JOB CHARACTERISTICS, SATISFACTION AND ENTREPRENEURIAL INTENTION:

A STUDY OF PLATFORM BASED GIG ECONOMY WORKERS

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

DOCTOR OF PHILOSOPHY

IN

MANAGEMENT

BY

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DECLARATION

I, Muhammed Rafi T A, hereby declare that this thesis entitled "***Job Characteristics, Satisfaction And Entrepreneurial Intention: A Study Of Platform Based Gig Economy Workers***" in fulfilment 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, Professor, School of Management Studies, University of Hyderabad.

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

A. Journal Publication

Publised Paper Entitle "Multidimensional energy poverty and human capital development: Empirical evidence from India" in Energy Economics, Vol. 101, 105427. [Scopus, ABDC - A*]

B. Conferences and Workshops

a. Presented the entitled "Gender, Financial Empowerment and Business Venture Propensity" at 12th Doctoral Thesis Conference Organized by ICFAI Business School, Hyderabad on 18-19 April, 2019.

b. Presented paper entitled "Gender, Financial Empowerment and Business Venture Propensity" at Conference on Excellence in Research and Education (CERE) held at IIM, Indore on 3-5 May, 2019.

c. Paper entitled "Measuring Nature of Work in the Gig Economy: Validating Job Characteristic Questionnaire" at 3rd International Conference on Emerging Trends on Engineering Science, Technology and Management (ICETESTM-2019), Bhopal on 6-7 September 2019

d. Attended 3-day workshop on Metanalysis and Systematic Review conducted by School of Medical Sciences, University of Hyderabad at UoH campus in collaboration with Campbell Collaboration, Norway, during 5-7 February, 2018.

e. Attended 4 days' Workshop on Advanced Econometrics for Research in Social Sciences, conducted by SMS University of Hyderabad, From March 29 to April1, 2019

f. Attended 3 days Doctoral Scholar's School, Conducted by IIM Ahmadabad during 20 – 22 September, 2019.

g. Attended 7 days' workshop on Emerging Trends and Methods in Social Enterprise Research Conducted by IIM Udaipur during 6-11 January 2020

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

Course Code	Name	Credits	Pass / Fail
1. BA-801	Individual and Organizational behaviour	3	Pass
2. BA-802	Statistics for Business Analytics	3	Pass
3. EG-825	Academic Writing for Doctoral Students	3	Pass
4. MS-851	Research Methodology	3	Pass

Research Supervisor **Dean, School of Management Studies**

(Prof. P. Jyothi) (Prof. Mary Jessica)

DEDICATION

To my father, who was the true beacon of light throughout my life. He Sacrificed everything and paved the path for us. He backed and motivated me to pursue my dreams and continue my education to the point that I never felt I was a first-generation graduate. I am sure he is now in a better place to see me complete my research work. This is for you, my Vapichi!

And to my mother. The super lady who did all it takes to bring up me and mould my character and personality. The selfless woman who not only cared for her family and children but had high ambitions for them and worked hard to make them achieve it. This is for you too Ummachi; your prayers made this possible.

ACKNOWLEDGEMENTS

In the name The Almighty

I am thankful to The Almighty, for bestowing me with this opportunity and giving me the strength and determination to complete my thesis.

A plethora of people, both near and far, have played crucial roles in making my thesis a reality, and I owe them an enormous debt of gratitude.

Professor P. Jyothi has been an excellent mentor and teacher, and she deserves my eternal thanks and more. Thanks to her professional guidance and friendly encouragement, without which I could not have completed my study and had a pleasant time conducting my research. She has been by my side the whole way through, lending support on a mental, moral, and emotional level.

I am incredibly grateful to my Doctoral Committee members Dr Sapna Singh, Dr Punam Singh, and Dr P. Murugan for their constant inputs throughout my research and for being extremely encouraging. I am immensely grateful to all other faculty members of the School of Management Studies for their motivation and support. I am also thankful to other staffs of the department for their assistance provided.

I thank all my fellow research scholars for sharing their research passion and carrying out productive discussions throughout my tenure at the University. A special thanks to my friends Naseef, Brahmani, Rasheed, Salu, Athira, Mahima and Radney for all the fun memories.

I hereby acknowledge various resources and guidance provided by the School of Management Studies, University of Hyderabad and University Grants Commission (UGC) for funding my doctoral research through Junior Research Fellowship (JRF) and Senior Research Fellowship (SRF).

I would also like to thank all the respondents of my study across India for unhesitatingly cooperating with my queries.

My friends inside the campus and outside were a huge part of my journey. I owe you bigg- Muhammed Ali, Mujeeb, Abdul, Misab Unais, Pathan, Saurabh, Asif, Swalih, Saif, Shareef, Usman, Ayoob, Abdurahman, Shihab, Muhsin, Binod, Satheesh, Samson, Athar, Vasil, Anees, Salman, Salam, Thahir, Thufail, Shameem, Irfan, Shafi, Thaufeeq, Dilbar, Shihab, Yasir, Waseel, Ramees, Raqeeb, Shareef… and the list goes on.

A most special thanks go to my wife Fathma Fida for being my pillar of strength. She made my journey easy by being a great partner. I thank her for supporting me in pursuing my passion and ensuring her sacrifices transform into my happiness.

A heartfelt thanks and a big hug to my son Affan Abdulla for being the new source of my motivation and the bundle of joy. I thank him for and bringing a smile to my face whenever I was upset, tired or otherwise.

I owe to my brother Rashid who took the responsibility of a big brother and supported the family and allowed me to pursue my education for so long. I would like to thank him and my siblings Ramla and Risvana for all the support they have provided throughout my life. They believed in my abilities and motivated me to pursue my passion.

Last but not least, I would like to remember the sacrifices my parents, Subaida and late Abdulla Musliyar, have made for us and thank them for everything they did to make me reach where I am today.

ABSTRACT

Rapid digitalization and the remote work culture instigated by the global pandemic have resulted in unprecedented growth in the platform-based gig economy. The gig economy is defined as 'people using apps (also commonly known as platforms) to sell their labour'. The rapid growth of these non-traditional jobs has brought fundamental changes to the nature and characteristics of work.

The broader objective of this study is to study whether work in the gig economy influences entrepreneurial intention and explore the nature of work in the gig economy and work-related psychological states which can result in positive work outcomes. Building on the foundations of theories like job characteristics theory, entrepreneurial event model, and theory of planned behaviour, this study attempts to propose and test a comprehensive theoretical framework to explain how variation in the job characteristics of workers in the gig economy influence their entrepreneurial intention. The model testes the relationship between two key job characteristics, namely, autonomy and feedback, and entrepreneurial intention through the potential channels of work meaningfulness, knowledge of result and job satisfaction.

Data from workers from gig economy and traditional work settings was used to test the proposed theoretical model. Data was subjected to demographic analysis, structural equation modelling and mediation analysis using SPSS and Process Macro.

Table of Content

List of Tables and Figures

Chapter 1

Background of the Study

This chapter introduces the fundamental concepts of the thesis – 'job characteristics and entrepreneurial intention of workers in the gig economy' - and gives an overview of the research questions and the methodologies adopted. The chapter also discusses the motivation behind the study, its significance and the theoretical and practical contributions, followed by the structural overview of the thesis.

1.1 The rise of the gig economy

The industrial revolution started in the middle of the eighteenth century, which enabled the transition of domestic production to factories and paved way for the technological innovations, gave birth to the modern management theories and concepts. It not only revolutionised the technology, but also impacted human values and societal norms surrounding the employer, employees and the workplace (Unyimadu, 1989). The scientific management movement, which was strengthened by of the trends brought about by the industrial revolution, is considered as the harbinger of the modern management revolution.

The scientific management principles advocated by Taylor (1911) focused on the scientific processes to attain efficiency through standardisation and optimisation. The focus of the early scientific management theories was on productivity through the strict hierarchy of authority and surveillance of the employees. The advancement in the management approached through human relations theories and behavioural science theories in the middle of the nineteenth century shifted the focus of management studies to motivation and satisfaction of employees rather than treating them as cost to the organization.

The last decade of the twenty first century witnessed drastic changes in the employee - employer relationship and Human Resource Management became a key part of any organization. A great many of businesses started to understand that the primary source of sustainable competitive advantage is people (Bassi & McMurrer, 2007). Eventually, they started increasing their investments in human resources and implementing tools like knowledge exchange, leadership development, and job design.

Though the human capital was given prime importance and the employee welfare was a matter of concern for the companies as well as the regulators, there existed concerns about exploitations. Organizations started to use motoes like “Employees are our most important asset” as rhetoric and yet treat employees as costs. This concerns caused the call for more autonomy, flexibility and motivated workers to turn self-employed or independent contractor with no formal employment with any organization.

The trend that people opting independent jobs over formal employment was fuelled with job loss caused by the Great Recession in 2007 and ended up to giving birth arguably, the most discussed phenomena in the labour market in the recent years – the ‘Gig Economy’. The technological advancement and the digitalization enabled by the internet made it feasible to a skilled laboured to find his on work without depending on any organization. The global lock-down resulted from pandemic in 2020 and the shift to the remote work culture caused an unprecedented growth in the number of people opting to join gig the gig economy.

Traditionally, the work arrangement was characterised by full-time engagements without a given end date, conducted in a given place under an employer's direction (Kalleberg, 2000). The arrangements that did not fall into this traditional definition were considered nonstandard employment, and such arrangements were obscure until the beginning of the twenty-first century. The digitalisation and interconnectivity of the internet have resulted in an unprecedented growth in non-traditional work settings, which are broadly termed the gig economy.

The gig economy is a novel job arrangement, where employees complete short-term assignments termed “gig” with one or more employers (Torpey & Hogan, 2016). According to them a “gig” refers to “a single project or task for which a worker is hired, often through a digital marketplace, to work on-demand”. M. Taylor, Marsh, Nicol, and Broadbent (2017) define the term gig economy which is also known as the “crowd economy,” “shared economy,” “on demand economy,” and “digital economy,” as: “people using apps also commonly known as platforms to sell their labour”

The gig economy consists of multiple types of independent workers with no permanent positions in any organisation. The type of work in the gig economy includes eLancing, which is defined as “a marketplace, which is a website where individuals interested in being hired and employers looking for individuals to perform some type of work meet” (Aguinis & Lawal, 2013), freelancing which refers to the jobs roles which are not permanent (Wood, Lehdonvirta, & Graham, 2018), and other forms of work which is beyond the definition of the traditional work.

Contrary to the traditional 9-to-5 work arrangement, the gig economy is said to be characterised by a higher level of autonomy, flexibility, and freedom. Even though the work settings with these characteristics are not new, the peer-to-peer model of employment fuelled by digitalisation has serious implications for the nature and standard of work (Kalleberg & Dunn, 2016). There is call for academic scholarship to study gig economy since it is fundamentally changing the way work is done, employs millions of people and brings in billions of dollars in business (Aguinis & Lawal, 2013).

The gig economy is growing in scale in developed countries as well as developed countries. Mckinsey in its report “A labour market that works: Connecting talent with opportunity in the digital age” estimated the gig economy could grow the world economy by percent or US$2.7 trillion per year by 2025. According to Forbes, in the US 36 percent or more of Americans work in the gig economy. In 2019, they contributed US$1.4 trillion to the US economy.

According to Michael & Susan Dell Foundation's recent report, “the gig economy has the potential to service up to 90 million jobs in India's non-farm economy alone, transact more than $250 billion in the volume of work, and contribute an incremental 1.25 percent approximately to India's GDP over the long term.”

1.2 Introduction to the study

The introduction of gig economy workers to the mainstream labour force has come up with increased opportunities as well as challenges for both employers and employees (Schroeder, Bricka, & Whitaker, 2021a). The wide popularity and rise of the gig economy have called up on academic scholars to understand the underlying mechanism of these novel work settings for several reasons; First, it challenges the very concept of work location and it promotes the ubiquity as the internet becomes the worker's current location (Aguinis & Lawal, 2013), which in turn enable the connection between employers in developed countries and employees from cheaper labour markets and offers a win-win deal for both parties in terms of increased payment for workers, and cost-effective options for employers with an opportunity close the skills gap. Second, it possesses huge potential in changing the demographics of the workers in the labour market as a whole, such as reduced gender gap and adoption to work-life balance practices resulted from the pressure from an aging population (Rapoport, Bailyn, Fletcher, & Pruitt). Third, while enjoying autonomy and flexibility the employees in these settings lack organisational support and they become employers of themselves, self-employed or semi-entrepreneurs (Bellesia, Mattarelli, Bertolotti, & Sobrero, 2019; Ravenelle, 2019). Fourth, These work settings lack many of the organisational behaviour aspects such as Perceived Organisational Support (POS), Perceived Supervisor Support (PSS), Organizational Commitment, Organizational Citizenship Behaviour (OCB) and Organisational or Professional Membership (Petriglieri, Ashford, & Wrzesniewski, 2019). Digital gig workers receive no traditional human resource management (HRM) assistance, including promotions, skill development, career development, and job security (Spreitzer, Cameron, & Garrett, 2017).

The rise of the gig economy has caused a huge debate in the literature. The debate stems from the age-old discussion over the quality of work, the good work and the bad work. The focus of research on the gig economy has shifted from its initial focus on its larger implication to the economy to its impact on job quality and the nature of the work (Josserand & Kaine, 2019). While there are good gigs and bad gigs, it is argued that the gig economy brings about more employment options with a higher level of freedom, autonomy (Gleim, Johnson, & Lawson, 2019), and flexibility (Alton, 2018). The work in the gig economy is marketed as entrepreneurship with promised flexible work schedules, a self-directed workplace, and limitless earnings (Ravenelle, 2019). On contrary, there are concerns over gig work resulting in a labour market where the workers are forced to have unhealthy competition (Healy, Nicholson, & Pekarek, 2017) and it being used by multinational cooperates as a tool of exploitation where they avoid employment-related liabilities such as paid leaves (Kaine & Josserand, 2019). In her book ‘After the Gig’, (Schor, 2020) argues that the much-promised positive characteristics of the gig economy have been hijacked by capitalist organisations and it has been used to exploit the labour force.

This study is an attempt to answer the question of whether the gig economy is a promising labour market or a tool of exploitation by looking at whether working in these settings promotes entrepreneurship among the workers. It also addresses the knowledge gap in the literature by testing the relationship between the job characteristics in the gig economy and its motivational and behavioural outcomes.

