. Items under workload reduction i-deals were “reduced work hours” and “reduced workload”.

Hornung et al. (2010) examined task i-deals from job characteristic perspective and modified Rousseau and Kim (2006) scale to focus only on the job content. The scale ($\alpha = 0.86$) constituted four items: “personally challenging work tasks”, “special job duties or assignments”, “work tasks that suit my personal interest” and “on-the job activities especially suited to me”. The additional category enabled identification of denied i-deals.

Hornung, Rousseau, Glaser, Angerer and Weigl (2011) studied the impact of leader consideration i.e. employee-oriented behavior on development and flexibility i-deals and adapted the German version of Hornung, et al. (2008) scale wherein the former was measured using three items: “Special opportunities for skill development,” “Special support for career development”, and “Special job duties or responsibilities”, and later was measured with an alternate combination of three items: “Special working time flexibility,” “An individually customized work schedule,” and “More influence over my working hours.”

Rosen, Slater, Chang and Johnson (2013) grouped i-deals into four categories: TWR, SF, LF and financial i-deals. The subscales under four part scale had reliabilities (α) of 0.83, 0.78, 0.89 and 0.86 respectively. They conducted the study in four parts: (I) operationalization of domains where i-deals are negotiated, (II) development of measure, (III) confirming reliability and factor structure, and (IV) confirming psychometric properties such as validity by assessing the nomological network of i-deals with other OB constructs. The psychometric properties were confirmed by assessing their relationship with LMX, political skills and tenure as antecedents and organizational commitment and job satisfaction as outcomes.

Hornung, Rousseau, Weigl, Müller and Glaser (2014) while applying job design theory to i-deals in their study further developed Hornung et al. (2008) scale and isolated items related to task, career support and flexibility i-deals. A five-point scale was developed where three items measured task i-deals: “Job tasks that fit my personal strengths and talents”, “Job tasks that fit my personal interests”, and “Personally motivating job tasks”. Next, three items measured career i-deals: “Career options that suit my personal goals”, “Personal career development opportunities”, and “Ways to secure my professional advancement”. Finally, flexibility i-deals was measured by three items: “A work schedule suited to me personally”, “Extra flexibility in starting and ending my work day” and “A work schedule customized to my personal needs”.

Whenever i-deals were studied from employer’s or supervisor’s perspective, the scale is modified accordingly. For example, in a study by Vidyarthi et al (2014), employer’s perspective was captured by modifying the wordings of the items of the scale. Rousseau and Kim (2006) scale was modified to measure flexibility i-deals using with items: “This employee is given flexibility in starting and ending his/her work day” and “This employee has an individually customized work schedule”.

Researchers occasionally ventured into measuring i-deals request where they developed scale to measure the frequency of requests. For example, Lee, Bachrach and Rousseau (2015), operationalized i-deals request as the frequency at which an employee has sought for personalized work arrangements. They measured flexibility i-deals requests on Likert scale (1= “never” to 7= “always”) using items related to flexibility found in the literature (Hochschild 1997, Rousseau 2001).

2.4 Types of I-deals

Researchers observed that though some work arrangements were dominantly sought and negotiated by the employees, there did exist some other less prevalent but crucial work conditions being negotiated by the employees. This led to the emergence of various types of i-deals. Hence, different researchers made an attempt to explore multiple i-deals, their antecedents, outcomes, mediators in multiple contexts and cultures.

Hornung and Rousseau (2006) studied antecedents and consequences of *developmental i-deals* and *flexibility i-deals* in a German context. Further, Hornung, Rousseau and Glaser (2009) suggested additional *workload-reduction i-deals* while studying authorization and evaluation of i-deals by the supervisors. In another study, Rousseau, Hornung and Kim (2009) included workhour arrangements such as “reduced work hours” and “greater work hours” as measurement items. Hornung et al. (2010) employed job characteristics theory and suggested additional idiosyncratic arrangements specific to the job content named *task i-deals*. Rosen et al. (2013) additionally identified *financial incentives* as an i-deal with a component of economic exchange along with other relationship based i-deals such as TWR, SF and LF i-deals.

2.5 Antecedents and Outcomes of I-deals: Status Quo

Hornung et al. (2008) empirically tested the work structures i.e. part-time work, telecommuting and personal initiative as precursors to negotiations of i-deals among German government employees and found positive relationships implying that work arrangements that encourage idiosyncrasy and employee's ability to personally initiate a request may lead to successful i-deal negotiations. They also explored the influence of i-deals negotiation on four individual-level outcomes - working unpaid overtime, performance expectations, work-family conflict and affective organizational commitment. While developmental i-deals were positively related to all the four outcomes, flexibility i-deals were related negatively to working unpaid overtime and work-family conflict and unrelated to affective organizational commitment and increased performance expectations.

Hornung et al. (2009) extended the study conducted on German government organization, investigated i-deals from supervisors' perspective and explored a new type of i-deal – workload-reduction i-deal. They found that while sanction of developmental i-deals was positively affected by employee initiative as perceived by the employer, flexibility i-deals though granted to proactive employees were majorly influenced by the type of job of the employee.

Hornung et al. (2010) explored task arrangements as an alternate approach to work redesign and found positive association with LMX perception implying that if employees perceive their relationship quality with their supervisors as high, they tend to receive significant bargaining power and flexibility in their supervisor defined zone of negotiation, which may enable them to seek challenging tasks and autonomy at work.

Anand, Vidhyarthi, Liden and Rousseau (2010) investigated the association between i-deals and OCB and argued that the quality of relationships of an employee with

his/her supervisors, colleagues, and organization represented through LMX, TMX and POS respectively, has a moderating effect on this relationship. Analysis of data obtained from 231 supervisor-subordinate pairs embedded in 53 work groups confirmed the positive association between i-deals and OCB which was strong at low LMX or TMX rather than high LMX or TMX.

Research by Hornung et al. (2010) extended task i-deals as a new approach to work re-design and tested predictors and outcomes of task i-deals in the context of USA and Germany. They found a positive association between LMX and task i-deals negotiation, which, in turn, positively related to favourable assessment of work features such as greater intricacy and control and low stressors. It was also found that the indirect positive association between task i-deals, employee initiate and work engagement is mediated by work characteristics.

Hornung, Rousseau and Glaser (2010) attempted to test the mutual dependencies of individuals and organizations in determining work and employment conditions. They found that employees engage in i-deals to obtain both intrinsic and extrinsic satisfaction such that they have overall high job satisfaction.

Further, leader consideration that implies employee-oriented behavior, was found to be positively related to authorization of both developmental and flexibility i-deals Hornung et al. (2011) study. The study made significant contribution to leadership research by providing an alternate mechanism through which leaders can fulfill the needs and preferences of each individual through greater customization of work arrangements and supporting employees effectively.

Lee and Hui (2011) analyzed content and timing of i-deals and found that social skills, perceived insider status and individualism positively related to ex-post i-deals. The

study was conducted among employees working in a Chinese telecommunication company.

Bal, Jong, Jansen and Bakker (2012), based on the personality theory, continuity theory, and activity and disengagement theory, conducted a multi-stage study on 1083 health-care workers nested in 24 operation units of two organizations in Netherlands, to test the influence of i-deals on motivation to continue working after retirement. The results indicated that both flexibility and developmental i-deals positively influence motivation to work while the influence of latter being moderated by the unit climate i.e. stronger association at low accommodative/high development unit climate.

Rosen et al. (2013) pursued the first ever scientific scale development process of i-deal and to evaluate the psychometric property of the scale tested the relationship of i-deals with three antecedents – tenure, political skills and LMX. The survey was conducted among 289 part-time and full-time employed university students (current & alumni). It was found that tenure was positively related only to the financial incentive i-deal indicating that longer tenure encouraged employees to negotiate financial aspects of work. Political skill significantly predicted TWR and LF i-deals which implies that individuals with greater political skills tend to seek i-deals from their employers to a greater extent. Finally, it was also found that LMX was a significant predictor of TWR, SF and financial incentives i-deals implying stronger relationship with the employer lead to higher likelihood of i-deal negotiation.

Liu, Lee, Hui and Wu (2013) conceptualized i-deals using self-enhancement theory and found positive relationships between i-deals and proactive behaviour and affective commitment of employees. Self-enhancement and social exchange mediated these relationships and individualism moderated these associations. It was found that

highly individualistic employees were stimulated by self-enhancement effects, whereas, employees with low individualism were motivated by social exchange effects.

Hornung, Rousseau, Weigl, Müller and Glaser (2014) carried out a survey among 187 health care professionals to empirically evaluate i-deals under the lens of job design theory. The study involved testing relationship between LMX as an antecedent to task, career support and flexibility i-deals. It was found that LMX significantly predicted all the three i-deals.

Vidyarthi et al. (2014) studied flexibility i-deals among software professionals in Indian organizations. They proposed a non-linear relationship between flexibility i-deals and perceived organizational support (POS) and tested it using hierarchical linear modelling. An analysis of data collected from 39 managers and 207 employees revealed that lower and higher authorization of flexibility i-deals signaled high POS and greater career satisfaction.

Ho & Kong (2015) integrated signaling theory with self-determination theory and investigated the signaling capabilities of i-deals. They collected data from 131 employee-co-worker dyads and observed that task i-deals positively signaled competence-based beliefs and lead to satisfaction, which in turn, related positively to OCB.

Luu and Rowley (2015) collected data from 131 mid-level managers of software companies in Vietnam and employed it to unleash value-based HR practices as the beginning point of i-deals. The results confirmed that value-based HR practices may be the foremost factor to stimulate the i-deal negotiation process. The value-based HR practices related positively to emotional intelligence, ethical and legal CSR which in turn related positively to organizationally beneficial behaviours that corresponded positively with i-deals.

Ng & Lucianetti (2015) studied i-deals in varied occupational contexts and surveyed 82 managers and 406 employees in different organizations in Italy. The study conceptualized that employees' tendency to initiate and receive i-deals is driven by the predisposition of their inner motivations, specifically, the motivation in the form of achievement, status and communion striving. The empirical analysis of the data collected indicated that employee's perceptions of i-deal receipt is positively related to achievement striving and status striving but unrelated to communion striving.

Tang & Hornung (2015) studied the impact of i-deals at work-family interface. The study was conducted in China among 179 employees who were parents and hence had core families. It was found that employee's personal initiative positively influenced negotiation of development i-deals but did not relate to flexibility i-deals. In addition, it was empirically established that family-work enrichment (FWE) moderated the relationship between i-deals and personal initiative such that personal initiative had higher positive impact on flexibility and development i-deals when FWE was high.

Guerrero, Jeanblanc & Veilleux (2016) conducted a longitudinal survey among 325 engineers in France to explore additional antecedents and consequences of development i-deals. They found a positive association between development i-deals and career planning which implies that individuals who are proactive in designing their career path in the organizations tend to seek and negotiate developmental i-deals.

Guererro and Challiol-Jeanblanc (2016) applied social-comparison theory to understand the helping behaviour of i-deals recipients towards their co-workers. A longitudinal study of engineers in France indicated that organization-based self-esteem mediates the link between i-deals and helping behaviour and the strength of this relationship is high when i-deals recipients perceive that a certain co-worker lacks the prospect to discuss i-deals.

Ho and Tekleab (2016) explored the dynamics of i-deals request and receipt and found that this relationship is moderated by leader-member exchange (LMX) such that i-deals request transformed into actual receipt when the LMX quality was high between the employer and the employee. In addition, receipt of i-deals related positively to affective commitment, job satisfaction and negatively to dropout intentions.

Tuan (2016) explored i-deals in the context of software employees in Vietnam and conducted a survey among 427 supervisor-subordinates dyads. The study investigated organizational ambidexterity (OA) as a predictor of entrepreneurial orientation (EO) in the presence of corporate social responsibility (CSR) which in turn predicts i-deals. The results indicated a positive relationship between OA and EO, confirmed the moderating effect of CSR and indicated a positive relationship between EO and i-deals. This implies that an ambidextrous organization promotes entrepreneurial orientation among its employees which in turn may encourage them to negotiate greater number of i-deals to pursue entrepreneurial activities through nature of work and by obtaining flexibility.

Guererro Challiol-Jeanblanc (2017) explored the antecedents of developmental i-deals through the lens of a situationist and from an organizational politics perspective. They proposed and tested the relationship between networking skills and receipt of developmental i-deals. A survey was conducted among 252 engineers in France and the data thus obtained was analyzed. The results indicated networking skills positively influence receipt of developmental i-deals and the relationship is mediated by support-seeking behaviors.

Liao, Wayne, Liden and Meuser (2017) conducted a survey across 71 restaurants in USA and collected data from 961 employees to test their proposed model developed on the basis of social exchange theory, justice theory and social comparison theory. They found that i-deals related positively to helping behaviour, in-role performance and job

satisfaction. In addition, the results indicated that LMX quality mediates these relationships and the mediating effect becomes stronger when in-group LMX differentiation is greater.

Rofcanin, Kiefer and Strauss (2017) emphasized on the need to explore factors that determine successful authorization of i-deals and proposed that leader's affective attitude or emotions have a significant role in i-deals obtainment. They suggested that managers grant i-deals based on their perceived employee outcomes post the negotiation. A two-wave longitudinal design was employed to test the propositions and results revealed that managers grant i-deals to those employees who they expect, will be engaged in socially desirable behaviours with their teams, whereas deny i-deals to employees who they perceive to be socially disconnected.

Few studies also explored i-deals from co-workers' perspective in order to understand the chances of disagreement, conflict, injustice perception etc. and the consequent impact on their perceptions about their managers, colleague and overall work environment. In addition, there exists a scarce amount of literature on i-deals is from managers's perspective as discussed below.

Lai, Rousseau and Chang (2009) in their study on work group dynamics, studied sixty-five employees nested in twenty R & D work-groups using network approach. It was found that coworkers' willingness to accept a colleague's ideal depends on his relationship with both the manager and the individual receiving the i-deals (i-dealer). The group members have greater acceptance of i-deals received by their close friends. Also, acceptance is greater when the coworkers perceive i-deals as a social exchange rather than economic exchange and these relationships are mediated by their belief regarding receiving similar opportunity to negotiate i-deals in the future.

Lee, Bachrach and Rousseau (2015) studied i-deals under the lens of labour contracting and explored antecedents of i-deals request. They surveyed 615 managers in eleven Korean firms from manufacturing sector and identified those conditions under which employees seek i-deals despite being part of internal labour markets (ILM). It was found that employees' beliefs about ILM is negatively related to i-deals requests implying that employees do not seek i-deals in the presence of positive beliefs towards ILM as ILM signal long term commitment of the employer and hence employees are more cooperative and contribute to organization while being cordial about peers and seniors receiving benefits, in the anticipation of receiving future benefits as implicit under ILM. The study also reported a positive relationship between firm-specific human capital and i-deals requests. It meant that employees with greater work experience and tenure in the organization for a critical intellectual resource for the organization and are hence better positioned to initiate i-deals.

Bayazit and Bayazit (2017) studied i-deals among 227 managers working in multiple organizations in Istanbul. In this study, they found that employee's perception about availability of flexible work arrangements (FWAs) encourage them to initiate flexibility i-deals. The result of negotiation of flexibility i-deals was favourable when general health was positive and work-to-family conflict was low.

Ng (2017) argued that developmental i-deals may often have unfavourable social consequences such as turnover, in case of young professionals, who feel entitled to resources for career development. The argument was tested empirically using data obtained from 190 educated employees in a five-wave longitudinal study. The results showed that obtaining developmental i-deals and observing developmental i-deals of coworkers positively associated with feelings of being envied and to resent others, respectively. Such emotions lead to increased perception of workplace competition which

subsequently leads to greater felt ostracism, which most often is the factor responsible for voluntary turnover.

Kimwolo and Cheruiyot (2018) conducted a field study among 48 managers and 498 employees of life insurance companies in Kenya, to investigate the influence of intrinsically motivating i-deals on innovative work behaviour (IWB). The data collected was analyzed using standard multiple regression and results showed a positive relationship between both task & work responsibility i-deals and IWB and between flexibility I-deals and IWB. Therefore, it was established that to encourage innovative behaviours among employees, managers must grant flexibility and task i-deals.

Luu and Djurkovic (2019) study focused on behavioural orientation of leaders and explored the association between paternalistic leadership and i-deals in Confucian-based cultures such as Vietnam. For this purpose, they collected data from 168 supervisors and 1,182 clinical employees. It was found that authoritarian leadership behaviors is associated negatively with employees' i-deals, but the dimensions of morality and benevolence related positively with i-deals. In addition, the study found employees' flexible role identity to be a moderator between organizational identification and i-deals.

Marescaux, Winne and Sels (2019) studied i-deals from a co-workers perspective using equity theory. The study aimed at exploring varied judgements and reactions of co-workers towards the i-dealer. A vignette study with 1989 employees examined the extent to which i-deals content and employee-coworker functional dependence influenced co-worker judgments regarding i-deal fairness and consequent voice behavior. The results revealed that if coworkers perceive i-deal to be distributively unfair, they tend to achieve equity via voice behavior, rendering i-deals ineffective. In addition, distributive unfairness perceptions and related voice behaviour resulting out of i-deals was more prominent in work contexts with high functional interdependence. It was also found that

financial bonuses as an i-deal triggered greater perceptions of injustice and attracted complaints or requests for compensation.

The summary of i-deals literature discussed so far is provided in Table 2.1.

Table 2.1
Summary of Literature on I-deals

Author	Country	Type of I-deal studied	Antecedents	Outcomes	Mediator/ Moderator	I-deals Scales Used
Hornung & Rousseau, 2006		Developmental	Work structures: Part-time work (+) Telecommuting (+) Personal Initiative (+)	Work-family conflict (+) Working unpaid overtime (+) Performance expectations (+) Affective organization al commitment (+)	- -	Rousseau & Kim (2006)
		Flexibility	Work structures: Part-time work (+) Telecommuting (+) Personal Initiative (+)	Work-family conflict (-) Working unpaid overtime (-) Performance expectations (nr) Affective organization al commitment (nr)		
Hornung, Rousseau & Glaser, 2009		Developmental	Job constraints (+) Employee Initiative (+) Unfulfilled obligations (-) Group size (+)	Performance standards (+) Employee motivation (+) Employee work-life balance (nr)	-	Rousseau & Kim (2006)

		Flexibility		Performance standards (nr) Employee motivation (nr) Employee work-life balance (+)		
		Workload-reduction			-	
Anand, Vidyarthi, Liden & Rousseau, 2010	India	Developmental	-	OCB (I) (+) OCB (O) (+)	LMX (low) TMX (low) POS (nr)	-
Hornung, et al., 2010	USA, Germany	Task	LMX perception (+)	Personal Initiative (+) Work engagement (+)	Complexity of work (+, indirect) Control at work (+, indirect) Work stressors (-, indirect)	Modified Rousseau & Kim (2006)
Hornung, et al., 2011	Germany	Developmental	Leader consideration	Work engagement (+)	-	German version of scale developed by Hornung, et al. (2008) Rousseau & Kim (2006)
		Flexibility	Leader consideration	Work-family conflict (-)		
Lee & Hui, 2011	China	Ex-post	Individualism (+)		-	Rousseau & Kim (2006)
		Ex-ante	Social skills (+) Perceived insider status (+)			

		Developmental		Relational psychologic al contracts (+)		
		Flexibility		Transactiona l psychologic al contracts (+)		
		Workload reduction				
Bal, Jong, Jansen & Bakker, 2012	Netherlan d	Developmental	-	Motivation to continue working after retirement (+)	Accommo dative unit climate (+, nr)	Adopted scale
		Flexibility			Development unit climate (+, nr)	
Rosen, Slater, Chang & Johnson, 2013	USA	Task & Work responsibilities	Tenure`(-) Political skills (+) LMX (+)	Job satisfaction (+) Organization al commitment (+)		standard scale develop
		Schedule flexibility	Tenure`(-) Political skills (-) LMX (+)			
		Location flexibility	Tenure`(-) Political skills (+) LMX (-)			
		Financial incentives	Tenure`(+) Political skills (-) LMX (+)			
Guerrero, Bentein & Lapalme, 2013	Canada	Developmental	PCB	Affective commitment	Trust I-deals (moderated mediation)	Rousseau & Kim (2006)
Hornung, Rousseau ,	Germany	Task	LMX (+)	Job performance (+)	Job autonomy (+)	Hornung et al. (2008).

Weigl , Müller & Glaser, 2014		Career	LMX (+)	Self-efficacy	Skill acquisition (+)	
		Flexibility	LMX (+)	Irritation (-)	Work overload (+)	
Tuan, 2014	Vietnam	Task & work responsibilities	Organizational ambidexterity (+)		Entrepreneurial orientation (+)	Rosen et al (2013)
		Schedule flexibility			Corporate social responsibility (+)	
		Location flexibility				
Vidyarthi ,Chaudhary, Anand & Liden, 2014	India	Flexibility	-	Perceived organizational support (+) Career satisfaction (+)	-	Rousseau and Kim (2006)
Guerrero & Jeanblanc, 2015	France	Developmental	-	Helping behavior directed at co-workers	Organization-based self-esteem (+/med) I-deal opportunity for co-workers (nr)	Hornung et al. (2008)
Ho, 2015	-	Task	-	Organizational citizenship behaviour (+)	Competence need satisfaction (+)	Rosen et al (2013)
		Financial		Organizational	LMX (+) Competence need	

				citizenship behaviour (+)	satisfaction (-) LMX (+)	
Ng & Lucianetti, 2015	Italy	Career development Schedule flexibility	Employees' achievement striving (+) status striving (+) communion striving (nr)	in-role job performance (+) voice behavior (+) Interpersonal citizenship behavior (+)	Employees', perceptions of the i- deals they receive (mod/ +, +, -) Employees', perceptions of whether their coworkers are receiving i-deals (mod)	Hornung et al. (2008)
Tang & Hornung, 2015	China	Development Flexibility	Personal Initiative (+)	Work engagement (+) Work-to- Family enrichment (+)	Family- Work Enrichment (+) Intrinsic motivation (+) Extrinsic motivation (+)	Hornung et al. (2008)
Guerrero, Jeanblanc & Veilleux, 2016	France	Development	Career planning (+)	Objective career success (+) Subjective career success (+)	-	Hornung et al. (2008)

Ho & Tekleab, 2016	USA	Developmental (receipt of i-deals) Flexibility Task Financial	I-deal request	Job Satisfaction (+) Organizational Commitment (+) Turnover Intention (-)	Gender Industry experience (+, mod) LMX (+, mod)	Hornung et al. (2008), Hornung et al. (2010), Scale development for financial i-deals Scale developed for I-deal request
Lee, Bachrach & Rousseau, 2016	Korea	I-deal request	Firm-specific human capital (+) Employee internal labor market Beliefs (-) Group heterogeneity (+)	-	-	Scale developed for I-deal request
Liao, Wayne, Liden & Meuser, 2016	USA	Career Task Flexibility	-	Job satisfaction In-role performance Helping behaviour	Managers' procedural fairness (med, +) LMX quality (mod, +)	Hornung, Rousseau, Weigl, Müller, and Glaser (2014)
Luu & Rowley, 2016	Vietnam	Task & work responsibility Location flexibility	Cultural intelligence (+)	-	Trust (med, +) HR localization (mod,+)	Rosen et al (2013)
Oostrom, Pennings & Bal, 2016	Netherlands	Task & work responsibility Schedule flexibility Location flexibility	-	Employability of older workers (+,-, +)	Self-efficacy (med,+) Future time perspective (med,+)	Rosen et al (2013)

Bayazit & Bayazit, 2017	Turkey	Flexibility	Perceived availability of flexible work arrangements	Work-family conflict	Successful negotiation of flexibility i-deals (med)	Hornung, Rousseau, Weigl, et al. (2009)
				General health	perceived family-supportive cultures (mod)	
Kimwolo & Cheruiyot (2018)	Kenya	Flexibility	-			Rosen et al (2013)
		Task & Work responsibility		Innovative work Behaviours	-	
Luu & Djurkovic (2019)	Vietnam	Task & Work responsibility	Paternalistic leadership		Employees' flexible self identity	Rosen et al (2013)
		Schedule Flexibility	Organizational identification	-		
		Location flexibility				

2.6 Research Gaps

The review of studies in the field of idiosyncratic deals till date revealed significant gaps in the i-deals literature, which forms the motivation for the present research.

2.6.1. *Call for attention to additional theories for broadening the explanatory framework*

Though the initial works on i-deals was centered on social exchange theory, the call for studies from different theoretical perspectives encouraged researchers to apply multiple theories. Till date, few theories that have been applied to i-deal theory development are employee goals theory, job characteristics theory (Liao, Wayne & Rousseau, 2014), self-determination theory (Litalien & Guay, 2015), equity theory (Thomas W.H. Ng, 2017), sociological role theory (Tang & Hornung, 2015), and social

comparison theory (Vidyarthi et al., 2016). Therefore, it can be contended that multiple theories have been contributing to i-deals research and novel theoretical perspectives can only strengthen the explanatory framework of the i-deal construct.

The present study on i-deals draws upon the features of other new theoretical perspectives such as Theory of Pro-social Reasoning, Strategic Contingency Theory, Social Penetration theory and integrates them with Self-determination theory and Signaling theory to address three points: (i) to identify and empirically study additional individual level antecedents of TWR and flexibility i-deals (ii) to empirically test the signaling role of TWR i-deals by studying the intermediate role of CNS between task & work responsibility i-deals and academic self-concept, motivation and dropout intention of research scholars, and, (iii) to empirically test the trust-signaling role of flexibility i-deals through the intermediate process of improved trust and reduced perceived stress.

While Theory of Pro-social reasoning is applied to study additional antecedents (supervisor's empathic concern and perspective-taking) to i-deals, features of Strategic Contingency Theory (actor-centrality) and Social Penetration theory (tenure under supervisor) have been employed to define research supervisor – doctoral scholar sampling frame for the study. Signaling theory has been integrated with Self-determination theory to examine Rousseau and colleagues (2006) notion that ideals can signal the value that an employer places on the i-deal receiver. This has been done earlier with respect to task i-deals, where the competence-signalling, motivational mechanism underlying these i-deals was examined, which in turn positively influenced the citizenship behavior of the i-deal recipient. In this study, signaling theory facilitates the logic of how development and flexibility i-deals indicate positive messages to scholars (Connelly, Certo, Ireland & Reutzel, 2011), and SDT articulates the mechanisms through which signals from developmental i-deals augment scholar's competence need satisfaction and, subsequently,

their academic self-concept and reduce dropout intentions (Ryan & Deci, 2000). SDT also explicates how signals from flexibility i-deals strengthen perceived trust which in turn reduces perceived stress. These ideas will be further developed in Chapter 3.

2.6.2 Call for studies investigating additional antecedents of the idiosyncratic deals

A recent meta-analysis of i-deals research revealed the need to go beyond individual proactivity, leader personality and leader-member relationships and persistently explore and investigate the characteristics, behaviours and styles of the employees and leaders, to contribute more antecedents of i-deals at the individual level that impact the creation of i-deals (Liao et al., 2014).

Multiple theoretical perspectives in the past have substantiated that mutual concern and caring is one of the cardinal characteristics of high-quality supervisory relationships (Colbert, Bono & Purvanova, 2008). This mutual concern, operationalized as “empathy” in the academic literature, has been established as an important leadership skill that can motivate and inspire others (Goleman, 1998). Empathy is associated with positive interpersonal and intrapersonal outcomes (Konrath & Grynberg, 2013) such as life satisfaction, emotional intelligence, self-esteem (Eisenberg, Fabes, & Spinrad, 2006; Mayer, Caruso, & Salovey, 2000) and helps in building strong prosocial social networks (Konrath, Ho, & Zarins, 2016). Therefore, the present study intends to explore the role of leader empathy in successful authorization of i-deals and influence on individual-level outcomes. The most persistently used measure of empathy -Interpersonal Reactivity Index (IRI) - was developed by Davis (1980) which operationalized empathy as a set of four distinct but related constructs – *perspective-taking*, *empathic concern*, *personal distress* and *fantasy* - that all uniquely measured reactions of an individual to the observed experiences of another (Smith, Gardner & Signo, 1994). The present study examines one

cognitive (perspective-taking) and one affective or emotional component (empathic-concern) as a predictor of i-deal creation as majority theorists assert that PT and EC are the most consequential components of successful social interactions (Parker & Axtell, 2001).

2.6.3 Studying interactive associations of EC and PT in predicting TWR and flexibility i-deals

A comparative understanding of role played by cognitive and affective empathy in predicting success of i-deal negotiation will deepen our knowledge about underlying processes that operate in human mind while granting i-deals. Previous research indicated that perspective taking and empathic concern have differential effects in negotiations. Galinsky, Maddux, Gilin & White (2008) discovered that while PT strengthened the individual ability to discern covert agreements and generate or obtain resources, EC had an inverse effect on the negotiating table. Studying interactive association will enable us to understand the extent to which empathic concern and perspective-taking together or individually influence the decision-making of the supervisor while negotiating and granting i-deals.

2.6.4 Application of i-deals to a novel organizational context

Empirical studies on i-deals till date have been conducted with respect to managers and employees in IT, manufacturing, telecommunication and healthcare industries (Bal et al., 2012; Ng et al., 2012a; Lee, C., & Hui, C., 2011, Hornung et al., 2010). Its application in strengthening academic relationships have not yet been explored and hence presents a unique opportunity to widen the scope of i-deal concept while addressing key frictional issues in research on supervisor-scholar relationships.

2.6.5 Addressing existing issues in a supervisor-scholar relationship in doctoral education

The learning process in doctoral education involves both the supervisor and the research scholar (Franke & Arvidsson, 2011). While some researchers (Green & Lee, 1995) argued that creating a collaborative conversation and communication between supervisor and student is unimaginable and unfeasible, few others (Bartlett & Mercer, 2000) perceived this relationship as more collaborative in nature where the supervisor acts as a facilitator and offers greater flexibility and autonomy and scholars utilize these arrangements to balance their personal and academic lives. Irrespective of this dichotomous view, supervision has consistently emerged as an amalgam of pedagogical and personal relationships. This intensifies the complexity of supervisor-scholar relationship as each group combats its own challenges while attempting to produce the quality output i.e. thesis dissertation, a culminating component of doctoral studies which many students emphasize as the most difficult barrier to independence (Katz & Martin, 1997; Deuchar, 2008; Halse & Malfroy, 2010).

The literature suggests that supervisors experience frustration with the progress and attitude of students on one hand and the multitude of administrative processes on the other. In addition, the emergence of structured doctoral programmes, has supplemented to the pressure through complex academic goals, meticulous evaluation methods and schedules demands. Also, while the number of doctoral students has increased tremendously in institutions with high research rigor, the number of supervisors has not grown in parallel. The problem has worsened with increasing demand on supervisors to cover interdisciplinary research topics. This double-edged sword of larger numbers and even larger breadth negatively affected supervisory workloads.

The literature expounds that young researchers gradually lose motivation and almost get exhausted by the end of course completion. Students experience disengagement which impact their persistence to complete their study and leads to increased stress and higher attrition rate (Gardner, 2007). Doctoral students also find it difficult to balance work and private life and hence crave for a supporting environment (Appel & Dahlgren, 2003). Hagedorn (2012) emphasized on greater importance of family and social commitment over the scholarly life which itself is very meaningful and worth achieving.

The present study suggests that i-deals may serve as a conflict-resolution mechanism and create a win-win situation for both scholar and supervisors, improve quality of research output, and significantly reduce the dropout rates by facilitating the development of high-quality exchange relationships between research supervisors and doctoral scholars.

2.6.6 Lack of i-deal research in the Indian context

Though research in the area of i-deals has been growing significantly across the globe, it is intriguing that Indian researchers have not yet given any attention to this upcoming research area. Till date, most researchers on i-deals have conducted studies in countries such as USA, Germany, Netherlands, Canada, France, Italy, China and Vietnam as observed in Table 2.1. The only study conducted by Indian researchers on i-deals has been on Indian hospitality industry by Dhiman, Budhwar & Katau (2017) in collaboration with international researchers. This study will be uniquely placed both in terms of its context and demographics.

A careful examination of the abovementioned research gaps raises some critical research questions that the present study sets out to address as discussed in the following sub-section.

2.7 Objectives of the Study

The principal aim of current study is to examine determinants and academia-specific outcomes of idiosyncratic deals. The four main research objectives are:

1. To study the link between empathic concern, perspective-taking of the supervisor and authorization of task & work responsibility i-deals, location flexibility i-deals and schedule flexibility i-deals with prosocial motivation as moderator.
2. To study the combined effect of empathic concern and perspective-taking of supervisor in predicting supervisor authorization of task & work responsibility i-deals, schedule flexibility i-deals and location flexibility i-deals.
3. To examine the signaling function of task & work responsibility i-deals and flexibility i-deals by studying i) competence need satisfaction as an intermediate variable between TWR i-deals and academic self-concept & student motivation (ii) perceived trust as an intermediate variable between SF i-deals and LF i-deals and perceived stress.
4. To examine the effect of i-deals on dropout intentions of the scholars.

These objectives encourage further investigation of relevant theories and identify factors influencing supervisor-scholar relationships and that can be influenced through i-deals. It also warrants integration of evidences from areas of i-deals research and research in doctoral education in Higher Educational Institutions (HEIs) in India, to formulate hypotheses and develop a theoretically and a practically sound conceptual model, to be discussed in the next chapter.

Chapter Summary

The chapter comprehensively discussed the area of i-deals and dealt with its conceptualization, scope, formation and measurement. Further, an overview of each study conducted in the field of i-deals is presented along with the overview of the literature for better visualization of research gaps. The chapter, then presents the research gaps arising out of literature review, consequent research questions and specific objectives of the study.

CHAPTER 3

THEORY AND HYPOTHESES DEVELOPMENT

This chapter provides the contextual background of the present research and discusses the literature on doctoral education with specific emphasis on the relationship between research supervisors and doctoral scholars. The chapter then lays the theoretical foundation by discussing the key theories guiding this research. Further, the chapter integrates evidences from literature on key constructs, establishes possible links and propose relevant hypotheses to be tested empirically.

3.1 The Doctoral “Journey”

A proven linear connect between doctoral education and phenomena such as economic prosperity, research, innovation and knowledge production has garnered the interest of academic scholars as well as the policy makers over the past two decades (King, 2008). An increasing number of studies on doctoral education has been taken up globally with respect to disciplinary/departmental culture (Golde & Dore, 2004), supervisor relations (Nettles & Millett, 2006), socialization (Austin, 2002), and attrition (Lovitts, 2001). This burgeoning literature is apropos as the success of research students has emerged as a crucial national issue with higher educational levels having greatest impact on a country’s levels of innovation and productivity (Harman, 2003).

But, the journey of doctoral education is a complex process and seldom does it progresses in a romanticized way. Doctoral students enter into a dual role of a student and a researcher (Garner, 2008; Stubb et al. 2011) and embark on a journey from being a knowledge consumer to a knowledge creator (Delamont et al., 2000). Their journey not

only constitute the indispensable academic teaching and research assignments, but includes an in-depth development of scholarship that involves strong commitment and focus (Walker et al., 2008). But life external to the doctorate continues and have a consequential impact on events within the doctoral environment (Green & Bowden, 2012). Hence, it is inevitable for doctoral students to strive towards achieving equilibrium in this stage of their professional and personal growth.

But is this equilibrium achievable? Specifically, in the “quest” of doctoral education (McCulloch, 2013), which has been characterized as a “lonely, demanding, creative and, not least, emotional venture” (Boucher & Smyth, 2004). This nature of doctoral education is conspicuous in increasing levels of stress, depression, anxiety, burnout and emotional exhaustion among doctoral students (Levecque et al., 2017) and higher doctoral attrition rates globally (Gardner, 2007, Council of Graduate Schools, 2016). Research reports indicate doctoral attrition of > 50% in USA (National Center for Education Statistics, 2017), 20-41% in Europe (European Commission, 2015), 33% in Australia (Department of Education and Training, 2017) and 20-35% in other countries.

The doctoral student experience in contemporary education system is very different than a decade ago. Scholars are expected to transform into leaders, experts, and change agents on completion of their doctoral degree in their field of research while also engaging in other professional development activities (conferences, consulting, publications, research, training teaching etc.). This trend is leading to greater pressure for timely completion of the program while simultaneously reducing the chances of securing an academic position post doctorate degree. Therefore, academicians need to acknowledge these underlying challenges and redesign their thinking towards the newer trends of doctoral education (Egan, Stockley, Brouwer, Tripp, & Stechyson, 2009).

India too is heading towards a similar fate as top Indian research institutions struggle with high attrition rates among doctoral students. From 2014 to 2016, a total of around 2000 doctoral scholars from top IITs and IIMs dropped out of their courses. While IIMs saw departure of 49 scholars, IITs faced egression of an unexpected number of scholars with 256 students dropping out from IIT Delhi, 198 from IIT Kharagpur, 47 from IIT Kanpur, 35 from IIT Madras, 34 from IIT Mumbai and 22 from IIT Patna (MHRD, 2016). And others who move forward to completion, does it while coping up with several challenges.

Doctoral research cannot progress in social segregation. It is a collective effort of different individuals and institutions who directly or indirectly contribute towards thesis submission and development of scholar as an academician (Turner & McAlpine, 2011; McAlpine et al., 2009). Interpersonal relationships and networks enable improved PhD experience and research progress (Jairam & Kahl, 2012). While peers or co-scholars contribute as a source of intellectual, social and emotional support, supervisors serve as mentors and guide (Kemp et al., 2013).

Doctoral education has been described as a process of “creation” that involves transformation of a student who is knowledge consumer into an independent researcher who is a knowledge creator (Delamont et al., 2000; Stubb et al., 2011). Doctoral students have to demonstrate rigor in their research along with completion of course works, seminars and final submission of their dissertation (Bargar & Duncan, 1982). Research indicates that completing doctoral studies is a challenging journey and most students face some critical challenges such as increased stress and reduced well-being (Spaulding & Rockinson-Szapkiw, 2012; Kurtz-Costes et al., 2006). Some of the problems reported by students were departmental problems, lack of funding, ineffective supervision, personal sacrifices and simultaneous occurrence of crucial events in personal lives (Appel &

Dahlgren, 2003). These problems are constraints to successful doctoral completion to an extent that around 30 to 50 percent of doctoral scholars dropout of the course globally (McAlpine & Norton, 2006).

Vekkaila, Pyhalto and Lonka (2013) in their study indicated that doctoral students found it difficult to balance their research life with their personal lives which lead to disengagement and intention to quit. This also led to perceived incompetence and reduced sense of belonging to the academic environment. Interestingly, scholars attributed these challenges to the organizational environment and lack of supervisor and co-scholar support

This implies that the quality of the experience as a part of academic community is a critical factor influencing engagement of research scholars. It was also found that scholars who are engaged found these challenges as a source of motivation as well and continued to demonstrate high performance (Virtanen & Pyhalto, 2012). But engagement of doctoral students depend on multiple factors such as autonomy, supervisor support, and quality feedback which improve satisfaction, well-being and persistence (Schaufeli & Bakker, 2004; Gardner, 2007).