1.3 Broad Research Area

The study of job characteristics stems its root from the job design studies build upon the “scientific management philosophy” set forth by Taylor (1911). The study of the nature of work, its relationships with its antecedents, and outcomes and the mechanism through which these relationships work was a key topic in Organisational Behaviour literature. The inquiry into what motivates workers to do their work and where they derive this motivation from was a prominent part of organisational behavioural studies. Prominent studies such as Herzberg's

(1959) approach to job design and Hackman's (1976) Job Characteristics Theory have lied the foundation for OB research on studying the nature of work and its behavioural outcomes.

Researcher in the field of OB and HRM has shown keen interest in developing a Job Characteristic model and testing it in various contexts. In continuation to those attempts, the present research sets out to integrate prominent theories from Organisational Behaviour, Psychology and Human Resource Management to explore the characteristics of work in the gig economy. As this study is based on major theories and critical concepts from Organizational Behaviour and Human Resources Management it can be positioned between these two subjects.

1.4 Studying the Nature of the Work

Frederick Herzberg's ground-breaking approach to job design specified that jobs should be enriched rather than simplified in order to motivate employees to perform good work. (Herzberg et al., 1959). Herzberg argued that the purpose of work should be to promote responsibility, success, competence growth, recognition, and advancement. Effective management techniques and pleasant working conditions are examples of “hygiene factors”, which, if not properly managed, could lead to dissatisfaction but never motivate employees to work hard and deliver well. Numerous projects for job enrichment were started as a result of Herzberg's work, many of which were successful. And it served as starting point for the studies carried out by Hackman and Oldham (1976) which eventually evolved into the Job Characteristics Theory (JCT) and the Job Characteristics Model (JCM).

Studies on the nature of work were initially carried out to find out what motivates the employees to perform better. These studies eventually became the motivation for enormous fundamental studies in the organisational behaviour literature in the areas of job design, job re-design, job enlargement, job enrichment etc. Along with this, nature of the work and the way employees or workers perceive the characteristics of work has been a major predictor of behavioural outcomes such as job performance, job satisfaction and motivation.

1.5 The Job characteristics

The Job Characteristics theory, which was based on the seminal research on job characteristics carried out by Turner and Lawrence (1965), proposed a model of five core job characteristics: "Skill variety", "task identity", "task significance", "autonomy", and "feedback". According to the theory, each of the core job characteristics would primarily contribute to the experienced critical psychological states namely "work meaningful", "felt responsibility for outcomes", and "knowledge of the results of the work". These psychological states would motivate workers to perform well. The basic premise of the "Job Characteristics Theory" is that specific attributes of jobs can impact the likelihood that an individual find his work meaningful, will have responsibility for work outcomes, and will have knowledge of the results of their work. People with higher levels of perceived meaningfulness and responsibility of their work, resulting from the positive job characteristics, will always be motivated to perform well and it will eventually lead to higher levels of job satisfaction and other positive work outcomes.

With the help of measurement instruments, developed by prominent scholars like Hackman and Oldham (1975), Idaszak and Drasgow (1987), (Campion & Thayer, 1985) and Morgeson and Humphrey (2006), job characteristics have been widely studied and the models of its antecedents and outcomes have been tested in different contexts.

1.6 Core Job Characteristics of Work in the Gig Economy

1.6.1 Autonomy

Autonomy is the most widely studied work characteristic. It is considered as one of the key characteristics of the job which has to be considered in the motivational work design methods (Campion, 1988; Hackman & Oldham, 1976). Initially it was defined as “the amount of freedom and independence an individual has in terms of carrying out his or her work assignment” (Hackman & Oldham, 1975). Recent research has expanded this conceptualisation to suggest that “autonomy reflects the extent to which a job allows freedom, independence, and discretion to schedule work, make decisions, and choose the methods used to perform tasks” (Wall, Jackson, & Davids, 1992; Wall, Jackson, & Mullarkey, 1995).

The autonomy in deciding what and how to do their work and the flexibility in scheduling it is the hallmark of the gig economy (Alton, 2018). The very name of 'gig economy' was coined when a large number of workers started taking on autonomous side works (gigs) to earn extra money during the great recession of the 2000s.

Though autonomy is a core characteristic of the work in the gig economy, and it has been widely advertised by the gig platforms and its promotors, empirical studies find that the level of autonomy varies for different kinks of gig works and it becomes extremely important to study this characteristic. The increased monitoring, minimised gap between tasks, and extending job tasks beyond the work schedule in the remote work setting result in seemingly intensified work (F. Green, Felstead, Gallie, & Inanc, 2016), longer working hours, more intense work and work–home spill-over (Felstead and Henseke, 2017).

It has been observed that autonomy and flexibility, the key characteristics that make the gig economy works more attractive is replaced by algorithmic control. Wood et al. (2018) observed that there are good gigs and bad gigs, and it can be identified by the level of autonomy given to the workers opposite to the algorithmic control that exists in the platform.

Autonomy, a characteristic inculcated in the very definition of gig economy work, is perceived by the workers at varying levels in diverse kinds of work settings. This draws research interest in understanding the perception of workers on these particular job characteristics and their impact on various job-related outcomes.

1.6.2 Feedback

Feedback from job refers to the extent to which the job gives precise information regarding how well a task is performed (Hackman & Oldham, 1976). The perception of feedback from work is a key characteristic of work in the gig economy as reliance on electronic reputation algorithms is a trait shared by all online platform companies (Kuhn, 2016). Labour platforms measure the individual work value based on the client feedback ratings. Platform workers are informally controlled by algorithms that take into account customer feedback and other metrics. These algorithms and metrics are developed and implemented by firms who are not their formal employers.

Feedback from the work is the only mechanism by which the gig economy workers get the perception of the results of their work. It can act as a key characteristic of the job that affects the motivation of the workers in the gig economy (Kaufmann, Schulze, & Veit, 2011). This fact makes feedback and interesting factor to studied in the novel context of the gig economy and poses novel questions about its effects work-related outcomes.

1.7 Work Meaningfulness and Knowledge of Result

Work meaningfulness, and knowledge of result are conceptualised as the core psychological states that are resulted from the nature of the work or its design. Work meaningfulness is defined as "the degree to which the individual experiences the job as one which is generally meaningful, valuable, and worthwhile" (Hackman & Oldham, 1976). A work is perceived to be meaningful when an individual feels that his work is having a desired impact on his life on and the life of others. There are several studies that try to understand how an individual worker derives meaning in his work, and what effect it can have on his performance and other behavioural outcomes such as motivation and satisfaction.

Knowledge of result is defined as "the degree to which the individual knows and understand, on a continuous basis how effectively he or she is performing the job" (Hackman & Oldham, 1976). According to the JCT, the perceived meaningfulness and knowledge of result of the work are among the psychological states that are resulted from the positive job characteristics and mediate the relationship between the job characteristics and its outcomes.

While studying the nature of work in the gig economy and the positive outcomes it brings about in an employee, it is important to study what is the role of work being meaningful to the individual employee and how knowledge of result impacts work related outcomes. Both the key psychological states are the mechanisms through which the positive work characteristics operate and result in a number of desired work outcomes.

1.8 Job Satisfaction

Job satisfaction is one of the most widely studied constructs in organisational behaviour research. Locke (1969) defined job satisfaction as “a pleasurable or positive emotional state resulting from an appraisal of one's job”. It is considered to be the most desired psychological outcome someone expects from his work. The given importance of this variable has led to thousands of studies that try to investigate antecedents and outcomes of job satisfaction in different job settings and contexts.

Though the study of job satisfaction began in the early second half of the last century, its importance to the theory and practice keeps it a relevant variable to be studied. While the early research on Job Satisfaction was to define it and find out its predictors, recent studies have been exploring beyond satisfaction and finding out the desirable outcomes that this positive psychological state brings about.

1.9 Entrepreneurial Intention

Entrepreneurship has been viewed as a desirable choice of work and a catalyst of revolution in the modern world order (Anwar & Abdullah, 2021). Successful economies encourage their working population to pursue entrepreneurship to achieve their individual goals in particular, and the economic interest of the nation as a whole (Mueller, 2011). Given the importance of entrepreneurship, it has been an academic interest to study what motivates one to be an entrepreneur and what turns one from the status of an employee to self-employed and an employer. Interestingly, the most desirable job outcomes such as work-life balance and satisfaction, motivate the workers to stay employed and restrict them from pursuing entrepreneurial goals (Guerra & Patuelli, 2016). On contrary, in the case of workers in the gig economy, the desired outcome can promote entrepreneurship as the characteristics of their work and the profile of an entrepreneur overlap in several meanings (Bellesia et al., 2019).

Entrepreneurial intention is considered to be the first and most important step of venture creation (Liñán & Chen, 2009), and It is a crucial foundational step for all entrepreneurial behaviours (Fayolle, Gailly, & Lassas-Clerc, 2006). According to The Theory of Planned Behaviour (TPB) proposed by Ajzen (1991), "intentions is the single best predictor of behaviour". Considering entrepreneurial intentions as positive behaviour and an indication of one's chances to be an entrepreneur, this study examines whether working in the gig economy can positively impact entrepreneurial intention. Further, we study the relationship between the job characteristics of the gig economy workers and their entrepreneurial intention.

1.10 Motivation for the Study

This study is motivated by both personal experience and an interest in understanding human behaviour. The personal experience is that the first ever job I did for a corporate organisation while continuing my studies was a freelance job. While performing the job I was not aware that this type of job is termed a gig economy, still, I was interested in understanding why this kind of job exists and how it affects both parties, employees, and employers. After going through a proper recruitment process, I was called to the company office and given clear instructions on how to do the job, and then it was all about doing the work at my convenience and getting paid for what I do. This experience was interesting for me for several reasons; First, it provided me with a good opportunity to earn while enjoying the flexibility required for a student to complete his studies. Second, although I was working as a freelancer the recruitment and payroll procedure was similar to those of a regular job. Third, later on, I came to know from my peers that some of them are taking this work in bulk and getting it done by others. They are working as intermediaries and hiring others to do the same job for them.

This experience led me to explore this kind of work arrangement. Realising that this job market was in a boom in developed countries as the employees were looking for alternate work options after the financial crisis of 2008, I was motivated to explore the implication of this trending work set up to the organisational behaviour studies, which is my learning interest. This coincided with the unprecedented growth in the gig economy in India. The adoptions of platforms like Uber, Ola, and Zomato were evident and the growth of gig platforms such as Freelancer.com, Task Rabbit and Amazon Mechanical Turk was happening in the background. This growth in platform-based gig workers in metro cities also prompted real estate investors to come up with the concept of 'hire a desk', where gig workers can go and use the facility to do their work.

Following the global trend, the gig economy has been growing considerably in India throughout the last decade. India at present has around fifteen million gig workers engaged in projects in sectors like IT, HR, and designing. In comparison, there are almost fifty-three million independent workers in the US. According to the latest report by Associated Chambers of Commerce and Industry of India[1], the gig economy sector is expected to grow to an estimate of $455 billion by 2024. A recent report released by NITI AYOG[2] projected that the gig economy will exponentially grow in the recent future to include an estimated number of 2.35 crore gig workers by 2030.

Recognising the growth of gig economy workers in the labour force and its potential as an alternative employment option government of India has introduced several policy initiatives from tracing and recording the labour market to introducing laws that can regulate workers, work providers and the mediating platforms. The finance minister of India, in her budget speech 2021-2022, proposed to launch a portal that collects information on gig economy workers. The growing interest from policymakers toward the gig economy, and the call from OB and HRM researchers to explore this new work setting worked as a key motivation to pursue this research.

1. 11 Problem Statement

As is the case with any other job, there are good gigs and bad gigs. The debate over the motive behind the promotion of the gig economy still exists. The larger problem is the question of whether the gig economy promotes more autonomy and flexibility to employees or is used as a tool of exploitation by employers.

[1] GIG ECONOMY Aligning Consumer Preferences: The Way Forward – January 2020
[2] Policy Brief:India's Booming Gig and Platform Economy 27062022 – June 2022

One of the major arguments in favour of the gig economy is that it is kind of a self-employment, which allows the employees to choose what they want to do and give them various level of autonomy in terms of selecting the work, location and time. It is argued that these positive characteristics will motivate the workers towards taking self-employment as a career choice which in turn results in entrepreneurial orientation. Given the novel nature of the phenomenon, there is no clear evidence on whether the work in the gig economy promotes entrepreneurship or not.

The nature of work in the gig economy is of distinct characteristics and it differs from the traditional work settings in various means. The early research on the implications of this novel work arrangement to industrial and organisational psychology has called upon academic scholars to revisit the established theoretical models in this new context. The present study revisits the relationship between job characteristics and the psychological states that are resulting from it. It also addresses the problem of whether the gig economy possesses the potential to promote entrepreneurship orientation among workers.

1.12 Research Questions

The following specific research questions can be used to address the stated research problem:

1. Does the work in the gig economy promote entrepreneurship intention?
2. What is the relationship between job characteristics and entrepreneurship intention of gig economy workers?

3. Do the positive characteristics of the work in the gig economy result in perceived meaningfulness?
4. Can the job characteristics improve Job satisfaction for workers in the gig economy?
5. What are the mechanisms through which positive job characteristics promote entrepreneurial intention among workers in the gig economy?

1.13 Aim of the Study

1.13.1 Broad Objective

The primary objective of this study is to revisit the relationship between Job Characteristics and its outcomes in the context of the gig economy.

1.13.2 Specific Objectives:

1. To study the impact of work setting (gig economy versus traditional) on entrepreneurial intention of the employees.
2. To empirically test the relationship between Job Characteristics and Entrepreneurial Intention among gig economy workers.
3. To Explore the mechanism through which the relationship between Job Characteristics and Entrepreneurial Intention operates by analysing:
    1. Perceived Work Meaningfulness as an intermediate variable between Autonomy and Entrepreneurial Intention.
    2. Perceived Knowledge of result as a mediator between Feedback and Entrepreneurial intention

3. Job Satisfaction resulted from the positive characteristics of the job as an intermediate variable between Job Characteristics and Entrepreneurial Intention.