Lack of supervisory support in the form of meaningful interactions was found to be a significant determinant of scholars' dissatisfaction and attrition (Hoskins & Goldberg, 2005). Students who quit their doctoral studies reasoned isolation, lack of integration and uncooperative relationships with their supervisors as a key factor influencing their dropout intentions (Lovitt, 2001). Another hurdle in the doctoral journey is the inability of students to integrate their own values into academic life thus experiencing inadequate understanding of comparative understanding of research and teaching (Bieber & Worley, 2006). Despite structured training efforts to strengthen their development, scholars perceive these efforts as inadequate thus emphasizing on the need

to understand the process of doctoral quest and transformation of doctoral scholars into professional academics (Golde & Doré, 2001).

3.2 Supervisor-Scholar Relationships in Academia

In the academic context, research supervisors are often attributed as mentors. Mentoring has been defined as “a nurturing process in which a more skilled or more experienced person, serving as a role model, teaches, sponsors, encourages, counsels and befriends a less skilled or less experienced person for the purpose of promoting the latter’s professional and/or personal development” (Anderson & Shannon, 1988, p. 40). Research suggests that mentors provide both professional support and psychological support to their subordinates (Johnson & Nelson, 1999). Supervisors facilitate the process of researcher development through empathetic interactions and demonstrating professional research behaviour (Manathunga, 2007). But for mentoring to be effective, positive rapport and transparent communication is key precursor (Phillips & Pugh, 2000). Mentors have a significant influence on quality of doctoral experience through counseling, exposure, protection and sponsorship (Luna & Cullen, 1998). A consensus among researchers exists that supervisors as mentors transmit technical skills and scientific knowledge, guide scholars towards better career opportunities and motivate them by building self-confidence (Reskin, 1979; Alleman et al., 1984). The overall purpose of doctoral is to monitor, assess and improve scholar’s learning process throughout the doctoral pursuit (Chiappetta & Watt, 2011).

Historically, the relationship between research supervisor and doctoral scholar has been portrayed as an inherently harmonious one and one that operates on the foundation of well-established rules. This relationship is believed to traverse through a progressive trajectory where the scholar gradually achieves competence and autonomy and becomes

independent. As supervisors-scholars interact over regular discussions and meetings, it enhances domain and research knowledge of the scholar as well as enable functional progress of the course (Lee, 2008). Research till date, has highlighted several models of supervisor-scholar relationship. Wisker and Kiley (2012) suggested a collegial model that allows students to be co-producer of knowledge and enables maintenance of a very sensitive and a positive relationship between supervisor and scholars. Acker et al. (1994) contrasted the “technical rationality” model of social interactions in the context of supervisor-scholar relationship and categorized supervisor-scholar relationships into emotional-oriented models and functional models, but researchers argued that functional elements such as production of high-quality thesis, supervision process and duration of Ph.D. completion etc. are entangled with the emotional elements.

Further, the negotiated order model, derived from the interpretive perspective suggested that actions of supervisors and scholars are a result of their social interactions, situational interpretations and past experiences (Taysem & Slater, 2014). In the context of doctoral studies, most situations are unique and are characterized by conflict and uncertainty, predetermined rational solutions may be ineffective, and therefore, the implicit psychological contracts may change over time and demand negotiations (Acker et al., 1994, p. 485).

Despite best efforts of research supervisors, the supervisor-scholar dyad are perceived under the presumed norms of power relations and are distressed by “master-slave” attribution (Lee, 2008; Grant, 2008). Therefore, supervisors need a meticulous understanding of doctoral supervision (Manathunga, 2007b, p. 207). Supervision is one of the key determinants of successful completion of doctoral studies. Issues such as improper supervision or conflicting friction in supervisory relationships cause serious problems in doctoral education (Pyhalto et al., 2012). It is important that the supervisors’

and scholars' beliefs and expectations are in alignment as both the parties are part of an intricate interactive system where beliefs, norms, values and common practices are continuously changing and they need to constantly renegotiate and reconstruct terms of their relationship and ensure sustainability.

With increasing number of students in doctoral courses, supervisors are expected to supervise a larger group of scholars with diverse research interests that may be peripheral to supervisors' own field of interest. The complexity of handling more number and greater breadth of scholars has significantly increased supervisory workloads (Ives & Rowley, 2005). It is interesting that while challenges faced by the scholars have been acknowledged and researched profoundly, problems faced by supervisors remain neglected and has received little attention by the research community itself. Research suggests that supervisors go through difficulty with the slow progress and negative attitude of students on one hand and the increasing complexity of administrative formalities on the other. In addition, the emergence of structured doctoral programmes and massification of research scholars, has supplemented to the pressure by placing new expectations and extra assessment procedures and schedule mandates. The consequent increase in the number of doctoral candidates per supervisor has also widened the fields of research that each supervisor is expected to work on. The supervisors are additionally burdened by the interdisciplinary research interests of each of the scholars as this necessitates them to work on research areas that goes beyond their own interests (Ives and Rowley, 2005). An additional aspect is the modern day need of group supervision which is in contrast to traditional individual supervision, thus demanding group management skills (Graham & Grant, 1997; Samara, 2006).

3.3 I-deals in Supervisor-Scholar Relationships

Research indicates that the interpersonal relationship between supervisor and doctoral student is a critical success factor in PhD completion (Doloriert et al., 2012; McAlpine & Norton, 2006) and hence it is sensible to study and apply any potential mechanism or phenomena that underlies this relationship and any possible arrangement that can strengthen it and create a win-win situation for both scholar and supervisor.

An effective arrangement that can possibly nourish and ease its management may emerge in the form of “Idiosyncratic deals” or “i-deals”, a concept introduced by Denisse. M. Rousseau and her colleagues which they defined as “voluntary, personalized agreements of a nonstandard nature negotiated between individual employees and their employers regarding terms that benefit each party” (Rousseau, Ho, & Greenberg, 2006). With a conceptual focus on the exchange relationship between employer and employee and a theoretical underpinning in social exchange theory, i-deals construct emerges from organizational psychology perspective and finds its way into strategic HRM by significantly influencing the HRM practices in modern workplaces through greater customization of work arrangements and moderating the employer-employee or manager-subordinate relationships.

Based on past research it was found that similar relationships are evidenced in the field of academia where research supervisor and doctoral scholar have an exchange relationship that is complex and has impact on professional and personal lives of both the parties (Vilkinas, 2002; Unsworth et al., 2010). The current research will attempt to apply i-deals theory to supervisor-scholar relationship and examine determinants and consequences of i-deals in this dyadic relationship.

Schaufeli & Bakker (2004) study established that social support in organizational context from supervisors and colleagues can drive both intrinsic motivation by fulfilling individual's need to belong and need for autonomy and extrinsic motivation by increasing the likelihood of task completion. Therefore, it can be argued that effective supervisory support in the form of idiosyncratic deals can serve as a positive resource factor for increasing engagement of research scholars in doctoral studies, enhance self-competence perceptions and stimulate faster completion of the course (Zhao et al., 2007).

3.4 Theories

3.4.1 Social Exchange Theory

Social Exchange theory is widely applied to elucidate the nature of the employee-organization or employer-employee relationships (Aryee et al., 2013). Social exchange relationships emerge when employers initiate employee well-being efforts leading to positive employee outcomes (Cropanzano & Mitchell, 2005). Social exchange theory postulates that by allowing employees to negotiate customized work arrangements, the organization creates a foundation for employee reciprocity (Rousseau, 2005). Negotiation and authorization of i-deals reinforce the social exchange between employers and employees by signaling organizational support in the form of social recognition and contribution towards employee's overall well-being (Rousseau et al., 2009). Such perceived organizational support stimulates affective commitment and proactive behaviours among employees (Crant, 2000).

3.4.2 Theory of Pro-social Reasoning

Theory of Pro-social Reasoning focusses on the ability of individuals to elicit a prosocial response to a situation where their needs or desires are in conflict with other person in need, in a context of absence of external rules or policies and formal obligations

(Eisenberg, 1986). Pro social reasoning is a form of moral understanding that emphasizes on interpersonal framework than abstract designs of justice. It operates when individuals have to extend a decision in favour of others or be a provider of a resource that others need, which may or may not be mutually beneficial (Shaffer, 2002). The focus in such double bind situation is to act with responsibility and engage in prosocial behaviour rather than equity based moral decisions (Kolberg, 1984). The prosocial behaviour emanates from one of the multiple typologies of moral reasoning that are based on either emotions or cognition thus requiring individuals to employ empathic-concern and perspective-taking respectively. The lower and higher stages of moral reasoning co-exist and lower stages do not get replaced by higher stages of maturity and reasoning. This implies that an individual may zone into any one or more of these typologies based on the sense of responsibility towards others, personal values and goals in a situation. According to this theory, individuals gradually acquire and internalize affective, cognitive and social competencies as they mature which enable them to tap into one of the various typologies of prosocial moral reasoning (Eisenberg, 1982; Eisenberg et al., 2006). Greater the level of prosocial moral reasoning, greater is the probability of both self- and other-informed prosocial behaviour and actions (Carlo, Mestre, Samper, Tur, & Armenta, 2011).

3.4.3 Self-determination Theory

Self-determination theory (SDT) is a central theory in the understanding of intrinsic motivation and guiding work motivation research (Gagne & Deci, 2005). The theory suggests that individuals have need for three fundamental psychological aspects – autonomy, relatedness and competence (Ryan & Deci, 2000). Autonomy is the feeling of discretion and choice, relatedness is the feeling of belongingness and connectedness with others and competence is the feeling of efficaciousness and capability. The theory

suggests that the social setting has a significant influence on intrinsic motivation of an individual. The social environment either fulfills an individual's psychological needs or reinforces the perceptions of their fulfillment (Grouzet et al., 2004). The satisfaction of needs is perceived as common inevitability and are closely linked with situation-based perceptions and emotions (Sheldon et al., 2001). In addition, SDT does not focus solely on individual variances in the strength of these psychological needs, but the extent to which the fulfillment is achieved. Gagne and Deci (2005) highlighted that "SDT postulates that when people experience satisfaction of the needs for relatedness and competence with respect to behaviour, they will tend to internalize its value and regulation, but the degree of satisfaction of the need for autonomy is what distinguishes whether identification or integration, rather than just introjection, will occur".

Organizational researchers can employ SDT for explaining the motivational influences of transformational leadership among supervisors including intellectual stimulation and individualized consideration. This may encourage subordinates to set autonomous and not controlled goals thus leading to higher performance and positive attitudes (Bono & Judge, 2003). SDT can be integrated with job design such that job structure itself can stimulate intrinsic motivation. Individuals when provided with autonomy enjoys the discretion and freedom to craft their jobs in a way that is intrinsically motivating. TWR i-deals provide such discretion to design tasks and achieve higher performance by being motivated.

3.4.4 Signaling Theory

Spence (1978) proposed signaling theory in the context of job markets and suggested that employees cannot directly view certain attributes of organizations which in turn impacts the employees' perceptions about the organization which may further

reduce organization's chances of acquiring the right talent. Therefore, researchers argued that in the absence of accurate information about the organization, prospective employees could use organizational communications or signals to form an image about the organization's expectations (Suazo, Martinez & Sandoval, 2011). Connelly et al. (2011) established that several elements of the signaling theory highlight its appropriateness to be applicable to function of i-deals as organizational signals. They highlighted following key features the theory: a signaler (supervisor in this context) who is a representative of the organization and possess the authority, resources and information (academic institutions), a receiver (research scholar) who may seek access to resources or information and the signal (i-deals) which is the actual action that the signaler puts forth for the receiver. Since, in a supervisor-subordinate relationships power and information asymmetry is inherent, supervisors can use certain communication or signals in the form of authorization of i-deals sought by their subordinates to reduce uncertainty and encourage positive outcomes (Belogolovsky & Bamberger, 2014). In addition, since signals are meant to "focus primarily on the deliberate communication of positive information in an effort to convey positive organizational attributes" (Connelly et al., 2011), they must be noticeable as well as communicable in a way that the underlying message is appropriately interpreted by the receivers (Belogolovsky & Bamberger, 2014).

It is evident that features defined under signaling theory hold relevance for examining i-deals in academic supervision as supervisors can employ i-deals to communicate their regard and positive evaluation for selected scholars and elicit favourable behavioral responses. Supervisors have considerable decisional control over the amount and form of i-deals to be authorized and message to be communicated. Also, since i-deals are formulated to fit individuals' needs, they will most probably stimulate

positive feelings and actions or workplace behaviours among subordinates that will be mutually beneficial to the signaler as well.

3.5 Hypotheses Development

3.5.1 Empathy and Idiosyncratic deals

Theory of Pro-social Reasoning establishes that there is a reason behind every action or behaviour and defines pro-social behaviour as "voluntary actions that are intended to help or benefit another individual or group of individuals" (Eisenberg & Mussen 1989, 3). Developmental psychologists and other social scientists point out that prosocial behaviour is an inherent function of human existence and not something that is unnatural that needs nurturing de novo. One universal driver of pro-social behaviour in individuals is – empathy - an emotional response directed towards another individual, that is stimulated by the distress or disturbance experienced by the other individual and driven towards his/her perceived welfare (Batson, 2009; Decety & Jackson, 2004).

Empathy is an intricate phenomenon, comprising cognitive and affective processes that operate in various developmental patterns. Perspective taking (PT) or cognitive empathy can be explained as the mindfulness and understanding of other's emotion. Affective empathy can be explained as the indirect experience of sensations similar to the other person with subsequent feeling of empathic-concern that causes emotions such as sadness and concern for others (Davis, 1983). Researchers have most persistently used Interpersonal Reactivity Index (IRI) to measure empathy. Davis (1980) developed this scale where empathy was operationalized as a set of four distinct but related constructs – personal distress (PD) and empathic-concern (EC) constructs are affective components whereas fantasy (FS) and perspective-taking (PT) and constructs are cognitive components of empathy - where all uniquely measure reactions of a person

to the visible experiences of other individuals (Smith, Gardner, & Signo, 1994). The present study examines one cognitive (perspective-taking) and one affective dimension (empathic-concern) of empathy as a predictor of authorization of i-deals, as the majority of the theorists assert that these are the most significant components of successful social interactions (Parker & Axtell, 2001).

The initiation of i-deal though maybe majorly carried out from the scholar's side, its authorization may significantly depend on the cognitive processes of the supervisor's mind and his emotional contagion. Despite significant inter-relationship, empathic-concern and perspective-taking have a differential influence on various attitudinal and behavioural outcomes as indicated by previous research. Each of them has dominance over the other in determining organizational outcomes. Supervisor-scholar relationships operate on specific power equation where the supervisor is the high-powered individual who has greater control over organizational resources (Magee & Galinsky, 2008). Therefore, supervisors are less dependent on scholars and are not obligated to mandatorily consider perspectives of others (Muscatell et al., 2012; Galinsky, Magee, Inesi, & Gruenfeld, 2006). However, the diminishing potential of power on perspective-taking depends on if the perspective-taker is focused on self or others (Schmid Mast, Jonas, & Hall, 2009).

Research has often indicated the significance of empathic-concern in driving decisions. Davis (1980) found that empathic-concern has a greater effect on evoking an emotional response and subsequent drive to provide actual help. Furthermore, a meta-analytic study by Miller and Eisenberg (1988) provided support that empathic-concern has a low to moderate effect on negative behaviours such as aggression and anti-social behaviour. Also, empathic-concern reduces the tendency to engage in unethical negotiations in organizational settings (Cohen, 2010). This implies that individuals with

high empathic-concern will potentially engage in pro-social behaviours, show concern towards others' distress and oblige to their request for support. This concept is relevant to workplace negotiations where managers and employees engage in distributive and integrative negotiations for mutual benefits wherein the cognitive or affective disposition of manager will drive him to authorize or negate specific terms or conditions being negotiated. To empirically test these assumptions about empathic-concern, the following hypotheses are formulated

H1: Empathic-concern is positively related to authorization of (H1a) task & work responsibility (H1b) schedule flexibility and (H1c) location flexibility i-deals.

In an experimental context supervisors are conditioned to either focus on other-advancement or on self-advancement, wherein those who were oriented towards other-advancement exhibited higher perspective-taking than those who are focused on self-advancement (Schmid Mast et al., 2009). Although such organizational power, in general, reduces the perspective-taking ability (Muscatell et al., 2012), the actual dynamics of the impact of power on perspective-taking seems complex. It establishes that supervisors who intend to advance the careers of their employees will authorize developmental i-deals that will contribute towards career development. Other empirical studies have emphasized that perspective-taking assumes a dominant role over empathic-concern under certain contexts. Mencyl & May (2009) suggest that in the organizational setting, due to the pervasiveness of emotional labour, perspective taking plays a greater role in influencing the moral reasoning of supervisors during decision-making. Based on this evidence and their understanding, the following hypotheses related to perspective-taking are formulated.

H2: Perspective-taking is positively related to authorization of (H2a) task & work responsibility (H2b) schedule flexibility and (H2c) location flexibility i-deals.

3.5.2 Prosocial Motivation as Moderator

Motivation denotes a desire or reason to act, and “prosocial” literally means for the benefit of others or with the intention of helping others (Oxford English Dictionary, 2009). As such, prosocial motivation is the desire to benefit other people or groups (Batson, 1987; Grant, 2007). Psychologists suggest that prosocial motivation (PM) functions at three graded levels: global, situational and contextual (Vallerand, 1997). Contextual PM implies individual desire to support specific people through a specific job. Situational PM is an individual desire to support specific people in a specific situation. Organizations and managers may be prosocially motivated to safeguard and support employee psychological well-being, physical well-being, developmental well-being, and material well-being (economic and financial status). Furthermore, the beneficiaries of prosocial motivation based actions can be individuals, groups, or organizations, or societies. Therefore we propose that presence or absence of prosocial motivation can be significant determinant of the probability and extent of i-deals being authorized by the supervisors who intend to direct i-deals towards their subordinates to improve their overall well-being.

H3: Prosocial motivation moderates the relationship between empathic-concern and authorization of (H3a) task & work responsibility (H3b) schedule flexibility and (H3c) location flexibility i-deals.

H4: Prosocial motivation moderates the association between perspective-taking and authorization of (H4a) task & work responsibility (H4b) schedule flexibility and (H4c) location flexibility i-deals.

3.5.3 Perceived Employee Outcomes and Authorization of I-deals

I-deals benefits organizations by enabling them to hire and retain employees through sustained motivation and high performance (Rousseau, 2005). Specifically, developmental i-deals fortify employee motivation, performance and work-life balance. Different i-deals (development, task, flexibility, and financial) provide different benefits to both the employer and the employee (Hornung et al., 2008a). While i-deals are theorized as reciprocally beneficial arrangements for parties involved, yet their varied scope, content, and blend advances the chances of differential consequences for both supervisors and subordinates (Rousseau et al., 2006). Therefore, supervisors attach different levels of significance with different i-deals based on their possible outcomes and potential benefits.

TWR i-deals include arrangements and opportunities that can fortify or reinforce employee's job involvement and commitment (Rousseau, 199). Authorization of TWR i-deals by supervisors is one of the techniques to increase motivation and obtain high performance from the subordinates (Rousseau, 2005). Hornung et al. (2008) proved that independent challenging tasks, work autonomy and performance recognition improves motivation of employees while providing managers a device to accomplish career-related obligations towards their employees. Therefore, supervisors granting TWR customizations can expect additional efforts from the i-dealers (Rousseau et al., 2006). It is logical to propose that "supervisor's authorization of TWR i-deals" may lead to higher performance and improved scholar motivation.

H5: "Supervisor authorization of task & work responsibility i-deals is positively related to their perceptions of (5a) increases in performance standards and (5b) change in motivation".

Individuals seek flexibility to manage professional work and personal life (Thorntwaite, 2004). While WLB is highly treasured by employees, it provides greater flexibility in HRM practices of the organization (Lawler & Finegold, 2001). Therefore, it is important that supervisors must consider implications of work on individual work-life balance while managing employee performance and engagement (Ford et al., 2007). Individual flexibility in schedule or work timings and location facilitate employees to balance their personal and professional life demands, while contributing significantly to the organizational tasks (Tietze & Musson, 2003). In present research scenario, it can be argued that supervisors granting flexibility arrangements will expect these i-deals as mechanisms improving scholars' work-life balance, while retaining their performance quality expectations.

H6: "Supervisor authorization of (H6a) location flexibility and (H6b) schedule flexibility i-deals is positively related to their perceptions of increases in employee work-life balance".

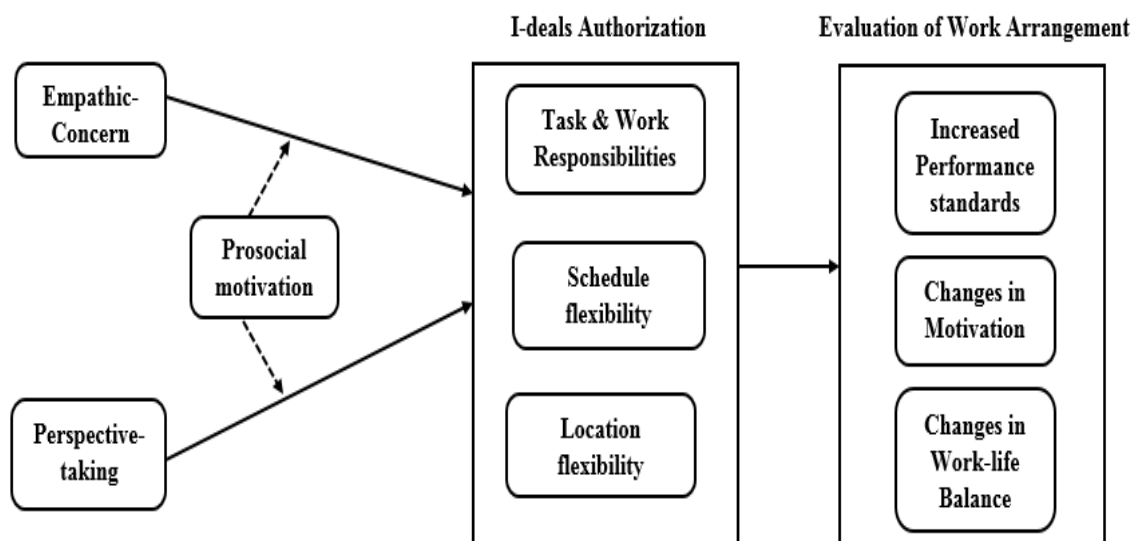


Figure 3.1: Empathy-I-deals Conceptual Framework

The above hypotheses can be represented diagrammatically in the form of conceptual framework as given in Figure 3.1

3.5.4 I-deals Receipt and Intermediary Mechanisms to Reduced Dropout Intentions

A vast amount of research on doctoral education highlights that doctoral scholars experience high levels of stress and this can be a significant factor leading to increasing doctoral attrition rates globally (Gardner, 2007). Accordingly, there is a need to develop more engaging learning environments for doctoral students (Pontius & Harper, 2006). An important principle inherent to theory of i-deals is the signaling characteristic of i-deals which may elicit varied responses depending on the type of i-deal being negotiated (Rousseau et al., 2006). While few i-deals hint towards a high-quality LMX with the managers and can enhance motivation of employees, few other i-deals indicate transactional purposes and may stimulate motivation to a limited extent (Rousseau, Hornung, & Kim, 2009). It implies that each i-deal based on its content may signal different messages, and may not essentially encourage mandatory reciprocity from the employees. Consequently, based on past research it can be agreed that “social exchange theory arguments are insufficient in explaining the process” relating i-deals authorization and individual outcomes. This calls for further theorizing that broadens the established descriptive mechanisms beyond the social exchange approach as applied by most researchers (Liao, Wayne, & Rousseau, 2016).

The current research is a step in this direction as it integrates signaling theory with self-determination theory (SDT) to explore the competence need-motivation signaling mechanism embedded in functioning of idiosyncratic deals. Mainly, this research sets out to investigate the differential effects of two unique forms of i-deals (TWR and Flexibility i-deals) on dropout intentions among scholars by satisfying their competence-need,

beyond the social exchange mechanisms. The emphasis is on TWR and flexibility i-deals as their operational distinctiveness raises curiosity about the outcome of competence-enhancing signal communicated by each of them. The question arises if the competence-need will be diminished or reinforced when both operate simultaneously.

Based on the foundation of signaling theory (Spence, 1973), the present research stands as the first study to explicitly explore the signals communicated by task and flexibility i-deals which influence eventual dropout intention of the scholars. The idea of i-deals as signals was originally proposed by Rousseau et al. (2006), who noted that i-deals “can signal [to their recipients] the value an employer places on [them]”. While signaling theory elucidates the logic behind the signaling capabilities of i-deals, it does not clearly explain the specific process that underlies the translation of such signals into advanced behavioral responses or actions. Hence, self-determination theory, a foundational theory of motivation, has been integrated to explain the process of individuals’ competence need satisfaction as a response to i-deals signal, which in turn improves their motivation and academic self-concept thus reducing the intention to quit. Similarly an alternate mechanism is suggested for flexibility i-deals which improves trust beliefs among scholars in turn reducing perceived stress and further reduces the dropout intentions. To test above theories, following hypotheses are proposed and conceptually represented in Figure 3.2.

H7: “Task & work responsibility i-deals is positively related to competence-need satisfaction”.

H8: “Schedule flexibility i-deals is positively related to perceived trust”.

H9: “Location flexibility i-deals is positively related to perceived trust”.

H10: Competence-need satisfaction relates positively to (10a) academic self-concept and (10b) motivation of scholar.

H11: Perceived trust is positively related to perceived stress.

H12: (12a) Academic self-concept is negatively related to dropout intentions of the scholar. (12b) Student motivation is negatively related to dropout intentions of the scholar. (12c) Perceived stress is positively related to dropout intentions of the scholar impact dropout intentions of the scholar.

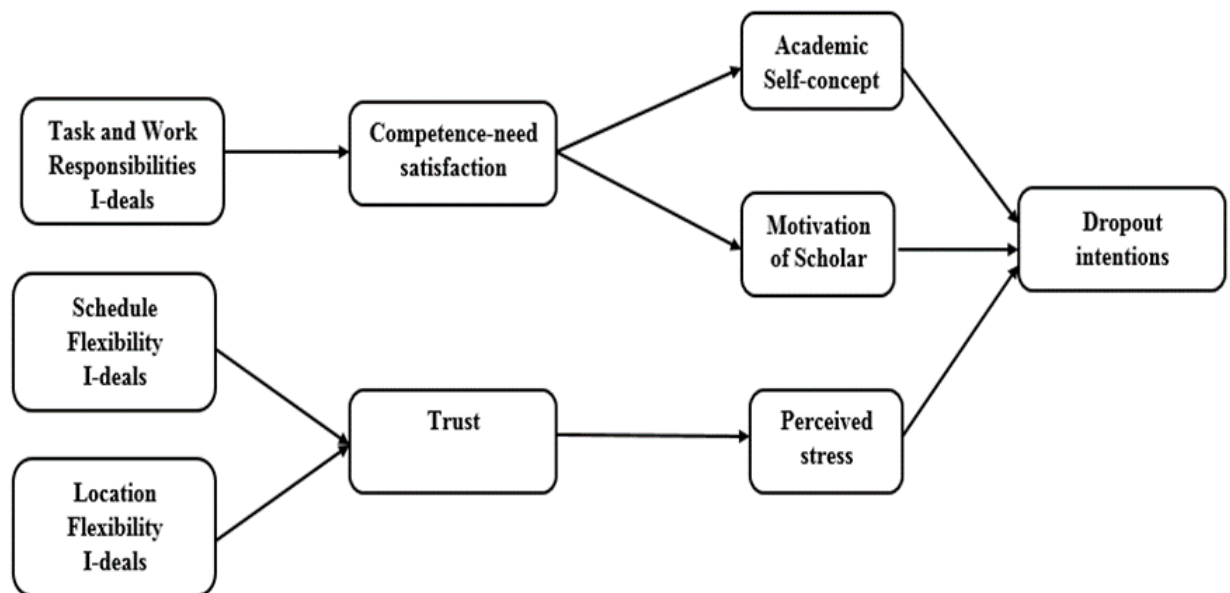


Figure 3.2: I-deals-Dropout Intentions Conceptual Framework

Table 3.1
Overview of Hypotheses

Hypothesis	Hypothesized relationship
Hypothesis 1	Empathic-concern is positively related to authorization of (H1a) task & work responsibility (H1b) schedule flexibility and (H1c) location flexibility i-deals.
Hypothesis 2	Perspective-taking is positively related to authorization of (H2a) task & work responsibility (H2b) schedule flexibility and (H2c) location flexibility i-deals.

Hypothesis 3	Prosocial motivation moderates the relationship between empathic-concern and authorization of (H3a) task & work responsibility (H3b) schedule flexibility and (H3c) location flexibility i-deals.
Hypothesis 4	Prosocial motivation moderates the relationship between perspective-taking and authorization of (H4a) task & work responsibility (H4b) schedule flexibility and (H4c) location flexibility i-deals.
Hypothesis 5	“Supervisor authorization of task & work responsibility is positively related to their perceptions of (5a) increases in performance standards and (5b) employee motivation”.
Hypothesis 6	“Supervisor authorization of (H6a) location flexibility and (H6b) schedule flexibility i-deals is positively related to their perceptions of increases in employee work-life balance”
Hypothesis 7	“Task & work responsibility i-deals is positively related to competence-need satisfaction.”
Hypothesis 8	“Schedule flexibility i-deals is positively related to perceived trust”.
Hypothesis 9	“Location flexibility i-deals is positively related to perceived trust.”
Hypothesis 10	“Competence-need satisfaction is positively related to (10a) academic self-concept and (10b) motivation of scholar”
Hypothesis 11	Perceived trust is positively related to perceived stress.
Hypothesis 12	(12a) Academic self-concept is negatively related to dropout intentions of the scholar. (12b) Student motivation is negatively related to dropout intentions of the scholar. (12c) Perceived stress is positively related to dropout intentions of the scholar impact dropout intentions of the scholar.

Chapter Summary

The present chapter discusses literature on supervisor-scholar relationships and challenges of doctoral studies as well as supervision. Further, the chapter integrates evidence from literature on i-deals and empathy and proposes two conceptual frameworks and hypotheses to be tested empirically.

CHAPTER IV

METHODOLOGY

This chapter on methodology will discuss the applied research design for the current research. The chapter explains the research paradigm and the methodological choice congruent to the research questions, on the basis of epistemological, ontological, axiological and methodological assumptions as applicable to the study. The chapter also provides justification for selection of specific research methods and discourses the appropriateness of the present study to the conditions of evaluation of research in social sciences i.e. reliability, validity, generalizability and replicability. In addition, the chapter briefly deliberates the data analysis plan and duration of the research. The chapter ends with reflections on ethical considerations pertaining to confidentiality, anonymity and informed consent as maintained under this research.

4.1 Introduction

Research design is the “specification of methods and procedures for acquiring the information needed. It is the over-all operational pattern or framework of the project that stipulates what information is to be collected from which source by what procedures” (Green & Tull, 1970). The ontology and epistemology of the existing research questions, guide the choice of methodology which needs further diligence due to the availability of multiple techniques, procedures, sampling plans and analytical tools. Still, any study where researcher have clarity about the two elements i.e. the proposed methodology and the justification for its selection, does progress effortlessly.

4.2 Research Typology

The methodology adopted for a particular research is in tandem to the research questions being addressed and necessitates systematic justification of the same. This is facilitated by the research typology developed by Saunders *et al.* (2012), who presented elements of research in a metaphorical form represented by an “onion” that guides a researcher through the several layers to structurally position his/her research in an otherwise vast research context (Figure 4.1). The layers of onion simulate six key elements of the study – “philosophy, approach, strategy, choice, time horizon and data collection and analysis”.

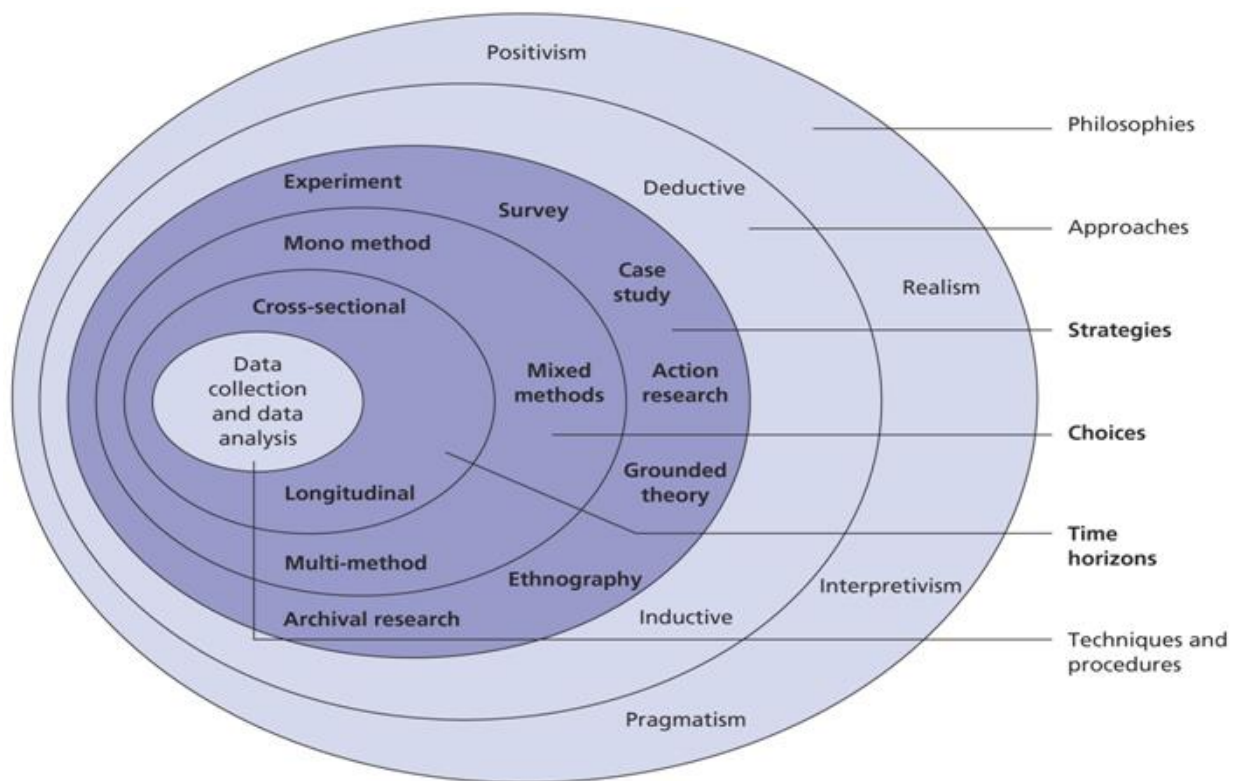


Figure 4.1: Saunders et al. (2012) research typology

Each of these elements and the positioning of the current research within this framework is discussed further.

4.3 Research Philosophy

Research philosophy refers to a fundamental system of beliefs and assumptions which serves as foundation for knowledge development (Burrell and Morgan, 1979).

These assumptions may be associated with:

- realities observed during research (ontological assumptions),
- human knowledge (epistemological assumptions), and,
- the magnitude to which one's values impact the research procedure (axiological assumptions)

Each aspect of research i.e. understanding of research questions, methods employed and interpretation of findings, are all essentially shaped by these assumptions (Crotty 1998). Burrell and Morgan (1979) discussed five groups or categories of assumptions that further permeate through to granular levels of research process and influence each stage:

- i. Ontological
- ii. Epistemological
- iii. Axiological
- iv. Methodological assumptions
- v. Assumptions about human nature.

Business and management research, owing to its emergence from multiple disciplines such as social sciences, applied sciences, natural sciences etc., has adopted multiple philosophies, research paradigms, methodologies and approaches. The present study holds a pluralistic view and is in agreement to this phenomenon. Thus, to position the present research appropriately, the study delves into a comparative analysis of four major research philosophies followed by management researchers as given in Table 4.1.

Table 4.1

Research Philosophies in Business and Management Research: A Comparison

Epistemology (what constitutes acceptable knowledge)	Ontology (nature of reality or being)	Axiology (role of values)	Typical Methods
Positivism			
<ul style="list-style-type: none"> ▪ Scientific method ▪ Observable and measurable facts ▪ Law-like generalizations ▪ Causal explanation and prediction as contribution 	<ul style="list-style-type: none"> ▪ Real, external, Independent ▪ One true reality (universalism) ▪ Ordered 	<ul style="list-style-type: none"> ▪ Value-free research ▪ Researcher is detached, neutral and independent of what is researched 	<ul style="list-style-type: none"> ▪ deductive, highly structured, large samples, quantitative analysis, but a range of data can be analyzed
Critical realism			
<ul style="list-style-type: none"> ▪ Layered (the empirical, the actual and the real) ▪ External, independent, ▪ Objective structures ▪ Causal mechanisms 	<ul style="list-style-type: none"> ▪ Knowledge historically situated and transient ▪ Facts are social Constructions ▪ Historical causal explanation as contribution 	<ul style="list-style-type: none"> ▪ Value-laden research ▪ Researcher acknowledges bias by world views, cultural experience and upbringing ▪ Researcher tries to minimize bias and errors ▪ Researcher is as objective as possible 	<ul style="list-style-type: none"> ▪ Retroductive, in-depth historically situated analysis of pre-existing structures and emerging agency. ▪ Range of methods and data types to fit subject matter
Interpretivism			
<ul style="list-style-type: none"> ▪ Theories and concepts too simplistic ▪ Focus on narratives, stories, perceptions and interpretations ▪ New understandings 	<ul style="list-style-type: none"> ▪ Complex, rich ▪ Socially constructed through culture and language ▪ Multiple meanings, interpretations, realities 	<ul style="list-style-type: none"> ▪ Value-bound research ▪ Researchers are part of what is researched, subjective ▪ Researcher interpretations key to contribution 	<ul style="list-style-type: none"> ▪ Typically inductive ▪ Small samples, in-depth investigations, qualitative methods of analysis, but a range of data can be interpreted

and worldviews as contribution	▪ Flux of processes, experiences, practices
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Source: Burrell & Morgan, 1979

In addition, Alvesson and Sköldbberg (2000) encouraged researchers to cultivate reflexivity and moderate the relationship between their philosophical stand and the actual research process by acquiring knowledge on prominent research philosophies and enquiring their research beliefs and assumptions. Isaeva, Bristow and Saunders (2015) developed a reflexive tool named “*Heightening your Awareness of your Research Philosophy*” or HARP that facilitates researcher to introspect his/her beliefs and values in relation to the research and justify its fit with a specific research philosophy. The present study has employed HARP tool to position this research in the philosophical context (Appendix 1).

Based on the outcome of HARP tool and comparative understanding of major research philosophies, the study is found to be relevantly placed in the positivistic paradigm. The study has an objective orientation and views reality to be independent and external to social actors. The researcher takes an objective stance and intends to employ scientific methods to test proposed relationships and explain cause-effect relationships between variables through statistical measurement and data analysis.

4.4. Research approach

The research approach employed in the present thesis is - *hypothetico-deductive approach* (Figure 4.2). According to Bryman (2012), deduction is a process of obtaining a deeper understanding of the known aspects of a specific area (i.e. the idiosyncratic deals and supervisor-scholar relationship in the context of present research) and deducing hypotheses from them and then operationalize them to render measurement.

Operationalization involves developing measures to study the construct or concept to be researched. This is followed by collection of data and further analysis to test the proposed hypotheses. The findings out of this process serve as a contribution to the existing research and is utilized by other researchers for future knowledge development.

4.5 Methodological choice

The choice of methodology applied in addressing a particular research question is determined by both the research philosophy and the research approach. The present study is positioned in positivist paradigm and employs deductive approach. The methodology may be either qualitative, quantitative or mixed that have unique characteristics distinguishing them thus influencing their utilization for different studies. Saunders *et al.* (2012) distinguished between the two major categories of research methods as mentioned in Table 4.2.

The fundamental difference between the two research designs is the research philosophy. Quantitative method embraces a positivist perspective and is highly structured, while, qualitative research embraces the interpretivist view wherein the researcher holds a subjective thought process and views the research domain under the meanings construed by the social structure of the contexts. Further, quantitative method follows a deductive approach which empirically tests theory, while qualitative method follows inductive approach. By taking the research philosophy, approach and questions into consideration and using Table 4.2, the methodology adopted for the present study is “mono-method quantitative research” as deemed to be suitable for addressing the current research questions.

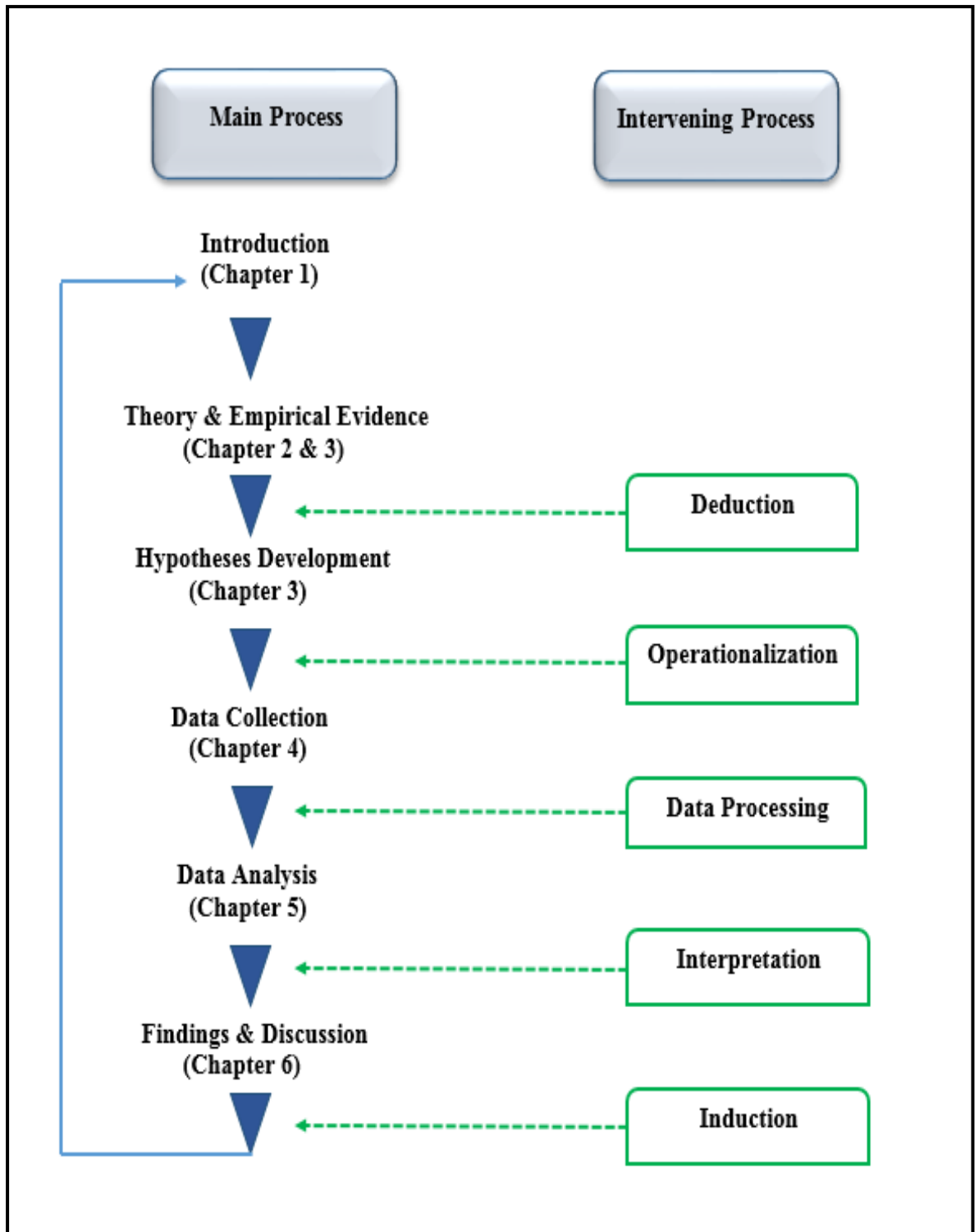


Figure 4.2: Research process (Bryman, 2012)

Table 4.2
Qualitative vs Quantitative Research Methods

	Quantitative	Qualitative
Research philosophy	Positivism	Interpretivism
Research objective	Examines relationships between variables	Studies participants' meanings and relationships between them.
Research approach	Predominantly deductive	Predominantly inductive
Research strategy	Experimental and survey research	Case study, grounded theory, ethnography, narrative inquiry, action research.
Researcher's position	Independent from respondents	Plays a more active role

Source: Saunders et al. (2012)

4.6 Research Strategy

Researchers use one of the several research strategies such as - experiments, archival research, survey, case study, action research, ethnography, narrative enquiry and grounded theory – depending on the type of the study. The nature of the current study is primarily descriptive and therefore, the research strategy adopted is survey method. The strategy is consistently been utilized by researchers in the area of i-deals and is appropriate for hypotheses testing arising out of review of existing literature (Guest, 1999).

4.7 Time Zone

Most empirical research studies are either cross-sectional or longitudinal based on the problems they address. Cross-sectional research collects data from respondents at a single point in time whereas longitudinal studies involve obtaining data at multiple points

in time but from same respondents. Since cross-sectional designs do not have a time order and can only examine relationships between variables, the direction of causality cannot be established and is a critical limitation (Jiang *et al.*, 2013). While, the present research acknowledges the advantages of longitudinal design, it yet utilizes a cross-sectional design due to limited amount of time, data and respondent (research supervisors) access and resource constraints. Longitudinal study consumes more time and obtaining data from supervisors for the second time was difficult. Also, to ensure sample to be heterogeneous, the data was collected from academic institutions across India which incurred significant amount of time and money. Therefore, the data was obtained at a single time point.

4.8 Data Collection

Survey is a data collection method that uses unstructured, semi-structured or structured questionnaires for obtaining information from the sample respondents (Ghauri & Gronhaug, 2005). According to Bryman (2012), survey involves following steps as described in sub-sections below:

4.8.1 Sample Design

4.8.1.1 Target Population

The population for the current research was research supervisors and doctoral scholars of top five HEIs in each of the following categories - IIMs, IITs, Central Universities, NITs and Other Ivy League Institutions. The top five ranking in each category was based on their respective Research and Professional Practice Score (RPC) as given under NIRF by MHRD for the year 2017, indicating the presence of rigorous research culture in these institutions. All the HEIs are based in India as given in Table 4.3.

4.8.1.2 Sample & Sampling Technique

While the sampling frame of the target population was definite and each unit of the population was identifiable, yet the decision to carry out study using sample was taken. This was done due to constraints such as high cost of population study, limited time and limited access. Since the list of population was not available, probabilistic sampling could not be pursued, and therefore, purposive sampling, a type of non-probabilistic sampling was employed. Further, to ensure heterogeneity in the sample and better representation of the population, it was ensured that responses from each of the identified HEI were obtained. The supervisors and scholars belonged to the courses with highest number of Ph.D. enrollment in India i.e. Engineering & Technology, Sciences, Management Studies, Social Sciences and Languages (MHRD, 2017).

4.8.1.3 Sample Size Justification

The data was collected from two different respondent groups to test Model 1 and Model 2. For testing Model 1 (antecedent model), a sample of 317 research supervisors was selected and for testing Model 2 (outcome model), data was collected from 797 doctoral scholars of the same institutions. In general, non-probability sampling does not involve a standard rule for sample size determination and depends significantly on recommendations of other researchers as well as on the issues such as feasibility, financial limitations etc. (McCormack, Hill, & Hill, 1997). The present study determined the sample based on recommendations of researchers who have extensively employed structural equation modelling (SEM) for model testing. Researchers often suggest sample size determination using ratio method or compliance to the minimum or acceptable values.

According to Hair *et al.* (2017), for each observed variable, a minimum of 5 to 10 responses must be obtained. The present study have 36 and 60 observed indicators for Model 1 and Model 2 respectively. Therefore, minimum sample sizes (in case of 10 responses per variable) of 360 and 600 must be considered to perform SEM effectively. This approach is in agreement with the ratio approach suggested by Gorsuch (1983b) that recommends a minimum of 5 responses per item in the scale, suggesting minimum sample sizes of 180 and 300 for the present study. The present study takes into consideration the range of the suggested minimum values, SEM as the analytical technique and highly probable low response rates, and decides to conduct the questionnaire survey on a sample of 500 research supervisors and 1000 doctoral scholars.

Table 4.3

Category-wise List of Top HEIs based on NIRF Rankings (2017)

Type of Research Institution	No. of Institutions	Selection Criteria	Institutions Selected based on selection criteria
Indian Institute of Management (IIMs)	5	Top 5 as per NIRF	<ul style="list-style-type: none"> • Indian Institute of Management Bangalore • Indian Institute of Management Ahmedabad • Indian Institute of Management Calcutta • Indian Institute of Management Lucknow • Indian Institute of Management Kozhikode
Indian Institute of Technology (IITs)	5	Top 5 as per NIRF	<ul style="list-style-type: none"> • Indian Institute of Technology Bombay, Mumbai • Indian Institute of Technology Madras, Chennai • Indian Institute of Technology Kharagpur, Kharagpur • Indian Institute of Technology Delhi, Delhi • Indian Institute of Technology Kanpur, Kanpur
Central University	5	Top 5 as per NIRF	<ul style="list-style-type: none"> • Jawaharlal Nehru University, Delhi • Banaras Hindu University, Varanasi

			<ul style="list-style-type: none"> • University of Hyderabad, Hyderabad • University of Delhi, Delhi • Aligarh Muslim University, Aligarh
National Institute of Technology (NITs)	5	Top 5 as per NIRF	<ul style="list-style-type: none"> • National Institute Of Technology, Delhi • National Institute Of Technology, Tiruchirappalli • National Institute Of Technology, Durgapur • National Institute Of Technology, Goa • National Institute Of Technology, Rourkela-Rourkela
Indian Institute of Sciences (IISc), Bengaluru	1	Higher RPC scores under NIRF	-
Tata Institute of Social Science, Mumbai	1	Higher RPC scores under NIRF	-
Indian Agricultural Research Institute, Delhi	1	Higher RPC scores under NIRF	-
BITS-Pilani, Pilani	1	Higher RPC scores under NIRF	-
Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru	1	Higher RPC scores under NIRF	-

NIRF: National Institute Ranking Framework (NIRF) by MHRD

4.8.2 Mode of administration

The study is carried out using self-administered structured questionnaire survey. Owing to the technicality of the concept of i-deals, the respondents were given a brief explanation of i-deals and the related queries were clarified. Initially, the survey was administered by sending emails to the professors but there was minimal response. Therefore, the survey was conducted in-person. Formal appointments were being taken through email or over phone, and the questionnaires were handed over and collected back personally. The researcher abstained from providing any personal views about the questionnaire items to maintain objectivity and reduce bias.

While this method accelerated the pace of data collection by rendering survey ingenuous and building rapport with the professors, it suffered with disadvantages of higher cost incurred due to travelling to multiple locations and the possibility of socially desirable responses due to the presence of the researcher in the scenario.

4.8.3 Generation of questionnaire

The study adopted Churchill and Iacobucci (2002) approach to develop and validate the questionnaire as illustrated in Figure 4.3. Two separate questionnaires were prepared to test Model 1 and Model 2.

4.8.3.1 Specifying information sought

This step involved determining the questions to be presented to the respondents to obtain information required to test the model. The initial part of the questionnaire seeks information regarding respondent's demographic profile and the variables were also included as control variables. The remaining part of the survey was intended to gather construct-related data to test the proposed conceptual models. For testing Model 1, data

was sought from the research supervisors on following variables – EC, PT, PM, TWR, SF, LF, supervisors’ perception on IPS, CM and CWB. To test Model 2, data was sought from the doctoral scholars on following variables – TWR, SF, LF, CNS,TB, ASC, MO, PS and DI.

4.8.3.2 Deciding questionnaire type and method of administration

A structured questionnaire with closed ended questions was considered suitable for this study as it allowed researcher to limit the length of the questionnaire as required and also warranted uniformity of responses as all respondents were exposed to the same sequence of questions (Saunders *et al.*, 2012). The survey was administered by the researcher for ensuring better control over the data collection process.

4.8.3.3 Operationalization of constructs (Content of individual items)

All the constructs were operationalized as multi-item variables (Churchill & Iacobucci, 2002). The questionnaire items were extracted from well-established scales given in extant literature. A 5-point Likert scale measured all the variables with relevant scale labels, where 1=strongly disagree; 5=strongly agree. The complete questionnaires for supervisors’ sample and scholars’ sample are given in Appendix 2 and Appendix 3 respectively.

The scales used to collect data from research supervisors in HEIs for testing Model 1 (antecedent model) are as follows:

Empathic-concern: EC of supervisors was measured using the 7-item sub-scale of Interpersonal Reactivity Index (IRI) developed by Davis (1980) to measure multi-dimensional construct of empathy. A sample item was “When I see people being taken

advantage of, I feel kind of protective towards them”. The subscale has three reverse-coded items.

Perspective-taking: PT of supervisors was measured using the 7-item sub-scale of Interpersonal Reactivity Index (IRI) developed by Davis (1980) to measure multi-dimensional construct of empathy. A sample item was “Before criticizing somebody, I try to imagine how I would feel if I were in their place”. The subscale has one reverse-coded item.

Prosocial motivation: PM of supervisors was measured using five-item scale developed by Grant and Sumanth (2009) in the context of university faculty and staff. A sample item was “I get energized by possibly benefitting others”. The subscale has one reverse-coded item.

Authorization of I-deals: Supervisors’ authorization of TWR, SF and LF i-deals was measured using Rosen *et al.* (2013) scale. The scale was originally developed in the context of supervisors and subordinates. TWR scale consisted of six items and a sample item measuring TWR was “Extra responsibilities that take advantage of the skills that they bring to the job”. SF was measured using three items and a sample item included was “On his/her request, has accommodated his/her off-the-job demands when assigning his/her work hours”. LF was measured using two-item scale and a sample item was “Because of my particular circumstances, my supervisor allows me to do work from somewhere other than the main office”.

Increase in performance standards: Supervisors' perceptions of increase in performance standards of scholars was measured using three-item scale developed by Hornung *et al.* (2009). It was measured using five-point Likert scale where 1= "not at all"; 5= "to a very great extent". The scale measured whether scholars fulfill expected work performance criteria with respect to "the amount of work", "the quality of work results" and "the compliance with deadlines".

Change in motivation: Supervisors' perceptions of change in motivation of scholars was measured using three-item scale developed by Hornung *et al.* (2009). It was measured using five-point Likert scale where 1= "decreased to a great extent"; 5= "increased to a great extent". The scale evaluated changes in scholars' academic motivation attained through the negotiated working arrangements in terms of "achievement motivation", "job involvement" and "positive job attitudes".

Improved work-life balance: Supervisors' perceptions of change in motivation of scholars was measured using three-item scale developed by Hornung *et al.* (2009). It was measured using five-point Likert scale where 1= "decreased to a great extent"; 5= "increased to a great extent". The supervisors' had to rate the increase or decrease in WLB quality of scholars achieved due to customized work arrangements being negotiated with them.

Demographic Variables: Questions about demographic characteristics such as gender (0 = male, 1 = female), department (0 = sciences and 1 = non-sciences) and job level (1=Assistant Professor, 2= Associate Professor, 3=Professor) were included in the questionnaire.

The scales used to collect data from doctoral scholars in HEIs for testing Model 2 (outcome model) are as follows:

Successful negotiation of i-deals: This variable was measured using Rosen *et al.* (2013) scale. The scale was originally developed in the context of supervisors and subordinates. TWR scale consisted of six items and a sample item measuring TWR was “Extra responsibilities that take advantage of the skills that I bring to the job”. SF was measured using three items and a sample item included was “On my request, has accommodated my off-the-job demands when assigning my work hours”. LF was measured using two-item scale and a sample item was “Because of my particular circumstances, my supervisor allows me to do work from somewhere other than the main office”.

Competence-need satisfaction: CNS was measured using basic psychological needs at work scale (BPNWS) developed by Brien *et al.* (2012). It constituted four items and a sample item is “I feel competent at work”.

Perceived trust: A 3-item scale developed by Roberts and O’reilly (1974) was used to measure perceived trust in supervisors. One such item is “My supervisor places trust in me”.

Academic self-concept: 20-items Academic Self-Concept Scale developed by Reynolds *et al.* (1980) was used to measure ASC. Sample items are “I am usually interested in my course work” and “If I work hard, I think I can get better grades”.

Motivation of Scholar: It was measured using “Motivation for PhD Studies” scale. This scale was developed using two separate scales - Self-Regulation Questionnaire (Ryan & Connell, 1989) and Academic Motivation Scale (Vallerand, Blais, Brière, & Pelletier,

1989). The scale has good psychometric properties (Litalien *et al.*, 2015) and contains 15 items that measure overall motivation. Five-point Likert scale measured the items where 1= “does not correspond at all” and 5= “corresponds exactly”.

Perceived stress: Perceived stress among scholars was measured by adapted version of Cohen *et al.* (1983) scale. The scale consisted of 10-items and measured items on a five-point Likert scale where 1= “never” and 5= “very often”. A sample item is – “During the dissertation process, how often have you found that you could not cope with all the things that you had to do?”

Dropout intention: In general, dropout intentions is taken as an indicator of dropout behavior and intention is presumed to be a direct precursor of action as theorized under Theory of Planned Behavior (Ajzen, 1985). A study by Sheeran (2002) informed a mean correlation of .53 between dropout intention and behavior in a meta-analytic study implying substitution of one construct with another as relevant. In present context, scholars responded to two-items measuring dropout intention on a 5-point Likert scale (1 = not at all likely, 5 = very likely). The items were - “Is it likely that you will give up your studies in the next year?” and “Is it likely that you will give up your studies before graduation?”

Demographic Variables: Questions about demographic characteristics such as gender (0 = male, 1 = female), department (0 = sciences and 1 = non-sciences) and year of study (1=I; 2=II; 3=III, 4=IV, 5=V & above) were part of the survey.

4.8.3.4 Form of response

Each scale item included in the questionnaire were in the form of closed-ended questions which were either dichotomous and multichotomous. The dichotomous questions mainly captured demographic details. The multichotomous questions were developed from scales of the variables and measured variables on a five-point Likert scale.

4.8.3.5 Question wording

In order to ensure that respondents understood the questions clearly, language was kept simple and technical jargons were avoided. Though the respondent groups – supervisors and scholars – were well-qualified to understand the technical language, yet simplifying the wordings ensured faster readability and reduced reluctance to answer the questionnaire. Further attention was given in simplifying and avoiding, wherever required, the double-barrelled questions (questions that enquire about two different aspects). The wording of i-deals and perceived stress constructs was modified according to the context and no other construct items were altered.

4.8.3.6 Question sequence

According to Churchill and Iacobucci (2002), the questions sequence must be determined under following considerations: a) opening questions should be simple and interesting b) classification information must be asked towards the end, c) difficult or sensitive questions must be present in between the questionnaire, and d) a logical structure must be followed. Based on these recommendations, demographic information was obtained at the end of the questionnaire. Furthermore, the questions were segregated into well-defined sections with each section eliciting responses on single construct. This ensured right flow and better readability for the respondents. In addition, the items

concerning the predictor and outcome variables were positioned in separate sections. This controls potential common method bias to a significant extent.

4.8.3.7 Questionnaire layout

The questionnaires were decided to be distributed both in-person and in online mode. Therefore, the layout and appearance of the questionnaires were to be designed well to ensure that it attracts and encourages respondents to participate in the survey as well as facilitates smooth and efficient completion of the survey. The in-person surveys were designed using Microsoft Word and online surveys were designed using Google Forms. The beginning of the questionnaires clearly described the study objectives and ensured anonymity and confidentiality of the responses.

4.8.3.8 Pre-testing of the Questionnaires – Pilot Study

To pre-test the questionnaire, both the questionnaires were presented and discussed with select research supervisors and scholars to obtain feedback and ensure clarity. While the questionnaire developed for collecting data in in-person mode was well-taken by the respondents, online survey received some crucial inputs from the pilot study respondents. Respondents suggested inclusion of “progress bar”, approximate completion time and simplification of certain questionnaire items. Also, comment regarding the length of the scholar survey was made by the respondent group, no change was made on this aspect as the scales used were well-established scales and it was important to retain all the items for reliable measurement of the constructs. Yet, to validate the scales further in the present context, pilot studies were conducted among both supervisors and scholars.

To conduct the pilot studies, data was collected from 50 research supervisors and 150 doctoral scholars. The data was analyzed using IBM SPSS Version 25.0. The factor analysis results of pilot study initially indicated few cross-loadings in both the models and therefore the items were removed and analysis was repeated. The results indicated improved loadings of indicators on to their respective latent constructs and improved reliabilities. Therefore, an adapted and validated version of the questionnaires along with inclusion of suggested inputs were further distributed for the main study. The process and results of the pilot study is discussed further.

For Model 1 (antecedent model), pilot data was collected from 50 research supervisors and factor analysis was conducted. KMO and Bartlett's Test results are presented in Table 4.4. Bartlett's test of sphericity is found to be significant with $p < 0.001$, with degrees of freedom equal to 630. The KMO value is 0.620 which is above the suggested threshold value of 0.5, indicating significant correlation between underlying constructs and suitability for further analysis (Kline, 1994). Table 4.5 provides the results of factor rotation wherein the factors were extracted using Principle component analysis (PCA) with varimax rotation.

Table 4.4
KMO and Bartlett's Test (Model 1 Pilot Result)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.620
Bartlett's Test of Sphericity	Approx. Chi-Square	1835.604
	Df	630
	Sig.	.000

Table 4.5
Rotated Component Matrix (Model 1 Pilot Result)

	Rotated Component Matrix ^a								
	Component								
	1	2	3	4	5	6	7	8	9
EC1	.927								
EC2	.909								
EC6	.884								
EC3	.843								
EC4	.832								
EC5	.820								
TWR5		.903							
TWR1		.890							
TWR4		.877							
TWR2		.850							
TWR6		.813							
TWR3		.732							
PT1			.885						
PT3			.825						
PT4			.800						
PT5			.783						
PT2			.726						
MC2				.828					
MC5				.815					
MC4				.785					
MC1				.774					
MC3				.773					
CWB4					.881				
CWB1					.873				
CWB2					.842				
CM1						.875			
CM2						.868			
CM3						.866			
IPS1							.847		
IPS2							.838		
IPS3							.833		
SF3								.864	
SF1								.791	
SF2								.620	
LF1									.927
LF2									.927
Extraction Method: PCA.									
Rotation Method: Varimax with Kaiser Normalization.									

Table 4.6 reports the cumulative variances which is found to be 83.22% for all the seven factors. It further confirms the uni-dimensionality of all the variables with Eigenvalue reported to be greater than 1.

Table 4.6:
Total Variance Explained (Model 1 Pilot Results)

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
	Loadings			Loadings			Loadings		
	% of	Cumulative		% of	Cumulative		% of	Cumulative	
	Total	Variance	%	Total	Variance	%	Total	Variance	%
1	10.130	28.138	28.138	10.130	28.138	28.138	5.247	14.576	14.576
2	3.817	10.603	38.741	3.817	10.603	38.741	5.007	13.908	28.484
3	3.669	10.191	48.932	3.669	10.191	48.932	3.706	10.295	38.779
4	3.210	8.916	57.848	3.210	8.916	57.848	3.454	9.596	48.375
5	2.600	7.222	65.069	2.600	7.222	65.069	3.097	8.602	56.976
6	2.177	6.046	71.115	2.177	6.046	71.115	2.791	7.753	64.729
7	1.720	4.779	75.894	1.720	4.779	75.894	2.562	7.117	71.846
8	1.419	3.942	79.835	1.419	3.942	79.835	2.093	5.813	77.659
9	1.220	3.390	83.226	1.220	3.390	83.226	2.004	5.567	83.226
10	.935	2.597	85.823						
11	.720	2.001	87.824						
12	.581	1.614	89.438						
13	.490	1.361	90.799						
14	.463	1.285	92.084						
15	.443	1.229	93.313						
16	.349	.969	94.282						
17	.307	.852	95.134						
18	.273	.758	95.892						
19	.241	.670	96.562						
20	.189	.526	97.087						
21	.170	.472	97.559						
22	.156	.434	97.993						
23	.128	.355	98.347						
24	.107	.298	98.645						
25	.096	.268	98.913						
26	.076	.211	99.125						

27	.065	.180	99.305
28	.052	.145	99.449
29	.046	.129	99.578
30	.034	.095	99.674
31	.033	.092	99.765
32	.028	.079	99.844
33	.025	.070	99.914
34	.017	.046	99.961
35	.010	.029	99.989
36	.004	.011	100.000

Extraction Method: Principal Component Analysis.

Table 4.7 reports Cronbach's alpha values which informs about the internal consistencies of the nine constructs. The values ranged between 0.715 and 0.954 which are above the suggested criterion value of 0.7 and therefore indicate significant construct reliability for all the constructs (Nunally, 1978).

Table 4.7
Construct Reliabilities (Model 1 Pilot Results)

Constructs	Cronbach's alpha
TWR	0.954
SF	0.715
LF	0.891
IPS	0.895
CM	0.928
CWB	0.953
MC	0.874
PT	0.904
EC	0.953

For Model 2 (outcome model), pilot data was collected from 150 doctoral scholars and factor analysis was conducted. Table 4.8 presents the results of KMO and Bartlett's Test. Bartlett's test of sphericity is found to be significant with $p < 0.001$, with degrees of

freedom equal to 1770. The KMO value is 0.909 which is above the recommended threshold value of 0.5, indicating significant correlation between underlying constructs and suitability for further analysis (Kline, 2011). The factors were extracted using Principle component analysis (PCA) with varimax rotation and the results are presented in Table 4.9.

Table 4.8
KMO and Bartlett's Test (Model 2 Pilot Result)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.909
Bartlett's Test of Sphericity	Approx. Chi-Square	12930.450
	Df	1770
	Sig.	.000

Table 4.9
Rotated Component Matrix (Model 2 Pilot Result)

	Rotated Component Matrix ^a								
	Component								
	1	2	3	4	5	6	7	8	9
ASC17	.947								
ASC10	.943								
ASC11	.941								
ASC15	.940								
ASC13	.938								
ASC9	.920								
ASC16	.913								
ASC12	.912								
ASC2	.907								
ASC3	.905								
ASC6	.898								
ASC8	.892								
ASC1	.859								
ASC4	.844								
ASC5	.834								
ASC14	.805								

ASC7	.802			
MS13		.947		
MS4		.941		
MS8		.937		
MS12		.934		
MS6		.931		
MS7		.924		
MS10		.922		
MS5		.919		
MS11		.914		
MS9		.907		
MS3		.902		
MS2		.897		
MS1		.894		
PS7			.955	
PS10			.951	
PS1			.951	
PS5			.940	
PS6			.931	
PS9			.919	
PS2			.912	
PS3			.885	
PS8			.884	
PS4			.802	
TWI2			.939	
TWI1			.904	
TWI4			.900	
TWI3			.895	
TWI5			.884	
TWI6			.876	
CNS4				.852
CNS1				.824
CNS2				.794
CNS3				.787
TB2			.929	
TB3			.916	
TB1			.910	
SFI2				.856
SFI1				.852
SFI3				.828
LF12				.939
LF11				.926
DI2				.876

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Table 4.10 reports the cumulative variances which is found to be 85.95% for all the seven factors. It further confirms the uni-dimensionality of all the variables with Eigenvalue reported to be greater than 1.

Table 4.10
Total Variance Explained (Model 2 Pilot Results)

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	18.727	31.212	31.212	18.727	31.212	31.212	14.239	23.732	23.732
2	10.133	16.889	48.101	10.133	16.889	48.101	11.833	19.722	43.454
3	7.797	12.994	61.095	7.797	12.994	61.095	8.745	14.574	58.028
4	4.633	7.722	68.818	4.633	7.722	68.818	4.996	8.326	66.355
5	3.494	5.823	74.640	3.494	5.823	74.640	3.052	5.087	71.442
6	2.377	3.962	78.602	2.377	3.962	78.602	2.765	4.608	76.050
7	1.789	2.982	81.585	1.789	2.982	81.585	2.540	4.233	80.282
8	1.464	2.440	84.024	1.464	2.440	84.024	1.888	3.147	83.429
9	1.176	1.960	85.985	1.176	1.960	85.985	1.533	2.556	85.985
10	0.712	1.187	87.172						
11	0.506	0.844	88.016						
12	0.490	0.817	88.833						
13	0.460	0.767	89.600						
14	0.362	0.603	90.203						
15	0.356	0.594	90.796						
16	0.353	0.588	91.384						
17	0.321	0.535	91.919						
18	0.299	0.499	92.418						
19	0.298	0.497	92.916						
20	0.268	0.446	93.362						
21	0.246	0.410	93.772						
22	0.238	0.397	94.170						
23	0.214	0.357	94.526						
24	0.210	0.350	94.876						
25	0.191	0.319	95.195						
26	0.184	0.306	95.501						
27	0.176	0.294	95.796						

28	0.163	0.272	96.067
29	0.161	0.269	96.336
30	0.148	0.247	96.583
31	0.146	0.244	96.827
32	0.138	0.231	97.058
33	0.130	0.217	97.275
34	0.127	0.211	97.487
35	0.114	0.190	97.677
36	0.110	0.183	97.860
37	0.104	0.173	98.034
38	0.094	0.156	98.190
39	0.088	0.147	98.337
40	0.087	0.145	98.482
41	0.085	0.142	98.624
42	0.079	0.132	98.756
43	0.073	0.121	98.877
44	0.069	0.115	98.992
45	0.065	0.108	99.100
46	0.062	0.104	99.204
47	0.051	0.085	99.290
48	0.051	0.085	99.375
49	0.048	0.079	99.454
50	0.046	0.077	99.532
51	0.044	0.073	99.604
52	0.040	0.067	99.672
53	0.033	0.055	99.727
54	0.032	0.053	99.779
55	0.027	0.046	99.825
56	0.025	0.042	99.867
57	0.024	0.040	99.907
58	0.022	0.036	99.943
59	0.018	0.030	99.973
60	0.016	0.027	100.000

Extraction Method: Principal Component Analysis.

Table 4.11
Construct Reliabilities (Model 2 Pilot Results)

Constructs	Cronbach's alpha
TWI	0.957
SFI	0.939
LFI	0.913
CNS	0.894
TB	0.961

ASC	0.897
MS	0.989
PS	0.982
DI	0.760

The internal consistencies of all nine constructs are measured using Cronbach's alpha values (Table 4.11). The values ranged between 0.760 and 0.989 which are above the suggested threshold value of 0.7 and therefore indicate significant construct reliability for all the constructs (Nunally, 1978).

4.9 Final Data Collection

The revised questionnaire was then distributed to 500 research supervisors and 1000 doctoral scholars in both offline and online mode over a period of eight months and responses were subsequently registered. The online surveys were developed using Google Forms and were sent to the respondent's official email ids as obtained from their institution's website.

4.10 Data Cleaning, Coding and Conversion

The responses obtained from online survey was directly downloaded in Microsoft Excel document whereas the responses obtained through in-person survey was manually entered into the Microsoft Excel sheet. The responses in the dataset were coded by assigning numbers to each response or data point. The dataset was then checked for missing values and no value was found to be missing. The complete dataset was transferred to the SPSS Version 24.0 for data analysis.

4.11 Data analysis

The Model 1 of the study tests the relationship between empathic-concern, perspective-taking (independent variables/predictors) and authorization of TWR, SF and LF i-deals (dependent variables). Model 2 tests a serial mediation model of i-deals and dropout intention with competence-need satisfaction, perceived trust, academic self-concept, motivation and perceived stress as mediators. This implies that both the models deal with multiple variables, and therefore, to analyze the data pertaining to multiple variables, the study should employ multivariate analysis techniques.

Based on the research objectives, multivariate techniques are categorized into first- and second generational techniques (Table 4.4). Irrespective of the exploratory or confirmatory nature of the study, researcher may employ any of the first or second generational techniques accordingly.

Table 4.4
Typology of Multivariate Techniques

	Predominantly exploratory	Predominantly confirmatory
First-generation techniques	Cluster analysis Exploratory factor analysis Multidimensional scaling	Analysis of variance Logistic regression Multiple regression
Second-generation techniques	PLS-SEM	CB-SEM, including CFA

Source: Hair *et al.*, 2013, p. 2

Both first-generational (EFA) and second-generational technique (CB-SEM) are employed in the present research. Structural Equation Modelling (SEM) involves a group of interrelated techniques such as covariance structure modelling, covariance structure

analysis etc. that allows analysis of inferential data and estimate the amount of measurement error within the model (Byrne, 2001). The most unique characteristic of this method in comparison to the multiple regression techniques is that it evaluates mediator and moderator relationships simultaneously. Thus, SEM is appropriate while testing models with multiple hypotheses (Kline, 2011). SEM can be categorized into PLS-SEM and CB-SEM. The present study utilizes CB-SEM for three primary reasons: First, CB-SEM is preferable when the objective of the study is theory-testing. Second, both the models in the study involve constructs that are reflective and there are no formative constructs necessitating the use of PLS-SEM. Third, presence of large dataset with near-normal distribution, rendering CB-SEM appropriate.

4.12. Ethical Considerations

As a researcher, one must be cautious of ethical considerations during a study. In view of this, the respondents need to be assured of anonymity and confidentiality of their personal information and responses. This was explicitly mentioned at the beginning of the survey. Furthermore, the objective of the study was also informed to prevent any misconception about motives such as commercial gains. The researcher also held a neutral stand while reporting the issues and challenges faced by both the supervisor and scholar groups and while interpreting the results of the study. This was crucial as the researcher belongs to one of the category and may be vulnerable to biased thinking. Therefore, additional care was taken while interpreting the results.

Chapter Summary

The section discussed the methodology adopted in the present research. It outlined the research philosophy guiding the study with special emphasis on its ontology and

epistemology. It also provided an account of sample, measurement tools and data analysis techniques and software. The chapter ends with a brief description of ethical considerations associated with the study.

CHAPTER 5

DATA ANALYSIS

The chapter presents, in detail, the output of the statistical analysis of the data collected. This includes the demographic description of the supervisors' sample and the scholars' sample, and descriptive statistics of the studied variables. Further, it discusses the process of preliminary data screening and missing values treatment, existence of outliers and level of normality. The chapter then discusses the method and results of EFA, CFA (measurement model evaluation) and structural model evaluation of Model 1 and Model 2 along with the moderating effects of the intervening variables in case of Model 1.

5.1 Response rate

Data was collected over a period of eight months during 2017-2018. A total of 1000 survey questionnaires were administered to the doctoral scholars' respondent group and 700 questionnaires were distributed across 500 research supervisors belonging to the five categories of HEIs (IIMs, IITs, Central Universities, NITs, Others). From scholars' sample, 823 responses were received, out of which 23 incomplete or inappropriate questionnaires were discarded, and finally 797 responses were considered valid and subjected to analysis. Hence, the response rate for the scholars sample was found to be 79.7 percent. In case of supervisor sample, 323 responses were received and five responses had to be discarded, rendering 317 responses to be suitable for statistical analysis. Therefore, the response rate

for the supervisors sample was 45.28 percent. Both the response rates were favourable according to the suggested average response rate of 52.7 percent for individual-level data (Baruch & Holtom, 2008). Examining response rates is crucial as favourable response rates generate larger data samples that more closely represent the target population and therefore have greater statistical power and lower confidence intervals while determining sample statistics. In addition, larger sample sizes indicate better perceived credibility of the data and higher reliability of the results (Rogelberg & Stanton, 2007).

5.2 Sample demographics

The demographic profile of research supervisors and doctoral scholars who participated in the study is presented in Table 5.1 and Table 5.2. The demographic information for supervisors sample was related to gender, faculty level, department, type of institution, and number of scholars under supervision. The demographic information for scholars sample was related to gender, marital status, year of study, department and type of institution.

The demographic profile indicates that 70.34 of the research supervisors were male and around 47.63 percent of respondents were working at the level of Professor. About 55.83 percent of the research supervisors belonged to the non-Sciences departments (Management, Social Sciences and Language Studies) and remaining 44.17 percent of the supervisors belonged to the Sciences department (Sciences and Engineering). A major percentage of the respondents in this category belonged to the Central Universities i.e. 40.69 percent, as universities constitute departments of all the subject areas. Nearly half of the supervisors had around 4-6 doctoral scholars currently under supervision, while a relatively small percentage of them had number of scholars less than 2 or greater than 6.

Table 5.1
Demographic Profile of Research Supervisors

Demographic Characteristic	Valid N	Number of Responses	Total (% of supervisors)
Gender	317		
Male		223	70.34
Female		94	29.65
Faculty Level	317		
Assistant Professor		53	16.72
Associate Professor		113	34.65
Professor		151	47.63
Department	317		
Sciences		47	14.83
Engineering		93	29.34
Management		78	24.61
Social Sciences		61	19.23
Language Studies		38	11.99
Type of Institution	317		
IIMs		21	6.63
IITs		93	29.34
Central University		129	40.69
NITs		43	13.56
Others		31	9.78
Number of scholars under supervision	317		
Less than 2		31	9.78
2-4		106	33.44
4-6		153	48.26
More than 6		27	8.52

Among doctoral scholars, 59 percent of the respondents were male and 41 percent were females. Most scholars, i.e. 86.70 percent, were single and only 13.3p percent were married. Around 48.43 percent of the scholars were pursuing third year of their doctoral course and remaining belonged to fourth year and above. Nearly 58 percent of the scholars were from the non-Sciences departments (Management, Social Sciences and Language

Studies) and remaining 42 percent of the scholars belonged to the Sciences department (Sciences and Engineering).