1.14 Scope of the Study

Considering the fast-growing nature of academic literature, and the large frequency and the research works published exploring similar and dissimilar constructs, it is important for any work in academics to clearly define its scope. The subject of the present study, job characteristics, has been a study interest for a long, and the body of literature on the subject is still growing. Each of the studies caters to a well-defined area, thus it is important to define the scope and the nature of the study objectively beforehand.

The research scope is determined by the constructs, concepts, and context. The constructs explored in this thesis are key job characteristics of the workers in the gig economy, namely autonomy and feedback, the psychological states resulting from these job characteristics work meaningfulness, and knowledge of the result of the job. We further explore job satisfaction and entrepreneurial intention as the outcome of the above characteristics. The context of this study is the work in the gig economy. The scope of the study is limited to two contexts of the gig economy for two major reasons: One, it is a novel work context which is not similar to traditional work studied in the literature. Two, the organisational behaviour scholars who studied the gig economy have called upon the academic community to explore the nature of work in this new context.

1.15 Contributions of the study

It is important for a reader to understand how a study contributes to the existing theory and practice as the understanding of new scientific knowledge results from the accumulation of knowledge which is systematically built on the foundation of previous works. To enable a better understanding of what is addressed in this thesis, before diving into the details, an overview of the theoretical contribution made by this study, and its practical implications is provided here.

1.15.1 Theoretical Contribution

Integrating multiple theories related to entrepreneurial intention, work design, job characteristics and planned behaviour, this research extends the job characteristic model by testing entrepreneurial intention as a new outcome while testing work meaningfulness, knowledge of result and job satisfaction as potential channels. The theories upon which this model is built are, the theory of planned behaviour, the entrepreneurial event model, and the job characteristics theory. This study expands the scope of previous studies by attempting to test the model in a relatively new work setting and finds out possible extensions of the model. Further, the study responds to the call from previous studies for revisiting established theoretical models given the novel characteristics of the work in the gig economy.

1.15.2 Practical Implications

The unprecedented growth of the gig economy has drawn the attention of policymakers. Government agencies have shown keen interest in formulating policies that record, regulate and promote the type of work carried out in the gig economy. This study has implication for those policymakers as it can help them make informed decisions on how the policies are formulated. For instance, this study explores whether the work in the gig economy encourages the employee to turn entrepreneur. The result of the analysis has potential implications for formulating policies that promote entrepreneurship among gig economy workers. Further, the study assesses the impact of different job characteristics on entrepreneurial intention and different mechanisms through which these relationships work. This can inform the policymakers on decisions regarding regulating and promoting this particular labour force.

From a worker's standpoint, this study can show them directions on whether to choose gig works as a career option, especially for those who have entrepreneurial aspirations. Contrary to the prevailing notion in the literature, that the comfort and the satisfaction derived from a regular job will decrease the intention to switch to more risky options, this study suggests the entrepreneurial intention among satisfied gig economy workers is higher. This has implications for the career choices of individual workers and for the larger actions of the governmental and non-governmental entities aiming at promoting entrepreneurship.

1.16 Organization of the thesis

This thesis is organised into six chapters as follows:

Chapter I (Introduction):

The first chapter introduces the key elements of this study. It provides a detailed discussion of the background of the study and the key concepts studies, followed by a discussion of the motivation for the study and its scope. The chapter also includes the problem statement, objectives of the study and its contribution to the theory and practice. In end, an overview of the chapters of the thesis is given.

Chapter II (Review of Literature):

The second chapter discusses an overview of theoretical and empirical studies related to the present research topic. It covers the review of relevant literature on job design, job characteristics model and organisational behavioural studies trying to address the new phenomenon in the gig economy. The chapter concludes with a detailed note on the research gap identified in the review.

Chapter III (Theory and Hypothesis Development):

The chapter discussed the theoretical background on the basis of which the research gap is addressed. Elaborating on different theories used in the study, this chapter explains the evidence to formulate the research question and hypotheses by proposing a research model. The model consists of four major constructs, namely, job characteristics, work meaningfulness, job satisfaction and entrepreneurial intention,

Chapter IV (Methodology):

This chapter explains the methods used to address the problem at hand and to test the hypotheses. To explain the congruence between the research question address and the method adopted, a brief note on the research philosophy is given at the beginning of the chapter. The chapter also includes the operational definitions of each variable discussed in the study, sampling design, the tools used for data collection, and statistical methods used to analyse data.

Chapter V (Data Analysis and Interpretation):

The fifth chapter elaborates on each technique employed and describes the findings of the statistical analysis.

Chapter VI (Conclusion):

The concluding chapter discusses the findings of the present study. Further, it elaborates on the contribution of the study, and its limitations and provides suggestions and directions for further research.

Chapter II

Review of Literature

This chapter presents the literature review. It includes an overview of the extant literature on the major constructs and models used in this thesis, identifies the research gap, and discusses the gaps being addressed in the present study.

2.1 The Evolving Nature of Jobs: Regular Jobs, Contingent Works, and Gig Economy

The unit of study in any employment-related research is the job. The nature of the job has been evolving throughout the past centuries. The academic literature has shown a keen interest in defining the job for several reasons; Primarily, the job act as a source of self-definition in society (Ghidina, 1992); thus, the status of an individual is directly correlated with the status of his job. Secondly, the absence or presence of a job act as defining factor for a number of individuals, societal and governmental action such as the classification of employed and unemployed (Polivka & Nardone, 1989). Finally, a job is the central unit of analysis for job design research carried out from the employment boom resulting from the industrial revolution.

The earliest studies pertaining to the job and its nature were confined to the factory labour works that were well defined in nature. The studies such as time and motion studies (F.

W. Taylor, 1911) and Hawthorne Experiments (Mayo, 1945) were dealing with the performance issues in the jobs in manufacturing sectors. Later on, the body of literature started discussing service-based jobs in the wake of the internet revolution that took place in the first decade of the 21st century. Regardless of the industry the work takes place, the majority of job-related research was revolving around well-defined, full-time jobs. As noted by Morgeson, Brannick, and Levine (2019), the traditional view of work design in the organisational behaviour and human resource management literature revolved around choosing specific jobs in a certain way and setting up the roles that manage those jobs to achieve better performance.

Polivka and Nardone (1989) point out that the employee-employer relations, supervisor-subordinate relations, and organisational settings where the work happens were the key component in most of the work studied the nature of jobs. However, a significant segment of the labour force was underrepresented in those studies. That segment includes the contingent workers, who do not fall into the regular defections of employment.

According to Kalleberg (2000), For the majority of the 20th century, full-time employment without a defined end date that was performed on-site under organisational supervision has been considered the typical or standard work arrangement. However, in recent years, there has been an increase in nonstandard work arrangements, which may include part-time, temporary, contract-based works.

Audrey Freedman introduced the term 'contingent works' in a 1985 conference on employment security. Later, the term was widely used in the literature to refer to a wide range of non-regular work arrangements. Those arrangements include part-time jobs, temporary work, self-employment and employee leasing. Including all of these non-traditional work settings, Christensen (1988) defined contingent work as “any arrangement which differs from full-time, permanent, wage, and salary employment”. The nonstandard work setting has become a popular way of organising work and attracted researchers' attention in the last decade of the 20th century (Kalleberg, 2000).

Casey (1991) studied the nonstandard employment relations and highlighted the lack of importance to this section of employment which accounts for a greater portion of the labour force. He suggested that the lack of job security and organisational support for the nonstandard employees should attract policymakers' attention towards making legal interventions.

F. Green, Krahn, and Sung (1993) noted that the debate on the no-standardised form of work, including part-time jobs, own-account self-employment, temporary working and multiple job holding, should move beyond the flexibility of the labour force. They called for defining contingent employment and having proper measures for these types of employees as the number of workers in this sector has been increasing in many industrialised countries.

Sherer (1996) studied alternative work arrangements and found that they are in an unprecedented rise. Their study included a wide range of untapped work arrangements such as organisations in retail sales, entertainment and financial services, and the taxicab industry that hire lessees, requiring them to pay a fee to use equipment, materials or space, and organisations that are ‘renting’ senior executives and even CEOs and the companies where employees are made owners, paying them as claimants on the company's profits and granting them shareholder rights, including the ability to speak out and vote.

Abraham (1990) argued that market-mediated arrangements should be considered in the alternative work arrangements, as a considerable part of the labour force in these arrangements are out of the definitions of traditional employees, resulting in lacking legal support or research attention that the regular labour market enjoys.

Summers (1996) explored the historical reason behind the classification of employment as traditional and contingent. They summarised those conventional definitions of employment exclude contingent works for three reasons. First, it is characterised by the personal relationship between a master or employer and a worker. Second, it was full-time, and third, it was assumed to be continuing for a substantial period of time. The work settings that are out of this definition has to be counted as contingent or alternative work setting.

Houseman (1997) studied flexible staffing agreements in the United States and made recommendations to the policymakers and suggested that "workers from temporary help agencies, short-term hires, regular part-time workers, on-call workers, and independent contractors should be counted in these not traditional work arrangements."

Kalleberg (2009) studied the negative consequences of contingent work arrangements. They called this type of work as precarious work and observed that it is having unparalleled growth in most part of the world. They called upon the sociologist, politicians and researchers to understand the new workplace arrangements that produce precarious work, which is characterised by uncertain and unpredictable work in contrast to the relatively less job security.

On contrary to the pessimistic employment relation viewpoint on contingent workers Kunda, Barley, and Evans (2002) hold a different view. The study of 52 highly skilled technical contractors found that contingent work is more rewarding than a permanent job and it brings the opportunity to escape organisational politics or inept management.

Various researchers have explored the realm of not traditional contingent works and the following terms has been used to denote such works:

- "Market-mediated arrangements" (Abraham, 1990)
- "Flexible staffing arrangements" (Houseman, 1997)
- "Flexible working practices" (Brewster, Mayne, & Tregaskis, 1997)
- "Peripheral employment" (Summers, 1996)
- "Precarious employment" (Treu, 1992)
- "Disposable work" (Gordon, 1998)
- "Vulnerable work" (Brewster et al., 1997)
- "On call work" (Alterman, Luckhaupt, Dahlhamer, Ward, & Calvert, 2013)

While the debate over the nature of contingent non-traditional work arrangement was going on in the literature, the second decade of the 21st century started with boom in the literature around the work in the Gig Economy. "The gig economy is the labour market where employees complete short-term, on-demand work assignments known as gigs across a variety of employers." (Colbert, Yee, & George, 2016). The gig economy includes crowdsourced freelancers and individuals get and complete their work using technological mediators (Aguinis & Lawal, 2013)

M. Taylor et al. (2017) defined the gig economy as "people using apps (also commonly known as platforms) to sell their labour." According to Wood et al. (2018), a gig refers to "short-term projects or tasks for which workers are hired on-demand." The gig economy generally consists of two types of works; work that is done via platform but delivered physically and the work completely transacted remotely from assigning the work to delivering it (Huws, Spencer, & Joyce, 2016).

A meta-analysis conducted by M. Taylor et al. (2017) on modern work practices found that 'gig economy' has emerged as a key theme in the work-related studies. Huws et al. (2016) observed that the introduction of online platforms to manage work had been a dramatic development in the labour market

Ashford, Caza, and Reid (2018) observed that the gig economy has fundamentally changed how work get done. They concluded that as a growing number of workers has started to work independently outside the established form of the work that is familiar to the organisational behavioural theories, there must be studies that can tap the individual work behaviour.

Scholars have defined gig economy in different terms. Kalleberg and Dunn (2016) define it as “the collection of markets that match providers to consumers on a gig (or job) basis in support of on-demand commerce. In the basic model, gig workers enter into formal agreements with on-demand companies to provide services to the company's clients. Prospective clients request services through an Internet-based technological platform or smartphone application that allows them to search for providers or to specify jobs. Providers (gig workers) engaged by the on-demand company provide the requested service and are compensated for the jobs.”

Aldrich and Ruef (2006) suggest that the organisational field of the gig economy is becoming more established as a large variety of platforms operate in homogeneous functions and forms. They find that “the majority of gig companies can be located in one of four categories of work platforms: crowd work platforms, transportation platforms, delivery/home task platforms, and online freelance platforms.”

Gleim et al. (2019) define the gig economy as “a labour market of ad hoc, short-term, freelance, or otherwise non-permanent jobs”. They broadly classified gig workers into shares and sellers. Sharers participate in the gig economy by sharing their assets or labour, and the sellers are involved in the direct selling of goods and services.

2.2 Gig Economy and Entrepreneurial Orientation

One of the fundamental questions about the gig economy is whether it is an avenue of self-employment and entrepreneurial activities or a tool of exploitation designed by multi-national giants where they can bypass the liabilities of regular employment (Josserand & Kaine, 2019). Though the debate is still relevant and has attracted policy-level attention, the gig economy platforms have been propagating the entrepreneurship narrative and classifying the workers as self-employed or semi-entrepreneurs. Addressing the critical questions raised from this debate, the academic literature has started critically examining the entrepreneurial orientation in the gig economy.

Ravenelle (2019) explores the McGregor's theory of X and Y framework in the context of gig economy and studies how different management assumptions affect workers perceptions of themselves as entrepreneurs. The qualitative study among workers in the ride-sharing industry identifies semi-entrepreneurship as a key theme among satisfied gig workers.

Bellesia et al. (2019), in their paper "Platforms as entrepreneurial incubators? How online labour markets shape work identity" discussed how the gig economy or the platforms could work as entrepreneurial incubators. The study found that the workers the characteristics of the gig platforms that motivate workers to be part of the digital workforce potentially constrain their actions and limit their career success. This interplay motivates workers to add new characteristics to their work-self and develop an entrepreneurial orientation.

Burtch, Carnahan, and Greenwood (2018) studied the relationship between the entry of gig economy platforms into a new market and the local entrepreneurial activity. They concluded that "on the one hand, gig economy platforms may reduce entrepreneurial activity by offering stable employment for the unemployed and underemployed. On the other hand, such platforms may enable entrepreneurial activity by offering work flexibility that allows entrepreneurs to redeploy resources strategically to pursue the nascent venture."

Shalini and Bathini (2019) conducted a qualitative study among the gig economy workers in India. They analysed the perception of the workers on the entrepreneurial discourse used by the platforms to promote their business. They argue that the platforms use entrepreneurship discourse as a cultural tool to gain legitimacy for gig platforms in India.