Table 5.2
Demographic Profile of Doctoral Scholars

Demographic Characteristic	Valid N	Number of Responses	Total (% of supervisors)
Gender	797		
Female		326	40.90
Male		471	59.10
Marital Status	797		
Married		106	13.30
Single		691	86.70
Year of Study	797		
III		386	48.43
IV		316	39.65
V & above		95	11.92
Department	797		
Sciences		123	15.43
Engineering		212	26.60
Management		174	21.83
Social Sciences		161	20.20
Language Studies		127	15.94
Type of Institution	797		
IIMs		93	11.67
IITs		212	26.60
Central University		252	31.62
NITs		53	6.65
Others		187	23.47

5.3 Descriptive Statistics

The descriptive analysis provides the summary of sample and measures in the form of measures of central tendency (mean), measures of dispersion (standard deviation)

and measures of symmetry (skewness and kurtosis). The descriptive statistics for Model 1 (supervisor sample) includes focal constructs of empathic-concern, perspective-taking, prosocial motivation, TWR, SF, LF i-deals, IPS, CM and CWB. Item-wise descriptive statistics as indicated by values of the mean, SD, skewness and kurtosis for the abovementioned constructs are presented in Appendix 4.

The mean values of all the constructs is found to be above 3 and standard deviations slightly over 1. This depicts supervisors' positive perceptions on all the constructs and certain variation in responses among supervisors. The descriptive analysis shows that supervisors largely involve in both perspective-taking and empathic-concern and are pro-socially motivated. The supervisors also have a favourable inclination towards authorization of idiosyncratic deals based on perceived positive outcomes in the form of performance, motivation and work-life balance.

The descriptive statistics for Model 2 (scholars sample) includes focal constructs of TWR, LF, SF i-deals, competence-need satisfaction, perceived trust, academic self-concept, motivation of scholar, perceived stress and dropout intentions. Item-wise descriptive statistics as indicated by values of the mean, SD, skewness and kurtosis for the abovementioned constructs are presented in Appendix 5.

The mean values are above 3 for TWR, LF, CNS, TB, PS and DI and mean values are below 3 for SF, ASC and MS. This indicates that on an average, most scholars asked and successfully negotiated TWR and LF i-deals and did not seek SF i-deals. Also, scholars exhibited overall high need for competence-need satisfaction and trust of supervisor. The perceived stress reported was high overall and academic-self-concept and motivation were low among scholars. The dropout intention was also found to be slightly

above average. The standard deviations for all the constructs were marginally above 1 and is indicative of variation in responses among research scholars.

The descriptive analysis revealed two key observations for each of the models. Firstly, for Model 1, the typical response of research supervisors was well above neutral position *between agree and strongly agree* indicating overall positive empathic disposition of supervisors, high prosocial motivation and tendency to authorize i-deals. Further, for Model 2, the typical response of doctoral scholars for most variables (TWR, SF, CNS, TB, PS and DI) ranged between *neutral to slightly agree* and for few variables (LF, ASC and MS) the responses ranged between *slightly disagree to neutral*. Secondly, the standard deviations for all items in both Model 1 and Model 2 are above 1, indicating differences in the responses of both groups of respondents to these items measured on 5-point Likert scales. The mean values above 3 and standard deviations above 1, signal possible acquiescence bias (tendency to answer in positive connotation to all the questions) or social desirability bias (tendency to answer in a way that is perceived positively by others). These response biases will be discussed in further sections.

The normality of the datasets is evaluated generally by examining two statistical measures i.e. skewness and kurtosis. Skewness is a measure of the extent of symmetry observed in the distribution of a variable. Kurtosis is a measure of the level of peakedness of a given distribution. Typically, skewness values in the range of ± 1 indicate marginally skewed data, ± 2 indicates considerably skewed data and ± 3 indicate extremely skewed data and non-normal distribution (Byrne, 2001; Kline, 2011). Further, in case of kurtosis, values in the range of ± 3 indicate distribution similar to the normal distribution (Tabachnick & Fidell, 2007). In the present study, for both Model 1 and Model 2, the skewness values are between 0 and -1 indicating slightly negatively skewed data and the kurtosis values are in the range of 0 and -2, also indicating non-normal distribution and

moderate departure from normal distribution (mean=0, standard deviation=1, skewness=0, kurtosis=0). A plausible reason for the lack of normality in the datasets is the acquiescence bias that may have occurred due to a few respondents answering to all the questions in a same way (mostly affirmative) (Purcell, 2014). But, since the non-normality is only moderate, one can be assured of genuineness of the responses.

While the datasets are non-normal, the study sets on to perform parametric tests such as t-test, ANOVA, regression analysis and CB-SEM that are based on the assumptions of normality. This approach is justified as the study employs large sample sizes and a higher confidence level (95 percent) which have been emphasized as sufficient criteria for employing parametric tests on non-normal data. In their research, Lumley, Diehr, Emerson and Chent (2002) established this through simulation studies of non-normal datasets with large sample sizes, wherein, data were analyzed using parametric as well as non-parametric tests such as Wilcoxon Rank Sum test and ordinal logistic regression and found comparable results. They concluded that t-test and linear regression are relevant and practical alternatives to non-parametric tests and can be conveniently employed for interval data that has a non-normal distribution. Further, it is also well-acknowledged in the literature that while the assumption of normality is required for inference-making, it is not a mandatory condition for establishing validity of t-tests and linear regression and only an extreme departure from the normality (presence of outliers) may provide unauthentic results (Kleinbaum, Kupper, Muller & Nizam, 1998, p.117).

5.4 Exploratory Factor Analysis (EFA)

The study uses adapted versions of well-established scales and does not develop new scales, and therefore does not employ EFA as a method of dimension reduction for scale development. In fact, to conduct SEM for testing developed models, initially EFA

must be conducted as a preliminary step. EFA analyzes the nature of the latent constructs and their relationship with the corresponding measured variable. CFA is the next step that verifies the factor structure developed based on theoretical knowledge and confirmed by EFA investigation. Further, SEM is conducted which provides all the possible causal relationships between the variables. Finally, the model-fit indices are calculated to ascertain the quality of the model.

EFA is a multivariate statistical technique used to ascertain the number and nature of the fundamental latent factors, responsible for within data variability and to determine the extent to which each observed variable is explained by latent factors (Byrne, 2001). It is a combination of extraction and rotation techniques designed to model latent (unobserved) constructs. The fundamental assumption of EFA is that the manifest (observed) variables are the combined result of underlying latent constructs (Osborne, 2014). In addition, EFA also identifies that the total variance in the model is a sum of common variance and unique variance across variables. Yet, it only examines the common variance and retains unique variance in the model each time a factor is generated. EFA is conducted in the present context to confirm the possibility of a structure among the variables and uses SPSS 24.0 to perform the analysis. The step-by-step process of EFA as suggested by Osborne (2014) and followed under this study is explained further.

Step 1: The first step in conducting EFA is selection of a suitable extraction method. The extraction method involves “extraction” of unobserved variables from the manifest variables by examining the correlation or covariation between the variables. Typically, based on the distribution of variables, either Maximum Likelihood Estimation (MLE) or Principal Component Analysis (PCA) is used. While MLE is the suitable extraction method for normally distributed data, PCA is best choice for non-normal distributions,

especially when the assumption of normality is “severely violated” (Fabrigar, Wegener, MacCallum & Strahan, 1999). The present study selected the Principal Component Analysis as the estimation method as the data were non-normal and moderately skewed.

Step 2: The second step is determining the number of factors to be retained. This was done using a combination of sound theoretical knowledge of the constructs, the Kaiser criterion and the Scree plot, as combination of these methods is considered more effective (Osborne, 2014). The scree plot presents a graphical display of the eigenvalues in the form of a curve and the point at which the slope flattens (elbow) must be identified. The number of factors to be retained is generally equivalent to the data points count after the point of bent of the scree curve.

Theory signaled that the number of factors to be extracted should be equivalent to the number of constructs in Model 1 and Model 2 i.e. 9 and 9 respectively. The Kaiser criterion i.e., an Eigenvalue greater than 1.0 (Kaiser, 1960) was set as the extraction preference. To further confirm the decision, a scree plot display was also sought. The scree plots for pilot analysis for Model 1 and Model 2 are given in Figure 5.1 and 5.2 respectively. The scree plots for final data analysis for Model 1 and Model 2 are presented in Figure 5.3 and Figure 5.4 respectively.

Step 3: The third step in EFA is to choose a rotation method that enables simplification of the factor structure. Based on the angle between X and Y axes, rotation methods are categorized as – orthogonal rotation (90°) and oblique rotation (other than 90°). Orthogonal rotation generates factors based on their non-correlation whereas oblique rotation produces factors that correlate. There are three types of orthogonal rotations i.e. Varimax, Quartimax and Equimax rotation and two types of oblique rotations i.e. Direct Oblimin and Promax.

The present study uses Varimax rotation, a type of orthogonal rotation that aims at maximizing within-factor variance such that higher loadings are amplified and lower are minimized. The approach is selected as it presents easily interpretable results.

Step 4: The final step is to perform EFA and interpret its results. EFA results of final data analysis and their interpretations are discussed further.

5.4.1 Exploratory factor analysis (Model 1 Final Results)

EFA results are reported based on certain key outputs from the analysis i.e. Kaiser-Meyer-Olkin and Bartlett test criteria, communalities, total variance explained, rotated component matrix and scree plot. For Model 1 (antecedent model), EFA involved conducting a PCA followed by Varimax rotation on 36 items of a questionnaire completed by 317 research supervisors of HEIs concerning their empathic dispositions, i-deals and perceived student outcomes. The EFA output is discussed further.

Table 5.3 presents the KMO and Bartlett's test results. The KMO measures the sampling adequacy and its value must be greater than 0.05 for suggesting further analysis (Kline, 1994). The KMO value of the final sample of research supervisors is found to be 0.904, indicating significant correlations between underlying constructs, and therefore, is sufficient for conducting further analysis. . Bartlett's test of sphericity relates the observed co-relation matrix with the identity matrix and assesses possible redundancy among the variables in order to condense large number of variables into limited numbers of factors. Bartlett's test is found to be significant as its associated probability is less than 0.001 at 630 degrees of freedom, indicating some correlation among the variables.

Table 5.3
KMO and Bartlett's Test (Model 1 Final Output)

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.904

	Approx. Chi-Square	15100.307
Bartlett's Test of Sphericity	Df	630
	Sig.	.000

Total variance explained output presents all the factors extractable from the analysis along with their eigenvalues, the percent of variance attributable to each factor, and the cumulative variance of the factor and the previous factors. Eigenvalues represents the amount of common variance explained by a factor and is the combined value of the squared factor loadings of a specific factor. Table 5.4 represents the total variance explained output for Model 1. Based on Kaiser's Rule that suggests selection of factors with eigenvalues above 1, nine factors are retained, which together elucidate 88.83 percent of the total variance.

Table 5.4
Total Variance Explained (Model 1 Final Output)

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
				Loadings			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.639	32.332	32.332	11.639	32.332	32.332	5.680	15.777	15.777
2	5.704	15.846	48.178	5.704	15.846	48.178	5.610	15.583	31.360
3	3.347	9.299	57.476	3.347	9.299	57.476	4.489	12.471	43.831
4	2.744	7.622	65.098	2.744	7.622	65.098	3.580	9.946	53.776
5	2.714	7.538	72.636	2.714	7.538	72.636	2.770	7.694	61.471
6	1.737	4.824	77.460	1.737	4.824	77.460	2.743	7.619	69.090
7	1.520	4.221	81.681	1.520	4.221	81.681	2.645	7.348	76.438
8	1.481	4.113	85.794	1.481	4.113	85.794	2.567	7.130	83.568
9	1.092	3.034	88.828	1.092	3.034	88.828	1.893	5.260	88.828
10	.665	1.848	90.676						
11	.424	1.178	91.854						
12	.247	.685	92.539						
13	.242	.671	93.210						
14	.230	.639	93.849						

15	.200	.556	94.405
16	.182	.505	94.910
17	.171	.474	95.384
18	.148	.411	95.795
19	.136	.379	96.174
20	.130	.362	96.536
21	.127	.353	96.889
22	.119	.330	97.219
23	.114	.316	97.535
24	.106	.295	97.830
25	.106	.294	98.124
26	.094	.262	98.385
27	.081	.225	98.610
28	.076	.210	98.820
29	.075	.208	99.028
30	.066	.183	99.211
31	.065	.180	99.391
32	.055	.153	99.544
33	.047	.130	99.675
34	.045	.124	99.799
35	.042	.118	99.916
36	.030	.084	100.000

Extraction Method: Principal Component Analysis.

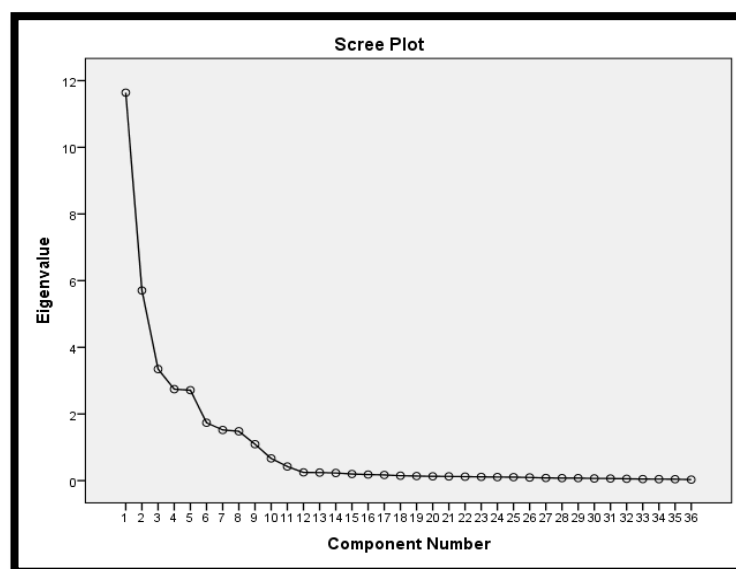


Figure 5.1: Scree Plot (Model 1 Final Data)

Figure 5.1 displays the scree plot for Model 1. Scree plot is a graphical representation of successive eigenvalues of the factors and is used to determine the numbers of factors to be retained. The point on the scree plot at which the curve tends to flatten is referred to as “elbow” and the additional factors after this point are deemed to be inconsequential and are thus discarded (Cattell, 1996). The number of factors to be retained are nine and this is in agreement with the number of factors retained based on the Kaiser’s Rule (Figure 5.1).

Factor rotation was performed using Varimax rotation and the output is presented in Table 5.5. Rotation improves the interpretability of the factor solution by rotating factors in a way that variables with larger and smaller loading are well-differentiated. This is achieved by rotating axes on a sequence of scatter graphs till the most interpretable factor structure is achieved. Table 5.5 indicates nine well-differentiated factors which will be subsequently used for analysis.

Table 5.5
Rotated Component Matrix (Model 1 Final Output)

	Rotated Component Matrix^a								
	Component								
	1	2	3	4	5	6	7	8	9
TWR1	.933								
TWR2	.906								
TWR3	.897								
TWR4	.931								
TWR5	.921								
TWR6	.909								
SF1								.831	
SF2								.849	
SF3								.826	
LF1									.929
LF2									.923
IPS1						.893			
IPS2						.877			
IPS3						.871			

CM1		.872
CM2		.867
CM3		.855
CWB1	.883	
CWB2	.891	
CWB4	.896	
EC1	.944	
EC2	.924	
EC3	.901	
EC4	.925	
EC5	.922	
EC6	.936	
PT1	.932	
PT2	.896	
PT3	.873	
PT4	.894	
PT5	.920	
PM1	.860	
PM2	.879	
PM3	.769	
PM4	.786	
PM5	.777	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

5.4.2 Exploratory factor analysis (Model 2 Final Results)

Similar to the earlier model, for Model 2 (outcomes model), EFA involved conducting a PCA followed by Varimax rotation on 60 items of a questionnaire completed by 797 doctoral scholars of HEIs concerning their i-deals, attitudes and dropout intentions. Various EFA outputs and findings are discussed further.

Table 5.6 presents the KMO and Bartlett's test results. The KMO value of the final sample of research supervisors is found to be 0.963, indicating significant correlations between underlying constructs, and therefore, is sufficient for conducting further analysis

(Kline, 1998). Bartlett's test is found to be significant as its associated probability is less than 0.001 at 1770 degrees of freedom, indicating some correlation among the variables.

Table 5.6
Tests for Sampling Adequacy (Model 2 Final Output)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.963
Bartlett's Test of Sphericity	Approx. Chi-Square	52996.361
	Df	1770
	Sig.	.000

Table 5.7 represents the total variance explained output for Model 2. Based on Kaiser's Rule that suggests selection of factors with eigenvalues above 1, nine factors are retained, that together elucidate 79.95 percent of the total variance.

Table 5.7
Total Variance Explained (Model 2 Final Output)

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
	Loadings			Loadings			Loadings		
	% of Total	Cumulative Variance	%	% of Total	Cumulative Variance	%	% of Total	Cumulative Variance	%
1	19.749	32.915	32.915	19.749	32.915	32.915	13.061	21.768	21.768
2	7.816	13.026	45.941	7.816	13.026	45.941	10.671	17.785	39.553
3	6.388	10.647	56.588	6.388	10.647	56.588	8.417	14.028	53.580
4	4.483	7.471	64.059	4.483	7.471	64.059	4.484	7.473	61.054
5	2.708	4.514	68.573	2.708	4.514	68.573	3.059	5.098	66.152
6	2.310	3.849	72.422	2.310	3.849	72.422	2.486	4.143	70.294
7	1.768	2.947	75.369	1.768	2.947	75.369	2.449	4.082	74.376
8	1.481	2.469	77.838	1.481	2.469	77.838	1.814	3.023	77.399
9	1.267	2.111	79.950	1.267	2.111	79.950	1.530	2.551	79.950
10	.775	1.292	81.241						
11	.601	1.001	82.242						
12	.476	.793	83.036						
13	.434	.723	83.758						
14	.423	.705	84.464						
15	.385	.642	85.106						

16	.382	.636	85.742
17	.357	.594	86.336
18	.331	.551	86.888
19	.328	.547	87.435
20	.306	.510	87.945
21	.291	.485	88.430
22	.282	.469	88.900
23	.274	.457	89.357
24	.260	.433	89.790
25	.253	.422	90.212
26	.247	.412	90.624
27	.242	.403	91.027
28	.237	.396	91.422
29	.233	.389	91.811
30	.227	.378	92.189
31	.220	.367	92.556
32	.216	.360	92.916
33	.210	.349	93.265
34	.204	.339	93.605
35	.200	.334	93.938
36	.196	.327	94.265
37	.193	.321	94.586
38	.186	.310	94.897
39	.181	.302	95.199
40	.178	.297	95.496
41	.171	.286	95.782
42	.168	.281	96.062
43	.165	.275	96.337
44	.162	.270	96.608
45	.156	.259	96.867
46	.150	.251	97.118
47	.149	.248	97.365
48	.145	.242	97.607
49	.141	.234	97.842
50	.137	.228	98.070

51	.135	.225	98.295
52	.130	.217	98.512
53	.129	.215	98.726
54	.124	.207	98.933
55	.117	.195	99.128
56	.114	.189	99.317
57	.113	.188	99.505
58	.106	.177	99.681
59	.097	.162	99.843
60	.094	.157	100.000

Extraction Method: Principal Component Analysis.

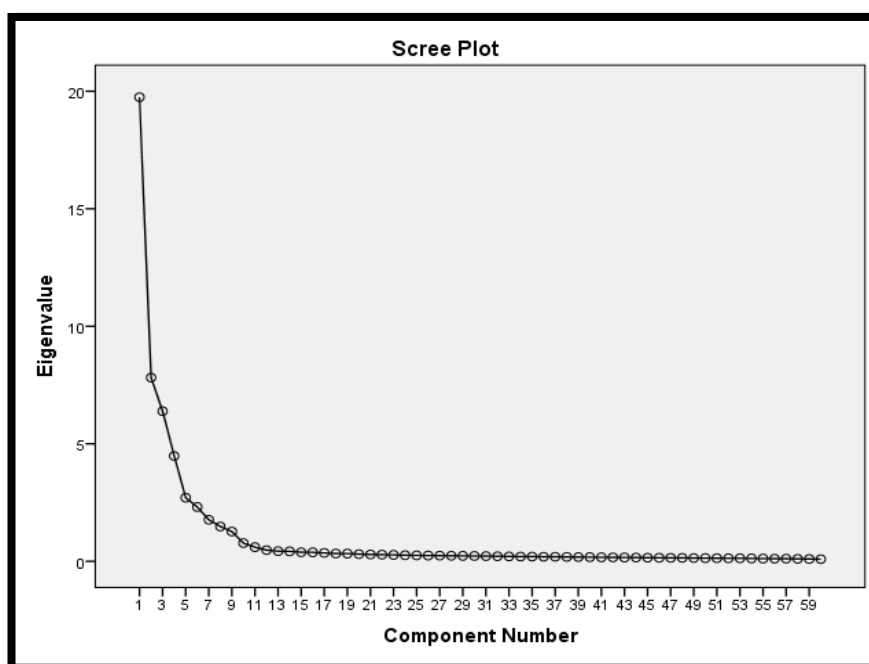


Figure 5.2: Scree Plot (Model 2 Final Data)

Figure 5.2 displays Model 2 scree plot, which suggests that the total number of factors to be retained are nine and this again is in agreement with the number of factors retained based on the Kaiser's Rule. Factor rotation was performed using Varimax rotation and the output indicates nine well-differentiated factors which will be used for further analysis (Table 5.8).

Table 5.8

Rotated Component Matrix (Model 2 Final Output)

Rotated Component Matrix^a									
	Component								
	1	2	3	4	5	6	7	8	9
TWI1				.855					
TWI2				.847					
TWI3				.858					
TWI4				.859					
TWI5				.816					
TWI6				.838					
CNS1					.850				
CNS2					.819				
CNS3					.811				
CNS4					.816				
ASC1	.833								
ASC2	.874								
ASC3	.870								
ASC4	.831								
ASC5	.826								
ASC6	.842								
ASC7	.855								
ASC8	.822								
ASC9	.894								
ASC10	.872								
ASC11	.859								
ASC12	.844								
ASC13	.853								
ASC14	.791								
ASC15	.848								
ASC16	.819								
ASC17	.853								
MS1		.873							
MS2		.836							
MS3		.881							
MS4		.888							
MS5		.882							
MS6		.871							
MS7		.883							
MS8		.881							
MS9		.895							
MS10		.862							

MS11	.889		
MS12	.842		
MS13	.835		
DI1			.821
DI2			.865
SFI1		.857	
SFI2		.855	
SFI3		.859	
LFI1			.929
LFI2			.934
TB1		.874	
TB2		.864	
TB3		.868	
PS1	.886		
PS2	.903		
PS3	.872		
PS4	.875		
PS5	.873		
PS6	.886		
PS7	.887		
PS8	.876		
PS9	.864		
PS10	.885		

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

5.5 Confirmatory Factor Analysis (CFA)

CFA, a subset of SEM, is a theory-driven statistical method which focuses on evaluation of the measurement model by modeling the association between the manifest (observed) indicators and the latent (unobserved) variables (i.e. factors) based on correlations or co-variances. CFA can be used for construct validation, scale validation, and assessing measurement invariance. CFA, foremost, specifies the theoretical model through diagrammatic representation that denotes latent constructs in circles and manifest variables in squares, all of which are connected using regression and covariance paths

respectively. CFA mandates the specification of characteristics of the proposed measurement model such as number and pattern of indicators, hypothesized relationship between factors etc. The technique ascertains the pattern of individual factor loadings and depicts how the indicators or variables of measurement model integrate to explain each of the latent constructs.

CFA facilitates development of robust scale and further evaluation of the overall measurement model by detecting the invariance of an indicator within a group of indicators and by identifying the influence of latent constructs on each other (Brown, 2014). The present study employed AMOS Version 21.0 to conduct CFA and SEM for Model 1 and Model 2 and Figure 5.3 and Figure 5.4 represent their related measurement models respectively.

CFA involves a series of criteria that constitute the measurement model evaluation. This includes tests of reliability and validity. Reliability refers to the precision and constancy of a measure while validity refers to the relevance of the measure to gauge the construct it claims to measure. In quantitative research, reliability is value of the extent to which study results are reproducible and validity is an evidence for integrity of the research findings (Bryman & Bell, 2007). The internal reliability and validity of constructs is established through following tests:

- (i) Reliability
- (ii) Convergent validity & Discriminant validity
- (iii) Model fit indices

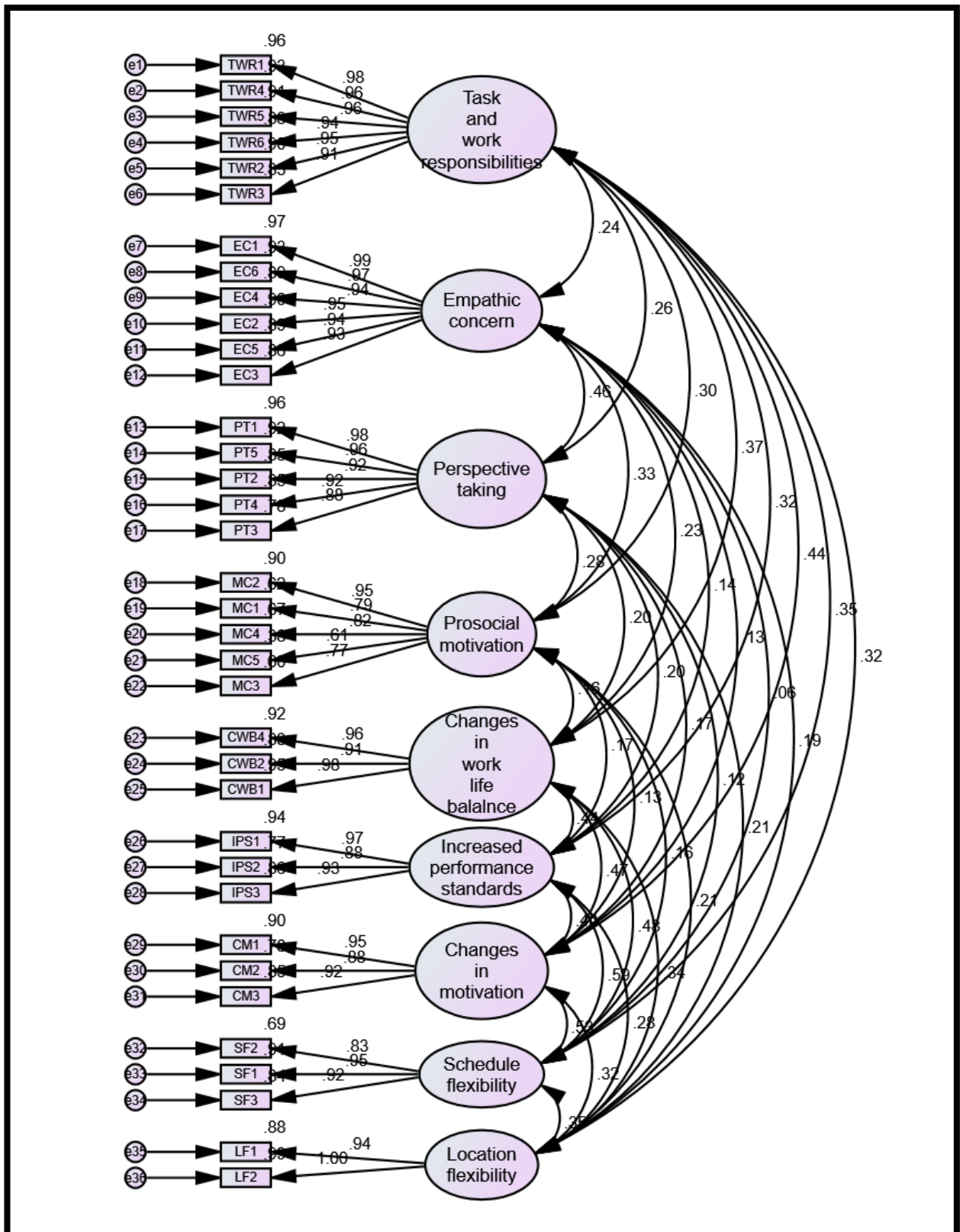
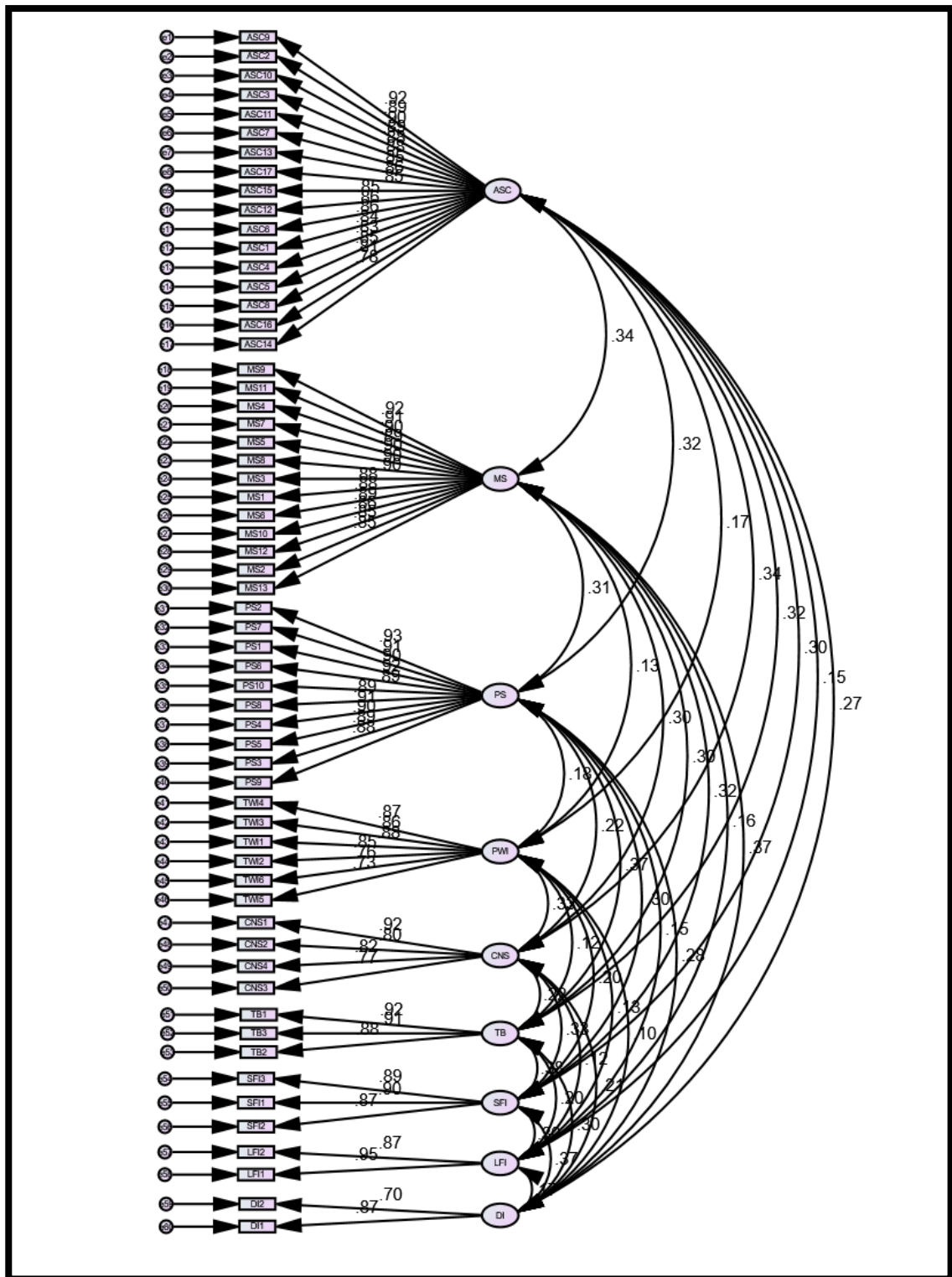


Figure 5.3: Measurement Model (Model 1)



Note: TWI = task & work responsibility; SFI = schedule flexibility; LFI = location flexibility; CNS = competence-need satisfaction; TB = perceived trust; ASC = academic self-concept; MS = motivation of scholar, PS = perceived stress; DI = dropout intentions

Figure 5.4: Measurement Model (Model 2)

5.5.1 Reliability

Reliability is the uniformity and constancy of findings that allows its replicability. Internal reliability can be determined using Cronbach's alpha (α) which specifies whether all the scale items are measuring the same thing. It corresponds to the mean of all the split half correlations of the items in the questionnaire (Burns & Burns, 2008). Cronbach's alpha values can be obtained through reliability analysis tool in SPSS. An α value above 0.70 indicates sufficient reliability (Nunnally, 1978). The internal reliabilities of all the constructs of both Model 1 and Model 2 are given in Table 5.9 and 5.10 respectively. For Model 1, the Cronbach's alpha values ranged between 0.89 and 0.98, and for Model 2, alpha values ranged between 0.76 and 0.98, indicating sufficient internal reliabilities of all the constructs in both the models.

Table 5.9
Construct Reliabilities (Model 1)

Construct	Cronbach's alpha (α)
TWR	0.982
SF	0.927
LF	0.966
IPS	0.946
CM	0.942
CMB	0.965
EC	0.983
PT	0.971
MC	0.888

Table 5.10
Construct Reliabilities (Model 2)

Construct	Cronbach's alpha (α)
TWI	.929
CNS	.898
ASC	.980
MS	.980
DI	.759
SFI	.917
LFI	.905
TB	.931
PS	.977

The measurement model validity is contingent upon:

- i) providing specific evidence for construct validity through determination of discriminant and convergent validity
- ii) achieving adequate level of goodness-of-fit

5.5.2 Convergent validity & Discriminant validity

Convergent validity indicates the degree to which a particular scale relates to similar constructs. *Discriminant validity* indicates the degree to which a particular scale exhibits low or no correlations with measures that are different (Campbell & Fiske, 1959).

Convergent validity estimates the measurement items that converge to form a construct and share maximum common variance. This is established through Composite reliability (CR) and average variance extracted (AVE) values which serve as considerations for evaluating convergent validity of the measurement model (Fornell & Larcker, 1981; Hair et al. 2007).

Composite reliability (Ω) is a degree of internal consistency of indicators loading on to a construct (McDonald, 1970). During model estimation, composite reliability assigns priority to indicators and compute reliability scores as a function of the item factor loadings. This differs from Cronbach's alpha as the latter utilizes the item covariance matrix (Cronbach, 1951). Nunnally and Bernstein (1994) suggested that the values of CR in exploratory research may lie between 0.60 and 0.70 and in empirical studies should range from 0.70 to 0.90. In addition, Hair *et al.* (2010) suggests that CR values above the threshold of 0.70 are deemed to be acceptable.

Average variance extracted (AVE) measures "the degree of variance captured by a construct against the amount of variance due to measurement error". AVE values equal to or greater than 0.50 are acceptable for establishing validity (Fornell & Larcker, 1981; Kline, 1998). AVE for every construct is calculated as the summation of standardized factor loadings squares divided by obtained sum plus aggregate of indicators error variances. To obtain an absolute standardized solution, all latent variables and corresponding indicators are scaled to consisting of unit variance.

For Model 1, the CR values and AVE values of all the constructs are given in Table 5.11. The CR values lie between 0.895 and 0.983 and are above the suggested limit of 0.70. In addition, the AVE values range from 0.634 to 0.937 and are greater than the threshold value of 0.50. The CR values are also reported to be greater than AVE values for all the constructs. This indicates sufficient convergent validity for Model 1.

For Model 2, the CR values and AVE values of all the constructs are given in Table 5.12. The CR values lie between 0.768 and 0.982 and are above the suggested limit of 0.70. In addition, the AVE values range from 0.625 to 0.830 and are greater than the threshold value of 0.50. The CR values are also reported to be greater than AVE values

for all the constructs. This indicates sufficient convergent validity for the second measurement model.

Table 5.11
Convergent Validity Results (Model 1)

	CR	AVE	MSV	Convergent validity
TWR	0.982	0.903	0.191	Yes
EC	0.983	0.908	0.208	Yes
PT	0.972	0.873	0.208	Yes
PM	0.895	0.634	0.111	Yes
CWB	0.965	0.901	0.227	Yes
IPS	0.947	0.856	0.349	Yes
CM	0.942	0.845	0.282	Yes
SF	0.929	0.813	0.349	Yes
LF	0.967	0.937	0.123	Yes
<i>Note: “For convergent validity: CR > 0.7; AVE ≥ 0.5; CR > AVE”</i>				

Table 5.12
Convergent Validity Results (Model 2)

	CR	AVE	MSV	Convergent validity
ASC	0.980	0.740	0.115	Yes
MS	0.982	0.789	0.139	Yes
PS	0.977	0.810	0.137	Yes
PWI	0.928	0.685	0.111	Yes
CNS	0.899	0.690	0.115	Yes
TB	0.931	0.818	0.141	Yes
SFI	0.918	0.788	0.141	Yes

LFI	0.907	0.830	0.092	Yes
DI	0.768	0.625	0.139	Yes

Note: “For convergent validity: CR > 0.7; AVE ≥ 0.5; CR > AVE”

Discriminant validity is defined as “the degree to which two conceptually similar concepts are distinct”. Its objective is to confirm that a reflective construct constitutes strongest associations with its own indicators when compared to indicators of other constructs in the path model ((Hair *et al.*, 2010; Hair *et al.*, 2017). According to the Fornell-Larcker (1981), discriminant validity can be established by comparing the extent of the variance explained by the construct (AVE) and its shared variance with other dissimilar constructs (inter-construct correlation). They indicated that the AVE square root values of every construct should be more than its highest correlation with other constructs.

Table 5.13

Discriminant Validity Results (Model 1)

Note: “Discriminant validity: Square root of AVE > Inter construct co-relation”.

	TWR	EC	PT	PM	CWB	IPS	CM	SF	LF
TWR	0.950								
EC	0.240***	0.953							
PT	0.260***	0.456***	0.934						
PM	0.302***	0.332***	0.275***	0.796					
CWB	0.373***	0.227***	0.199***	0.157**	0.949				
IPS	0.317***	0.145*	0.199***	0.170**	0.435***	0.925			
CM	0.437***	0.126*	0.169**	0.134*	0.471***	0.396***	0.919		
SF	0.353***	0.060	0.121*	0.163**	0.477***	0.591***	0.531***	0.902	
LF	0.324***	0.190**	0.213***	0.209***	0.344***	0.281***	0.322***	0.351***	0.968

Bold values are the square root of AVE

*Correlation is significant at the 0.10 level (2-tailed).

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

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

Table 5.14
Discriminant Validity Results (Model 2)

	ASC	MS	PS	PWI	CNS	TB	SFI	LFI	DI
ASC	0.860								
MS	0.337***	0.888							
PS	0.321***	0.308***	0.900						
PWI	0.165***	0.134***	0.176***	0.828					
CNS	0.340***	0.303***	0.224***	0.333***	0.831				
TB	0.323***	0.301***	0.370***	0.123**	0.220***	0.905			
SFI	0.303***	0.324***	0.301***	0.203***	0.327***	0.376***	0.888		
LFI	0.153***	0.164***	0.152***	0.128**	0.123**	0.200***	0.304***	0.911	
DI	0.271***	0.372***	0.275***	0.103*	0.214***	0.297***	0.372***	0.167***	0.791

Note: “Discriminant validity: Square root of AVE > Inter construct co-relation”.

Bold values are the square root of AVE

*Significance at the 0.10 level (2-tailed).

** Significance at the 0.05 level (2-tailed).

*** Significance at the 0.01 level (2-tailed).

Table 5.13 and Table 5.14 reports inter-construct correlations and diagonally represent square root of AVE values for Model 1 and Model 2 respectively. Based on the Fornell- Larcker criterion indicated earlier, in both cases, the square root values of AVE are higher than the correlations between the constructs, thus suggesting acceptable discriminant validity for each constructs in both the models.

5.5.3 Model fit indices

Goodness-of fit specifies the degree of similarity of observed and estimated covariance matrix i.e. it indicates how best the specified measurement model replicates the indicator items based observed covariance matrix.

On estimation of the specified model, model fit draws parallel between the theory (indicated by the estimated covariance matrix) and the reality (indicated by the observed covariance matrix), which if demonstrate high similarity, suggest perfect theory development. The similarity between the observed and estimated matrices is evaluated

based on specific measures that are obtained from mathematical comparison of the matrices. Greater the similarity in values of the matrices, better is the model fit (Hair *et al.*, 2010).

The study reports following fit indices for both structural model and measurement model evaluation:

- Absolute fit indices: These are a direct measure of how best the proposed theory fits the sample data. The most commonly reported absolute fit indices are Root Mean Square Error of Approximation (RMSEA), Normed Chi-square (CMIN/df), and Goodness-of-fit (GFI).
- Incremental fit indices: These evaluate the fit between the estimated model and a specific baseline model. Mostly, the baseline model is the null model that presumes correlation between the observed variables. Some most commonly reported incremental fit indices are Tucker Lewis Index (TLI), Normed Fit Index (NFI), and Comparative Fit Index (CFI).
- Parsimonious fit indices: These indices evaluate model fit relative to its complexity and indicate which model is best among a fixed number of competing models. One of the commonly reported indices in this category is Adjusted Goodness-of-fit Index (AGFI).

The measurement model model-fit is estimated using the maximum likelihood estimation method (Arbuckle, 2007). Table 5.15 and 5.16 present the model fit indices for Model 1 and Model 2 respectively, along with the recommended values that deem model fit to be good. A set of criteria was recommended by Bentler and Bonett (1980) for assessing model fit i.e.: $\chi^2/df < 3$, $GFI \geq 0.90$, $RMSEA \leq 0.05$, $NFI > 0.90$, $TLI \geq 0.95$, $CFI \geq 0.95$, and P Close near to 1. The measurement model fit indices are within the

suggested values i.e. $\chi^2/df = 1.499$, CFI = 0.982, GFI = 0.800, NFI = 0.948, and RMSEA = 0.047 indicating appropriate fit of the measurement model.

Table 5.15
CFA - Model Fit indices (Model 1)

Fit Indices	Estimated Value	Threshold Values
CMIN/DF	1.499	< 3
P-VALUE	0.000	≥ 0.05
GFI	0.800	≥ 0.95 Extremely good; ≥ 0.90 acceptable; ≥ 0.80 sometimes permissible
CFI	0.982	≥ 0.95
TLI	0.979	≥ 0.95
AGFI	0.856	≥ 0.80
NFI	0.947	> 0.90
RMSEA	0.040	≤ 0.05
P close	0.900	Close to 1
Note: Reported fit indices indicate adequate model fit		

Table 5.16
CFA-Model Fit indices (Model 2)

Fit Indices	Estimated Value	Threshold Values
CMIN/DF	2.461	< 3
P-VALUE	0.000	≥ 0.05
GFI	0.834	≥ 0.95 Extremely good; ≥ 0.90 acceptable; ≥ 0.80 sometimes permissible
CFI	0.954	≥ 0.95
TLI	0.951	≥ 0.95
AGFI	0.818	≥ 0.80
NFI	0.924	> 0.90
RMSEA	0.043	≤ 0.05
P close	0.900	Close to 1

5.6 Common Method Bias (CMB)

The present research has adopted a cross-sectional research design for testing both Model 1 and Model 2 and has gathered data at a single point of time. The data also belongs to a single context, and has been collected using questionnaires with common scale anchors, common scale format, and susceptibility to socially desirable responses. Therefore, a possibility exists for the current data analysis and subsequent results to be misrepresented under the influence of common method biases such as common rater effects, item context effects and measurement context effects (Podsakoff *et al.*, 2003). Thus it is important to report the degree of common method bias, for which two approaches have been employed – “Harman single factor test” and use of “common latent factor (CLF)”.

Harman single factor test involved conducting unrotated EFA involving all the indicators to obtain the single factor majority of variance. The single factor variance denoted by the Eigen value, serves as a measure of CMB and proves absence of common method bias when found to be below 50 per cent (Harman, 1967). For Model 1, the test results reported Eigenvalue of single factor variance to be 32.33 per cent which is within the suggested threshold, thus establishing absence of common method bias (Table 5.17). For Model 2, results reported Eigenvalue of single factor variance to be 32.92 per cent which is also within the suggested threshold, and confirming absence of common method bias (Table 5.18).

Table 5.17

Harman Single Factor Test Result (Model 1)

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.639	32.332	32.332	11.639	32.332	32.332
2	5.704	15.846	48.178			
3	3.347	9.299	57.476			
4	2.744	7.622	65.098			
5	2.714	7.538	72.636			
6	1.737	4.824	77.460			
7	1.520	4.221	81.681			
8	1.481	4.113	85.794			
9	1.092	3.034	88.828			
10	.665	1.848	90.676			
11	.424	1.178	91.854			
12	.247	.685	92.539			
13	.242	.671	93.210			
14	.230	.639	93.849			
15	.200	.556	94.405			
16	.182	.505	94.910			
17	.171	.474	95.384			
18	.148	.411	95.795			
19	.136	.379	96.174			
20	.130	.362	96.536			
21	.127	.353	96.889			
22	.119	.330	97.219			
23	.114	.316	97.535			
24	.106	.295	97.830			
25	.106	.294	98.124			
26	.094	.262	98.385			

27	.081	.225	98.610
28	.076	.210	98.820
29	.075	.208	99.028
30	.066	.183	99.211
31	.065	.180	99.391
32	.055	.153	99.544
33	.047	.130	99.675
34	.045	.124	99.799
35	.042	.118	99.916
36	.030	.084	100.000

Extraction Method: Principal Component Analysis.

Table 5.18
Harman Single Factor Test Result (Model 2)

Component	Total Variance Explained			Extraction Sums of Squared		
	Initial Eigenvalues			Loadings		
	% of			% of		
	Total	Variance	Cumulative %	Total	Variance	Cumulative %
1	19.749	32.915	32.915	19.749	32.915	32.915
2	7.816	13.026	45.941			
3	6.388	10.647	56.588			
4	4.483	7.471	64.059			
5	2.708	4.514	68.573			
6	2.310	3.849	72.422			
7	1.768	2.947	75.369			
8	1.481	2.469	77.838			
9	1.267	2.111	79.950			
10	.775	1.292	81.241			
11	.601	1.001	82.242			
12	.476	.793	83.036			
13	.434	.723	83.758			
14	.423	.705	84.464			
15	.385	.642	85.106			
16	.382	.636	85.742			
17	.357	.594	86.336			

18	.331	.551	86.888
19	.328	.547	87.435
20	.306	.510	87.945
21	.291	.485	88.430
22	.282	.469	88.900
23	.274	.457	89.357
24	.260	.433	89.790
25	.253	.422	90.212
26	.247	.412	90.624
27	.242	.403	91.027
28	.237	.396	91.422
29	.233	.389	91.811
30	.227	.378	92.189
31	.220	.367	92.556
32	.216	.360	92.916
33	.210	.349	93.265
34	.204	.339	93.605
35	.200	.334	93.938
36	.196	.327	94.265
37	.193	.321	94.586
38	.186	.310	94.897
39	.181	.302	95.199
40	.178	.297	95.496
41	.171	.286	95.782
42	.168	.281	96.062
43	.165	.275	96.337
44	.162	.270	96.608
45	.156	.259	96.867
46	.150	.251	97.118
47	.149	.248	97.365
48	.145	.242	97.607
49	.141	.234	97.842
50	.137	.228	98.070
51	.135	.225	98.295
52	.130	.217	98.512
53	.129	.215	98.726
54	.124	.207	98.933
55	.117	.195	99.128
56	.114	.189	99.317
57	.113	.188	99.505

58	.106	.177	99.681
59	.097	.162	99.843
60	.094	.157	100.000

Extraction Method: Principal Component Analysis.

Introduction of common latent factor (CLF) as a marker variable in SEM and subsequent comparison of its standardized regression weights with the regression weights of factors included in the measurement model, constituted the alternate approach to test for CMB. A difference of less than 0.2 between the regression weights of CLF and CFA factors indicates absence of CMB (Podsakoff *et al.*, 2003). For both Model 1 and Model 2, the AMOS results showed a difference of not more than 0.2, between the regression weights with CLF and the regression weights without CLF for all the indicators establishing unbiasedness.

5.7 Structural Model Evaluation (SEM)

SEM is a statistical method that analyzes the structure of interrelationships between multiple independent and dependent constructs, analyzed through a series of multiple regression equations. SEM is inherently a combination of multiple regression and factor analysis. Also known as covariance structure analysis, causal modelling, simulation modelling, latent variable analysis, path analysis, and analysis of covariance, SEM examines the relationships between the latent factors or constructs (Toe *et al.*, 2009). The unique characteristics of SEM are:

- Estimation of dependence relationships between multiple constructs
- Ability to characterize latent theory in these relationships and justify measurement error during estimation
- Define a structure to explain a complete set of relationships

SEM examines multiple, separate, yet interdependent relationships simultaneously by postulating the structural model, which emanates from theory, experiences, observations, and research objectives of the researcher. SEM is specialized to estimate a series of predictor (independent) and criterion (dependent) variables wherein a criterion variable may function as a predictor variable in subsequent relationships. Also, SEM projects differential effects of multiple variables on multiple dependent variables.

As SEM involves estimating latent variables using other latent variables, they have to be well-differentiated. In SEM, the latent constructs are referred to as exogenous constructs and endogenous constructs which are multi-item, latent comparable to independent and dependent variables respectively. For Model 1, the exogenous constructs are EC, PT and PM whereas endogenous constructs are TWR, SF, LF i-deals, IPS, CWB and CM. For Model 2, exogenous constructs are TWR, SF, LF i-deals and endogenous contract are CNS, TB, ASC, MS, PS and DI.

The estimation technique employed is maximum likelihood estimation (MLE) as it is deemed to provide stable and valid results for sample sizes as low as 50. The technique estimates the parameter values by allowing observed data to leverage the parameter likelihood with the given data. Further, when primary data is collected using Likert scales, MLE is an appropriate estimation method (Breckler, 1990). The present study utilizes MLE procedure to assess whether the theorized research model fits into the observed data.

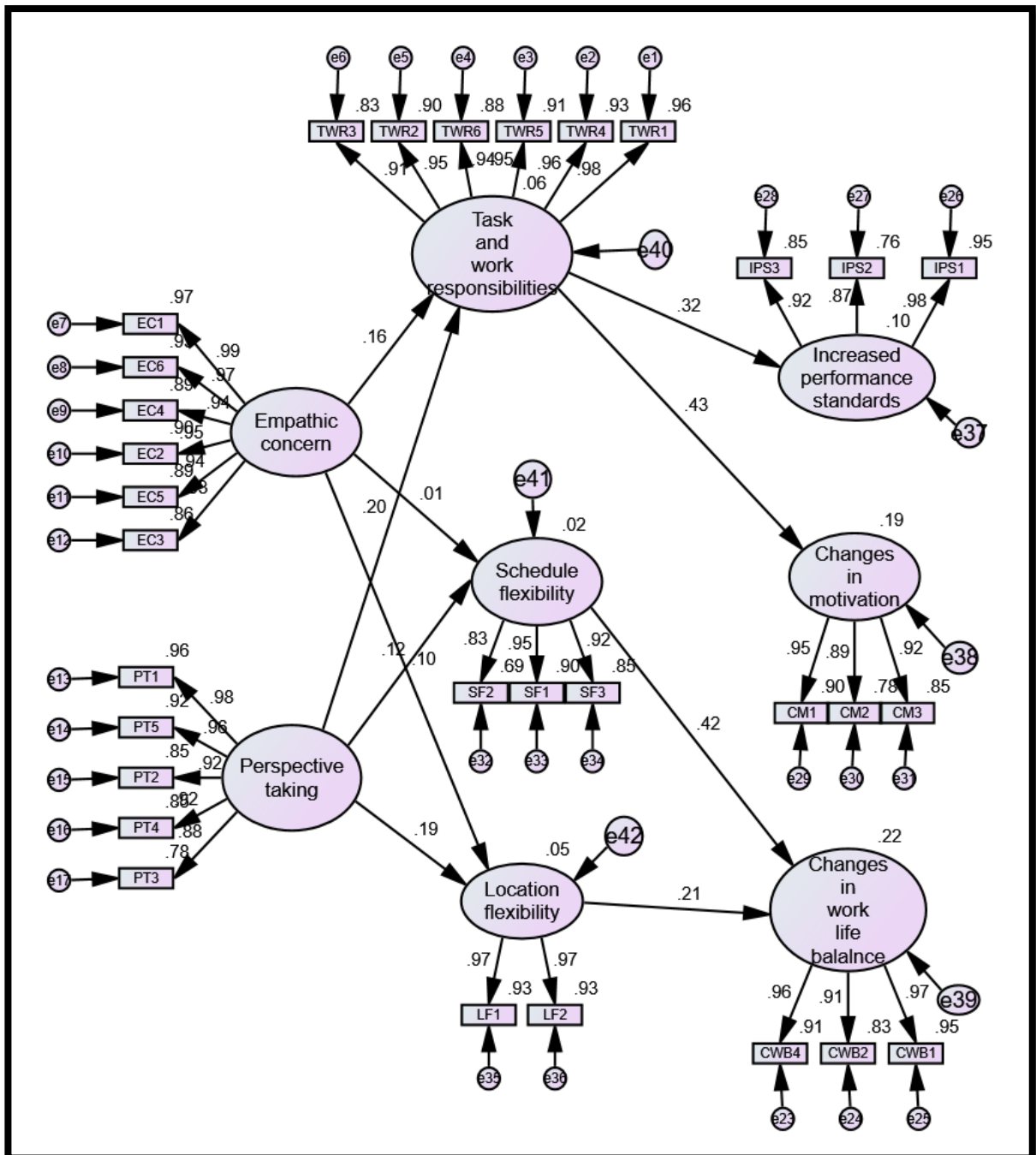
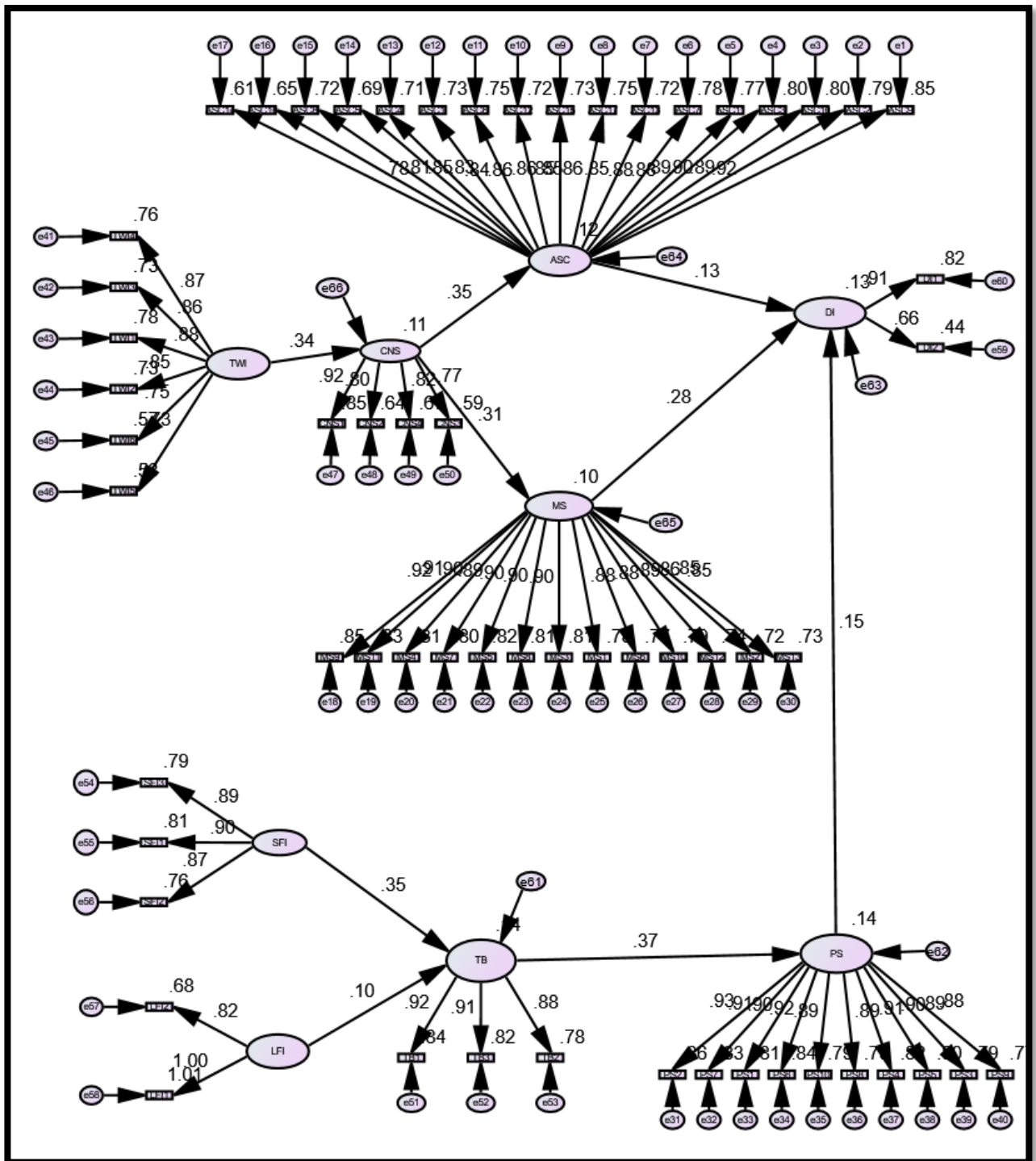


Figure 5.5 : Structural Model (Model 1)



Note: TWR= task & work responsibility, SFI=schedule flexibility, LFI=location flexibility, CNS=competence-need satisfaction, TB=perceived trust, ASC=academic self-concept, MS=motivation of scholar, PS=perceived stress, DI=dropout intention

Figure 5.6 : Structural Model (Model 2)

The structural model evaluation involves path analysis to examine relationships between latent factors including reporting of path coefficients and statistical significance

for testing the proposed hypotheses. SEM confirms the model fit by comparing the theorized covariance model with the observed covariance matrix (Shah & Goldstein, 2006; Hair et al., 2010). The analysis reports three types of estimates for assessing the model fit – fit indices, path coefficients, and squared multiple correlations (R^2). SEM was performed using AMOS-20 and the structural model for Model 1 and Model 2 are given in Figure 5.5 and 5.6 respectively.

Further, in case of Model 1, the model estimation conducted to investigate the overall structural model fit indicated following fit indices: $\chi^2/df = 2.096$, GFI= 0.853, TLI = 0.952, CFI = 0.967 and RMSEA = 0.059 (Table 5.19). The results demonstrate adequate fit of the conceptualized model as all the fit indices values lie within the prescribed acceptable limits.

Table 5.19
SEM-Model fit Indices (Model 1)

Fit Indices	Estimated Values	Threshold Values
CMIN/DF	2.096	< 3
P-VALUE	0.000	≥ 0.05
GFI	0.853	≥ 0.95 Extremely good; ≥ 0.90 acceptable; ≥ 0.80 sometimes permissible
CFI	0.967	≥ 0.95
TLI	0.963	≥ 0.95
AGFI	0.828	≥ 0.80
NFI	0.938	> 0.90
RMSEA	0.059	≤ 0.05
P-CLOSE	0.004	Close to 1
Note: Reported fit indices indicate adequate model fit		

In case of Model 2, the model estimation reported following fit indices values: $\chi^2/df = 2.693$, GFI= 0.820, TLI = 0.943, CFI = 0.945 and RMSEA = 0.046 (Table 5.20). The results demonstrate adequate fit of the conceptualized model and demonstrate that there exists significant level of correspondence between the observed and the estimated covariance matrix.

Table 5.20
SEM-Model fit Indices (Model 2)

Fit Indices	Estimated Values	Threshold Values
CMIN/DF	2.693	< 3
P-VALUE	0.000	≥ 0.05
GFI	0.820	≥ 0.95 Extremely good; ≥ 0.90 acceptable; ≥ 0.80 sometimes permissible
CFI	0.945	≥ 0.95
TLI	0.943	≥ 0.95
AGFI	0.807	≥ 0.80
NFI	0.916	> 0.90
RMSEA	0.046	≤ 0.05
P-CLOSE	1.000	Close to 1
Note: Reported fit indices indicate adequate model fit		

Further, the model estimation output yielded path coefficients (standardized direct effects), path significances and R^2 (variance explained) values, for each dependent variable to assess the significance of hypothesized paths. The structural model path estimates for Model 1 and Model 2, along with significance values are reported in Table 5.21 and Table 5.22 respectively.

For Model 1, the results indicate that while empathic-concern has a significant positive effect on authorization of task & work responsibility i-deals ($\beta = .156$, $t = 2.824$,

$p < 0.01$), its influence on both SF i-deals ($\beta = .013$, $t = .217$, $p < 0.828$) and LF i-deals ($\beta = .105$, $t = 1.86$, $p < 0.063$) is non-significant, thus supporting hypothesis H1a and rejecting H1b and H1c. Perspective-taking showed significantly positive relationship with TWR i-deals ($\beta = .196$, $t = 3.532$, $p < 0.01$), SF i-deals ($\beta = .122$, $t = 2.102$, $p < 0.036$) and LF i-deals ($\beta = .193$, $t = 3.391$, $p < 0.01$), thus supporting hypotheses H2a, H2b and H2c.

Table 5.21
Hypothesis Testing Results (Model 1)

Exogenous Construct	Endogenous Construct	Hypothesis	Standard Estimates (β)	Standard error	t-statistic	P-value	Interpretation
Empathic-concern	Task & work responsibility	H1a	.156	.056	2.824	.005	Significant
Empathic-concern	Schedule flexibility	H1b	.013	.051	.217	.828	Not Significant
Empathic-concern	Location flexibility	H1c	.105	.060	1.860	.063	Not Significant
Perspective-taking	Task & work responsibility	H2a	.196	.051	3.532	***	Significant
Perspective-taking	Schedule flexibility	H2b	.122	.046	2.102	.036	Significant
Perspective-taking	Location flexibility	H2c	.193	.055	3.391	***	Significant
Task & work responsibility	Increased performance standards	H5a	.315	.055	5.734	***	Significant
Task & work responsibility	Increased motivation	H5b	.434	.054	8.133	***	Significant
Schedule flexibility	Improved work-life balance	H6a	.421	.061	7.669	***	Significant
Location flexibility	Improved work-life balance	H6b	.207	.048	3.961	***	Significant

The association between task & work responsibility i-deals and supervisor's perception of increased performance standards ($\beta = .315$, $t = 5.734$, $p < 0.01$) and increased motivation ($\beta = .434$, $t = 8.133$, $p < 0.01$) is also found to be positive and significant, thus supporting hypotheses H5a and H5b. Finally, a significantly positive relationship is found between supervisor's perception of improved work-life balance and schedule flexibility i-deals ($\beta = .421$, $t = 2.102$, $p < 0.036$) and location flexibility i-deals ($\beta = .207$, $t = 3.391$, $p < 0.01$), thus supporting hypotheses H6a and H6b.

In Model 2, the results indicate a significantly positive relationship between scholar's receipt of task & work responsibility i-deals and competence-need satisfaction ($\beta = .336$, $t = 9.056$, $p < 0.01$), supporting hypothesis H7. Further, the relationship between both SF i-deals ($\beta = .355$, $t = 9.632$, $p < 0.01$), and LF i-deals ($\beta = .102$, $t = 2.976$, $p < 0.003$), and perceived trust is found to be positive and significant, supporting hypothesis H8, H9. Competence-need satisfaction in turn related positively to academic self-concept ($\beta = .348$, $t = 9.679$, $p < 0.01$), and motivation of scholar ($\beta = .313$, $t = 8.614$, $p < 0.01$), providing support to H10a and H10b. Perceived trust, related negatively to perceived stress ($\beta = .373$, $t = 10.504$, $p < 0.01$) and lent support to hypothesis H11. Finally, a negatively significant association is found between academic self-concept ($\beta = -.128$, $t = 3.239$, $p < 0.001$), motivation of scholar ($\beta = .285$, $t = 5.960$, $p < 0.01$), and dropout intentions and a positively significant relationship is found between perceived stress and dropout intentions ($\beta = .151$, $t = 3.752$, $p < 0.01$), thus supporting hypotheses 12a, 12b and 12c.

Table 5.22
Hypothesis Testing Results (Model 2)

Exogenous Construct	Endogenous Construct	Hypothesis	Standard estimate (β)	Standard error	t-statistic	p-value	Interpretation
Task & work responsibility i-deals	Competence-need satisfaction	H7	0.336	.039	9.056	***	Significant
Schedule flexibility i-deals	Perceived trust	H8	0.355	.040	9.632	***	Significant
Location flexibility i-deals	Perceived trust	H9	0.102	.031	2.976	.003	Significant
Competence-need satisfaction	Academic self-concept	H10a	0.348	.038	9.679	***	Significant
Competence-need satisfaction	Motivation of Scholar	H10b	0.313	.039	8.614	***	Significant
Perceived trust	Perceived stress	H11	-0.373	.035	10.504	***	Significant
Academic self-concept	Dropout intention	H12a	-0.128	.026	3.239	.001	Significant
Motivation of Scholar	Dropout intention	H12b	-0.285	.031	5.960	***	Significant
Perceived stress	Dropout intention	H12c	0.151	.027	3.752	***	Significant

R^2 values are obtained through multiple regression analysis of proposed relationships between exogenous and endogenous variables wherein the equation indicates the magnitude of variance in the dependent variable as a result of an independent variable on the dependent variables. This is indicated in the form of coefficient of determination (R^2). The R^2 values for Model 1 and Model 2 are presented in Table 5.23 and Table 5.24 respectively.

Table 5.23
Squared Multiple Correlations (Model 1)

	Estimate (R²)
LF	.048
SF	.015
TWR	.063
CM	.189
IPS	.099
CWB	.225

Table 5.24
Squared Multiple Correlations (Model 2)

	Estimate (R²)
TB	0.136
CNS	0.113
PS	0.139
MS	0.098
ASC	0.121
DI	0.128

For Model 1, the results also showed that together empathic-concern and perspective-taking accounted for approximately 6 per cent of the variance in the TWR i-deals authorization, 1 per cent of the variance in the SF i-deals authorization and 5 per cent of the variance in the LF i-deals authorization as indicated by their respective R² values. In addition, all the three types of i-deals together explained approximately 23 percent variance in change in work-life balance, 19 percent variance in change in motivation and 10 percent variance in increased performance standards (Table 5.23).

For Model 2, the results indicated that together all i-deals explained approximately 11 percent variance in competence-need satisfaction and accounted for 14 per cent of the variance in perceived trust. Further, competence-need satisfaction and perceived trust explained approximately 12 percent variance in academic self-concept, 10 percent variance in motivation and 14 percent variance in perceived stress as indicated by their respective R^2 values. Finally, academic self-concept, motivation and perceived stress explained 14 percent variance in scholar dropout intentions (Table 5.24).

5.8 Moderation Analysis

A moderator (W) is a variable that influences the “size, sign or strength of the effect of a predictor variable (X) on the outcome variable (Y)”. In other words, W is said to be a moderator of X’s effect on Y, or that W and X interact in their influence on Y (Hayes, 2018). The knowledge on a possible moderator of an effect facilitates the definition of the boundary conditions of that effect or condition, for which the effect is high versus low, positive versus negative, and present versus absent. A moderation effect could be (a) *Enhancing*, where increasing W would increase the effect of the predictor (X) on the outcome (Y); (b) *Buffering*, where increasing W would reduce the effect of X on Y; or (c) *Antagonistic*, where increasing W would reverse the effect of the X on Y.

Hierarchical multiple regression is employed to evaluate the effects of a moderating variable. To test moderation, the emphasis is on the interaction effect between X and W and whether or not such an effect is significant in predicting Y. The moderation effect is significant only if the nature of X-Y relationship changes as the values of the moderating variable W change. This is achieved by including an interaction effect in the model and testing if such an interaction is significant. The present study used SPSS Process Macro Version 3.3 by Hayes (2019) for moderation analysis. The plugin uses

regression along with bootstrapping procedure to test interactions. The algorithm also performs mean centering to prevent issues related to multicollinearity among moderator and independent variables. The output and the interpretations are discussed further.

5.8.1 Interaction Effect of Empathic-concern & Prosocial Motivation on Task & Work Responsibility I-deals

The results supported hypothesis H3a and demonstrated the enhancing role of prosocial motivation (PM) between EC and TWR i-deals. Interaction of PM with EC positively predicted TWR i-deals ($\beta = .0310$, $p < .0026$). Further, a significant change in R^2 is observed after the addition of the moderating variable in the model ($\Delta R^2 = .0256$, $p < .0026$) (Table 5.27). The conditional effects output, that represents the effects of predictor on outcome at different values of W as low, medium or high, is also obtained. The results indicated escalation in the significantly positive conditional effect of EC on TWR as magnitude of PM becomes high (Low = .0750, Medium = .2180, High = .3609) which demonstrated the enhancing role of PM. Bootstrapping results also confirm the significance of the results obtained as upper and lower limits of 95% CI values do not include '0' (Table 5.25). Therefore, it can be established that the positive relationship between EC and TWR is enhanced when there is high prosocial motivation. The interaction plot, too indicates that authorization of TWR i-deals is high when both prosocial motivation and empathic-concern are high (Figure 5.6).

Table 5.25
Moderation effect of PM between EC and TWR

Dependent Variable: Task & Work Responsibility i-deals	Coefficient	S.E.	P	LLCI	ULCI
Constant	19.182	3.313	.0000	12.664	25.701
Empathic-concern (EC)	-.3028	.1709	.0774	-.6391	.0335
Prosocial Motivation (PM)	-.2750	.2084	.1880	-.6850	.1351
Interaction effect		.0102	.0026	.0109	

(EC X PM)	.0310	.0511
R	.3645	
R ²	.1329	
R ² change due to interaction	.0256	

Conditional effects of the focal predictor at different levels of moderation

Moderation level	Coefficient	S.E.	p	LLCI	ULCI
Low	.0750	.0679	.2700	-.0586	.2086
Medium	.2180	.0581	.0002	.1037	.3322
High	.3609	.0810	.0000	.2015	.5203

Notes: Unstandardized regression coefficients are reported, SE- standard error, LLCI - lower limit confidence interval; ULCI - upper limit confidence interval; Bootstrap sample size =5,000, values for moderator (High, Medium and Low) are the mean and ± 1 SD from mean. * $p < 0.001$

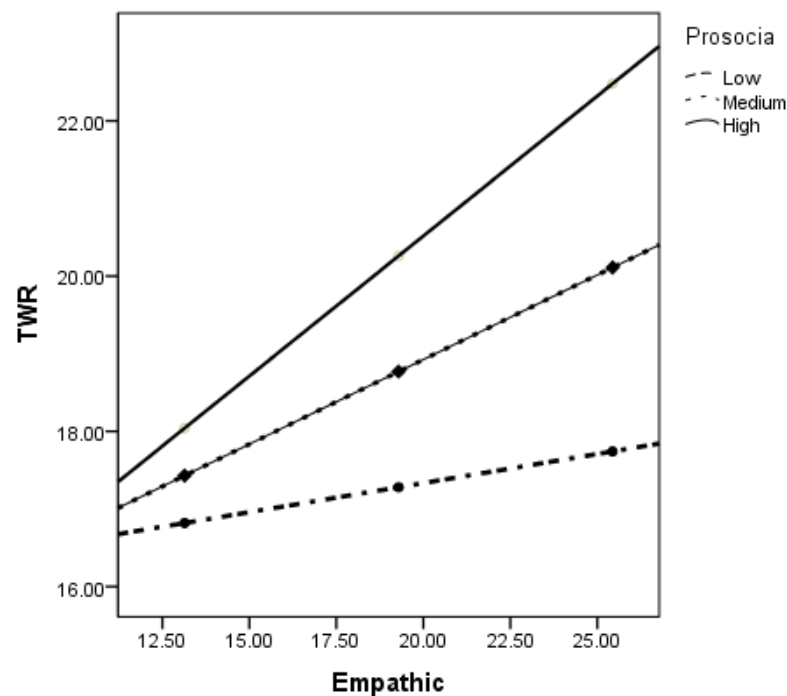


Figure 5.7: Plot Diagram of Interaction between EC & PM towards TWR

5.8.2 Interaction Effect of Empathic-concern & Prosocial Motivation on Schedule Flexibility I-deals

The results did not support hypothesis H3b regarding the moderating role of prosocial motivation (PM) between EC and SF i-deals. While the main effects of EC on TWR and PM on TWR were negative & significant and negative & insignificant, the unconditional effect of interaction of PM with EC positively predicted SF i-deals ($\beta =$

.0166, $p < .0016$). But, the results of the conditional effects were found insignificant, indicating that PM does not moderate the relationship between EC and SF i-deals. In addition, the bootstrap procedure results validated the non-significance of the results as upper and lower limits of 95% CI values include '0' (Table 5.26, Figure 5.7).

Table 5.26
Moderation effect of PM between EC and SF

Dependent Variable:					
Schedule flexibility i-deals	Coefficient	S.E.	p	LLCI	ULCI
Constant	12.9338	1.6931	.0000	9.6025	16.2651
Empathic-concern (EC)	-.2409	.0873	.0062	-.4127	-.0690
Prosocial Motivation (PM)	-.2433	.1065	.0230	-.4529	-.0337
Interaction effect (EC X PM)	.0166	.0052	.0016	.0063	.0269
R	.2156				
R ²	.0465				
R ² change due to interaction	.0308				

Conditional effects of the focal predictor at different levels of moderation					
Moderation level	Coefficient	S.E.	p	LLCI	ULCI
Low	-.0387	.0347	.2658	-.1069	.0296
Medium	.0378	.0297	.2032	-.0205	.0962
High	.1143	.0414	.0061	.0329	.1958

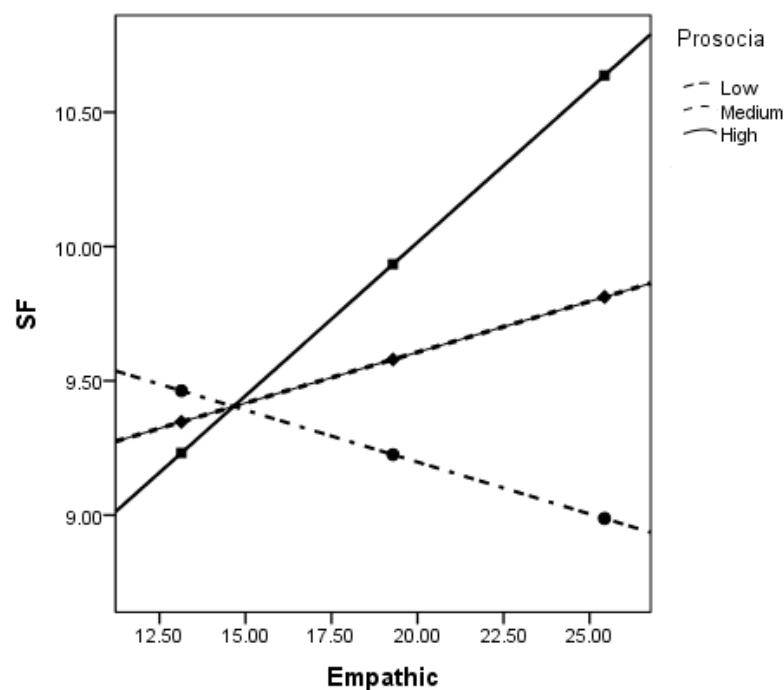


Figure 5.8: Plot Diagram of Interaction between EC & PM towards SF

5.8.3 Interaction Effect of Empathic-concern & Prosocial Motivation on Location Flexibility I-deals

Table 5.27
Moderation effect of PM between EC and LF

Dependent Variable:					
Location flexibility i-deals	Coefficient	SE	p	LLCI	ULCI
Constant	5.9701	1.2676	.0000	3.4761	8.4641
Empathic-concern (EC)	-.0101	.0654	.8772	-.1388	.1186
Prosocial Motivation (PM)	-.0059	.0797	.9413	-.1628	.1510
Interaction effect (EC X PM)	.0041	.0039	.2960	-.0036	.0118
R	.2356				
R ²	.0555				
R ² change due to interaction	.0033				

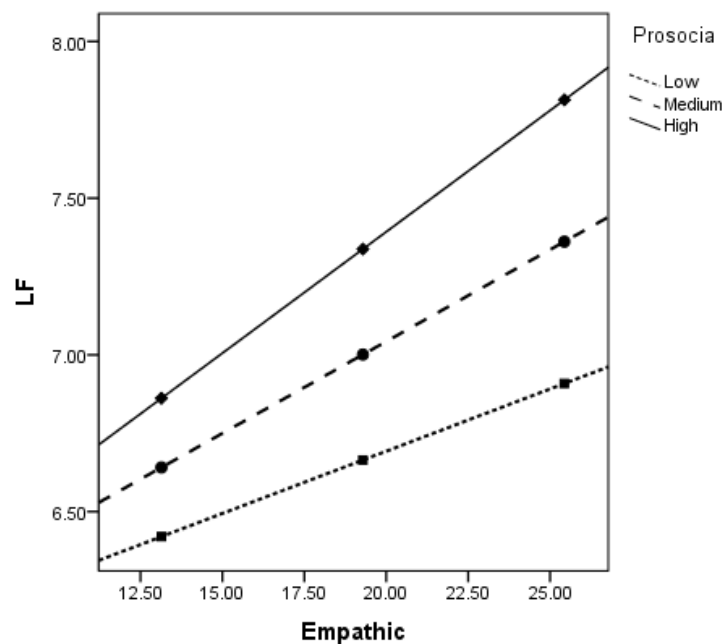


Figure 5.9: Plot Diagram of Interaction between EC & PM towards LF

The results did not support hypothesis H3c regarding the moderating role of prosocial motivation (PM) between EC and LF i-deals. The direct and interaction related main effects, unconditional and conditional effects between EC and LF with PM as moderating variable, were all found to be insignificant. The bootstrap procedure results

too validated the non-significance of the results as upper and lower limits of 95% CI values include '0' (Table 5.27, Figure 5.8).