2.3 Overview of the Job Design Literature

The inquiry into what makes the workers do, what they do and what motivates them to perform better has been a fundamental research interest for a long. The history of job design stems from the early works of Babbage (1832) and Smith (1776) that focused on the role of division of labour on productivity and work efficiency. Later in the early part of the 20th

century, the scientific management research conducted by F. W. Taylor (1919), and motion studies conducted by Gilbreth and Kent (1911) shifted the focus of research to the role of simplification and specialisation in increasing the productivity and efficiency.

These early job design studies were closely integrated into the industry and resulted in designing jobs in such a way that the operations are standardised and highly simplified. The problems with this work design methods were later on identified by the researchers like Walker and Guest (1952), who found out that the work system built with a high focus on productivity and efficiency occasionally resulted in negating the efficiencies engineers had incorporated into work systems. As Hackman and Lawler (1971) observe, "those approaches started resulting in decreased employee satisfaction, increased turnover and absenteeism, and difficulties in managing employees in simplified jobs."

The response from prominent researchers to these concerns raised about the aforementioned approaches to the work resulted in the development of the following renowned theories that focus on the motivating features of work.

In an attempt to find the roots of motivation at work, Herzberg (1965) introduced his theory of motivation. Herzberg's two-factor theory identified and classified the motivating factors at work into two distinct categories: motivating factors and hygiene factors. He theorised that the presence of motivating factors could enhance performance, and the absence of hygiene factors can demotivate employees. In their further research (1966, 1976) Herzberg argued that job enrichment should be preferred over job specialisation and simplification in order to achieve better performance through motivation.

Turner and Lawrence (1965), in their renowned work, “Industrial jobs and the worker: An investigation of response to task attributes” highlighted the importance of individual attributes and characteristics of a job. They identified key job attributes and assessed the impact of those attributes on motivation. Their work laid the foundation for the series of works in the area of job characteristics. In their initial study they found that different attributes of single work can have varying implications to the motivation and satisfaction of employees.

Hackman and Lawler (1971) developed and tested a conceptual model that tests the relationship between job performance and the conditions that motivates employees perform better. With this work and several other prominent studies that came up in the beginning of the 1970s, the focus of work design shifted to motivation, and researchers started to explore the characteristics of the job that motivates the employees and gives them enough satisfaction to perform well.

Building upon the foundations of job design studies and motivation theories developed by Porter and Lawler (1968), Herzberg (1965), and Turner and Lawrence (1965), Hackman and Oldham (1980; 1976; 1975) proposed the Job Characteristics theory and developed the Job Characteristics Model. In their initial study, they explored the concept of internal work motivation and explored the distinct characteristics that foster the state of internal work motivation. They theorised those positive levels of core job characteristics would contribute to the experienced positive psychological states and those, in turn, will lead to positive job out comes.

The Job Characteristics Model proposed and further developed by Hackman and Oldham (1980; 1976) remained one of the most prominent models in the organisational behaviour literature in the past century. Their work has been tested, developed and criticised by many well-known researchers throughout the past decades. Even though the model is 40 years old and prone to criticism from several scholars, it has a crucial role in the work design literature even today.

2.4 The concept of Job Characteristics

The focus on the study of the attributes and characteristics of the job has its root in motivation studies, where researchers started inquiring about what motivates the workers to perform better. The study of job characteristics gained importance mainly for three reasons; First, the rise of importance for job enrichment and enlargement programs initiated by big companies in the latter half of the 20^{th} century. Second, the search for the factors or the stimuli that motivate workers and third, the studies of the relationship between leadership behaviour a subordinate performance.

Turner and Lawrence (1965) is the pioneering work in this regard. They theorised that despite considering the ease of doing work and facilitating better working conditions, workers can be demotivated to perform and feel dissatisfied with their job. Thus, it is necessary to consider core attributes of the jobs such as the location of the work, required interaction and interaction opportunities.

Hulin (1971) in their work entitled “Individual differences and job enrichment”, brought about the discussion over the characteristics such as routine and repetitiveness and the effect those characteristics can have on employee motivation. They concluded that nonroutine and nonrepetitive jobs could result in higher motivation and performance.

Hackman and Lawler (1971) introduced the key dimensions of job characteristics in the initial paper entitled "employees' reaction to job characteristics" and later on in their further works (Hackman 1975; Hackman & Oldham 1976; 1980) developed the well-known theory of the Job Characteristics. The job characteristics model stands out as one of the most cited models in organisational behaviour research to date. We will discuss their work in detail in subsequent sections of this chapter.

Sims Jr, Szilagyi, and Keller (1976) developed and validated six dimensions of job characteristics and developed one of the earliest instruments to measure job characteristics called the Job Characteristics Inventory. The six dimensions discussed by them were "Variety, Autonomy, Feedback, Task Identity, Dealing with Others, and Friendship."

Grant and Parker (2009) reviewed the existing job characteristics theories and concluded that the theories and models developed in the wake of the industrial revolution have been limited to the manufacturing economy and observed that more refined theories are needed to address the nature of work in the service and knowledge economies.

2.5 The Job Characteristics Model

In a pursuit of diagnosing the motivational properties of the job, Hackman and Oldham (1975) developed the "Job Diagnostic Survey (JDS)". Objective task characteristics that will lead to high levels of intrinsic motivation, job satisfaction, and job performance were measured by the JDS.

The Job Characteristics Theory (JCT) assumes that five job characteristics, namely "skill variety, task identity, task significance, autonomy and feedback", which allows workers to experience a ‘pat on their back’ and an effective 'kick', and that internal reinforcement would work as a motivator to perform well. The theory identifies three critical psychological states that must exist for the job characteristics to result in positive outcomes defined by the model. Those psychological states are; “experienced meaningfulness of the work, experienced responsibility of the work, and knowledge of the actual result of the work.”

Hackman and Oldham (1975, 1976) theoretically defined and empirically proved that the presence of five job characteristics could result in desired psychological outcomes. The perceived level of the core characteristics determines whether the job can motivate the employees and lead them to the best of their performance and feeling of satisfaction.

Arnold and House (1980), Hackman and Oldham (1976), Kiggundu (1980, 1983), Tyagi (1985) also empirically tested the given relationship in the JCT in different work settings. Arnold and House (1980), and Kiggundu (1980) noted a strong correlation occurred between the task characteristics “skill variety”, “task identity”, “task significance” and “autonomy” and the psychological state of “knowledge of actual results of work activities” which was not predicted by the model. Kiggundu (1980,1983) also found a positive relationship between autonomy and “experienced meaningfulness of work” which was not predicted by the model.

Campion and Thayer (1985) extended job characteristics studies and developed the Multimethod Job Design Questionnaire (MJDQ). The MJDQ was further extended by Campion (1988) in an attempt to validate the scale with a larger sample with incumbents from multiple levels of jobs, including blue and white-collar, manufacturing and high technology.

2.6 Job design in the gig economy

Schroeder et al. (2021a) observed that the rise of gig economy calls for a radical shift in the focus of theories regarding job design. The earlier works focused on a top-down approach where organisations or authority decides what changes has to be initiated in the aspects of jobs, roles or tasks. In the case of gig workers, no such authority can initiate such changes and develop a job design.

Wrzesniewski and Dutton (2001) introduced a bottom-up job design framework where employees themselves initiate changes within a given role. The framework is called job crafting, which refers to “a process in which employees alter their jobs to match their individual needs, which can make work more meaningful and enhance one's work identity”. Schroeder et al. (2021a) highlighted the gap in the literature in the non-n standard employees work design and noted that “a parallel can be drawn between nonstandard work setting and the process of job crafting”.

Tims and Bakker (2010) highlighted the need of employee-centred job design frameworks. They stated that the emerging literature in job crafting could help us understand individual employees' proactive behaviours at work. They advanced the job crafting literature by finding a fit between the new bottom-up approach of job design and the earlier job design theoretical frameworks.

Spreitzer et al. (2017) did a review of the extant literature on the alternative work arrangements. They pointed out that the workers in those arrangements lack human resource management support, including key elements that help derive meaningfulness in work, such as promotions, skill training, career development, and job security. Thus, the workers tend to rely on their work identity in designing and initiating changes to the design of their jobs.

Kost, Fieseler, and Wong (2018) studied the job design in the gig economy and stated that “the extremely virtual environment, with little to no human managerial oversight, little interaction with task providers, and often uncontextualized nature of tasks, make it challenging for digital labourer to see task significance and/or how their work relates to others”.

Schroeder et al. (2021a) studied the work design in the digitalised economy and extended the concept of job design proposed by Wrzesniewski and Dutton (2001) and (Tims & Bakker, 2010). Building up on the job characteristics component model developed by Morgeson and Humphrey (2006) they proposed a work design model for the gig economy.

2.7 Organisational Behaviour Studies in The Context of the Gig Economy

Though the gig economy is under-represented in the organisational behaviour literature (Bergman & Jean, 2016; Kuhn, 2016), there is a growing interest among organisational behaviour and human resource management scholars to understand the changing nature of work and its implications for both employees and employers.

Ashford et al. (2018) highlighted the opportunities and the challenges posed to workers with raise the gig economy and proposed a research agenda for the novel setting. They stated that “the research in this area should focus on helping individuals to navigate the viability, organisational, identity, relational, and emotional challenges in ways that enable them to survive and even thrive.”

Brawley (2017) applied the self-determination theory and empirically tested the relationship between job satisfaction to a number of job-related outcomes in the gig economy. He examined the need for relatedness, competence and autonomy and their relationship with the workers' job satisfaction in a gig economy platform. This study is one of the first attempts to empirically test age-old organisational behaviour models in the context of the novel work arrangement of the gig economy.

Kaufmann et al. (2011) applied classic motivation theory to propose a combined model of workers' motivation in crowdsourcing. Building on the job characteristics model, the study proposed a comprehensive model for workers' motivation in crowdsourcing.

Umair, Conboy, and Whelan (2019) studied job-related experiences and the workers' perceptions in the online labour market. They identified job characteristics and techno-stressors as determinants of job satisfaction in the gig economy.

Keith, Harms, and Long (2020) studied the motivation and well-being of the workers in the gig economy. They divided the motivation of workers to push factors and pull factors. Economic reasons such as lower income in other jobs, debt burdens are the push motivations in the gig economy. Pursuit for higher level of autonomy, flexibility and desire for enjoyment with variety of works are the Pull motivations. They also highlighted that the precarious nature of work in the gig economy affects their motivation and well-being.

Hafeez, Gupta, and Sprajcer (2022) studied stress in the gig economy context and empirically tested the relationship between coping strategies and stress among platform workers. They found that planning, acceptance, active coping, and positive reframing are the key coping strategies that help workers overcome stress.

Jabagi, Croteau, Audebrand, and Marsan (2019) studied technology's role in motivating workers. They examined how thoughtful job designs of digital platforms by organisations can support gig-workers' self-motivation. Drawing on the “determination theory”, “job-characteristic theory” and “enterprise social media research”, they proposed a conceptual model of motivation of gig workers.

Ravenelle (2019) applied McGregor' s “Theory X and Theory Y” as a framework to discuss how different management styles used by the gig economy platforms affect worker perceptions of themselves as entrepreneurs. The study found that “the Theory X management assumptions and correlated behaviours directly contradict the entrepreneurial ethos marketed by the platforms, resulting in a psychological contract violation for workers and negative responses to the platform. In comparison, Theory Y managerial assumptions and correlated behaviours can be utilised to encourage worker innovation, creativity and sense of self as an entrepreneur.”

Building on the “Job Crafting Model”, Schroeder et al. (2021a) developed a work design model for the gig workers. The gig work design proposed by them, is bottom-up approach where workers themselves choose a design of their choice that suits their personal preferences and expectation from the job. They also explored the challenges and prospects in the gig economy for both employers and employees.

2.8 Research Gap

The literature review in the field of organisational behaviour and entrepreneurial orientation in the context of gig economy revealed significant gaps, which guide the direction of the present study.

2.8.1 Call for revisiting organisational behaviour theories in the context of gig economy.

The focus of studies of the world of work until recently was mainly on permanent jobs and career transitions within or between organisations. However, the rapid growth of the gig economy and other forms of non-traditional work arrangements has attracted the attention of the academic community and motivated them to redefine the 'work' and revisit the established theories. Ashford et al. (2018) states that "with the shift away from doing work in defined groups with stable membership in particular settings, we must adjust our thinking about key organisational concepts, rethink assumptions about traditional career structures and experiences and address new questions within these areas."

Recognising the research gap in this area, Colbert et al. (2016) state that "because the digital workforce is comprised of individuals whose unique competencies may influence how work is structured and conducted, it is necessary to examine how generalisable theoretical and empirical work based on a standard work arrangement model may be to the new setting of the gig economy."

The primary focus of academic literature in the gig economy was to address economic and labour laws which may directly affect the employee-employer relationships.

There is a dearth of literature focusing on organisational behaviour in these new and changing work arrangements.

Bergman and Jean (2016) counted freelancers in the gig economy settings as one of the categories of workers who are understudied and least studied in the industrial and organisational (I-O) psychology literature. Kuhn (2016) stated that “there is substantial opportunity for I-O psychologists and other behaviourally oriented organisational researchers to contribute to our understanding of the growing number of people who earn all or some of their income by freelancing.” Wong, Kost, and Fieseler (2021) noted that “despite its importance to participation in the gig economy, the factors cultivating resilience and career commitment in the gig work environment have received considerably little research attention and have mostly taken an economic and labour relations perspective with a top-down job design approach.”

Aguinis and Lawal (2013) suggested that “Human Resource Management scholars should study eLancing because it boasts millions of users and billions of dollars in transactions. The explosive growth of eLancing can be understood by considering several important factors that are changing the nature of work in the 21st century.” While proposing research agenda for e-lancing, which constitutes a large part of the gig economy, Aguinis and Lawal (2013) stated that “the increasing importance and popularity of eLancing worldwide creates a wonderful opportunity for scholars in HRM, OB, and I/O psychology to conduct empirical research that has great potential to bridge the widely documented science–practice gap.”