5.8.4 Interaction Effect of Perspective-taking & Prosocial Motivation on Task & Work Responsibility I-deals

The results supported hypothesis H4a and demonstrated the enhancing role of prosocial motivation (PM) between PT and TWR i-deals. While the unconditional effects were found insignificant, the results of conditional effect indicated escalation in the significantly positive conditional effect of PT on TWR as magnitude of PM becomes high (Low = .1111, Medium = .2562, High = .4014) which demonstrated the enhancing role of PM. Bootstrapping results also confirm the significance of the results obtained as upper and lower limits of 95% CI values do not include '0' (Table 5.28). Therefore, it can be established that the positive relationship between PT and TWR is enhanced when there is high prosocial motivation. The interaction plot, too indicates that authorization of TWR i-deals is high when both prosocial motivation and perspective-taking are high (Figure 5.9).

Table 5.28
Moderation effect of PM between PT and TWR

Dependent Variable: Task & Work Responsibility i-deals	Coefficient	S.E.	p	LLCI	ULCI
Constant	18.0193	3.3195	.0000	11.4880	24.5507
Perspective-taking (PT)	-.2726	.1978	.1691	-.6618	.1166
Prosocial Motivation (PM)	-.1998	.2067	.3345	-.6065	.2069
Interaction effect (PT X PM)	.0315	.0118	.0078	.0083	.0547
R	.3664				
R ²	.1343				
R ² change due to interaction	.0198				
<i>Conditional effects of the focal predictor at different levels of moderation</i>					
Moderation level	Coefficient	S.E.	p	LLCI	ULCI
Low	.1111	.0769	.1495	-.0402	.2624

Medium	.2562	.0638	.0001	.1308	.3817
High	.4014	.0900	.0000	.2242	.5786

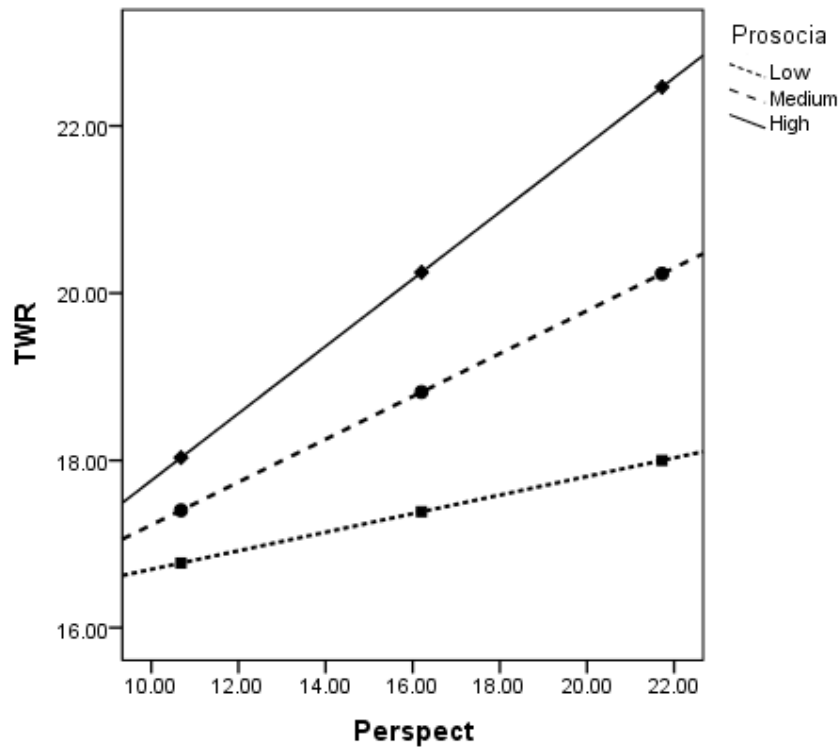


Figure 5.10: Plot Diagram of Interaction between PT & PM towards TWR

5.8.5 Interaction Effect of Perspective-taking & Prosocial Motivation on Schedule Flexibility I-deals

The results did not support hypothesis H4b regarding the moderating role of prosocial motivation (PM) between PT and SF i-deals. The direct and interaction related main effects, unconditional and conditional effects between EC and SF with PM as moderating variable, were all found to be insignificant. The bootstrap procedure results too validated the non-significance of the results as upper and lower limits of 95% CI values include '0' (Table 5.29, Figure 5.10).

Table 5.29
Moderation effect of PM between PT and SF

Dependent Variable: Schedule Flexibility	Coefficient	SE	p	LLCI	ULCI
Constant	10.6782	1.7084	.0000	7.3167	14.0397
Perspective-taking (PT)	-.6367	.5090	.2119	-1.6382	.3648
Prosocial Motivation (PM)	-.1998	.1064	.2393	-.3347	.0839
Interaction effect (PT X PM)	.0576	.0303	.0584	-.0021	.1172
R	.1856				
R ²	.0344				
R ² change due to interaction	.0111				

Conditional effects of the focal predictor at different levels of moderation

Moderation level	Coefficient	SE	p	LLCI	ULCI
Low	.0642	.1979	.7458	-.3251	.4535
Medium	.3294	.1641	.0456	.0064	.6523
High	.5945	.2317	.0108	.1386	1.0504

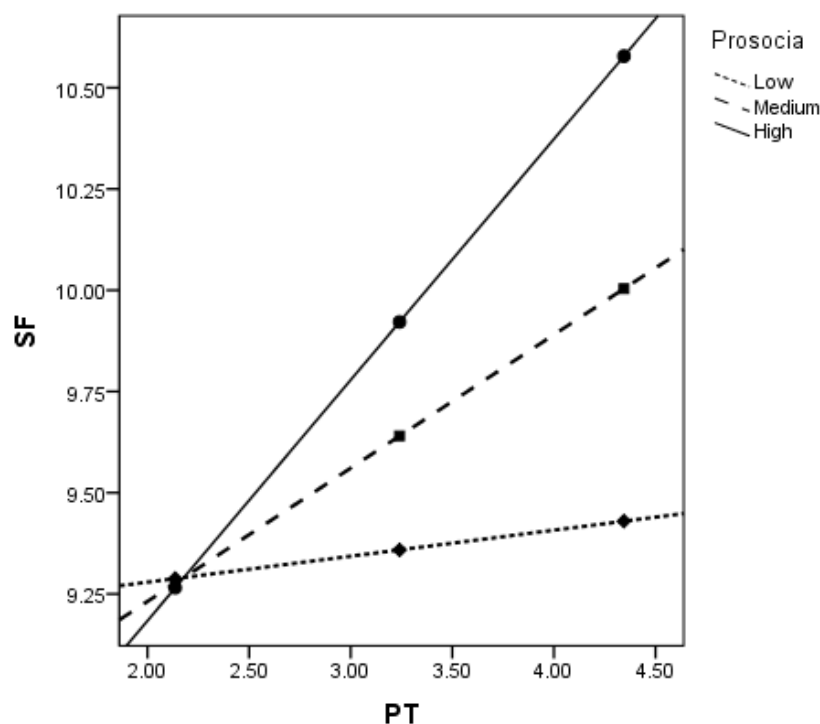


Figure 5.11: Plot Diagram of Interaction between PT & PM towards SF

5.8.6 Interaction Effect of Perspective-taking & Prosocial Motivation on Location Flexibility I-deals

The results did not support hypothesis H4c regarding the moderating role of prosocial motivation (PM) between PT and LF i-deals. The direct and interaction related

main effects, unconditional and conditional effects between EC and LF with PM as moderating variable, were all found to be insignificant. The bootstrap procedure results too validated the non-significance of the results as upper and lower limits of 95% CI values include '0' (Table 5.30, Figure 5.11).

Table 5.30
Moderation effect of PM between PT and LF

Dependent Variable: Schedule Flexibility	Coefficient	S.E	p	LLCI	ULCI
Constant	3.4592	1.2603	.0064	.9796	5.9389
Perspective-taking (PT)	.7603	.3755	.0437	.0215	1.4990
Prosocial Motivation (PM)	.1390	.0785	.0776	-.0154	.2934
Interaction effect (PT X PM)	-.0219	.0223	.3276	-.0659	.0221
R	.2673				
R ²	.0714				
R ² change due to interaction	.0029				

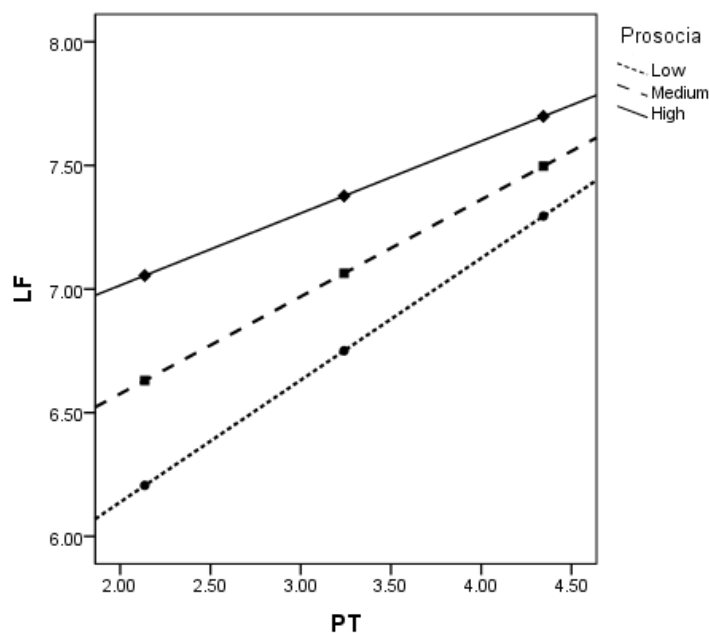


Figure 5.12: Plot Diagram of Interaction between PT & PM towards LF

Overall, the moderation analysis supported the theory that high prosocial motivation leads to increased authorization of task & work responsibility i-deals when empathic-concern and perspective-taking are high. But the influence of prosocial

motivation on the association between dimensions of empathy and flexibility i-deals is insignificant. The summary of the results of moderation analysis is given in Table 5.31.

Table 5.31
Summary of Moderation Analysis Results

Independent Variable	Dependent Variable	Moderating Variable	Hypothesis	Result
Empathic-concern	Task & work responsibility	Prosocial motivation	H3a	Supported
Empathic-concern	Schedule flexibility	Prosocial motivation	H3b	Not Supported
Empathic-concern	Location flexibility	Prosocial motivation	H3c	Not Supported
Perspective-taking	Task & work responsibility	Prosocial motivation	H4a	Supported
Perspective-taking	Schedule flexibility	Prosocial motivation	H4b	Not Supported
Perspective-taking	Location flexibility	Prosocial motivation	H4c	Not Supported

Chapter Summary

The present chapter provided the data analysis results and their interpretation. The chapter presented detailed sections on demographic characteristics of the supervisors and the scholars participants. Further, it discussed the descriptive statistics of the studied variables, preliminary data screening process, including evaluation of missing values, presence of outliers and level of normality. The chapter then discusses the method and results of EFA, CFA and structural model evaluation of Model 1 and Model 2 along with the moderating effects of the intervening variables in case of Model 1.

CHAPTER 6

DISCUSSION & CONCLUSION

The concluding section of the thesis deliberates the results of the current research and summarizes the overall work. Specifically, it discusses the study outcomes and examines whether the outcomes fulfill the defined objectives as stated in the previous chapters. It further details the theoretical and managerial implications of the study. Finally, the chapter presents the study limitations while providing the scope for future research.

6.1 Discussion

The broad objective of the current study was to explore additional determinants and academia-specific outcomes of idiosyncratic deals. For this purpose, the study considered three categories of i-deals – task & work responsibility, schedule and location flexibility i-deals. The study investigated two possible antecedents of i-deals: supervisor's perspective-taking and empathic-concern, the sub-dimensions of broader construct of empathy. This constituted Model 1 or the antecedent model where it proposed that empathy drives successful authorization of i-deals based on supervisor's perceived subordinate or scholar outcomes such as, change in motivation, increased performance standards and improved work-life balance. Further, i-deals outcome investigated in the context of academic supervisor-scholar relationships, was dropout intentions. This was examined through Model 2 or the outcome model which proposed that task & work responsibility i-deals signal perceived competence leading to competence-need satisfaction which improves academic self-concept and motivation of the scholar which

in turn reduces his/her dropout intentions. Similarly, flexibility i-deals signal perceived trust which reduces stress, thus leading to lower dropout intention. This segment discusses every objective in relation to the results obtained thus far.

6.1.1 Relationship between Empathic-concern, Perspective-taking & I-deals

The first objective was to examine the relationship between empathic concern and perspective-taking of the supervisor and authorization of TWR, SF and LF i-deals with prosocial motivation as moderator. The results disclosed that both EC and PT related positively to authorization of TWR i-deals but only PT related positively to the flexibility i-deals authorization. This indicates that supervisors' authorization of any type of negotiated work arrangements definitely involves critical thinking and does not occur as a form of an affective or emotional response. Yet, for authorization of developmental i-deals or task-based i-deals, emotions in the form of empathic-concern improves the probability of successful negotiation. This is an important finding in an organizational context as it reiterates the dominant role of leader's objective thinking over emotions while making decisions related to customized work arrangements. This is critical as decisions related to customized work arrangements may propagate perceptions of organizational injustice among co-workers and lower acceptance (Lai *et al.*, 2009).

Supporting the idea of theory of prosocial reasoning, the research findings of the present work fortify the arguments developed in previous research that PT serves as a relatively more effective strategy than EC in strategic interpersonal exchanges (Galinsky *et al.*, 2008). Perspective-taking enables a negotiator to think objectively, analyze the extent of cooperation-competition equilibrium to be maintained and predict the outcome of the negotiation for self and for others. Smith (2002) emphasized that viewing issues from others' perspective enables individuals to go beyond emotions to achieve override

covert yet efficient and value-added solutions that are mutually beneficial. The present study provided evidence in agreement to the past studies and suggested that authorization of both career-based as well as well-being based work arrangements by the supervisors are a result of sound cognitive processing of the negotiation situation and its outcomes.

While perspective-taking is established as a more effective individual difference characteristic than empathic-concern, for successful realization of integrative agreements, one cannot completely ignore the significance of empathic-concern in the negotiation process. In fact, Galinsky *et al.*, 2008 proposed that empathic-concern is a critical factor in strengthening interpersonal relationships such that high-quality relationships facilitate successful negotiations especially in the context of customized work arrangements. In addition, empathic-concern may also prevent the formation of unethical agreements. This speculation found support in the present study as empathic-concern was found to positively influence authorization of task & work responsibility of i-deals. Overall, the study provides evidence for differential effects of sub-dimensions of empathy i.e. empathic-concern and perspective-taking on authorization of i-deals by supervisors.

6.1.2 Prosocial Motivation as Moderator between Empathy and I-deals Authorization

The study investigated the role of prosocial motivation as a moderator between empathy and authorization of i-deals by the supervisors. The results showed that prosocial motivation moderates the relationship between empathic-concern and authorization of TWR i-deals such that the authorization of TWR i-deals was maximum when empathic-concern and prosocial motivation were high and minimum at the lower end. Prosocial motivation also moderated the relationship between perspective-taking and task & work responsibility i-deals such that at high levels of perspective-taking and prosocial

motivation, supervisors were most likely to authorize i-deals. The findings are in agreement to past studies which showed that individuals with high level of prosocial motivation have a greater tendency to help others in their work environment (Bolino & Grant, 2016). Research has also indicated that prosocial negotiators, as opposed to egoistic negotiators, adopt cooperative approach to achieve integrative agreements that provide win-win solution (Pruitt, 1998; Weingart & Kwon, 2000). According to the study results, it can be established, that supervisors employ both empathic-concern and perspective-taking while authorizing task & work responsibility i-deals, and those with higher prosocial motivation have a higher probability to authorize them as they always apply cooperative strategies for successful negotiations.

Another important finding of the present study is - prosocial motivation did not moderate the relationships of both EC and PT with flexibility i-deals. The possible explanation of this, in the organizational context, may be that authorization of flexibility i-deals is viewed as a catalyst to injustice perceptions and therefore, even when individuals have high prosocial motivation, they do not adopt a cooperative strategy for negotiations related to flexible work arrangements (Bal & Lub, 2015).

6.1.3 Relationship between I-deals and Perceived Subordinate Outcomes

In the social context of negotiations, Bazerman and Neale (1983) suggested that, “taking the perspective of an opponent is not done for purely philanthropic reasons; rather, in achieving any set of objectives, there is valuable information to be gleaned from taking the perspective of the other negotiating party”. In accordance with this, researchers proposed that perspective taking is a cognitive outlook that stimulates a series of cognitive processes oriented towards the psychological state of the other person such that negotiators maximize outcomes of their own as well the other individuals through

perspective-taking and perceiving value of these outcomes (Bazerman & Neale, 1983; Gollwitzer & Bayer, 1999; Galinsky et al., 2008). The proposed model in this study was developed based on these arguments and suggested that supervisors authorize i-deals depending on their perceived subordinate-related attitudinal and behavioural outcomes. For example, task & work responsibility i-deals were authorized when supervisors perceived that such authorization may increase performance standards of their scholars and enhance their motivation whereas flexibility i-deals were authorized when supervisors perceived a definitive change in one's work-life balance.

6.1.4 Relationship between I-deals and Scholar's Dropout Intentions

The study explored the signaling function of i-deals wherein TWR i-deals signaled competence-need and LF and SF i-deals signaled trust belief. Further, it was proposed that TWR i-deals resulted in competence-need satisfaction among scholars which, in turn, improved their academic self-concept and motivation thus reducing their dropout intentions. Similarly, location and schedule flexibility i-deals signal trust which, in turn, reduces stress among scholars thus reducing dropout intentions. Self-determination theory suggests that for an individual to be self-determined and have high self-concept, his/her sociocultural atmosphere must fulfil his/her fundamental needs for including competence needs (Ryan & Deci, 2007). Supporting the idea of self-determination theory, the study results showed that task & work responsibility i-deals, a form of supervisor support fulfils scholar's need for competence thus improving his/her self-concept and motivation which eventually reduces tension such as dropout intentions. These findings are in agreement with few studies which established that competence-need satisfaction is a strong predictor of motivation (Kowal & Fortier, 2000) and in contrast to other studies that showed either weak or no relationship between competence and motivation (Wilson, Longley, Muon, Rodgers, & Murray, 2006). This difference may be due to differences in contexts and

therefore the findings of this study shall not be generalized to other contexts such as employer-employee relationships.

6.2 Theoretical Contributions

The present research contributes towards theorizing process of both i-deals literature and doctoral studies literature in multiple ways. This research has examined empathic-concern, perspective-taking, idiosyncratic deals, competence-need satisfaction, trust, self-concept, motivation and dropout intentions. This implies testing of several distinctive relationships and thus making significant contributions to the academic literature.

The study developed models on the foundation of theories such Theory of Prosocial Reasoning and Signaling theory. While social theory dominates i-deals literature, few other theories have been employed to investigate i-deals and researchers encourage this trend. The present research integrated two alternate theories that seemed relevant to i-deals, and proved that social exchange theory when integrated with both signaling theory and theory of prosocial reasoning, could better explain the hypothesized relationships effectively. This entails that the explanations for the recommended relationships from these different theoretical viewpoints are not separate and, are in fact, synergistic with assumptions and evidence of one theory leading to development of a new perspective embedded within the foundations of another theory. Therefore, the study demonstrates the possibility of theoretically integrating the predictors and the outcomes of i-deals and to empirically investigate a comprehensive model of i-deals.

Theory of Prosocial Reasoning has been established as a significant concept in explaining the i-deals functioning thus contributing to its conceptual background. The study contributes evidence towards the role of empathy as an antecedent to prosocial

behaviour and prosocial actions such as authorization of i-deals and also establishes that prosocial motivation enhances occurrence of prosocial behaviours.

The study responds to the call for examining additional antecedents to i-deals and, more specifically, from emotional perspective. The study, therefore, investigates dimensions of empathy i.e. empathic-concern and perspective-taking as antecedents to i-deals. It is also one of the few studies in the area of management that tests the differential effects of dimensions of empathy (Galinsky *et al.*, 2008) and establishes the differential roles played by these construct in successful authorization of i-deals. Further, the study explores the differential effect in a dual-motive interaction situation that involves conflict prone negotiation tasks with covert agreements. Hence, unlike earlier studies (Batson & Moran, 1999), findings of this study clearly points out the more important social competencies necessary for successful negotiations through strategic interactions.

An alternate perspective employed in the present study is that of a signaling function. The study suggested that supervisors employ ideals as a mechanism to communicate positive indications to scholars and stimulate better performance that will benefit both the parties. This signaling perspective of i-deals is relevant when dealt along with theories of self-enhancement and social exchange. The results are in agreement with the signaling theory that both TWR and flexibility i-deals are perceived as signals that communicate specific opinions or perceptions of supervisors towards scholars. These communications or signals are critical in formation of scholar's opinions about the quality of their LMX exchange relationship with their respective supervisors. This further leads to strengthening of their implicit psychological contracts which enhances their beliefs regarding the perceived supervisory support thus motivating them to reciprocate through expected level of performance.

TWR i-deals are found to signal positive opinion of supervisors towards scholar's competence thus satisfying their competence-need. This outcome is in accordance with the earlier research studies indicating positive relationship between task i-deals and competence-satisfaction in manager-employee relationships (Ho & Kong, 2015). Another finding of the study is that competence-need satisfaction improves motivation of scholar which further decreases dropout intentions. This is consistent with Vallerand & Losier (1999) study that suggests that "self-determined motivation mediates the relationship between need satisfaction and behavioural outcomes". The results also indicated that flexibility i-deals granted in response to scholars' personal needs signaled trust from their supervisors and reduced their stress thus decreasing their intentions to dropout. These findings lend empirical support to foundational theories of Blau (1964) and Haas & Deseran (1981) who proposed that by customizing work arrangements for fulfilling employees' personal needs, managers tend to provide employee a unique offering constituting contribution, often involving figurative social-emotional elements such as trust. Overall, these findings contribute to the i-deals theory building.

Further, exploring i-deals in the context of academic relationships is a significant contribution as it addresses the need for studying i-deals in varied contexts as well as it provides an alternate approach for improving supervisor-scholar relationships. Such exploration lends support to past studies exploring academic supervision through management theories (Gatfield & Alpert, 2002).

6.3 Practitioner Implications

From a practitioner's standpoint, this thesis deals with academia-specific outcomes of i-deals which will enable supervisors to better manage their relationship with the scholars by understanding what message each of these customized work arrangements

convey to the scholar and what impact it will have on the scholars perceptions and behaviours. The study also guides supervisors in decision-making by helping them in understanding the relative role of their affective (empathic-concern) and cognitive (perspective-taking) personalities in negotiating arrangements with individual scholars. Further, this thesis is felicitous as top institutes in India as well as across the globe face high attrition rate among doctoral students which directly impacts economic prosperity, research, innovation and knowledge production of a nation.

The findings of the present study indicate that supervisors who have high prosocial motivation are capable of creating a work environment that propagates perceptions of support and trust among their scholars. Therefore, academic institutions may benefit by creating a conscious awareness among research supervisors about the influence of their prosocial behaviour towards research scholars and enabling the process of quality research. At the same time, the study encourages research scholars to seek opportunities that build their knowledge and skills from their supervisors. The findings of the study encourage integrative agreements between scholars and supervisors that may ensure resolution of unsaid issues this type of leader-member relationship and benefit both supervisor and scholar in terms of better time management, task scheduling, timely completion of work and quality research output.

Realizing the importance of prosocial motivation, supervisors themselves could drive their efforts in aligning their scholars' values with their own and stimulate them to achieve highest quality research. Given such feeling of trust and confidence, scholars can be expected to show increased performance standards, high motivation and improved work-life balance. Similar findings were reported by other studies which proved that informal controls, like open-door problem resolution, socialization and mentoring etc.,

effectively complements the formal authority by creating an overall altruistic workplace (Cardinal, Sitkin, & Long, 2004). Such an altruistic supervision is essential as scholars emulate their supervisors in future based on their supervisory experiences.

6.4 Limitations of the Study and Future Research Directions

While this research has significant implications, it faces few limitations and provides scope for future research. I-deals negotiation depends on both subordinate initiative and supervisor authorization as they constitute negotiated work arrangements at the individual-level (Rousseau, 2005). This process becomes functional at the intersection of individual needs and formalized organizational processes, and therefore, incorporation of data from both the individual and institution perspective will hold more value. The present study tests two models – supervisor-related and scholar-related models – that are mutually exclusive and uses information from two different sample groups. This suggests that the study is carried out using cross-sectional research design, and therefore, upcoming studies should employ longitudinal designs to assess probabilities of reverse causality.

In continuation with the above limitation, researchers must utilize advanced methodologies and pursue similar studies using matched responses obtained from supervisor-scholar dyads or collect group level data to explore coworker perspectives for in-depth understanding of antecedents, consequences, and underlying mechanisms of i-deals. This study did not utilize advanced methodology, such as, grouping scholar and supervisor data was very difficult owing to respondent's professional apprehensions and confidentiality concerns.

The study does not delve deeply into the neuropsychological aspects of empathy which is a deviation from most recent empathy-related studies. It is a linear relationship based model and does not take into consideration underlying mediators. The actual link

between empathy and i-deals is not linear and consist of other variables influencing their relationship. The neuroscience guiding the empathy in the human brain can be investigated through integrative negotiations through interdisciplinary experiment-based studies. The role of empathy in the authorization of i-deals can be tested in the presence of mediators such as LMX, Trust etc. Also, empathy about authorization of other i-deals such as developmental and financial i-deals can be explored. A more comprehensive role of empathy in negotiations may be well understood by including other two dimensions – fantasy and personal distress to the current concept.

Though the two dimensions considered under this study are conceptually distinct and produce different outcomes, in some contexts - such as self-exploration, they may operate together. Both dimensions are often studied in combination and are proven to be interrelated with significant correlation and causal relation (Galinsky et al., 2008a; Batson, 2011; Chartrand & Bargh, 1999; Todd & Galinsky, 2014). Researchers who support the combined model of empathy, have found some indirect evidence that signal interaction effects between affective and cognitive dimensions of empathy. Social psychologists have proposed that an individual's emotion or affect may significantly influence his cognitive functioning (Forgas & Bower, 1987) and a reverse effect may also be experienced as cognitive processes influence the emotional behaviours (Davis, Hull, Young, & Warren, 1987).

Further, this study does not take into consideration the justice perceptions of co-scholars who are key stakeholders within a supervisors' research team. This is crucial as studies in the past suggest that colleagues may be impacted by the i-deals being received by a team member, which may influence their approach to the i-deals as well as the relationship quality with the corresponding supervisors (Greenberg *et al.*, 2004).

Therefore, future studies should explore co-scholars' perspectives about i-deals received by other scholars and the circumstances under which they will support or oppose them.

The study is conducted at the individual-level and did not explore i-deals in the context of teams. Collective examination of scholars working under same supervisors may have provided insights into task interdependence among scholars and differences in the quality of relationship of each scholar with the supervisor. These insights are critical, as such structural conditions serve as constraints for the supervisor while granting i-deals to the focal scholar. Future researchers may explore i-deals under the influence of structural conditions and determine the relationship between the i-deals sought and the i-deals granted.

The present study would have better theoretical value if i-deals in academia were explored domain wise. For example, scholars in research fields such as life-sciences may render flexibility i-deals as less significant as the nature of their research demands continuous presence in laboratory whereas the same group may greatly value financial i-deals in the form of funding for their research. Similarly, scholars in social sciences field may seek flexibility i-deals to a larger extent as it allows them to engage in field studies. Therefore, exploring i-deals in academic supervision needs to give consideration to inter-departmental differences.

The findings of this study have a very limited generalizability to other types of i-deals as the nature of TWR and flexibility i-deals differ from other forms such as financial i-deals (Rosen et al., 2013). Therefore, future studies need to investigate other underlying theoretical mechanisms that can explain the unique effects of financial i-deals in comparison to other forms of i-deals.

The contextual background of the study i.e. India has a patriarchal culture which inherently allows subordinates to seek customized work arrangements from their

supervisors who are expected to protect the well-being of subordinates (Aycan, Shyns, Sun, Felfe, & Saher, 2013). Researchers can attempt to investigate the influence of other cultural dimensions on the initiation and authorization of such personalized workplace arrangements.

The study measures behaviours using self-reported measures than employing coded cases of strategic choice. Doing so, could provide understanding of the role of relationship quality, power dynamics and other interactions during negotiations.

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Appendix 1: HARP Statements

Please indicate your agreement or disagreement with the statements below. There are no wrong answers.

(Strongly Agree; Agree; Slightly Agree; Slightly Disagree; Disagree; Strongly Disagree)

Your views on the nature of reality (ontology)

1. Organisations are real, just like physical objects.
2. Events in organisations are caused by deeper, underlying mechanisms.

3. The social world we inhabit is a world of multiple meanings, interpretations and realities.
4. 'Organisation' is not a solid and static thing but a flux of collective processes and practices.
5. 'Real' aspects of organisations are those that impact on organisational practices.

Your views on knowledge and what constitutes acceptable knowledge (epistemology)

6. Organisational research should provide scientific, objective, accurate and valid explanations of how the organisational world really works.
7. Theories and concepts never offer completely certain knowledge, but researchers can use rational thought to decide which theories and concepts are better than others.
8. Concepts and theories are too simplistic to capture the full richness of the world.
9. What generally counts as 'real', 'true' and 'valid' is determined by politically dominant points of view.
10. Acceptable knowledge is that which enables things to be done successfully.

Your views on the role of values in research (axiology)

11. Researchers' values and beliefs must be excluded from the research.
12. Researchers must try to be as objective and realistic as they can.
13. Researchers' values and beliefs are key to their interpretations of the social world.
14. Researchers should openly and critically discuss their own values and beliefs.
15. Research shapes and is shaped by what the researcher believes and doubts.

Your views on the purpose of research

16. The purpose of research is to discover facts and regularities, and predict future events.
17. The purpose of organisational research is to offer an explanation of how and why organisations and societies are structured.
18. The purpose of research is to create new understandings that allow people to see the world in new ways.
19. The purpose of research is to examine and question the power relations that sustain conventional thinking and practices.

20. The purpose of research is to solve problems and improve future practice.

Your views on what constitutes meaningful data

- 21. Things that cannot be measured have no meaning for the purposes of research.
- 22. Organisational theories and findings should be evaluated in terms of their explanatory power of the causes of organizational behaviour.
- 23. To be meaningful, research must include participants' own interpretations of their experiences, as well as researchers' interpretations.
- 24. Absences and silences in the world around us are at least as important as what is prominent and obvious.
- 25. Meaning emerges out of our practical, experimental and critical engagement with the world.

Your views on the nature of structure and agency

- 26. Human behaviour is determined by natural forces.
- 27. People's choices and actions are always limited by the social norms, rules and traditions in which they are located.
- 28. Individuals' meaning-making is always specific to their experiences, culture and history.
- 29. Structure, order and form are human constructions.
- 30. People can use routines and customs creatively to instigate innovation and change.

Scoring key

Each answer you gave is given a number of points as shown in the table below

Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree Strongly	Disagree Strongly
3	2	1	-1	-2	-3

Appendix 2: Supervisor Survey Questionnaire

While answering this questionnaire, please note that:

- ☐ Your answers are **STRICTLY CONFIDENTIAL** and intended for academic research only– study results will simply be exhibited in aggregate form.
- ☐ Your contribution toward the successful outcome of this study is **INVALUABLE**; please answer all questions as honestly as possible.
- ☐ There is no right or wrong answer, please just answer according to your opinion.

The purpose of this survey is to improve our understanding of the idiosyncratic work arrangements (also called idiosyncratic deals) that you have negotiated and granted to your doctoral scholar. An idiosyncratic work arrangement is a voluntary, personalised agreement of a nonstandard nature that is negotiated between you and your scholar. Such arrangements are mutually beneficial and may include re-assignment to different tasks, flexibility in work hours, and flexibility in work location (e.g., working from home). The following are key characteristics of idiosyncratic deals:

1. They are individually negotiated.
2. The conditions that are negotiated are usually not available to all the scholars.
3. The new arrangement is mutually beneficial.
4. The new arrangement is negotiated based on scholar's competency and your trust on them.

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BACKGROUND INFORMATION

Please place a check ✓ beside or circle the most appropriate answer to each of the following questions. In a few cases please fill-in the blank.

- 1) Gender: ☒ Male ☐ Female
- 2) Faculty level: ☐ Assistant Professor ☐ Associate Professor ☐ Professor
- 3) Please indicate your department/school
☐ Sciences ☐ Engineering ☐ Management ☐ Social Sciences ☐ Language Studies

1. Empathic-concern (7-items)

		0 = Does not describe me well	1	2	3	4 Describes very well
1.	When I see people being taken advantage of, I feel kind of protective towards them.					
2.	When I see people being treated unfairly, I sometimes					

	don't feel very much pity for them. (-)					
3.	I often have tender, concerned feelings for people less fortunate than me.					
4.	I would describe myself as a pretty softhearted person					
5.	Sometimes I don't feel very sorry for other people when they are having problems. (-)					
6.	Other people's misfortunes do not usually disturb me a great deal. (-)					
7.	I am often quite touched by things that I see happen					

2. Perspective-taking (7-item)

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate number on the scale. Answer as honestly as you can.

		0 = Does not describe me well	1	2	3	4 Describes very well
1.	Before criticizing somebody, I try to imagine how I would feel if I were in their place.					
2.	If I'm sure I'm right about something, I don't waste much time listening to other people's arguments					
3.	I sometimes try to understand my friends better by imagining how things look from their perspective.					
4.	I believe that there are two sides to every question and try to look at them both					
5.	I sometimes find it difficult to see things from the "other guy's" point of view. (-)					
6.	I try to look at everybody's side of a disagreement before I make a decision.					
7.	When I'm upset at someone, I usually try to "put myself in his shoes" for a while.					

3. Prosocial Motivation (5 items)

		1 = Strongly disagree	2 = Disagree	3 = Neither agree or disagree	4 = Agree	5 = Strongly agree
1.	I get energized by possibly benefitting others					
2.	I want to help others					
3.	I wish to have a positive impact on others.					
4.	I do my best when I contribute to the well-being of others					
5.	It is important to me to have the opportunity to benefit others.					

4. I-deals Authorization

Recall the degree to which your scholars had “asked and successfully negotiated for individual conditions that deviate from official regulations or standards applying to peers in comparable positions”.						
		1 = not at all	2 =slightly	3 =somewhat	4 =to a great extent	5 =to a very great extent
	Task and work responsibilities (6 items)					
1.	Extra responsibilities that take advantage of the skills that they bring to the job.					
2.	Requested tasks that better develop their skills.					
3.	Tasks that better fit their personality, skills, and abilities.					
4.	Opportunities to take on desired responsibilities outside of their formal job requirements.					
5.	In response to his/her distinctive contributions, more					

	flexibility in how he/she complete his/her job.					
6.	Assigned desirable position that makes use of their unique abilities.					
	Schedule flexibility (3 items)					
1.	Considered his/her personal needs when making his/her work schedule.					
2.	On his/her request, has accommodated his/her off-the-job demands when assigning his/her work hours.					
3.	Outside of formal leave and sick time, has allowed him/her to take time off to attend to non-work-related issues.					
	Location flexibility (2 items)					
1.	Because of his/her individual needs, have negotiated a unique arrangement that allows him/her to complete a portion of his/her work outside of the office.					
2.	Because of my particular circumstances, my supervisor allows me to do work from somewhere other than the main office.					

Evaluate the effects of the customized arrangements being negotiated by your scholars, in terms of work performance, motivation, and work-life balance, as observed by you.

5. Increased Performance standards (3-items)

Report whether your own standards regarding the work performance expected from your scholars have increased with respect to:

		1 = not at all	2 =slightly	3 =somewhat	4 =to a great extent	5 =to a very great extent
1.	the amount of work					
2.	the quality of work results					
3.	the compliance with deadlines					

6. Changes in Motivation (3-items)

Evaluate changes in your scholars' academic motivation attributable to the new negotiated working arrangements:						
		1 = decreased to a great extent	2 =decreased somewhat	3 =stayed unchanged	4 =increased somewhat	5 =increased to a great extent
1.	achievement motivation					
2.	job involvement					
3.	positive job attitudes					

7. Changes in Work-life Balance (3-items)

Based on your observations, rate the changes in the quality of your scholars' work-life balance as a result of customized work arrangements being negotiated with you.						
		1 = decrease d to a great extent	2 =decreased somewhat	3 =stayed unchange d	4 =increase d somewhat	5 =increase d to a great extent
1.	work-life balance					
2.	compatibility of work and private life					
3.	room for leisure time					

Appendix 3: Scholar Survey Questionnaire

While answering this questionnaire, please note that:

☐ Your answers are **STRICTLY CONFIDENTIAL** and intended for academic research only— study results will simply be exhibited in aggregate form.

☐ Your contribution toward the successful outcome of this study is **INVALUABLE**; please answer all questions as honestly as possible.

☐ There is no right or wrong answer, please just answer according to your opinion. The purpose of this survey is to improve our understanding of the idiosyncratic work arrangements (also called idiosyncratic deals) that you have negotiated with your supervisor. An idiosyncratic work arrangement is a voluntary, personalized agreement of a nonstandard nature that is negotiated between an employee and his employer. Such arrangements are mutually beneficial to and may include adjustments in pay, re-assignment to different tasks, flexibility in work hours, and flexibility in work location (e.g., working from home). The following are key characteristics of idiosyncratic deals. The following are key characteristics of idiosyncratic deals:

1. They are individually negotiated.
2. The conditions that are negotiated are usually not available to everyone else i.e. your co-scholars
3. The new arrangement is mutually beneficial.
4. The new arrangement is negotiated based on your competency as a scholar.

I intend to study the applicability of i-deals in academic context. Based on whether or not you have negotiated such i-deals with your research supervisor, please answer the below questionnaire.

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BACKGROUND INFORMATION

Please place a check ☒ beside or circle the most appropriate answer to each of the following questions. In a few cases please fill-in the blank.

- 1) Gender: Male ☐ Female ☐
- 2) Marital Status: a) Married b) Unmarried
- 3) Year of PhD Study: a) III b) IV c) V d) VI & Above
- 4) Please indicate your department/school
Sciences Engineering Management Social Sciences Language
Studies

1. I-deals Receipt

Recall the degree to which you have “asked and successfully negotiated for individual conditions that deviate from official regulations or standards applying to peers in comparable positions” with your supervisor.						
		1 = not at all	2 = slightly	3 = somewhat	4 = to a great extent	5 = to a very great extent
	Task and work responsibilities (6-items)					
1.	Extra responsibilities that take advantage of the skills that I bring to the job.					
2.	Requested tasks that better develop my skills.					
3.	Tasks that better fit my personality, skills, and abilities.					
4.	Opportunities to take on desired responsibilities outside of the formal job requirements.					
5.	In response to my distinctive contributions, more flexibility in how I complete my job.					
6.	Assigned desirable position that makes use of my unique abilities.					
	Schedule flexibility (3-items)					
1.	Considered my personal needs when making my work schedule.					
2.	On my request, has accommodated my off-the-job demands when assigning my work hours.					
3.	Outside of formal leave and sick time, has allowed me to take time off to attend to non-work-related issues.					
	Location flexibility (2-items)					
1.	Because of my individual needs, have negotiated a unique arrangement that allows me to complete a portion of my work outside of the office.					

2.	Because of my particular circumstances, my supervisor allows me to do work from somewhere other than the main office.					
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2. Competence-need satisfaction (4-items)

		1 = Completely disagree	2 = Disagree	3 = Neither Agree nor Disagree	4 = Agree	5 = Completely Agree
1.	I have the ability to do my work well					
2.	I feel competent at work					
3.	I am able to solve problems at work					
4.	I succeed in my work					

3. Trust

		1 = Completely disagree	2 = Disagree	3 = Neither Agree nor Disagree	4 = Agree	5 = Completely Agree
1.	My supervisor believes I am trustworthy					
2.	My supervisor places trust in me					
3.	My supervisor believes I can be trusted.					

4. Academic Self-concept

		1 = Completely disagree	2 = Disagree	3 = Neither Agree nor Disagree	4 = Agree	5 = Completely Agree
1.	I can follow the lectures easily.					
2.	I day-dream a lot in lectures.					

3.	I am able to help my course mates in their school work.					
4.	I often do my course work without thinking.					
5.	If I work hard, I think I can get better grades.					
6.	I pay attention to the lecturers during lectures.					
7.	Most of my course mates are smarter than I am.					
8.	I study hard for my tests.					
9.	My lecturers feel that I am poor in my studies.					
10.	I am usually interested in my course work.					
11.	I often forget what I have learned.					
12.	I will do my best to pass all the courses this semester.					
13.	I get frightened when I am asked a question by the lecturers					
14.	I often feel like quitting the degree course.					
15.	I am good in most of my courses.					
16.	I am always waiting for the lecture to end and go home.					
17.	I always do poorly in course works and tests.					
18.	I do not give up easily when I am faced with a difficult question in my course work.					
19.	I am able to do better than my friends in most courses.					
20.	I am not willing to put in more effort in my course work.					

5. Motivation

The following 15 statements correspond to reasons that can motivate doctoral students to persevere in their studies. Please indicate the extent to which each statement corresponds to the reasons why you persevere in your doctoral studies.

		1 = Does not correspond at all	2 = Correspond somewhat	3 = Correspond	4 = Correspond well	5 = Correspond exactly
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				moderately well		
1.	For the satisfaction I feel when I surpass myself in my learning activities (e.g., work, presentations).					
2.	For the satisfaction I have in facing challenges in my studies.					
3.	For the pleasure I feel in accomplishing my study project (e.g., thesis).					
4.	Because doctoral studies are consistent with my values (e.g., curiosity, ambition, success).					
5.	Because my doctoral studies are a fundamental part of who I am and my identity.					
6.	Because my doctoral studies meet my goals and my objectives in life.					
7.	Because I want to improve my skills in my field of study.					
8.	Because it's important for me to advance knowledge in my field of study.					
9.	Because I have the opportunity to take my first steps in research (e.g., publications, collaborations) while benefitting from supervision.					
10.	Because my supervisor would be disappointed or angry if I gave up.					
11.	Because I have made commitments that I must fulfill (e.g., with					

	funding agencies, employers, collaborators, a research director).					
12.	Because I do not want to be perceived as a quitter.					
13.	For the prestige associated with a PhD.					
14.	To find a job with good working conditions.					
15.	To get a better paying job after graduation.					

6. Perceived Stress

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. For each question choose from the given alternatives:

		1 = never	2 = almost never	3 = sometimes	4 = fairly often	5 = very often
1.	During the dissertation process, how often have you been upset because of something that happened unexpectedly?					
2.	During the dissertation process, how often have you felt that you were unable to control the important things in your life?					
3.	During the dissertation process, how often have you felt nervous and stressed?					
4.	During the dissertation process, how often have you felt confident about your ability to handle your personal problems?					
5.	During the dissertation process, how often have you felt that things were going your way?					
6.	During the dissertation process, how often have you found that you could not cope with all the things that you had to do?					
7.	During the dissertation process, how often have you been able to control irritations in your life?					

8.	During the dissertation process, how often have you felt that you were on top of things?					
9.	During the dissertation process, how often have you been angered because of things that were outside of your control?					
10.	During the dissertation process, how often have you felt difficulties were piling up so high that you could not overcome them?					

7. Dropout intentions

Please select the most suitable response as applicable to you on the given five-point scale.

		1 = Not at all likely	2 = Slightly likely	3 = Neither agree nor disagree	4 = Agree	5 = Very likely
1.	Is it likely that you will give up your studies in the next year?					
2.	Is it likely that you will give up your studies before graduation					

Appendix 4: Descriptive Statistics (Model 1: Supervisors Sample)

Construct items	Item description	Mean	SD	Skewness	Kurtosis
<i>Empathic-concern</i>					
EC1	When I see people being taken advantage of, I feel kind of protective towards them.	3.22	1.076	-.351	-.545
EC2	When I see people being treated unfairly, I sometimes don't feel very much pity for them. (R)	3.20	1.062	-.372	-.533
EC3	I often have tender, concerned feelings for people less fortunate than me.	3.20	1.062	-.340	-.513
EC4	I would describe myself as a pretty softhearted person	3.23	1.062	-.350	-.522

EC5	Sometimes I don't feel very sorry for other people when they are having problems. (R)	3.22	1.057	-.393	-.569
EC6	Other people's misfortunes do not usually disturb me a great deal. (R)	3.21	1.081	-.375	-.520
EC7	I am often quite touched by things that I see happen				

Perspective-taking

PT1	. Before criticizing somebody, I try to imagine how I would feel if I were in their place.	3.20	1.198	-.382	-.748
PT2	If I'm sure I'm right about something, I don't waste much time listening to other people's arguments	3.25	1.155	-.498	-.556
PT3	. I sometimes try to understand my friends better by imagining how things look from their perspective.	3.29	1.144	-.530	-.497
PT4	I believe that there are two sides to every question and try to look at them both	3.24	1.148	-.512	-.541
PT5	. I sometimes find it difficult to see things from the "other guy's" point of view. (R)	3.22	1.183	-.412	-.678
PT6	. I try to look at everybody's side of a disagreement before I make a decision.				
PT7	. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.				

Prosocial Motivation

PM1	I get energized by possibly benefitting others	3.34	1.058	-.545	-.384
PM2	I want to help others	3.39	1.024	-.628	-.239
PM3	I wish to have a positive impact on others.	3.40	1.178	-.686	-.419
PM4	I do my best when I contribute to the well-being of others	3.33	1.006	-.544	-.347

PM5	It is important to me to have the opportunity to benefit others.	3.32	1.254	-.562	-.718
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I-deals Authorization

Task and work responsibilities

TWR1	Extra responsibilities that take advantage of the skills that they bring to the job.	3.17	1.111	-.460	-.545
TWR2	Requested tasks that better develop their skills.	3.19	1.111	-.471	-.533
TWR3	Tasks that better fit their personality, skills, and abilities.	3.16	1.101	-.480	-.513
TWR4	Opportunities to take on desired responsibilities outside of their formal job requirements.	3.18	1.116	-.463	-.522
TWR5	In response to his/her distinctive contributions, more flexibility in how he/she complete his/her job.	3.17	1.117	-.444	-.569
TWR6	Assigned desirable position that makes use of their unique abilities.	3.16	1.106	-.492	-.520

Schedule flexibility

SF1	Considered his/her personal needs when making his/her work schedule.	3.26	1.090	-.757	-.286
SF2	On his/her request, has accommodated his/her off-the-job demands when assigning his/her work hours.	3.21	1.124	-.740	-.416
SF3	Outside of formal leave and sick time, has allowed him/her to take time off to attend to non-work-related issues.	3.24	1.116	-.732	-.375

Location flexibility

LF1	Because of his/her individual needs, have negotiated a unique arrangement that	3.51	1.187	-.714	-.345
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	allows him/her to complete a portion of his/her work outside of the office.				
LF2	Because of my particular circumstances, my supervisor allows me to do work from somewhere other than the main office.	3.52	1.192	-.731	-.321
<i>Increased Performance standards</i>					
IPS1	the amount of work	3.35	1.106	-.861	-.155
IPS2	the quality of work results	3.39	1.046	-.928	.083
IPS3	the compliance with deadlines	3.38	1.083	-.865	-.075
<i>Changes in Motivation</i>					
CM1	achievement motivation	3.31	1.155	-.588	-.517
CM2	job involvement	3.37	1.131	-.691	-.336
CM3	positive job attitudes	3.32	1.147	-.572	-.488
<i>Changes in Work-life Balance</i>					
CWB1	work-life balance	3.46	1.137	-.688	-.209
CWB2	compatibility of work and private life	3.42	1.107	-.626	-.256
CWB3	room for leisure time	3.48	1.118	-.708	-.167

Appendix 5: Descriptive Statistics (Model 2: Scholars Sample)

Construct items	Item description	Mean	SD	Skewness	Kurtosis
<i>Task and work responsibilities</i>					
TWR1	Extra responsibilities that take advantage of the skills that they bring to the job.	3.0	1.117	-.177	-.758
TWR2	Requested tasks that better develop their skills.	3.09	1.128	-.346	-.744

TWR3	Tasks that better fit their personality, skills, and abilities.	3.09	1.133	-.329	-.768
TWR4	Opportunities to take on desired responsibilities outside of their formal job requirements.	3.08	1.144	-.335	-.789
TWR5	In response to his/her distinctive contributions, more flexibility in how he/she complete his/her job.	3.06	1.124	-.279	-.789
TWR6	Assigned desirable position that makes use of their unique abilities.	3.06	1.114	-.308	-.759

Schedule flexibility

SF1	Considered his/her personal needs when making his/her work schedule.	3.05	1.076	-.119	-.705
SF2	On his/her request, has accommodated his/her off-the-job demands when assigning his/her work hours.	2.97	1.119	-.100	-.767
SF3	Outside of formal leave and sick time, has allowed him/her to take time off to attend to non-work-related issues.	2.97	1.110	-.083	-.737

Location flexibility

LF1	Because of his/her individual needs, have negotiated a unique arrangement that allows him/her to complete a portion of his/her work outside of the office.	3.12	1.473	-.244	-1.344
LF2	Because of my particular circumstances, my supervisor allows me to do work from somewhere other than the main office.	3.17	1.451	-.304	-1.274

Competence-need satisfaction

CNS1	I have the ability to do my work well	3.10	1.130	-.326	-.714
CNS2	I feel competent at work	3.19	1.150	-.395	-.689
CNS3	I am able to solve problems at work	3.18	1.151	-.429	-.680
CNS4	I succeed in my work	3.18	1.142	-.388	-.670

Perceived Trust

TB1	My supervisor believes I am trustworthy	3.05	1.188	-.189	-.833
TB2	My supervisor places trust in me	3.01	1.213	-.174	-.897
TB3	My supervisor believes I can be trusted.	3.03	1.198	-.197	-.860

Academic Self-concept

ASC1	I can follow the lectures easily.	3.06	1.173	-.335	-.844
ASC2	I day-dream a lot in lectures.	3.00	1.163	-.279	-.842
ASC3	I am able to help my course mates in their school work.	3.00	1.163	-.243	-.861
ASC4	I often do my course work without thinking.	2.99	1.166	-.211	-.882
ASC5	If I work hard, I think I can get better grades.	2.95	1.176	-.193	-.899
ASC6	I pay attention to the lecturers during lectures.	3.01	1.161	-.215	-.838
ASC7	Most of my course mates are smarter than I am.	2.98	1.175	-.198	-.873
ASC8	I study hard for my tests.	2.93	1.178	-.176	-.925
ASC9	My lecturers feel that I am poor in my studies.	2.95	1.174	-.187	-.910
ASC10	I am usually interested in my course work.	2.95	1.166	-.222	-.892

ASC11	I often forget what I have learned.	3.02	1.169	-.252	-.855
ASC12	I will do my best to pass all the courses this semester.	3.06	1.177	-.281	-.840
ASC13	I get frightened when I am asked a question by the lecturers	3.03	1.172	-.246	-.839
ASC14	I often feel like quitting the degree course.	3.01	1.192	-.247	-.881
ASC15	I am good in most of my courses.	3.04	1.157	-.266	-.808
ASC16	I am always waiting for the lecture to end and go home.	2.98	1.148	-.223	-.852
ASC17	I always do poorly in course works and tests.	2.99	1.174	-.233	-.864
ASC18	I do not give up easily when I am faced with a difficult question in my course work.	2.45	1.172	-.247	-.808
ASC19	I am able to do better than my friends in most courses.	3.01	1.166	-.252	-.892
ASC20	I am not willing to put in more effort in my course work.	2.98	1.169	-.222	-.892

Motivation of Scholar

MS1	For the satisfaction I feel when I surpass myself in my learning activities (e.g., work, presentations).	2.91	1.239	-.193	-1.080
MS2	For the satisfaction I have in facing challenges in my studies.	2.91	1.229	-.187	-1.087
MS3	For the pleasure I feel in accomplishing my study project (e.g., thesis).	2.98	1.212	-.270	-.990

MS4	Because doctoral studies are consistent with my values (e.g., curiosity, ambition, success).	3.00	1.204	-.260	-.958
MS5	Because my doctoral studies are a fundamental part of who I am and my identity.	2.95	1.222	-.223	-1.020
MS6	Because my doctoral studies meet my goals and my objectives in life.	2.95	1.221	-.210	-1.024
MS7	Because I want to improve my skills in my field of study.	2.98	1.206	-.252	-.991
MS8	Because it's important for me to advance knowledge in my field of study.	2.99	1.201	-.266	-.982
MS9	Because I have the opportunity to take my first steps in research (e.g., publications, collaborations) while benefitting from supervision.	2.99	1.204	-.262	-.969
MS10	Because my supervisor would be disappointed or angry if I gave up.	2.98	1.198	-.275	-.974
MS11	Because I have made commitments that I must fulfill (e.g., with funding agencies, employers, collaborators, a research director).	3.00	1.218	-.289	-.984
MS12	Because I do not want to be perceived as a quitter.	2.99	1.207	-.277	-.949
MS13	For the prestige associated with a PhD.	2.98	1.217	-.241	-.976
MS14	To find a job with good working conditions.				
MS15	To get a better paying job after graduation.				

Perceived Stress

PS1	During the dissertation process, how often have you been upset because of	3.15	1.151	-.272	-.702
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	something that happened unexpectedly?				
PS2	During the dissertation process, how often have you felt that you were unable to control the important things in your life?	3.12	1.161	-.236	-.776
PS3	During the dissertation process, how often have you felt nervous and stressed?	3.12	1.170	-.242	-.795
PS4	During the dissertation process, how often have you felt confident about your ability to handle your personal problems?	3.15	1.153	-.272	-.716
PS5	During the dissertation process, how often have you felt that things were going your way?	3.16	1.158	-.304	-.720
PS6	During the dissertation process, how often have you found that you could not cope with all the things that you had to do?	3.12	1.129	-.217	-.710
PS7	During the dissertation process, how often have you been able to control irritations in your life?	3.18	1.108	-.332	-.603
PS8	During the dissertation process, how often have you felt that you were on top of things?	3.16	1.118	-.334	-.625
PS9	During the dissertation process, how often have you been angered because of things that were outside of your control?	3.16	1.110	-.348	-.621
PS10	During the dissertation process, how often have you felt difficulties were piling up so high that you could not overcome them?	3.16	1.104	-.290	-.604

Dropout intentions

DI1	Is it likely that you will give up your studies in the next year?	3.11	1.096	-.413	-.680
DI2	Is it likely that you will give up your studies before graduation	3.21	1.100	-.675	-.516

SYNOPSIS

Antecedents and Outcomes of Idiosyncratic Deals in Academic Supervisor-Scholar Relationships in India

1. Introduction

A wave of transformational changes in cultural and societal trends in recent times has forced contemporary workplaces to make relevant changes both in process management and in people management. Managing people is a critical organizational issue as people are not only the unique source of competitive advantage in a rapidly transforming business environment, but also the most complex asset that the organization needs to manage due to the involvement of human nature. But broader societal trends of - individualism (Oyserman et al., 2002), “psychologicalization” of employment relations (Godard, 2014), an emphasis on employee’s self-reliance for career development (Olson, 2013) etc. - have all placed individual employee in the center of employer-employee relationship and has put additional responsibility on individuals to manage their professional life on their own along with balancing their personal lives.

Individuals, hence, tend to negotiate customized work arrangements and resources with their employers, that are important but beyond existing organizational policies and regulations. These negotiations also give the opportunity to the employer to understand employees’ needs, inner beliefs and motivations which serve as foundational inputs in designing HR policies and practices. The outcome of such customized negotiations are beneficial to both the employee and the employer and has been termed as “Idiosyncratic deals” or “I-deals” by Denise M. Rousseau (2001, 2005).

With a conceptual focus on the exchange relationship between the employer and the employee and a theoretical underpinning in social exchange theory, i-deals construct

emerges from organizational psychology perspective and finds its way into strategic HRM by significantly influencing the HRM practices in modern workplaces through greater customization of work arrangements and moderating the employer-employee or manager-subordinate relationships. Research indicates that similar relationships are evidenced in the field of academia where research supervisor and doctoral scholar have an exchange relationship that is complex and has an impact on professional and personal lives of both the parties (Deuchar, 2008; Vilkinas, 2002). Hence, this thesis has set out to investigate supervisor-scholar relationships under the lens of idiosyncratic deals and study the predictors and outcomes of i-deals in this dyadic relationship.

Past research has explored multiple employee-related, leader-related and work-related predictors of i-deals and their impact on employee behaviours and attitudes such as motivation to work after retirement (Bal et al., 2012), job satisfaction (Ho & Tekleab, 2013; Huang & Niu, 2009), work engagement (Hornung et al., 2011), voice behavior (Ng & Feldman, 2012), and OCB (Hu et al., 2010; Huang & Niu, 2009). This thesis intends to shed light on additional leader-related antecedents – *empathic-concern* and *perspective-taking* of leader, which may possess a predictive ability towards i-deals in the context of academic relationships. Also, the study investigates context-specific outcomes of i-deals in Higher Education Institutions in India that offer doctoral courses to assess the role of academic i-deals in lowering the dropout intentions among scholars, as reported under media reports recently.

2. Motivation for the study

The motivation driving this study emanates from both personal experience and professional orientation. The personal experience that motivates this study is the

observation of people around us over the years who constantly discuss the ever-increasing challenges in maintaining work-life balance in the modern world and subsequent need for flexible organizations that are conducive to ensure such a balance. In an endeavor to study this aspect from organizational behavior perspective, the journey to understand existing OB theories and explore novel mechanisms began. It was found that flexible organizations are result of flexible people who can adapt and respond to situations proactively. Individuals working in organizations are the most important organizational resource and interpersonal relationships among them influence all organizational decisions. These relationships in turn are driven by individual differences in personality, beliefs, values, attitudes, behavior and perceptions. It was well understood that a study on understanding a process that helps in creating a flexible organization that ensures overall well-being of its employees and further investigation into its antecedents and consequences will make a significant contribution.

Moving ahead with the trend of interdisciplinary research, several OB concepts such as workplace wellness, psychological contracts, counterproductive workplace behaviours, flexi-time, protean careers etc., that have been developed using theories from other disciplines such as Psychology, Sociology, Medicine, Neurology etc., were explored. During this search, one specific construct – idiosyncratic deals – seemed relevant to the thought process driving the search for a suitable research problem till this point. There were three reasons for the attractiveness of this concept for the current research – firstly, relevance to the modern workplaces, secondly, the novelty of the concept especially in the Indian context and thirdly, potential for application to different organizational contexts. While, initial exploratory research revealed the need to explore additional antecedents to idiosyncratic deals, it was observed antecedents specifically leading to authorization of i-deals were lacking. Hence, the study set out to explore antecedents to authorization of i-deals.

The other element motivating this study, as already mentioned, was the researcher's professional orientation. Past researchers of i-deals have established that the nature and content of i-deals vary based on the context and this stimulated the thought of exploring i-deals in context other than IT, Manufacturing, Healthcare and Public Sector companies which were being explored thus far. Owing to the knowledge of challenges related to interpersonal relationships in the field of academia i.e. between doctoral scholars and research supervisors, who share a similar relationship as employee-employer in organizations, it was felt that application of i-deals to the academic context may contribute significantly to both i-deals literature as well as to the vast literature related to supervisor-scholar relationships. This idea was further strengthened by latest statistics of MHRD revealing the increasing attrition rate among doctoral scholars from Ivy League academic institutions in India (Table 1) as well as high doctoral attrition rates across the globe (Table 2).

Table 1
Number of Ph.D. Dropouts from few top Indian research institutions

Institution	No. of Dropouts (2014-2016)
IIMs	49
IIT Delhi	256
IIT Kharagpur	198
IIT Kanpur	47
IIT Madras	35
IIT Mumbai	34
IIT Patna	22

Source: MHRD, 2016

Table 2
Global doctoral attrition percentage

Region	Percentage doctoral attrition
USA	> 50% (National Center for Education Statistics, 2017)
Europe	20-41% (European Commission, 2015)
Australia	33% (Department of Education & Training, 2017)
Others	20-35%

Source: MHRD, 2016

3. Problem Statement

Organizations operate successfully on the foundation of quality of interpersonal relationships between its people. To achieve highest level of performance, people must be intrinsically and extrinsically motivated and must be in a sound mental state. Such a condition is achieved when individuals experience a balance between their professional and personal lives.

One of the ubiquitous type of organization that have tremendous influence on how world functions are the Higher Education Institution (HEIs). As organizations, academia also face multiple challenges and one of the most discussed challenge is that of interpersonal relationship between research supervisors and doctoral scholars. Literature suggest unspoken stress and tension in this relationship for both the parties that needs to be addressed.

Organizations can intervene and contribute towards employees' personal and professional well-being by customizing work arrangements suitable to individuals and derive desired level of performance from them. I-deals i.e. employee or employer negotiated terms of employment, have been found to be a functional mechanism that

is mutually beneficially for both the organization and the employee. The present study, therefore, takes into consideration the issues mentioned so far and develops a framework for strengthening supervisor-subordinate relationship and tests it empirically. The study applies Theory of Pro-social Reasoning and Signaling theory to understand the role of supervisor empathy in authorization of i-deals and impact of successful negotiation of i-deals on doctoral attrition rate.

4. Aim of the Study

Broad Objective: The overarching aim of this thesis is to examine additional antecedents and academia-specific outcomes of idiosyncratic deals.

Specific Objectives: The four main research objectives are:

1. To examine the relationships between empathic concern and perspective-taking of the supervisor and authorization of task & work responsibility i-deals, schedule flexibility i-deals and location flexibility i-deals with prosocial motivation as moderator.
2. To study the combined effect of empathic concern and perspective-taking of supervisor in predicting supervisor authorization of task & work responsibility i-deals, schedule flexibility i-deals and location flexibility i-deals.
3. To examine the signaling function of developmental i-deals and flexibility i-deals by studying i) competence need satisfaction as an intermediate variable between task & work responsibility i-deals and academic self-concept & student motivation (ii) perceived trust as an intermediate variable between schedule flexibility i-deals and location flexibility i-deals and perceived stress.
4. To examine the influence of i-deals on dropout intentions of the scholars.

5. Scope of the Study

It is crucial that any work in the field of academics and research defines its scope clearly, owing to the tremendously large number of studies addressing a multitude of similar and dissimilar constructs, being published at an extremely high frequency. The subject of this thesis i.e. idiosyncratic deals, too has experienced an interesting growth as a research area in terms of both its depth (understanding of multiple aspects of the construct itself) and breadth (relationship with other constructs). This has resulted in recent increase in the number of studies being published in this area thus making it inevitable for scholars to define objectively the scope of the study being conducted by them.

The scope of present study is defined in terms of constructs, content and context. The constructs explored in this thesis in relation to the i-deals are empathic-concern and perspective-taking which constitute only two out of four dimensions of empathy. The other two dimensions – personal distress and fantasy have been excluded for relevant reasons explained in next chapters. Further, a logical choice was made to study only two major i-deals i.e. task & work responsibility i-deals and flexibility (schedule-flexibility and location flexibility) i-deals and other forms of i-deals such as financial i-deals etc. were excluded. Finally, the decision to limit the study to academic relationships was being made for two reasons – call from past researchers to explore i-deals in varied contexts and possibility of i-deals as a solution to seemingly stressed supervisor-scholar relationships and its subsequent impact on doctoral attrition.

6. Literature Review

An exhaustive literature review on i-deals was conducted and has been summarized in Table 3 below.

Table 3:
Summary of Literature Review on I-deals

Author	Country	Type of I-deal studied	Antecedents	Outcomes	Mediator/ Moderator r	I-deals Scales Used
Hornung & Rousseau, 2006		Developmental	Work structures: Part-time work (+) Telecommuting (+) Personal Initiative (+)	Work-family conflict (+) Working unpaid overtime (+) Performance expectations (+) Affective organizational commitment (+)	- -	Rousseau & Kim (2006)
		Flexibility	Work structures: Part-time work (+) Telecommuting (+) Personal Initiative (+)	Work-family conflict (-) Working unpaid overtime (-) Performance expectations (nr) Affective organizational commitment (nr)		
Hornung, Rousseau & Glaser, 2009		Developmental	Job constraints (+) Group size (+) Employee Initiative (+) Unfulfilled obligations (-)	Performance standards (+) Employee motivation (+) Employee work-life balance (nr)	-	Rousseau & Kim (2006)
		Flexibility	Job constraints (-) Group size (-) Employee Initiative (+) Unfulfilled obligations (-)	Performance standards (nr) Employee motivation (nr) Employee work-life balance (+)		
		Workload-reduction	Job constraints (-) Group size (-)		-	

			Employee Initiative (-) Unfulfilled obligations (+)			
Anand, Vidyarathi, Liden & Rousseau, 2010	India	Developmental	-	OCB (I) (+) OCB (O) (+)	LMX (low) TMX (low) POS (nr)	Rousseau & Kim (2006)
Hornung, Rousseau, Glaser, Angerer & Weigl, 2010	USA, Germany	Task	LMX perception (+)	Personal Initiative (+) Work engagement (+)	Complexity of work (+, indirect) Control at work (+, indirect) Work stressors (-, indirect)	Modified Rousseau & Kim (2006)
Hornung, Rousseau, Glaser, Angerer & Weigl, 2011	Germany	Developmental	Leader consideration	Work engagement (+)	-	German version of scale developed by Hornung, <i>et al.</i> (2008) Rousseau & Kim (2006)
		Flexibility	Leader consideration	Work-family conflict (-)		
Lee & Hui, 2011	China	Ex-post	Individualism (+)		-	
		Ex-ante	Social skills (+) Perceived insider status (+)			

		Developmental		Relational psychological contracts (+)		
		Flexibility		Transactional psychological contracts (+)		
		Workload reduction				
Bal, Jong, Jansen & Bakker, 2012	Netherlands	Developmental	-	Motivation to continue working after retirement (+)	Accommo- dative unit climate (+, nr)	Hornung et al. (2008).
		Flexibility			Developme- nt unit climate (+, nr)	
Rosen, Slater, Chang & Johnson, 2013	USA	Task & Work responsibilities	Tenure`(-) Political skills (+) LMX (+)	Job satisfaction (+) Organizational commitment (+)		Develope- d a standard scale
		Schedule flexibility	Tenure`(-) Political skills (-) LMX (+)			
		Location flexibility	Tenure`(-) Political skills (+) LMX (-)			
		Financial incentives	Tenure`(+) Political skills (-) LMX (+)			
Guerrero, Bentein & Lapalme, 2013	Canada	Developmental	Psychological contract breach	Affective commitment	Trust I-deals (moderated mediation)	Rousseau & Kim (2006)
Hornung, Rousseau ,	Germany	Task	LMX (+)	Job performance (+)	Job autonomy (+)	Hornung et al. (2008).

Weigl , Müller & Glaser, 2014		Career	LMX (+)	Self-efficacy	Skill acquisition (+)	
		Flexibility	LMX (+)	Irritation (-)	Work overload (+)	
Tuan, 2014	Vietnam	Task & work responsibilities	Organizational ambidexterity (+)		Entreprene urial orientation (+)	Rosen et al (2013)
		Schedule flexibility				
		Location flexibility			Corporate social responsibil ity (+)	
Vidyarthi ,Chaudha ry, Anand & Liden, 2014	India	Flexibility	-	Perceived organizational support (+) Career satisfaction (+)	-	Rousseau and Kim (2006)
Guerrero & Jeanblanc , 2015	France	Developmental	-	Helping behavior directed at co- workers	Organizati on- based self- esteem (+/med)	Hornung et al. (2008)
					I-deal opportunit y for co- workers (nr)	
Ho, 2015	-	Task	-	Organizationa l citizenship behaviour (+)	Competenc e need satisfaction (+)	Rosen et al (2013)
		Financial		Organizationa l citizenship behaviour (+)	LMX (+) Competenc e need	

					satisfaction (-)	
					LMX (+)	
Ng & Lucianetti, 2015	Italy	Career development Schedule flexibility	Employees' achievement striving (+) status striving (+) communion striving (nr)	in-role job performance (+) voice behavior (+) Interpersonal citizenship behavior (+)	Employees', perceptions of the i- deals they receive (med/ +, +, -) Employees', perceptions of whether their coworkers are receiving i- deals (mod)	Hornung et al. (2008)
Tang & Hornung, 2015	China	Development Flexibility	Personal Initiative (+)	Work engagement (+) Work-to- Family enrichment (+)	Family- Work Enrichment (+) Intrinsic motivation (+) Extrinsic motivation (+)	Hornung et al. (2008)
Guerrero, Jeanblanc & Veilleux, 2016	France	Development	Career planning (+)	Objective career success (+) Subjective career success (+)	-	Hornung et al. (2008)

Ho & Tekleab, 2016	USA	Developmental (receipt of i-deals) Flexibility Task Financial	I-deal request	Job Satisfaction (+) Organizational Commitment (+) Turnover Intention (-)	Gender Industry experience (+, mod) LMX (+, mod)	Hornung et al. (2008), Hornung et al. (2010), Scale development for financial i-deals Scale developed for I-deal request
Lee, Bachrach & Rousseau, 2016	Korea	I-deal request	Firm-specific human capital (+) Employee internal labor market Beliefs (-) Group heterogeneity (+)	-	-	
Liao, Wayne, Liden & Meuser, 2016	USA	Career Task Flexibility	-	Job satisfaction In-role performance Helping behaviour	Managers' procedural fairness (med, +) LMX quality (mod, +)	Hornung, Rousseau, Weigl, Müller, and Glaser (2014)
Luu & Rowley, 2016	Vietnam	Task & work responsibility Location flexibility	Cultural intelligence (+)	-	Trust (med, +) HR localization (mod,+)	Rosen <i>et al</i> (2013)
Oostrom, Pennings & Bal, 2016	Netherland	Task & work responsibility Schedule flexibility Location flexibility	-	Employability of older workers (+,-, +)	Self-efficacy (med,+) Future time perspective (med,+)	Rosen et al (2013)

Bayazit & Bayazit, 2017	Turkey	Flexibility	Perceived availability of flexible work arrangements	Work-family conflict	Successful negotiation of flexibility i-deals (med)	Hornung, Rousseau, Weigl, et al. (2009)
				General health	perceived family-supportive cultures (mod)	
Kimwolo & Cheruiyot (2018)	Kenya	Flexibility	-		-	Rosen <i>et al</i> (2013)
		Task & Work responsibility		Innovative work Behaviours		
Luu & Djurkovic (2019)	Vietnam	Task & Work responsibility	Paternalistic leadership		Employees' flexible self identity	Rosen <i>et al</i> (2013)
		Schedule Flexibility	Organizational identification	-		
		Location flexibility				

7. Research Gaps

The review of studies in the field of idiosyncratic deals till date revealed significant gaps in the i-deals literature, which forms the motivation for the present research.

a) *Call for attention to additional theories for broadening the explanatory framework*

Though the initial works on i-deals was centered on social exchange theory, the call for studies from different theoretical perspectives encouraged researchers to apply multiple theories. Till date, few theories that have been applied to i-deal theory development are employee goals theory, job characteristics theory (Liao, Wayne & Rousseau, 2014), self-determination theory (Litalien & Guay, 2015), equity theory (Thomas W.H. Ng, 2017), sociological role theory (Tang & Hornung, 2015), and social comparison theory (Vidyarthi et al., 2016). Therefore, it can be argued that a number of theories have been contributing

to i-deals research and novel theoretical perspectives can only strengthen the explanatory framework of the i-deal construct.

The present study on i-deals draws upon the features of other new theoretical perspectives such as Theory of Pro-social Reasoning, Strategic Contingency Theory, Social Penetration theory and integrates them with Self-determination theory and Signaling theory to address three points: (i) to identify and empirically study additional individual level antecedents of task & work responsibility i-deals and flexibility i-deals (ii) to empirically test the competence-signaling function of task & work responsibility i-deals by studying the mediation effect of competence need satisfaction between task & work responsibility i-deals and academic self-concept, motivation and dropout intention of research scholars, and, (iii) to empirically test the trust-signaling function of flexibility i-deals by studying the mediating effect of perceived trust between flexibility i-deal and perceived stress.

While Theory of Pro-social reasoning is applied to study additional antecedents (supervisor's empathic concern and perspective-taking) to i-deals, features of Strategic Contingency Theory (actor-centrality) and Social Penetration theory (tenure under supervisor) have been employed to define research supervisor – doctoral scholar sampling frame for the study. Signaling theory has been integrated with Self-determination theory to examine Rousseau and colleagues (2006) notion that ideals can signal the value that an employer places on the i-deal receiver. This has been done earlier with respect to task i-deals and financial i-deals, where the competence-signalling, motivational mechanism underlying these i-deals was examined, which in turn positively influenced the citizenship behavior of the i-deal recipient. In this study, signaling theory facilitates the logic of how development and flexibility i-deals indicate positive messages to scholars (Connelly, Certo, Ireland & Reutzel, 2011), and self-determination theory articulates how the signals from developmental i-deals enhance scholar's competence need satisfaction and, in turn,

academic self-concept and reduce dropout intentions (Deci & Ryan, 1985; Ryan & Deci, 2000). SDT also explicates how signals from flexibility i-deals strengthen perceived trust which in turn reduces perceived stress. These ideas will be further developed in Chapter 3.

b) *Call for research examining additional antecedents of the idiosyncratic deals*

A recent meta-analysis of i-deals research revealed the need to go beyond individual proactivity, leader personality and leader-member relationships and persistently explore and investigate the characteristics, behaviours and styles of the employees and leaders, to contribute more antecedents of i-deals at the individual level that impact the creation of i-deals (Liao et al., 2014).

Multiple theoretical perspectives in the past have substantiated that mutual concern and caring is one of the cardinal characteristics of high-quality supervisory relationships (Colbert, Bono & Purvanova, 2008). This mutual concern, operationalized as “empathy” in the academic literature, has been established as an important leadership skill that can motivate and inspire others (Goleman, 1998). Empathy is associated with positive interpersonal and intrapersonal outcomes (Konrath & Grynberg, 2013) such as life satisfaction, emotional intelligence, and self-esteem (Eisenberg, Fabes, & Spinrad, 2006; Mayer, Caruso, & Salovey, 2000) and helps in building strong prosocial social networks (Konrath, Ho, & Zarins, 2016). Therefore, the present study intends to explore the role of leader empathy in successful authorization of i-deals and influence on individual-level outcomes. The most persistently used measure of empathy -Interpersonal Reactivity Index (IRI) - was developed by Davis (1980) which operationalized empathy as a set of four distinct but related constructs – *perspective-taking*, *empathic concern*, *personal distress* and *fantasy* - that all uniquely measured reactions of an individual to the observed experiences of another (Smith, Gardner & Signo, 1994). The present study examines one

cognitive (perspective-taking) and one affective or emotional component (empathic-concern) as a predictor of i-deal creation as majority theorists assert that perspective-taking and empathic concern are the most consequential components of successful social interactions (Parker & Axtell, 2001).

c) Studying interactive associations of empathic concern and perspective taking in predicting developmental i-deals and flexibility i-deals

A comparative understanding of role played by cognitive and affective empathy in predicting success of i-deal negotiation will deepen our knowledge about underlying processes that operate in human mind while granting i-deals. Previous research indicated that perspective taking and empathic concern have differential effects in negotiations. Galinsky, Maddux, Gilin & White (2008) found that while perspective taking increased individuals' ability to discover hidden agreements and to both create and claim resources at the bargaining table, empathic-concern did not prove nearly as advantageous and at times was detrimental to discovering a possible deal and achieving individual profit. Studying interactive association will enable us to understand the extent to which empathic concern and perspective-taking together or individually influence the decision-making of the supervisor while negotiating and granting i-deals.

d) Application of i-deals to a novel organizational context

Empirical studies on i-deals till date have been conducted with respect to managers and employees in IT, manufacturing, telecommunication and healthcare industries (Bal et al., 2012; Ng, T.W.H. et al., 2012a; Lee, C., & Hui, C., 2011, Hornung et al., 2010). Its application in strengthening academic relationships have not yet been explored and hence presents a unique opportunity to widen the scope of i-deal concept while addressing key frictional issues in research on supervisor-scholar relationships.

e) *Addressing existing issues in a supervisor-scholar relationship in doctoral education*

The learning process in doctoral education is formed and influenced by both the supervisor and the doctoral student (Franke & Arvidsson, 2011). While some researchers (Green & Lee, 1995) argued that creating a collaborative conversation and communication between supervisor and student is unimaginable and unfeasible, few others (Bartlett & Mercer, 2000) perceived this relationship as more collaborative in nature where the supervisor acts as a facilitator and offers greater flexibility and autonomy and scholars utilize these arrangements to balance their personal and academic lives. Irrespective of this dichotomous view, supervision has consistently emerged as an amalgam of pedagogical and personal relationships. This intensifies the complexity of supervisor-scholar relationship as each group combats its own challenges while attempting to produce the quality output i.e. thesis dissertation, a culminating component of doctoral studies which many students emphasize as the most difficult barrier to independence (Katz & Martin, 1997; Deuchar, 2008; Halse & Malfroy, 2010).