2.8.2 Application of job characteristics theory to a novel work setting

The theory of job characteristics, which is considered one of the most established models in the organisational behaviour literature, has been tested and validated in a variety of work contexts. The theory has been expanded in the past decades to include all kinds of jobs and employees. However, the nature of work in the gig economy is entirely different from that in traditional work settings where the validation of the model has been carried out. Digital laborers receive limited to no traditional human resource management support, such as “promotions”, “skill training”, “career development”, “job security” and so forth (Spreitzer et al., 2017). They also lack organisational aspects such as Perceived Organisational Support (POS), Perceived Supervisor Support (PSS), Organizational Commitment, and Organizational Citizenship Behaviour (OCB).

This difference between the work in the gig economy and traditional work setting has motivated researchers to conceptualise new work design models. Though there have been recent attempts to conceptualise a work design model for gig economy (Schroeder et al., 2021a), and expand the theoretical understanding of job characteristics in this context, the review of extant literature could not find any study that empirically tests the propositions of job characteristics theory. This gap motivates our attempt to empirically analyse the job characteristics of gig workers and its outcomes.

2.8.3 Inconclusive results on the entrepreneurial orientation in the gig economy

The platforms that promote the gig economy have been advertising entrepreneurship as a key theme to attract more works and workers to their platforms.

However, this narrative has been questioned by several scholars. Burtch et al. (2018) observed that the entry of gig platforms can affect local entrepreneurial activities in both ways. It may discourage entrepreneurship by providing employment for the unemployed and underemployed, or it may promote entrepreneurship by allowing for work flexibility so the entrepreneur may pursue their own business.

On the one hand, some scholars are of the view that gig economy workers identify themselves as semi-entrepreneurs (Ravenelle, 2019), and the platforms act as entrepreneurship incubator (Bellesia et al., 2019). On the other hand, some view entrepreneurship discourse as a cultural tool to gain legitimacy for gig platforms (Shalini & Bathini, 2019). This inconclusive discussion calls for empirically testing entrepreneurial intention among the workers and the key characteristics that can influence their entrepreneurial intention.

2.8.4 Dearth of studies in the Indian context

India's gig economy labour market has witnessed unprecedented growth in the past decade. It has become the second-largest market for freelance professionals in the world (Kasliwal, 2020). The 2019 Noble House Report, states that “forty-eight per cent of the major corporations surveyed reported using gig workers for at least one major organisational issue in the past year.” This rapid growth in the labour market has attracted policy-level interventions as the “Indian Ministry of Labour and Employment” proposed the “Code on Social Security Bill 5”, in which gig and platform employees were acknowledged as category of workers, for the first time, and provisions were developed to provide them with social security benefits. However, academic attention to the Indian model of gig work has been scarce. It is important to explore the Indian gig economy labour market as it possesses distinctive geographical and ethnic characteristics.

Chapter 3

Theory and Hypotheses Development

This chapter discusses the theoretical foundation of the present study and provides the contextual background of the literature with specific emphasis on the relationship between study variables. The chapter discusses the major theories that guide the research and evidence on the key variables and proposed relationships. Further, the chapter outlines the hypothesis developed to be empirically evaluated in this thesis.

3.1 Workers in the Platform-Based Gig Economy

An overwhelming interest in popular media on the rise of the gig economy and the data on the growing number of employees opting not to have a permanent job in the past decade has generated interest among policymakers and the academic community (Kuhn, 2016). A large number of studies on the nature of work in the gig economy have been carried out with respect to economics (Kokkodis & Ipeirotis, 2016), operations (Allon, Bassamboo, & Cil, 2012), and digitalization mechanism (Moreno & Terwiesch, 2014). The growing body of literature in this area has highlighted that the platform-based labour market has emerged as a potential avenue of economic growth, with larger concern for regulators and policy makers.

Kuhn and Maleki (2017) defined online labour platforms as "for-profit firms that use technology to facilitate the filling of immediate short-term service labour needs, either remotely or in-person, with workers who are officially considered independent contractors.” The platforms work as mediators connecting individual service providers with businesses. Their business model works by charging both parties for facilitating the seem less connection in terms of project delivery and payment. There are a number of websites and applications that allows businesses and individuals to hire gig workers located around the world with distinct skills they are looking for. Upwork, TaskRabbit, TopCoder, Designhill, Freelancer.com, Symplyhired, Peopleperhour and Fivver are few examples. The task delivered through these platforms vary from data entry to high end software developments. Microtask labour of Amazon’s Mechanical Turk (MTurk) which requires a worker to just fill survey forms, and highly skilled labour such as software development which available in crowdsourcing platforms like TopCoder include in the definition of gig economy labour. “The gig economy is a labour market of ad hoc, short-term, freelance, or otherwise non-permanent jobs. It is distinct from the traditional fulltime, permanent labour force.” (Wiessner, 2018). The distinguishing nature of the gig economy from the traditional works is that the workers are considered as independent contractors and they do not represent any organization as its employees. This is distinction is important form both the parties, as the companies are free from employee related obligations such as performance appraisal, insurance benefits and retirement payments and the employees are independent of the organizational restrictions of time and space. This autonomy and flexibility is the selling point for the gig economy and very name of ‘gig economy’ was coined in reference to these key characteristics during the Great Recession (Alton, 2018).

A major part of the studies is around the platforms and its characteristics that enable in-person and location-independent labour markets. The attitudes, experiences, and outcomes of workers who use these platforms has not been widely explored yet (Kuhn & Maleki, 2017). There exists an important question on how traditional organizational behaviour concepts and theory should be applied to this new and evolving employment model. The answer to this question will require understanding the diversity among both mediating firms (platforms) and workers. Owing to the heterogeneity of nonstandard work arrangements existing in the platform-based settings, the identity of the gig worker is still ambiguous. This heterogeneity has to be acknowledged when we try to extend the management theories to this novel work context (Connelly & Gallagher, 2004).

3.2 Gig Economy and Entrepreneurial Orientation

Digital platforms are propagated as a venue of self-employment, and the workers in those platforms are categorized as self-employed (Josserand & Kaine, 2019) or semi-entrepreneur (Ravenelle, 2019). This classification has been a matter of debate as this identity is propagated and advertised by the platforms and its promoters with a clear motivation. The platforms have heavily engaged in marketing themselves as providing opportunities for people to be entrepreneurial and 'be their own boss.' However, the way gig workers perceive their experience and define their professional identity is less obvious (Josserand & Kaine, 2019).

The studies that focus on the gig workers' perceptions of their work identity suggest that the entrepreneurial categorization bestowed by the platforms is not the correct narrative. Most of the workers using these platforms to find gigs identify themselves as employees of those platforms, and they find algorithmic control as the organizational structure that manages their work and career (Ravenelle, 2017). Burtch et al. (2018) Observed that "on the one hand, platforms might reduce entrepreneurial activity by offering stable employment for the unemployed and underemployed. On the other hand, such platforms may enable entrepreneurial activity by offering work flexibility that allows the entrepreneur to redeploy resources strategically to pursue the nascent venture."

Though the work in the platform-based gig economy itself does not classify the workers as entrepreneurs, the characteristics of the job in these settings overlap with those of the entrepreneurs and self-employed. The characteristics such as risk and autonomy are often common in both entrepreneurship and gig work. However, there are concerns over increased restrictive workplace policies in gig settings that seem to conflict with the fundamental workplace autonomy of entrepreneurship. Thus, the discussion of entrepreneurial orientation in the gig economy should be driven by the venturing prospects derived from the positive job characteristics in these unique work settings, rather than classifying them as self-employed while working. Geissinger, Laurell, Öberg, and Sandström (2021) discuss the impact of the sharing economy on the evolution of entrepreneurship and conceptually explain why the sharing economy gives rise to a relatively wide plethora of entrepreneurial activities initiatives. The role of gig economy platforms in facilitating entrepreneurial activities has also been discussed as they act as entrepreneurship incubators (Bellesia et al., 2019), and motivate workers to be micro-entrepreneurs (Maurer, Mair, & Oberg, 2020).

As the gig economy is considered to be having the potential to entrepreneurial activities (Richter, Kraus, Brem, Durst, & Giselbrecht, 2017), and the characteristics of gig economy work largely intersect with those of the entrepreneurs, we are interested in understanding whether the work and its characteristics in these settings translate to intention to be an entrepreneur.

3.3 Antecedents of Entrepreneurial Intention

Research shows that intention is a key indicator of an individual’s decision to start a new venture. The factors influencing entrepreneurial intention have been widely studied. Many theories have been used to understand intentions and how they translate to action. Ajzen’s (1991) theory of planned behaviour explains that the intentions are determined by “subjective norms”, “personal attitude” and “perceived behavioural control.” N. F. Krueger and Carsrud (1993) used the theory of planned behaviour to explain entrepreneurial intention.

Another theoretical model that explores the predictors of entrepreneurial intentions is Shapero's Entrepreneurial Event (Shapero & Sokol, 1982), where they propose that perceived desirability, propensity to act and perceived feasibility can drive entrepreneurial intention. A large number of research has been conducted to validate Shapero’s model and find out these three basic antecedents of entrepreneurial intention. Building on the entrepreneurial event model Ang and Hong (2000) identified “risk taking propensity”, “internal locus of control”, “persistence”, “the love for money” and “desire” as the antecedents of entrepreneurial intention.

The characteristics of an individual's present job can also predict his entrepreneurial intention. The entrepreneurial event model suggests that the perception of desirability can result from the characteristics of an individual's job, as it is the case of the workers with more risk, autonomy, and flexibility. The theory of self-efficacy (Bandura, 1997) can explain the role of positive job characteristics that overlap with the characteristics of an entrepreneur. Bandura (1997) defines self-efficacy as “people's beliefs in their capabilities to exercise control over their own functioning and over events that affect their lives”. The characteristics of the present job can contribute to the beliefs about the feasibility and desirability of future actions.

3.4 Work Design in the context of gig economy

The theories on work design have been evolving throughout the past century. The early theories around work design focused on the impact of work attributes on work outcomes (F. W. Taylor, 1911), and then shifted its focus to job enriching and job characteristic-related theories (Hackman, 1980; Hackman & Oldham 1975. An integrated work design framework was developed by Morgeson and Humphrey (2006), where they compinged the finding of the previous work design theories. These theories helped to understand the work design of the regular workers and focused on the organizational structure that facilitates the work design.

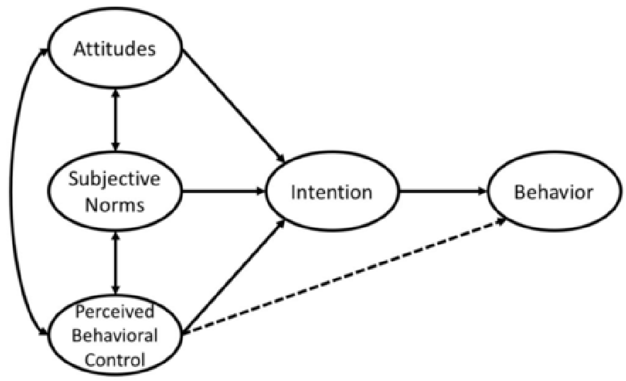
These studies left out a large section of the workers who do not fit into the traditional organizational structure (Schroeder et al., 2021a). Major theories view work design as top-down process where organization and management figure out ways to change employee's role, task or job. Non-traditional work settings, including gig economy, do not fit this top-down approach. One recent attempt to fill this gap in work design literature was the development of the job crafting model, which refers to "a process in which employees alter their jobs to match their individual needs, which can make work more meaningful and enhance one's work identity" (Wrzesniewski & Dutton, 2001). The responsibility for work design is transferred from the organisation to the individual in Job crafting and it fits to the studies that explore work characteristics and their outcome in the context of not standard works. It may be claimed that gig economy workers regularly use job crafting tactics since they have control over the activities they perform. Thus, in addition to introducing new work characteristics and mediating processes pertinent to work design, these work contexts may also include personal traits that were previously associated with the likelihood of job crafting. Drawing on the job crafting literature, Schroeder et al. (2021a) proposed a work design model that fits the context of the gig economy. This theoretical background helps our study formulate hypotheses related to the job characteristics, outcomes and the mediating mechanism.

3.5 Theories

3.5.1 Theory of Planned Behaviour

The Theory of Planned Behaviour proposed by Ajzen (1991) suggests that “an individual’s decision to engage in a specific behaviour can be predicated by their intention to engage in that behaviour. The intention is a direct antecedent of real behaviour; and the stronger the intention for behaviour, the bigger the success of behaviour prediction or actual behaviour.” According to the theory, intentions are determined by three key variables: “personal attitudes”, “subjective norms” and “perceived behavioural control”.

Figure 3.1 - Theory of Planned behaviour

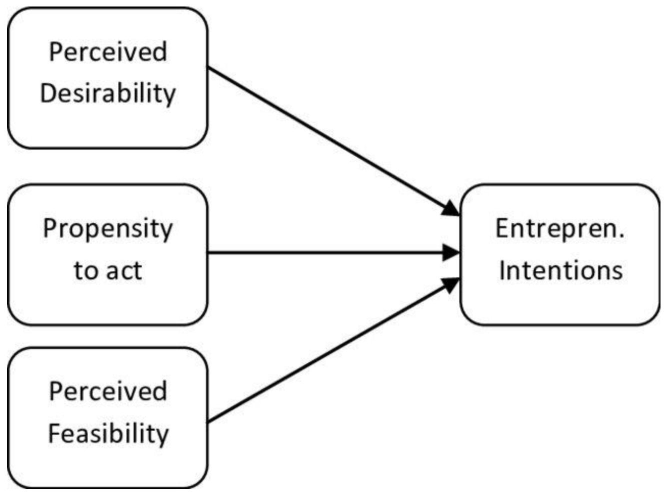


Krueger Jr, Reilly, and Carsrud (2000) state that “intentions are the single best predictor of most planned behaviour, including entrepreneurial behaviour”. De Pillis and Reardon (2007) define entrepreneurial intention as “the intention to start a new business.” It takes purposeful thought and planning to decide to start a new firm and become an entrepreneur (Wilson, Kickul, & Marlino, 2007). Thus, choosing to pursue an entrepreneurial career may be viewed as a planned behaviour that can be justified by intention models. An effective method for analysing the emergence of new businesses has been to examine people's entrepreneurial intentions using socio-cognitive models (Zhao, Seibert, & Hills, 2005).

3.5.2 Entrepreneurial Even Model

The concept of the entrepreneurial event modal was initiated by Shapero (1975) and developed by Shapero and Sokol (1982). The model suggests that “desirability, feasibility, and propensity to act as the determinants of the entrepreneurial intention.”

Figure 3.2 - Entrepreneurial Event Model



It has been found that the "perceived desirability" is a key factor in determining entrepreneurial intention. Typically, the attitudes and beliefs of a person starting a business will influence this perspective (Krueger, 1993). A number of variables can play role in shaping these believes and attitudes; for instance, it has been found that entrepreneurship education fosters a positive attitude about beginning a firm (Gorman, Hanlon, & King, 1997). According to Shapero and Sokol (1982) People who have favourable opinions toward entrepreneurship and who hold optimistic beliefs about it will see it as a desirable career path. Higher entrepreneurial intention is correlated with higher levels perceived desirability.

This proposition of the model can guide our hypothesis on the overlapping characteristics of both gig economy work and entrepreneurial career, such as risk, autonomy, and flexibility. These characteristics can act as a driver for perceived desirability which in turn can result in entrepreneurial intention.

3.5.3 Job Characteristics Theory

The job characteristics theory proposed by Hackman and Oldham (1975) states that "employee job satisfaction, intrinsic work motivation, and productivity are a function of the characteristics of a job." The central characteristic of a job leads to critical psychological states, resulting in positive work-related outcomes. The central characteristics of the job are "skill-variety", "task identity", "task significance", "autonomy", and "feedback". These characteristics result in "high internal motivation", "high-quality work performance", "high work and job satisfaction", and "low absenteeism and turnover" through "perceived meaningfulness of the work", "experienced responsibility" and "knowledge of the actual result".

In the past five decades this theory and the model have undergone extensive empirical examination in different work contexts and geographical locations. Since the introduction of the theory, work design literature has been revolving around it, and the theory is regarded as one of the most prominent theories in organizational behaviour literature.

This theory guides this thesis in developing hypotheses related to key job characteristics of work in the gig economy, it's outcomes and the potential channels through which the relationship between the characteristics and outcomes works.

3.6 Hypothesis Development

3.6.1 Entrepreneurial Intention and the work in the gig economy

The theory of planned behaviour (Ajzen, 1991) proposed that perceived behavioural control drives intention. The intention is found to be the best predictor of an event, including entrepreneurial event (Krueger Jr et al., 2000). Combining these theoretical propositions, we try to answer the question related to entrepreneurial orientation among the workers in the gig economy work setting.

The work in the gig economy is often identified as self-employment, and it is often termed as semi-entrepreneurship (Burtch et al., 2018). Though the literature has no conclusive evidence on the entrepreneurial identity of the gig economy workers, entrepreneurial orientation has been a key theme in gig economy research. In an attempt to answer the question on whether the work in the gig economy itself acts as motivating factor in one's decision to turn entrepreneur and empirically test the relationship, we formulate the following hypothesis:

H1: "Work in the gig economy has a positive effect on entrepreneurial intention"

3.6.2 Job characteristics and Entrepreneurial Intention

Further investigating the entrepreneurial intention in the gig economy, we ask the question: What characteristics of the work in this work setting affect entrepreneurial intention? Even though the relationship between job design and entrepreneurship initially looks quite distinct, both share a basic underlying belief (Baron, 2010). When the employees are given higher-level autonomy and significance to their work, they start to perceive their work to be meaningful and work hardest and best. In the case of entrepreneurs, they create the venture to have the feeling of meaningfulness that is derived from the autonomy and other positive characteristics of entrepreneurship.

The empirical evidence and theories related to job characteristics suggest that the positive characteristic of a job influence key outcomes such as work motivation, satisfaction, and performance. These outcomes are more important to understand the variables that influence founding a new business and the complex mechanism in which those variables operate (Baron, 2010).

Building on the theory of planned behaviour (Ajzen, 1991) and the entrepreneurial event model (Shapero & Sokol, 1982), we try to understand the key job characteristics of the work in the gig economy that can influence entrepreneurial intention. According to the theory of planned behaviour, "perceived behavioural control" is an antecedent to an intention. We propose that the job characteristics of the work in the gig economy can control an individual's perception of job-related behaviour, and it can, in turn, motivate him to take on activities with similar characteristics. In other words, the perceived autonomy in the job can drive entrepreneurial intention as entrepreneurship is attributed with a higher level of autonomy.

According to the entrepreneurial event model, perceived desirability is a key antecedent to entrepreneurial intention. The desirability can be derived when the characteristic of the current job is the same or better in the future role one is willing to take on. When an individual perceives a higher level of autonomy, flexibility and knowledge of result from continuous feedback, he finds it desirable to take on entrepreneurial activities that offer more autonomy and direct results. In order to empirically test these assumptions, the following hypotheses were set.

H2 – "Autonomy has a positive effect on the entrepreneurial intention of workers in the gig economy"

H3 – "Feedback has a positive effect on the entrepreneurial intention of workers in the gig economy"

3.6.3 Job Satisfaction and Entrepreneurial Intention

In traditional work settings job satisfaction, among other desirable work outcomes, has been found to be reducing entrepreneurial intention (Guerra & Patuelli, 2016). There is evidence in the literature that job satisfaction reduces attrition and leads to long-term careers. These positive outcomes restrict an individual from pursuing entrepreneurial activities. On the contrary, in the case of workers in the gig economy, the desirable outcome can promote entrepreneurship as the characteristics of their work and the profile of an entrepreneur overlap in several meanings (Bellesia et al., 2019).

As the entrepreneurial event model suggests, the desirability of the key job characteristics and the satisfaction derived from such jobs can motivate workers in the gig economy to take on entrepreneurial activities, which are perceived to give more satisfaction with a similar level of positive job characteristics. To find out the direction of the relationship between job satisfaction and entrepreneurial intention in this particular context, the following hypothesis has been set:

H4 – ‘‘Job Satisfaction has a positive effect on the entrepreneurial intention of workers in the gig economy’’

3.6.4 The Mediating Mechanism

The job characteristics theory proposed a model where the critical psychological factors mediate the relationship between job characteristics and work-related outcomes. According to the theory key job characteristics initially result in positive psychological states such as work meaningfulness, perceived knowledge of responsibility and results. We test these relationships in the proposed model and set the following hypotheses:

H5 – "Autonomy positively affects the work meaningfulness of workers in the gig economy"

H6 – "Feedback from work positively impacts knowledge of the result of workers in the gig economy"

The job characteristics model further suggests that a positive level of critical psychological state can lead to higher performance, motivation, and satisfaction. We test this proposition in our context, where we test the relationship between work meaningfulness, knowledge of result and job satisfaction with the following hypotheses:

H7- "Work Meaningfulness has a positive effect on the Job Satisfaction of workers in the gig economy."

H8- "Knowledge of result has a positive effect on Job Satisfaction of workers in the gig economy."

Integrating the job characteristics model and our initial hypotheses on the relationship between job characteristics and entrepreneurial intention, we test a set of mediations. We test the serial mediation of work meaningfulness, knowledge of result and job satisfaction with the following two hypotheses:

H9 – "Work Meaningfulness and Job Satisfaction mediates the relationship between Autonomy and Entrepreneurial Intention"

H10 – "Work Meaningfulness and Job Satisfaction mediates the relationship between Feedback and Entrepreneurial Intention"

Table 3.1 - Overview of Hypothesis

Hypothesis	**Relationship**
Hypothesis 1	H1: “Work in the gig economy has a positive effect on entrepreneurial intention”
Hypothesis 2	H2: “Autonomy has a positive effect on entrepreneurial intention of workers in the gig economy”
Hypothesis 3	H3 – “Feedback has a positive effect on entrepreneurial intention of workers in the gig economy”
Hypothesis 4	H4 – “Job Satisfaction has a positive effect on entrepreneurial intention of workers in the gig economy”
Hypothesis 5	H5 – “Autonomy has a positive effect on work meaningfulness of workers in the gig economy”
Hypothesis 6	H6 – “Feedback from work has a positive effect on knowledge of result of workers in the gig”
Hypothesis 7	H7- “Work Meaningfulness a has positive effect on Job Satisfaction of workers in the gig economy”
Hypothesis 8	H8- “Knowledge of result a has positive effect on Job Satisfaction of workers in the gig economy”
Hypothesis 9	H9 – “Work Meaningfulness and Job Satisfaction mediates the relationship between Autonomy and Entrepreneurial Intention.”
Hypothesis 10	H10 – “Work Meaningfulness and Job Satisfaction mediates the relationship between Feedback and Entrepreneurial Intention.”

Chapter 4

Research Methodology

This chapter gives an overview of the research design used in the current study. The chapter discusses the research philosophy and explains the procedures and techniques used throughout the thesis. It provides justification for the research techniques used in various context in this study. This chapter provides an explanation on how data was collected and analysed.

4.1 Introduction

According to Green and Tull (1970), research design is defined as "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". To enable an effortless progression of a proposed research, it is necessary to have clarity on the proposed methodology and justification for the selection of those particular methodology in the presence of multiple options to address a particular research question.

This study attempts to address the research questions related to entrepreneurial orientation among gig economy workers and test the model that predicts the relationship between job characteristics, job satisfaction, and entrepreneurial intention. In order to be precise and clear with the methodology adopted to address the research questions related to this study we discuss seven research design choices namely; “research philosophy”, “research type”, “research strategy”, “time horizon”, “sampling strategy”, “data collection method” and “data analysis methods and tools”.

4.2 Research design choices

4.2.1 Research philosophy

The first design choice a researcher has to make while addressing a particular research question is to choose what research philosophy is being employed among the available philosophical choices. Research philosophy refers to “beliefs regarding how data about a phenomenon should be collected, analysed and used”. Two commonly adopted research philosophy choices are “positivism” and “interpretivism”. Positivism is built up on the assumption that reality can be objectively assessed by the researcher and that there is only a single reality that exists independently outside the observer. It generally serves as the philosophical foundation for quantitative investigations. In contrast, in interpretivism, the researcher has a part to play in subjectively observing their surroundings, and therefore reality is unique for each observer.

There exists a well-debated conflict between the nature of knowledge development of physical sciences and social sciences as the philosophy of physical scientists has consensus on the existence of universal explanation, whereas the social scientist does not have that consensus and believes that inquiry about social phenomena requires varying standards and frameworks to carry out the investigation about the reality (May & Williams, 2002).

The basic question of the research philosophy choices is whether the deductive reasoning that explains the social phenomenon resulting from the observable facts could be based on the self-understanding of the individuals or it must be used in any way that helps change the way things are in the world (Shapiro & Wendt, 1992).

The literature related to the present study, including organisational behaviour, human resources management and entrepreneurship, has been following a positivism as the research philosophy owing to the influence of psychology, management studies and economics. As the major objective of this study is to employ scientific methods to test the underlying relationship between key variables and assess the causality amongst them, this study can be positioned the positivist philosophical paradigm.

4.2.2 Research Type

The next important research design choice is the research type or the research strategy. Major available choices are inductive research, where the theory is built from the observed data and deductive research, which starts with an established theory or set of theories and builds onto it with collected data. Inductive research uses an exploratory approach, whereas deductive research tends to be confirmatory in approach.

The present study follows a deductive approach where the theories are developed from the available body of literature in the topic of interest, and a confirmatory research strategy is designed to test those theories. According to (Blaikie & Priest, 2019), deductive research consists of six distinct steps as follows:

1. Develop idea to propose hypotheses.

2. Draw from the available literature and outline testable propositions.

3. Gain an incremental understanding of the proposed theory and compare it with the propositions of the available theories.

4. Test the premises of the proposed theory with data collected from relevant sources.

5. Reject or modify premises that are not supported by the collected data.

6. Validate the theory if the data is supporting the set premises.

The current study follows these steps to test the set hypothesis regarding the relationship between key job characteristics, work meaningfulness, job satisfaction, and entrepreneurial intention. Initially, a critical review of extant research literature was carried out, and a model that explains the relationship between these key variables was developed. From this proposed model a number of specific hypotheses have been set, including the key premise that work in the gig economy work setting is positively related to higher level of entrepreneurial intention, and job satisfaction in those settings increases the propensity of an individual's intention to become an entrepreneur. To confirm these hypotheses and the model proposed data was collected form gig economy workers across India.

Another important choice related to the research types is the kind of data, whether it is quantitative in nature or qualitative. As we are following a hypothetico-deductive approach the quantitative data which is collected by surveying target respondents is the best fit in the context of this study. This type of data also helps us in finding the reality of the relationship we are interested in as the research philosophy used is the positivist paradigm. Among the two methodological choices available, quantitative and qualitative, the former is characterised by a positivist perspective, and it is a highly objective and structured way of collecting the data. However, the qualitative methodology is of interpretive perspective, and the way data is collected and analysed is subjective. It gives more importance to the underlying social structure behind the phenomenon that is being studied.

4.2.3 Research Strategy

According to Denzin and Lincoln (2011), research strategy is the action plan of how a researcher conducts their research project. Research strategy, also known as a research action plan, connects the research philosophy and the methodological choice used to collect and analyse data. Several research strategies exist, including experiments, case studies, ethnography, grounded theory, action research and phenomenology. For a better understanding let us look at two of these, experiments and ethnography. The right research strategy will depend largely on the research aims and questions. Therefore, as with every other design choice, it is essential to justify why you chose the research strategy you did. With the research strategy pinned down, it is time to dig into some of the more practical design choices.

Aligning to the primary nature of this study, we adopt the survey strategy. We are using the quantitative methodology; therefore, we conduct a survey using a questionnaire. This method is a common practice among researchers in social sciences, especially in the domain of management and economics.

A survey method, when conducted with most care in designing the questionnaire, selecting the sample that is representative of the entire population of the study, and ensuring for adequate response rate will help the researcher to answer the research questions in hand by analysing the data and extrapolating it to the population. It allows the researcher to have detailed inference on the proposed relationships and the underlying reasons behind them.

4.2.4 Time horizon

With reference to the time horizon in which the required data for research was collected, the research is classified in two categories: cross-sectional and longitudinal studies. The study in which the data is collected at only one point of time is called a cross-sectional study. In the case of longitudinal study on the other hand, the data will be collected repeatedly in different and well-defined periods two or more times. The data collected to conduct a longitudinal study is called panel data as the surveys make a panel of information from same individuals in different time zones.

When compared with cross sectional data, the longitudinal data always give better understanding of the pattern in the data collected and helps the researcher to make better inferences. However, owing to time and resources constrains this study deploys a cross-sectional design for data collection. The required data for this study were collected from workers in the gig economy by conducting a structured survey at a single point of time.