The literature suggests that supervisors experience frustration with the progress and attitude of students on one hand and the increasing number of bureaucratic processes on the other. In addition, the emergence of structured doctoral programmes, has supplemented to the pressure by placing new demands and additional evaluation procedures and schedules requirements. Also, due to massification and concentration, the number of research students has risen sharply at a time when, in many research-intensive institutions, the pool of supervisors has not grown pro rata, in many cases the result has been an increase in the numbers of early career researchers whom staff are expected to supervise. Particularly outside the sciences, this increase in numbers has been compounded by a broadening of the research areas which supervisors are expected to cover. So, instead of supervising directly within their own area of expertise, the need to accommodate larger numbers has led to some

supervisors being allocated more and more early career researchers whose research interests are peripheral to their own (Ives & Rowley, 2005). This double bind of larger numbers and greater breadth has added significantly to supervisory workloads. Another facet of the increase in numbers has been a shift in focus away from the traditional model of supervising students independently and towards group supervision, particularly in the early stages (Samara, 2006). Clearly, this demands additional skills from supervisors in terms of managing groups while still ensuring that individuals receive appropriate attention.

The literature also reveals that students struggle to remain motivated beyond the initial phase when the achievement of award appears relatively close. Students experience disengagement which impact their persistence to complete their study and leads to increased stress and higher attrition rate (Gardner, 2007). Doctoral students also find it difficult to balance work and private life and hence crave for a supporting environment (Appel & Dahlgren, 2003). In fact, Hagedorn (2012) argued that though scholarly life fortifies a meaningful life, family and social commitment are more important.

The present study suggests that i-deals may serve as a conflict-resolution mechanism and create a win-win situation for both scholar and supervisors, improve quality of research output, and significantly reduce the dropout rates by facilitating the development of high-quality exchange relationships between research supervisors and doctoral scholars.

f) *Lack of i-deal research in the Indian context*

Though research in the area of i-deals has been growing significantly across the globe, it is intriguing that Indian researchers have not yet given any attention to this upcoming research area. Till date, most researchers on i-deals have conducted studies in countries such as USA, Germany, Netherlands, Canada, France, Italy, China and Vietnam

as observed in Table 2.1. The only study conducted by Indian researchers on i-deals has been on Indian hospitality industry by Dhiman, Budhwar & Katau (2017) in collaboration with international researchers. This study will be uniquely placed both in terms of its context and demographics.

A careful examination of the abovementioned research gaps raises some critical research questions that the present study sets out to address as discussed next.

8. Research Questions

The research questions associated with the above objectives are as under:

1. Are i-deals being negotiated in academic relationships i.e. between research supervisors and doctoral scholars?
2. What is the relationship between supervisor empathy and authorization of i-deals?
3. Is there a two-way interaction effect between empathic concern and perspective-taking in predicting successful authorization of i-deals?
4. Do i-deals exhibit signaling function in the context of supervisor-scholar relationships?
5. Can i-deals influence the dropout intentions of doctoral scholars in HEIs in India?

The research questions facilitated the specification of research objectives of the current study. The objectives of the study are discussed further.

9. Objectives of the Study

The overarching aim of this thesis is to examine additional antecedents and academia-specific outcomes of idiosyncratic deals. The four main research objectives are:

1. To study i-deals in the context of research supervisors and doctoral scholars in the context of Higher Educational Institutions (HEIs) in India.

2. To examine the relationships between empathic concern of supervisor, perspective-taking of supervisor, and authorization of task & work responsibility i-deals and flexibility i-deals.
3. To study the combined effect of empathic concern and perspective-taking of supervisor in predicting supervisor authorization of task & work responsibility i-deals and flexibility i-deals.
4. To study the moderating effect of prosocial motivation in the relationship between empathy and i-deals.
5. To examine the signalling function of task & work responsibility i-deals and flexibility i-deals.
6. To explore the influence of i-deals receipt on scholar's attitudes through the intermediate signaling mechanisms.
7. To explore the influence of i-deal receipt on dropout intentions of the scholars.

These objectives encourage further investigation of relevant theories and identify factors influencing supervisor-scholar relationships and that can be influenced through i-deals. It also warrants integration of evidences from areas of i-deals research and research in doctoral education in Higher Educational Institutions (HEIs) in India, to formulate hypotheses and develop a theoretically and a practically sound conceptual model.

10. Theories

a) Social Exchange Theory

Social Exchange theory is widely applied to elucidate the nature of the employee-organization or employer-employee relationships (Aryee et al., 2013). Social exchange relationships emerge when employers initiate employee well-being efforts which in turn

leads to positive employee outcomes (Cropanzano & Mitchell, 2005). Social exchange theory postulates that by allowing employees to negotiate customized work arrangements, the organization creates a foundation for employee reciprocity (Rousseau, 2005). Negotiation and authorization of i-deals reinforce the social exchange between employers and employees by signaling organizational support in the form of social recognition and contribution towards employee's overall well-being (Rousseau et al., 2009). Such perceived organizational support stimulates affective commitment and proactive behaviours among employees (Crant, 2000).

b) Theory of Pro-social Reasoning

Theory of Pro-social Reasoning focusses on the ability of individuals to elicit a prosocial response to a situation where their needs or desires are in conflict with other person in need, in a context of absence of external rules or policies and formal obligations (Eisenberg, 1986). Pro social reasoning is a form of moral understanding that emphasizes on interpersonal framework than abstract designs of justice. It operates when individuals have to extend a decision in favour of others or be a provider of a resource that others need, which may or may not be mutually beneficial (Shaffer, 2002). The focus in such double bind situation is to act with responsibility and engage in prosocial behaviour rather than equity based moral decisions (Kolberg, 1984). The prosocial behaviour emanates from one of the multiple typologies of moral reasoning that are based on either emotions or cognition thus requiring individuals to employ empathic-concern and perspective-taking respectively. The lower and higher stages of moral reasoning co-exist and lower stages do not get replaced by higher stages of maturity and reasoning. This implies that an individual may zone into any one or more of these typologies based on the sense of responsibility towards others, personal values and goals in a situation. According to this theory, individuals gradually acquire and internalize affective, cognitive and social competencies

as they mature which enable them to tap into one of the various typologies of prosocial moral reasoning (Eisenberg, 1982; Eisenberg et al., 2006). Greater the level of prosocial moral reasoning, greater is the probability of both self- and other-informed prosocial behaviour and actions (Carlo, Mestre, Samper, Tur, & Armenta, 2011).

c) Self-determination Theory

Self-determination theory (SDT) is a central theory in the understanding of intrinsic motivation and guiding work motivation research (Gagne & Deci, 2005). The theory suggests that individuals have three fundamental psychological needs – need for autonomy, need for relatedness and need for competence (Ryan & Deci, 2000). Autonomy is the feeling of discretion and choice, relatedness is the feeling of belongingness and connectedness with others and competence is the feeling of efficaciousness and capability. The theory suggests that the social setting has a significant influence on intrinsic motivation of an individual through its impact on either need satisfaction or strengthening of perceptions of autonomy, relatedness and competence (Grouzet et al., 2004). Needs satisfaction is seen as a universal inevitability and research suggests that they are most closely linked with event-based emotions and perceptions (Sheldon et al., 2001). In addition, the emphasis of SDT is not individual variances in the strength of these psychological needs, but the extent to which they are fulfilled. Gagne and Deci (2005, p. 337) highlighted that “SDT postulates that when people experience satisfaction of the needs for relatedness and competence with respect to behaviour, they will tend to internalize its value and regulation, but the degree of satisfaction of the need for autonomy is what distinguishes whether identification or integration, rather than just introjection, will occur”.

Organizational researchers can employ SDT for explaining the motivational influences of transformational leadership among supervisors including intellectual

stimulation and individualized consideration. This may encourage subordinates to set autonomous and not controlled goals thus leading to higher performance and positive attitudes (Bono & Judge, 2003). SDT can be integrated with job design such that job structure itself can stimulate intrinsic motivation. Individuals when provided with autonomy enjoys the discretion and freedom to craft their jobs in a way that is intrinsically motivating. TWR i-deals provide such discretion to design tasks and achieve higher performance by being motivated.

d) Signaling Theory

Spence (1973) proposed signaling theory in the context of job markets and suggested that employees cannot directly view certain attributes of organizations which in turn impacts the employees' perceptions about the organization which may further reduce organization's chances of acquiring the right talent. Therefore, researchers argued that in the absence of accurate information about the organization, prospective employees could use organizational communications or signals to form an image about the organization's expectations (Suazo, Martinez & Sandoval, 2011). Connelly et al. (2011) established that several elements of the signaling theory highlight its appropriateness to be applicable to function of i-deals as organizational signals. They highlighted following key features the theory: a signaler (supervisor in this context) who is a representative of the organization and possess the authority, resources and information (academic institutions), a receiver (research scholar) who may seek access to resources or information and the signal (i-deals) which is the actual action that the signaler puts forth for the receiver. Since, in a supervisor-subordinate relationships power and information asymmetry is inherent, supervisors can use certain communication or signals in the form of authorization of i-deals sought by their subordinates to reduce uncertainty and encourage positive outcomes (Belogolovsky & Bamberger, 2014, p. 1709). The theory also suggests that since signals are meant to "focus

primarily on the deliberate communication of positive information in an effort to convey positive organizational attributes” (Connelly et al., 2011, p. 44), they need to be noticeable and communicable in a way that the underlying message is appropriately interpreted by the receivers (Belogolovsky & Bamberger, 2014).

It is evident that features defined under signaling theory hold relevance in the context of i-deals as supervisors can employ i-deals to communicate their regard and positive evaluation for selected scholars and elicit favourable behavioral responses. Further, supervisors have considerable control over the number and type of i-deals to be provided and message to be communicated. Also, since i-deals are formulated to fit individuals’ skills or needs, they will most likely stimulate positive attitudes and behaviors among subordinates that will also benefit the signaler.

Based on the evidences obtained from the literature on i-deals and supervisor-scholar relationships, following hypotheses were proposed (Table 4) and conceptual frameworks (Figure 1 and Figure 2) were formulated.

Table 4
Overview of Hypotheses

Hypothesis	Hypothesized relationship
Hypothesis 1	Empathic-concern is positively related to authorization of (H1a) task & work responsibility (H1b) schedule flexibility and (H1c) location flexibility i-deals.
Hypothesis 2	Perspective-taking is positively related to authorization of (H2a) task & work responsibility (H2b) schedule flexibility and (H2c) location flexibility i-deals.
Hypothesis 3	Prosocial motivation moderates the relationship between empathic-concern and authorization of (H3a) task & work responsibility (H3b) schedule flexibility and (H3c) location flexibility i-deals.
Hypothesis 4	Prosocial motivation moderates the relationship between perspective-taking and authorization of (H4a) task & work responsibility (H4b) schedule flexibility and (H4c) location flexibility i-deals.

Hypothesis 5	Supervisor authorization of task & work responsibility is positively related to their perceptions of (5a) increases in performance standards and (5b) employee motivation.
Hypothesis 6	Supervisor authorization of (H6a) location flexibility and (H6b) schedule flexibility i-deals is positively related to their perceptions of increases in employee work-life balance
Hypothesis 7	Task & work responsibility i-deals is positively related to competence-need satisfaction.
Hypothesis 8	Schedule flexibility i-deals is positively related to perceived trust.
Hypothesis 9	Location flexibility i-deals is positively related to perceived trust.
Hypothesis 10	Competence-need satisfaction is positively related to (10a) academic self-concept and (10b) motivation of scholar
Hypothesis 11	Perceived trust is positively related to perceived stress.
Hypothesis 12	(12a) Academic self-concept is negatively related to dropout intentions of the scholar. (12b) Student motivation is negatively related to dropout intentions of the scholar. (12c) Perceived stress is positively related to dropout intentions of the scholar impact dropout intentions of the scholar.

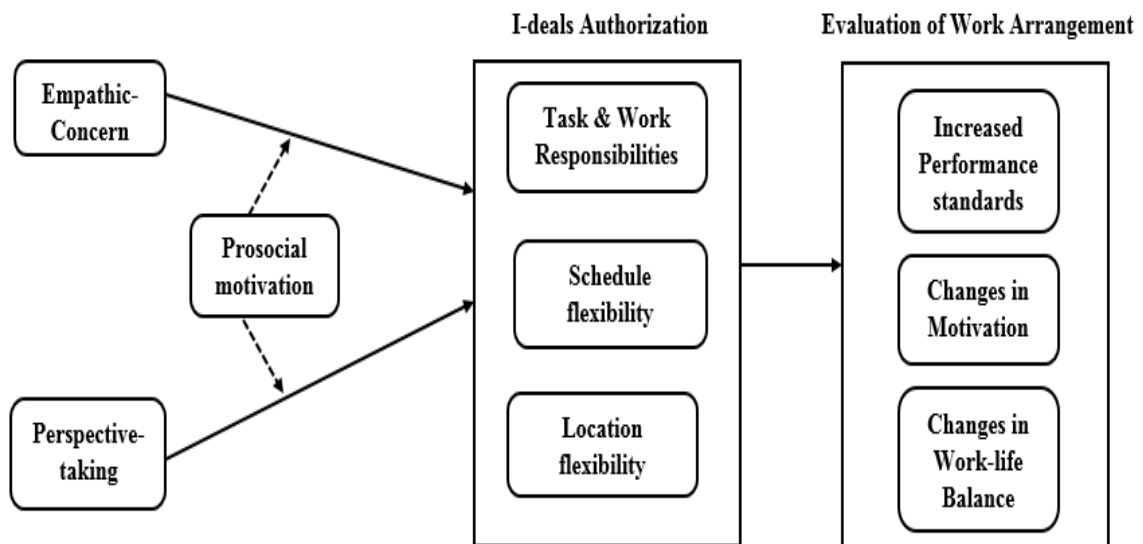


Figure 1: Empathy-I-deals Conceptual Framework

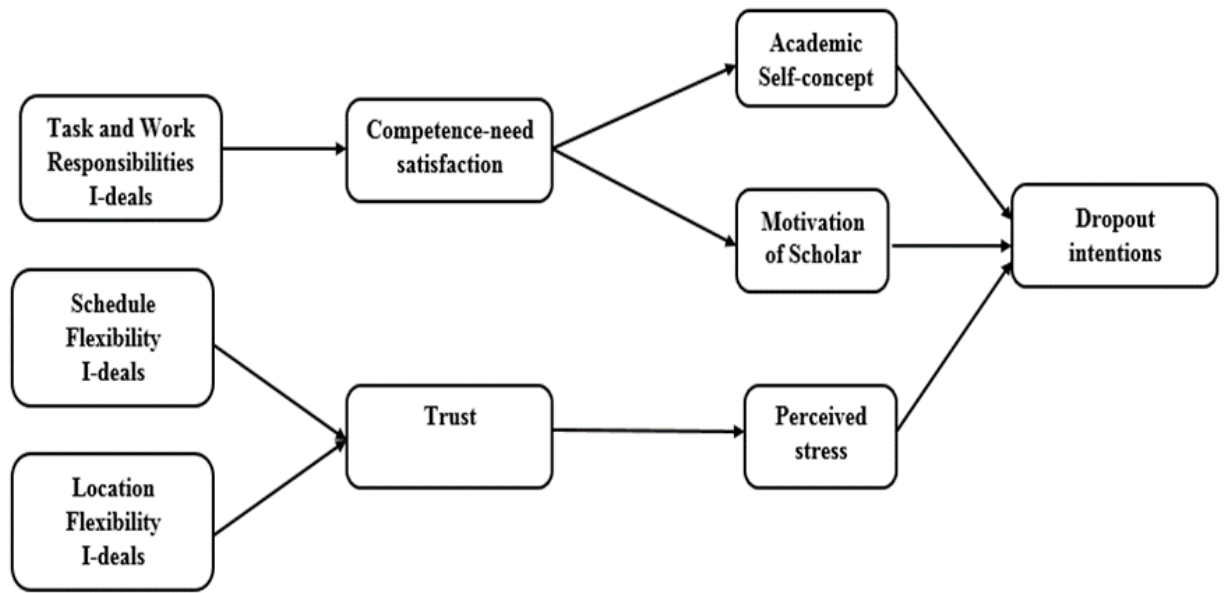


Figure 2: I-deals-Dropout Intentions Conceptual Framework

11. Methodology

The study is found to be relevantly placed in the positivistic paradigm. The study has an objective orientation and views reality to be independent and external to social actors. The researcher takes an objective stance and intends to employ scientific methods to test proposed relationships and explain cause-effect relationships between variables through statistical measurement and data analysis. The research approach employed in the present thesis is - *hypothetico-deductive approach*. The nature of the current study is primarily descriptive and therefore, the research strategy adopted is survey method. The study utilizes a cross-sectional design due to limited amount of time, data and respondent (research supervisors) access and resource constraints.

The target population for the present study was research supervisors and doctoral scholars of top five HEIs in each of the following categories - IIMs, IITs, Central Universities, NITs and Other Ivy League Institutions. The top five ranking in each category

was based on their respective Research and Professional Practice Score (RPC) as given under NIRF by MHRD for the year 2017, indicating the presence of rigorous research culture in these institutions. Purposive sampling, a type of non-probabilistic sampling was employed. Further, to ensure heterogeneity in the sample and better representation of the population, it was ensured that responses from each of the identified HEI were obtained. The supervisors and scholars belonged to the courses with highest number of Ph.D. enrollment in India i.e. Engineering & Technology, Sciences, Management Studies, Social Sciences and Languages (MHRD, 2017). The data was collected from two different respondent groups to test Model 1 and Model 2. For testing Model 1 (antecedent model), a sample of 317 research supervisors was selected and for testing Model 2 (outcome model), data was collected from 797 doctoral scholars of the same institutions.

All the constructs were operationalized as multi-item variables (Churchill & Iacobucci, 2002). The questionnaire items were extracted from well-established scales given in extant literature. All the items were measured using a 5-point Likert scale with relevant scale labels. The scales used to collect data from research supervisors in HEIs for testing Model 1 (antecedent model) are as follows:

- *Empathic-concern*: EC of supervisors was measured using the 7-item sub-scale of Interpersonal Reactivity Index (IRI) developed by Davis (1980) to measure multi-dimensional construct of empathy.
- *Perspective-taking*: PT of supervisors was measured using the 7-item sub-scale of Interpersonal Reactivity Index (IRI) developed by Davis (1980) to measure multi-dimensional construct of empathy.
- *Prosocial motivation*: PM of supervisors was measured using five-item scale developed by Grant and Sumanth (2009) in the context of university faculty and staff.

- *Authorization of I-deals*: Supervisors' authorization of three types of i-deals i.e. TWR, SF and LF i-deals was measured using Rosen *et al.* (2013) scale. The scale was originally developed in the context of supervisors and subordinates. TWR scale consisted of six items, SF was measured using three items and LF was measured using two-item scale.
- *Increase in performance standards*: Supervisors' perceptions of increase in performance standards of scholars was measured using three-item scale developed by Hornung *et al.* (2009).
- *Change in motivation*: Supervisors' perceptions of change in motivation of scholars was measured using three-item scale developed by Hornung *et al.* (2009).
- *Improved work-life balance*: Supervisors' perceptions of change in motivation of scholars was measured using three-item scale developed by Hornung *et al.* (2009).

The scales used to collect data from doctoral scholars in HEIs for testing Model 2 (outcome model) are as follows:

- *Competence-need satisfaction*: CNS was measured using basic psychological needs at work scale (BPNWS) developed by Brien *et al.* (2012). It constituted four items.
- *Perceived trust*: A 3-item scale developed by Roberts and O'reilly (1974) was used to measure perceived trust in supervisors.
- *Academic self-concept*: 20-items Academic Self-Concept Scale developed by Reynolds *et al.* (1980) was used to measure ASC.
- *Motivation of Scholar*: It was measured using Motivation for PhD Studies scale. This scale was developed using two separate scales - Self-Regulation Questionnaire (Ryan & Connell, 1989) and Academic Motivation Scale (Vallerand, Blais, Brière, & Pelletier, 1989). The scale has good psychometric properties (Litalien *et al.*, 2015) and contains 15 items.

- *Perceived stress*: Perceived stress among scholars was measured by adapted version of Cohen *et al.* (1983) scale. The scale consisted of 10-items and measured items on a five-point Likert scale.
- *Dropout intention*: In general, dropout intentions is taken as an indicator of dropout behavior and intention is presumed to be an immediate antecedent of action as theorized under Theory of Planned Behavior (Ajzen, 1985). Sheeran (2002) reported a mean correlation of .53 between dropout intention and behavior in a meta-analytic study implying substitution of one construct with another as relevant. In present context, scholars responded to two-items measuring dropout intention on a 5-point Likert scale (1 = not at all likely, 5 = very likely).

To conduct the pilot studies, data was collected from 50 research supervisors and 150 doctoral scholars. The data was analyzed using IBM SPSS Version 25.0. The factor analysis results of pilot study initially indicated few cross-loadings in both the models and therefore the items were dropped and analysis was performed again. The results indicated improved loadings of indicators on to their respective latent constructs and improved reliabilities. Therefore, an adapted and validated version of the questionnaires along with inclusion of suggested inputs were further distributed to collect data for the final study.

For Model 1 (antecedent model), pilot data was collected from 50 research supervisors and factor analysis was conducted. Bartlett's test of sphericity is found to be significant with $p < 0.001$, with df (degrees of freedom) equal to 630. The Kaiser-Meyer-Olkin (KMO) value is 0.620 which is above the suggested threshold value of 0.5, indicating significant correlation between underlying constructs and suitability for further analysis (Kline, 1994). The factors were extracted using Principle component analysis (PCA) with varimax rotation. The cumulative variances which is found to be 83.22% for all the seven factors. It further confirms the uni-dimensionality of all the variables with Eigenvalue

reported to be greater than 1. The Cronbach's values ranged from 0.715 to 0.954 which are above the suggested threshold value of 0.7 and therefore indicate significant construct reliability for all the constructs (Nunally, 1978).

For Model 2 (outcome model), pilot data was collected from 150 doctoral scholars and factor analysis was conducted. Bartlett's test of sphericity is found to be significant with $p < 0.001$, with df (degrees of freedom) equal to 1770. The Kaiser-Meyer-Olkin (KMO) value is 0.909 which is above the suggested threshold value of 0.5, indicating significant correlation between underlying constructs and suitability for further analysis. the cumulative variances which is found to be 85.95% for all the seven factors. It further confirms the uni-dimensionality of all the variables with Eigenvalue reported to be greater than 1. The Cronbach's values ranged from 0.760 to 0.989.

The revised questionnaire was then distributed to 500 research supervisors and 1000 doctoral scholars in both offline and online mode over a period of eight months and responses were subsequently registered. The complete dataset was transferred to the Statistical Package for the Social Sciences (SPSS) Version 24.0 for descriptive and moderation analysis. The data was further subjected to structural equation modelling using AMOS.

12. Data Analysis

a) Sample Demographics

The demographic profile indicates that 70.34 of the research supervisors were male and around 47.63 percent of respondents were working at the level of Professor. About 55.83 percent of the research supervisors belonged to the non-Sciences departments (Management, Social Sciences and Language Studies) and remaining 44.17 percent of the supervisors

belonged to the Sciences department (Sciences and Engineering). A major percentage of the respondents in this category belonged to the Central Universities i.e. 40.69 percent, as universities constitute departments of all the subject areas. Nearly half of the supervisors had around 4-6 doctoral scholars currently under supervision, while a relatively small percentage of them had number of scholars less than 2 or greater than 6.

Among doctoral scholars, 59 percent of the respondents were male and 41 percent were females. Most scholars, i.e. 86.70 percent, were single and only 13.3p percent were married. Around 48.43 percent of the scholars were pursuing third year of their doctoral course and remaining belonged to fourth year and above. Nearly 58 percent of the scholars were from the non-Sciences departments (Management, Social Sciences and Language Studies) and remaining 42 percent of the scholars belonged to the Sciences department (Sciences and Engineering).

b) Descriptive statistics

In the present study, for both Model 1 and Model 2, the mean values above 3 and standard deviations above 1. The skewness values are between 0 and -1 indicating slightly negatively skewed data and the kurtosis values are in the range of 0 and -2, also indicating non-normal distribution and moderate departure from normal distribution (mean=0, standard deviation=1, skewness=0, kurtosis=0).

c) Exploratory Factor Analysis (EFA)

Table 5: *KMO and Bartlett's Test (Model 1 Final Output)*

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.904
Bartlett's Test of Sphericity	Approx. Chi-Square	15100.307
	Df	630
	Sig.	.000

Table 6: *KMO and Bartlett's Test (Model 2 Final Output)*

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.963
Bartlett's Test of Sphericity	Approx. Chi-Square	52996.361
	Df	1770
	Sig.	.000

d) Measurement Model Evaluation: Confirmatory Factor Analysis

Table 7
Convergent Validity Results (Model 1)

	CR	AVE	MSV	Convergent validity
TWR	0.982	0.903	0.191	Yes
EC	0.983	0.908	0.208	Yes
PT	0.972	0.873	0.208	Yes
PM	0.895	0.634	0.111	Yes
CWB	0.965	0.901	0.227	Yes
IPS	0.947	0.856	0.349	Yes
CM	0.942	0.845	0.282	Yes
SF	0.929	0.813	0.349	Yes
LF	0.967	0.937	0.123	Yes

Note: For convergent validity: $CR > 0.7$; $AVE \geq 0.5$; $CR > AVE$

Table 8
Convergent Validity Results (Model 2)

	CR	AVE	MSV	Convergent validity
ASC	0.980	0.740	0.115	Yes
MS	0.982	0.789	0.139	Yes
PS	0.977	0.810	0.137	Yes

PWI	0.928	0.685	0.111	Yes
CNS	0.899	0.690	0.115	Yes
TB	0.931	0.818	0.141	Yes
SFI	0.918	0.788	0.141	Yes
LFI	0.907	0.830	0.092	Yes
DI	0.768	0.625	0.139	Yes

Note: For convergent validity: CR > 0.7; AVE ≥ 0.5; CR > AVE

Table 9
Discriminant Validity Results (Model 1)

	TWR	EC	PT	PM	CWB	IPS	CM	SF	LF
TWR	0.950								
EC	0.240***	0.953							
PT	0.260***	0.456***	0.934						
PM	0.302***	0.332***	0.275***	0.796					
CWB	0.373***	0.227***	0.199***	0.157**	0.949				
IPS	0.317***	0.145*	0.199***	0.170**	0.435***	0.925			
CM	0.437***	0.126*	0.169**	0.134*	0.471***	0.396***	0.919		
SF	0.353***	0.060	0.121*	0.163**	0.477***	0.591***	0.531***	0.902	
LF	0.324***	0.190**	0.213***	0.209***	0.344***	0.281***	0.322***	0.351***	0.968

Note: Discriminant validity: Square root of AVE > Inter construct co-relation.

Bold values are the square root of AVE

*Correlation is significant at the 0.10 level (2-tailed).

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

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

Table 10

Discriminant Validity Results (Model 2)

	ASC	MS	PS	PWI	CNS	TB	SFI	LFI	DI
ASC	0.860								
MS	0.337***	0.888							
PS	0.321***	0.308***	0.900						
PWI	0.165***	0.134***	0.176***	0.828					
CNS	0.340***	0.303***	0.224***	0.333***	0.831				
TB	0.323***	0.301***	0.370***	0.123**	0.220***	0.905			
SFI	0.303***	0.324***	0.301***	0.203***	0.327***	0.376***	0.888		
LFI	0.153***	0.164***	0.152***	0.128**	0.123**	0.200***	0.304***	0.911	
DI	0.271***	0.372***	0.275***	0.103*	0.214***	0.297***	0.372***	0.167***	0.791

Note: Discriminant validity: Square root of AVE > Inter construct co-relation.

Bold values are the square root of AVE

*Correlation is significant at the 0.10 level (2-tailed).

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

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

Table 10 and Table 11 reports inter-construct correlations of reflective constructs and the square root of AVE values on the diagonal for Model 1 and Model 2 respectively. Based on the Fornell- Larcker criterion indicated earlier, in both cases, the square root values of AVE are higher than the inter-construct correlations, thus suggesting acceptable discriminant validity for all the constructs in both the models.

Table 12

CFA - Model Fit indices (Model 1)

Fit Indices	Estimated Value	Threshold Values
CMIN/DF	1.499	< 3
P-VALUE	0.000	≥ 0.05
GFI	0.800	≥ 0.95 Extremely good; ≥ 0.90 acceptable; ≥ 0.80 sometimes permissible
CFI	0.982	≥ 0.95
TLI	0.979	≥ 0.95

AGFI	0.856	≥ 0.80
NFI	0.947	> 0.90
RMSEA	0.040	≤ 0.05
P close	0.900	Close to 1
Note: Reported fit indices indicate adequate model fit		

Table 13
CFA-Model Fit indices (Model 2)

Fit Indices	Estimated Value	Threshold Values
CMIN/DF	2.461	< 3
P-VALUE	0.000	≥ 0.05
GFI	0.834	≥ 0.95 Extremely good; ≥ 0.90 acceptable; ≥ 0.80 sometimes permissible
CFI	0.954	≥ 0.95
TLI	0.951	≥ 0.95
AGFI	0.818	≥ 0.80
NFI	0.924	> 0.90
RMSEA	0.043	≤ 0.05
P close	0.900	Close to 1
Note: Reported fit indices indicate adequate model fit		

Table 14
Hypothesis Testing Results (Model 1)

Exogenous Construct	Endogenous Construct	Hypothesis	Standard Estimates (β)	Standard error	t-statistic	p-value	Interpretation
Empathic-concern	Task & work responsibility-deals	H1a	.156	.056	2.824	.005	Significant

Empathic-concern	Schedule flexibility i-deals	H1b	.013	.051	.217	.828	Not Significant
Empathic-concern	Location flexibility i-deals	H1c	.105	.060	1.860	.063	Not Significant
Perspective-taking	Task & work responsibility i-deals	H2a	.196	.051	3.532	***	Significant
Perspective-taking	Schedule flexibility i-deals	H2b	.122	.046	2.102	.036	Significant
Perspective-taking	Location flexibility i-deals	H2c	.193	.055	3.391	***	Significant
Task & work responsibility i-deals	Increased performance standards	H5a	.315	.055	5.734	***	Significant
Task & work responsibility i-deals	Increased motivation	H5b	.434	.054	8.133	***	Significant
Schedule flexibility i-deals	Improved work-life balance	H6a	.421	.061	7.669	***	Significant
Location flexibility i-deals	Improved work-life balance	H6b	.207	.048	3.961	***	Significant

Table 15
Hypothesis Testing Results (Model 2)

Exogenous Construct	Endogenous Construct	Hypotheses	Standard estimate (β)	Standard error	t-statistic	p-value	Interpretation
Task & work responsibility i-deals	Competence-need satisfaction	H7	0.336	.039	9.056	***	Significant
Schedule flexibility i-deals	Perceived trust	H8	0.355	.040	9.632	***	Significant

Exogenous Construct	Endogenous Construct	Hypotheses	Standard estimate (β)	Standard error	t-statistic	p-value	Interpretation
Location flexibility i-deals	Perceived trust	H9	0.102	.031	2.976	.003	Significant
Competence-need satisfaction	Academic self-concept	H10a	0.348	.038	9.679	***	Significant
Competence-need satisfaction	Motivation of Scholar	H10b	0.313	.039	8.614	***	Significant
Perceived trust	Perceived stress	H11	-0.373	.035	10.504	***	Significant
Academic self-concept	Dropout intention	H12a	-0.128	.026	3.239	.001	Significant
Motivation of Scholar	Dropout intention	H12b	-0.285	.031	5.960	***	Significant
Perceived stress	Dropout intention	H12c	0.151	.027	3.752	***	Significant

Table 16
Summary of Moderation Analysis Results

Independent Variable	Dependent Variable	Moderating Variable	Hypothesis	Result
Empathic-concern	Task & work responsibility i-deals	Prosocial motivation	H3a	Supported
Empathic-concern	Schedule flexibility i-deals	Prosocial motivation	H3b	Not Supported
Empathic-concern	Location flexibility i-deals	Prosocial motivation	H3c	Not Supported
Perspective-taking	Task & work responsibility i-deals	Prosocial motivation	H4a	Supported

Independent Variable	Dependent Variable	Moderating Variable	Hypothesis	Result
Perspective-taking	Schedule flexibility i-deals	Prosocial motivation	H4b	Not Supported
Perspective-taking	Location flexibility i-deals	Prosocial motivation	H4c	Not Supported

The results showed that both empathic-concern and perspective-taking related positively to authorization of task & work responsibility i-deals but only perspective-taking related positively to the authorization of flexibility i-deals. This indicates that supervisors' authorization of any type of negotiated work arrangements definitely involves critical thinking and does not occur as a form of an affective or emotional response. Yet, for authorization of developmental i-deals or task-based i-deals, emotions in the form of empathic-concern improves the probability of successful negotiation.

The results showed that prosocial motivation moderates the relationship between empathic-concern and authorization of task & work responsibility i-deals such that the authorization of task i-deals was maximum when empathic-concern and prosocial motivation were high and minimum at the lower end. Prosocial motivation also moderated the relationship between perspective-taking and task & work responsibility i-deals such that at high levels of perspective-taking and prosocial motivation, supervisors were most likely to authorize i-deals.

Supporting the idea of self-determination theory, the study results showed that task & work responsibility i-deals, a form of supervisor support fulfils scholar's need for competence thus improving his/her self-concept and motivation which eventually reduces tension such as dropout intentions.

13. Major Contributions of the Study

Scientific knowledge progresses by systematically building studies on the ever-strengthening foundation of previous studies, and this accumulation takes our understanding of a new and a higher level. Hence, it is important to know how a study contributes to the existing theory and practice and its relevance to the reader, before exploring it in detail. Thus, an overview of theoretical and practical contributions made by this study is provided here.

a) Theoretical Formulation

Theoretically, this thesis contributes to the existing knowledge in multiple ways. First, this thesis presents an alternative perspective to view the concept of the idiosyncratic deals by integrating multiple theories such as Theory of Pro-Social Reasoning, Social Penetration Theory, Self-Determination Theory and Signaling Theory. Secondly, it expands the scope of previous research by suggesting application of i-deals in the field of academia and argues the possibility of the existence of idiosyncratic deals between research supervisors and doctoral scholars and their role in managing the much-discussed complexity of these relationships. Further, this thesis responds to call for examining additional antecedents to i-deals by studying the role of empathic-concern and perspective-taking of supervisor in authorization of i-deals, which has not been examined by previous researchers. The study also will stand as one of the earliest studies in the Indian context as there are only a few studies in Indian context so far.

b) Practical Application

From a practitioner standpoint, this thesis deals with academia-specific outcomes of i-deals which will enable supervisors to better manage their relationship with the scholars by understanding what message each of these customized work arrangements convey to the scholar and what impact it will have on the scholars perceptions and behaviours. The study also guides supervisors in decision-making by helping them in understanding the relative role of their affective (empathic-concern) and cognitive (perspective-taking) personalities in negotiating arrangements with individual scholars. Further, this thesis is felicitous as top institutes in India as well as across the globe face high attrition rate among doctoral students which directly impacts economic prosperity, research & innovation and knowledge production of a nation.

The findings of the present study indicate that supervisors who have high prosocial motivation are capable of creating a work environment that propagates perceptions of support and trust among their scholars. Therefore, academic institutions may benefit by creating a conscious awareness among research supervisors about the influence of their prosocial behaviour towards research scholars and enabling the process of quality research. At the same time, the study encourages research scholars to seek opportunities that build their knowledge and skills from their supervisors. The findings of the study encourage integrative agreements between scholars and supervisors that may ensure resolution of unsaid issues this type of leader-member relationship and benefit both supervisor and scholar in terms of better time management, task scheduling, timely completion of work and quality of research output.

Realizing the importance of prosocial motivation, supervisors themselves could drive their efforts in aligning their scholars' values with their own and stimulate drive to

achieve highest quality research. Given such feeling of trust and confidence, scholars can be expected to show increased performance standards, high motivation and improved work-life balance. Similar findings were reported by other studies which proved that informal controls, like open-door problem resolution, socialization and mentoring etc., effectively complements the formal authority by creating an overall altruistic workplace (Cardinal, Sitkin, & Long, 2004). Such an altruistic supervision is essential as scholars emulate their supervisors in future based on their supervisory experiences.

14. Limitations and Future Research Directions

While the present study has significant implications, it faces few limitations and provides scope for future research. The present study utilizes a cross-sectional design study and hence future research should explore longitudinal designs to evaluate probabilities of reverse causation. In continuation with the above limitation, researchers must utilize advanced methodologies and pursue similar studies using matched responses obtained from supervisor-scholar dyads or collect group level data to explore coworker perspectives for in-depth understanding of antecedents, consequences, and underlying mechanisms of i-deals. This study did not utilize such advanced methodology as grouping scholar and supervisor data relevantly was very difficult owing to respondent professional apprehensions and confidentiality concerns.

The study does not delve deeply into the neuropsychological aspects of empathy which is a deviation from most recent empathy-related studies. It is a linear relationship based model and does not take into consideration underlying mediators. The actual link between empathy and i-deals is not linear and consist of other variables influencing their

relationship. The neuroscience guiding the empathy in the human brain can be investigated through integrative negotiations through interdisciplinary experiment-based studies.

Further, this study does not take into consideration the justice perceptions of co-scholars who are key stakeholders within a supervisors' research team. Therefore, future studies should explore co-scholars' perspectives about i-deals received by other scholars and the circumstances under which they will support or oppose them. The study is conducted at the individual-level and did not explore i-deals in the context of teams. Collective examination of scholars working under same supervisors may have provided insights into task interdependence among scholars and differences in the quality of relationship of each scholar with the supervisor.

The findings of this study cannot be generalized to other types of i-deals as the nature of TWR i-deals and flexibility i-deals differ from i-deals such as financial i-deals (Rosen et al., 2013). Therefore, future studies need to investigate other underlying theoretical mechanisms that can explain the unique effects of financial i-deals in comparison to other forms of i-deals.

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