4.2.5 Sampling strategy

The next important design choice to make while conducting a research study is to define a sampling strategy. The sampling strategy is to decide who to collect data from. There are two distinct strategies used for sampling: probability sampling and non-probability sampling. Probability sampling refers to the method where the respondents are selected randomly from the total population of the study. The non-probability sampling is the method where the respondents are selected based on a criterion that is not random. In this method, every individual in the population will not have an equal chance to be selected as a respondent. The decision on what strategy have to be followed for a study largely depend on factors such as the availability of the list of the entire population to randomly select the sample from it, and the convenience of time and resources to have a randomised approach in the selection of the respondents.

Though we acknowledge the power of random sampling and its ability to make better causal inferences, this study uses a purposive sampling technique as a list of all workers in gig economy work setting in India does not exist.

4.2.6 Data Collection Method

As discussed earlier, the method used to collect data for the present study is a survey method. Ghuari and Gronhaug (2005) defined survey as "as a method of data collection that utilises questionnaires". In a survey method, researcher approaches a predefined group of people to gain information and detailed insights on his topic of interest. Here we have approached workers in the gig economy settings online and offline to collect their responses on the questions related to their job characteristics, work meaningfulness, job satisfaction and entrepreneurial intention. We also have approached their counterparts in the organised sectors and collected their responses as well to have a better understanding of the underlying causal relationships between these key variables.

When systematically designed and administered, a survey helps understand people's views, opinions, and attitudes. A systematic survey involves critical decisions on the way the survey is designed and conducted:

1. Sampling Frame
2. Operationalisation of the Constructs
3. Preparation of the questionnaire
4. Mode of administration

4.2.6.1 Sampling Frame

The data for the study consists of two distinct sets of employees working in various roles and positions. The set-I consists of 434 workers in the platform-based gig economy in India, whereas set-II includes 405 employees working in the private sector organisations. The prime focus of the study is the behavioural aspects of workers in the gig economy. However, to address the question of whether work in the gig economy increases the propensity of one to become more entrepreneurially oriented compared to their counterparts with the same background characteristics, data from non-gig workers is also included in the study.

To test all aspects of the model proposed, data on job characteristics, work meaningfulness, job satisfaction and entrepreneurial intention of workers in the gig economy is included in the data set-I, whereas data on the demographic characteristics and entrepreneurial intention is included in the data set-II.

As discussed earlier, we acknowledge the strength of probability sampling in testing and establishing theories and model. However due to constrains of time and resources and lack of access to the list of workers in the gig economy, from which we can do a randomised sampling, this study adopted a purposive sampling technique.

4.2.6.2 Operationalisation of the Constructs

After critically reviewing the extant literature in the area of the research and studying the theoretical propositions that drive the proposed model, it is important to operationalise the study variables. In chapter two, we discussed the literature in detail and had a look at the major theories that are the foundation of the propositions and hypotheses put forth in this study. Operationalisation will help us in transferring the theoretical concepts into measurable variables. When the operational definitions are clear, it is easy to prepare the measurement tools and questionnaire to collect the data on the given variables.

To address the drawbacks of the single-item questions about study variables, multi-item scales were used to operationalize each of the variables. The study scales were adopted from previously published research, and all of them were tested for its reliability and validity in multiple contexts and countries.

Job Characteristics

Job characteristics are the "basic parameters of a job as they affect the psychological state of the employee, especially with regard to motivation". In another word, job characteristics are the perceived nature of the tasks in a job itself. According to Hackman and Oldham (1975), the pioneers of the job characteristics study, job characteristics are the key elements of the job itself that influence the outcomes of the job.

The initial job characteristics model consists of five job characteristics; skill variety, task identity, task significance, autonomy and feedback. Building on the basic propositions of this model, researchers have proposed a bunch of other characteristics that can play a key role in defining the nature of a job in the context of motivation and other psychological outcomes.

As this study aims to test and validate a model that hypothesises the relationship between core job characteristics and psychological outcomes in a relatively new work setting of the gig economy, we focus on the particular job characteristics highlighted by the previous studies in this specific context.

Kalleberg and Dunn (2016), in their work titled "Good Jobs and Bad Jobs in the Gig Economy", highlighted the importance of key characteristics that can define the very nature of the work in the gig economy. Autonomy was also discussed as a key job characteristic in the gig economy settings by Schroeder et al. (2021a) and Wood et al. (2018).

Similarly, Donovan, Bradley, and Shimabukuru (2016) highlighted the importance of flexibility in terms and where and when the job is done in defining the nature of the gig economy work. De Stefano (2015) pointed out that work scheduling autonomy is a key distinguishing characteristic of the job in the gig economy.

In order to specifically understand the job characteristics in the context of gig economy we focus on three core characters: autonomy, and the feedback from the job. Autonomy pertains to the "degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedure to be used in carrying it out".

Autonomy is mostly linked to higher level managerial positions with more responsibilities in managing the organizations and teams within the organizations. Such jobs are considered more meaningful compared other roles because of the sense of responsibility and ownership aligned to such roles. However, this characteristic is not limited to the top-level management as the individual team member or workers will also make sense of the level of the autonomy provided them in deciding what and how to do their work. When an employees feel that they are part of decision making related to their own work and they are not being merely following an organizational authority above him, they find their work meaningful to them and find motivation to perform well.

We operationalise autonomy as "the amount of freedom and independence an individual has in terms of how to carry out his or her work assignment". It has been measured by nine items scale developed by Morgeson and Humphrey (2006) adopting from the "job diagnostic survey" (Hackman and Oldham, 1975), "job characteristics inventory" (Idaszak & Drasgow, 1987). The sample item from the scale includes: "the job allows me to plan how I do my work", "the job allows me to make a lot of decisions on my own" and "the job allows me to make my own decisions about how to schedule my work". The complete questionnaire is given in the appendix for reference.

Feedback refers to the "degree to which carrying out the work activities required by the job provides the individual with direct and clear information about the effectiveness of his or her performance."

Employees derive motivation from the feedback they receive from their peers, supervisors and others. When they are kept in the loop of their performance and given frequent feedback on how they are performing, they get clear sense of the results from the work and get motivated. If they come to know that they are performing well and their work is being appreciated, they will become self-motivated to keep the good work and enhance the performance. In contrast, if they are given feedback that they are not performing as expected, they will try to find ways to improve their performance.

"Feedback from job reflects the degree to which the job provides direct and clear information about the effectiveness of task performance". It has been measured by adopting the scale developed by Morgeson and Humphrey (2006) to measure the job characteristics. The sample question includes: "The job itself provides feedback on my performance."

Work Meaningfulness and Knowledge of Result

According to Hackman and Oldham (1976), the relationship between job characteristics and the job-related outcomes operates through critical psychological states. Perceived meaningfulness of the work and the knowledge of actual results from the work are two of the major psychological states included in the job characteristics model. Work Meaningfulness can be operationally defined as "the degree to which the individual experiences the job as one which is generally meaningful, valuable, and worthwhile". We operationalise knowledge of result as "the degree to which the individual knows and understand, on a continuous basis how effectively he or she is performing the job" (Hackman and Oldham, 1976).

Work Meaningfulness was measured using ten items scale developed by Steger, Dik, and Shim (2019), based on the theoretical propositions put forth by Hackman (1980). The sample items include: "I have found a meaningful career", "I view my work as contributing to my personal growth” and “I have a good sense of what makes my job meaningful”.

The scale to measure knowledge of result is adopted from job diagnostics survey developed by Hackman and Oldham (1975). The scale consists of three items that measure different aspects of an employee’s perception of the knowledge of the result from his work. The sample question includes: “I don’t have trouble figuring out whether I am doing well or poor”.

Job Satisfaction

Job Satisfaction is defined as “An individual’s positive affective reaction of the target environment as a result of the individual’s appraisal of the extent to which his or her needs are fulfilled by the environment”.

It has been measured by using six items Overall Job Satisfaction Survey developed and tested by Spector (1985). The sample items include: “I feel fairly well satisfied with my present job”, and “I am satisfied with my job for the time being”.

Entrepreneurial Intention

The study attempts to understand the entrepreneurial orientation among gig economy worker and no gig workers by measuring their intention. According to Shapero and Sokol (1982), entrepreneurial intention depends on perception of feasibility and desirability. The intention to be an entrepreneur reflects an individual's desirability and feasibility in a given context.

Entrepreneurial Intention is “the conscious state of mind that precedes action and directs attention toward entrepreneurial behaviours such as starting a new business and becoming an entrepreneur” (Moriano, Gorgievski, Laguna, Stephan, & Zarafshani, 2012).

We use a six-item scale developed by Liñán and Chen (2009) to measure Entrepreneurial Intention. The Sample questions include: “I am ready to do anything to be an entrepreneur” and “I will make every effort to start and run my own firm.”

4.2.6.3 Preparation of the Questionnaire

Churchill and Iacobucci (2006) have recommended a well-accepted step-by-step method to develop and validate a survey questionnaire. Following their recommendations, first, we have done the information sought. As explained above, we identified the measurement tools to be used for each of the variables in the model after considering various elements related to the research question and the research design choices. In addition to the questions about the key variables of the study, various questions about the respondents' background characteristics were also included. Both the questionnaires were classified as follows:

Questionnaire -1

Section 1 – Demographic Characteristics (Age, Gender, Education, Marital Status, Location of the residence whether urban or rural, Nature of the primary job, Experience and Income category)

Section 2 – Job Characteristics, work meaningfulness and Knowledge of the results from work

Section 3- Job Satisfaction and Entrepreneurial intention.

Questionnaire 2

Section 1 – Demographic Characteristics (Age, Gender, Education, Marital Status, Location of the residence whether urban or rural, Nature of the primary job, Experience and Income category)

Section 2 - Entrepreneurial Intention.

4.2.6.4 Mode of Administration

As is the case for most quantitative studies in organisational behaviour and allied areas of research, the self-administered questionnaire survey technique has been followed in this study. Before asking the survey respondents to fill out the questionnaire, a clear description of the background and the aims of the study have been given to the respondents to avoid confusion while filling it. In the case of online questionnaire, this has been achieved by adding a short paragraph explaining the background and the broader aim of the study in the beginning of the questionnaire. This detail has also been included in the description of the link.

Acknowledging the advantage of in person survey in terms of quality of sampling and data, maximum efforts has been taken to make the survey in person. Sixty percentage of the questionnaire for data set I were administered in person by visiting coworking hubs in various cities across India. The rest of the questionnaire was administered using online tools due to time and financial constraints. The survey for data set II was administrated wholly in the online mode as the decision to collect the data was taken at a later stage of the study, and the lockdown resulted from the covid19 pandemic was a huge constraint approach respondent individually.

4.2.6.5 Questionnaire Pre-Testing

Although the measurement tools used in this study have been well established and tested for its reliability and validity by multiple researchers in the past in different organisational contexts, owing to the novelty of the work setting we are interested in, a pilot study. We conducted a pre-test of the data on a subset of data from the gig economy work setting.

The pilot study and analysis were conducted on data from 140 workers in the platform-based gig economy. The following analyses using IBM SPSS:

KMO and Batters Test

Principal Component Analysis

Construct Reliability Test (Cronbach's Alpha)

KMO and Bartlett's Test

KMO is a statistical tool that examine how the study variables are correlated with each by testing partial correlations and find out how the factors explain each other. It indicates the degree of information among the variables that overlap with each other. KMO values less than 0.5 are unsatisfactory, whereas values closer to 1.0 are optimal.

Bartlett's test of Sphericity tests the null hypothesis that "the correlation matrix is an identity matrix". If the variables have an identity correlation matrix, they are unrelated and not fit for factor analysis. A significant statistical test (< 0.05) suggests that the correlation matrix is not an identity matrix (rejection of the null hypothesis).

Table 4.1 - The result of KMO and Bartlett's

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.919
Bartlett's Test of Sphericity	Approx. Chi-Square	7532.219
	Df	666
	Sig.	0.000

The result of KMO and Bartlett's Test is given in the Table 3.1. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (score = 0.919) was found to be above the prescribed limit of 0.5 (Draycott & Kline, 1994) And the test was significant with P value of 0.000 ($p<0.001$) with the degree of freedom equal to 666. Both these results show an adequate and significant correlation between the study constructs measured by the items in the pilot study questionnaire.

Principal Component Analysis

To confirm the extraction of the constructs from the study items, Principal Component Analysis was conducted with a varimax rotation technique. The rotation for the six constructs for the study was completed in 6 iterations, and the result of the PCA is given in table 3.2.

Table 4.2 - Rotated Component Matrix (Method of extraction – PCA)

	Component					
	1	2	3	4	5	6
AUT1	.703					
AUT2	.761					
AUT3	.814					
AUT4	.736					
AUT5	.739					
AUT6	.798					
AUT7	.750					
AUT8	.791					
AUT9	.834					
FD1			.834			
FD2			.821			
FD3			.852			
WM1		.887				
WM2		.895				
WM3		.853				

WM4		.845				
WM5		.885				
WM6		.762				
WM7		.874				
WM8		.741				
WM9		.818				
WM10		.796				
KR1					.812	
KR2					.774	
KR3					.757	
JS1						.715
JS2						.829
JS3						.890
JS4						.979
JS5						.945
JS6						.704
EI1				.599		
EI2				.585		
EI3				.596		
EI4				.636		
EI5				.565		
EI6				.636		

Table 3.3 consists of the result of the principal component analysis and gives details on the total variance explained. The results given in the table show that the cumulative

variances are 87.45% for all six constructs and these constructs are unidimensional as the reported Eigenvalues are above 1. These results reaffirm the findings of previous studies where the same items are used to measure these constructs.

Table 4.3 - Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.428	33.589	33.589	12.428	33.589	33.589
2	7.892	21.330	54.918	7.892	21.330	54.918
3	5.292	14.304	69.222	5.292	14.304	69.222
4	4.244	11.470	80.691	4.244	11.470	80.691
5	1.964	5.308	85.999	1.964	5.308	85.999
6	1.518	1.400	87.400	1.518	1.400	87.400
7	.420	1.136	88.536			
8	.386	1.044	89.580			
9	.319	.861	90.441			
10	.296	.801	91.242			
11	.274	.740	91.981			
12	.260	.702	92.684			
13	.240	.649	93.333			
14	.224	.605	93.938			
15	.203	.549	94.487			
16	.195	.528	95.016			
17	.180	.487	95.503			
18	.167	.451	95.954			

19	.162	.439	96.393			
20	.155	.419	96.812			
21	.132	.356	97.169			
22	.125	.338	97.507			
23	.110	.298	97.805			
24	.105	.284	98.089			
25	.092	.248	98.337			
26	.080	.216	98.553			
27	.072	.194	98.746			
28	.070	.188	98.934			
29	.062	.169	99.103			
30	.061	.166	99.269			
31	.057	.155	99.424			
32	.047	.127	99.551			
33	.041	.111	99.662			
34	.038	.104	99.766			
35	.038	.103	99.869			
36	.025	.069	99.938			
37	.023	.062	100.000			

Construct Reliability Test (Cronbach's Alpha)

The internal consistency indicators of the items in each study constructs are given in the Table 3.4. The Cronbach's Alpha is found to be higher than the prescribed 0.7 threshold and explains the reliability of the scales used in the study. In other words, the study scale shows consistency in measuring the constructs.

Table 4.4 - Construct Reliability Values

Constructs	Cronbach's Alpha
Autonomy	0.974
Feedback	0.986
Work Meaningfulness	0.981
Knowledge of Result	0.860
Job Satisfaction	0.978
Entrepreneurial Intention	0.967

4.3 Data Analysis techniques

The data collected was combined using Microsoft Excel and exported to SPSS and Stata for analysis. The data cleaning was also performed using Microsoft Excel. The following methods have been employed to address various aspects of the research questions in hand by testing the different hypotheses:

4.3.1 Ordinary Least Squire Regression (OLS)

To assess the relationship between the key variables in the study, Ordinary Least Squire Regression (OLS) has been employed. OLS is a "common technique for estimating coefficients of linear regression equations which describe the relationship between one or more independent quantitative variables and a dependent variable."

In the case of a model with p explanatory variables, the OLS regression model writes:

$Y = \beta 0 + \Sigma j{=}1..p\ \beta j Xj + \varepsilon$

where Y is the dependent variable, β0, is the intercept of the model, X j corresponds to the jth explanatory variable of the model (j= 1 to p), and e is the random error with expectation 0 and variance σ^2.

The first regression model in our study analyses whether being in the gig economy affects the employees' entrepreneurial intention. The Y in our model is a continuous variable that represents the employees' entrepreneurial intention. The key explanatory variable is a dummy variable coded 1 if the respondent works in the gig economy and 0 otherwise. The list X includes all other control variables, including demographic characteristics of the employees.

4.3.2 Logistic Regression

In order to check the robustness of the results from the OLS model, a logistics regression is also employed. In the case of logistic regression, the outcome variable should be discrete. It is “a process of modelling the probability of a discrete outcome given an input variable”. To run a logistics regression with a binary outcome variable, we coded the entrepreneurial intention with 1 if the average of all items in the scale is above 3, and 0 otherwise. Using this, we run a logistic regression and match the results with that of the baseline OLS model.

4.3.3 Structural Equation Modelling (SEM)

In order to test the reaming hypothesis in a single regression equation and validate the proposed model, we use the Structural Equation Modelling Technique (SEM). It is "a multivariate statistical analysis technique used to analyse structural relationships". SEM includes multiple statistical procedures that are interconnected.

The structural Equation Modelling can be done using multiple properties of the available data and can combine all regressions, testing multiple hypotheses in a single model. Based on the data structure used for the analysis, SEM is classified into two: Partial Least Square SEM (PLS SEM) and Covariate based SEM (CB SEM). PLS SEM considers explained variance in the endogenous constructs as the basis for the regression whereas CB SEM uses an observed covariance matrix to run the regressions. As the main objective of this study is to test the model, we use CB SEM, as it is preferable in such study contexts.

The SEM analysis includes a measurement model derived from a confirmatory factor analysis and a structural model resulting from the regression analysis. The measurement model explains the relationship between the study variables and its indicators, while the structural model shows the relationship between all of the study variables with the path coefficients of the regression among those variables.

4.4 Chapter Summary

In this chapter, we have discussed the Methodological Choices of the present study. We started with major research design options available and discussed the choices we have made along with an explanation of the reasons and justification behind those choices.

Chapter 5

Data Analysis and Interpretation

This chapter provides a detailed discussion of the results of the statistical analyses done on the data collected. It explains how the set hypotheses were tested using various techniques to address the question set by the researcher. The chapter starts with the explanation of descriptive statistics on the sample collected, and it goes on to a detailed description of the summary statistics of the study variables and each items used to measure them. Further, it gives a detailed explanation of analyses used for the data manipulations, including preliminary screening, treatment of missing data and outliers and the tests for the normality of the sample data. Major part of the chapter discusses various techniques used to test the hypotheses, including ordinary least square regression, propensity score matching, structural equation modelling and serial mediation analyses, along with providing detailed interpretations to the results of each analysis.

5.1 Demographic Profile of Respondents

The questionnaires used to collect data include data on the respondents' demographic profiles in the gig economy settings and non-gig settings. The questions in both questionnaires used for the study include gender, age, educational qualification, marital status, work experience, location of residence and income categories. The summary statistics about the demographic profile are presented in Tables 5.1 and 5.2.

Table 5.1 - Demographic Profile of Gig Economy Workers

Demographic Characteristics	**Valid N**	**Number of Respondents**	**Percentage**
Gender	434		
Male		388	89.40
Female		46	10.60
Age	434		
18-30		145	33.41
31-40		180	41.47
40-50		88	20.28
50 and above		21	4.84
Education	434		
Primary & Secondary		120	27.65
Graduation		212	48.85
Post-Graduation		102	23.5
Marital Status	434		
Single		75	17.28
Married		359	82.72
Experience Category	434		
3-5 Years		126	29.03
6-10 Years		187	43.09
11-15 Years		82	18.89
16 Years and above		39	8.98
Income Category	434		
Less than 5 Lack		144	33.17
5 to 10 lacks		197	45.39
10 lacks and above		93	21.42
Residence Location	434		
Urban		226	52.07
Rural		208	47.93

Table 5.1 gives the descriptive statistics on the demographic profile of the gig economy workers' sample. It shows the percentage of the selected sample in different

categories based on their gender, age, education, experience, marital status, income, and residence location. The description shows that 89.4 percent of the selected sample were male, and most of the employees (75 percent) who choose to be in the gig economy are in the age group between eighteen and forty. The data shows that the gig economy in India is still male-dominated and reiterates the notion that India's gig economy has not yet attracted women. The gig work in India is growing fast as it the estimated number of gig workers are above fifteen million. However, women represent only ten percent of this labour force (Varsha, 2022). This drastic gender gap in this promising labour market has been a matter of concern and the Government of India has started implementing policy-level intervention to address it. Government of India has been paying attention to this gap and attempting to introduce policy level measure to address it. For instance, NITI Aayog has proposed fiscal incentives for companies with about one-third of their workforce as women and people with disabilities. In order to facilitate analysis for the study, data from non-gig economy workers was also used. Table 5.2 depicts the demographic profile of the sample from the non-gig economy workers.

Table 5.2 - Demographic Profile of Non-Gig Economy Workers

Demographic Characteristics	**Valid N**	**Number of Respondents**	**Percentage**
Gender	405		
Male		247	39.01
Female		158	60.99
Age	405		
18-30		110	27.16
31-40		116	28.64
40-50		98	24.20
50 and above		81	20.00
Education	405		

Primary & Secondary		89	21.98
Graduation		222	54.81
Post-Graduation		94	23.21
Marital Status	405		
Single		345	85.19
Married		60	14.81
Experience Category	405		
3-5 Years		95	23.46
6-10 Years		124	30.62
11-15 Years		112	27.65
16 Years and above		72	17.70
Income Category	405		
Less than 5 Lack		150	37.03
5 to 10 lacks		160	39.50
10 lacks and above		195	23.45

As the study is done on two distinct categories of employees in the labour market, data on the type of their primary job was also collected. Table 5.3 and 5.4 presents the summary of job categories for both gig economy workers and non-gig workers.

Table 5.3 - Types of Works in the gig economy

Type of Work	Number of Respondents	Percentage
Content Writing/ Translation	66	15.20
Coding/ Programming	151	34.79
Data Entry	39	8.90
Graphic Designing / Video Editing	100	23.04
Other	78	17.97

Table 5.4 - Types of works in the non-gig economy sample

Type of Work	Number of Respondents	Percentage
Media	17	3.91
Coding/ Programming	77	17.74
BPO – Non-IT	122	28.11
Management	50	11.52
Other	168	38.70

5.2 Descriptive Statistics

In order to have a detailed understanding of the study variables and items used to measure them, we run descriptive analyses on the data and present its results. The major statistics presented here are the mean, standard deviation, Skewness and Kurtosis of each item in the questionnaire. The mean provides the details about the central tendency, and the standard deviation explains the dispersion of the distribution from the mean. Skewness and Kurtosis measure the symmetry of the distribution.

The descriptive statistics for data set 1 (gig economy) include focal constructs of Job Characteristics, Job Satisfaction and Entrepreneurial Intention, whereas the descriptive statistics of data set 2 (non-gig workers) include data only on the critical variable Entrepreneurial intention. Table 5.5 and 5.6 show mean, standard deviation, skewness and Kurtosis for these variables in both sample data sets.

Table 5.5 - Descriptive Statistics

Items	Item Description	Mean	SD	Skewness	Kurtosis
AU1	"The job allows me to make my own decisions about how to schedule my work"	3.09	1.093	-.373	-.633
AU2	"The job allows me to decide on the order in which things are done on the job"	3.06	1.094	-.274	-.593
AU3	"The job allows me to plan how I do my work"	3.04	1.101	-.205	-.644
AU4	"The job gives me a chance to use my personal initiative or judgment in carrying out the work"	3.02	1.102	-.190	-.695
AU5	"The job allows me to make a lot of decisions on my own"	3.01	1.106	-.172	-.677
AU6	"The job provides me with significant autonomy in making decisions"	3.08	1.103	-.201	-.628
AU7	"The job allows me to make decisions about what methods I use to complete my work"	3.04	1.089	-.178	-.618
AU8	"The job gives me considerable opportunity for independence and freedom in how I do the work"	3.03	1.113	-.169	-.679
AU9	"The job allows me to decide on my own how to go about doing my -work"	2.99	1.100	-.210	-.665
FD1	"The work activities themselves provide direct and clear information about the effectiveness (e.g., quality and quantity) of my job performance"	3.08	1.063	-.307	-.546
FD2	"The job itself provides feedback on my performance"	3.10	1.052	-.318	-.517

FD3	"The job itself provides me with information about my performance"	3.06	1.078	-.291	-.583
WM1	"I have found a meaningful career"	3.09	1.154	-.302	-.692
WM2	"I view my work as contributing to my personal growth"	3.18	1.186	-.350	-.712
WM3	"My work really makes no difference in the world"	3.14	1.185	-.343	-.732
WM4	"I understand how my work contributes to my life's meaning"	2.88	1.186	-.247	-1.055
WM5	"I have a good sense of what makes my job meaningful"	2.90	1.158	-.259	-.991
WM6	"I know my work makes a positive difference in the world"	2.92	1.142	-.268	-.944
WM7	"My work helps me better understand myself"	2.86	1.163	-.213	-1.017
WM8	"I have discovered work that has a satisfying purpose"	2.87	1.167	-.205	-1.024
WM9	"My work helps me make sense of the world around me"	2.88	1.147	-.205	-.985
WM10	"The work I do serves a greater purpose"	2.90	1.152	-.222	-.989
KR1	"I don't have trouble figuring out whether I am doing well or poor"	2.90	1.152	-.239	-.974
KR2	"I usually know whether or not my work is satisfactory on this job"	2.87	1.152	-.235	-1.013
KR3	"My opinion of myself goes up when I do this job well"	2.93	1.147	-.280	-.940
JS1	"Overall, I am satisfied with my job?"	3.28	1.065	-.328	-.518
JS2	"In general, the type of work I do corresponds closely to what I want in life"	3.22	1.076	-.265	-.621

JS3	"The conditions under which I do my work are excellent"	3.24	1.054	-.323	-.493
JS4	"Until now, I have obtained the important things I wanted to get from my work"	3.30	1.018	-.378	-.394
JS5	"If I could change anything at work, I would change almost nothing"	3.28	1.035	-.413	-.391
JS6	"Overall, I am satisfied with my financial benefits"	3.30	1.027	-.351	-.429
EI1	"I am ready to do anything to be an entrepreneur"	3.08	1.161	-.291	-.774
EI2	"My professional goal is to become an entrepreneur"	3.13	1.181	-.371	-.784
EI3	"I will make every effort to start and run my own firm"	3.11	1.175	-.346	-.806
EI4	"I am determined to create a firm in the future"	3.12	1.187	-.344	-.806
EI5	"I have very seriously thought of starting a firm"	3.06	1.154	-.293	-.801
EI6	"I have the firm intention to start a firm someday"	3.08	1.139	-.341	-.729

Table 5.5 shows the mean, standard deviation, skewness and Kurtosis for the responses to each of the items in the questionnaire. All the items have a mean value above 2.5 with a standard deviation between 1 and 2. This indicates that the respondents have a positive perception of the study variables. In other words, on an average, the responses of the gig economy workers about their job characteristics and work-related outcomes were about the neutral position and falling in the range of "agree" and "strongly agree", indicating a positive perception. The data shown in this table gives a broad understanding of the characteristics of the workers in the gig economy, their job satisfaction and their intention to turn entrepreneurs.

Skewness and Kurtosis explain the distribution of collected data. Kurtosis is defined as "the extent to which the tails of a particular distribution differ from that of a normal distribution." Skewness refers to "asymmetry or distortion in a symmetrical bell curve or normal distribution". According to Tabachnick, Fidell, and Ullman (2007), "if the values of Kurtosis lie within the range of ±3, it implies that distribution is similar to normal distribution." Hopwood and Moser (2011) suggests that "if the values of skewness are in the range of ± 1, it shows that the data is marginally skewed, ± 2 indicates that it is considerably skewed, and ±3 indicates it is extremely skewed, implying that the distribution is non-normal." For the sample in this study, the skewness of all items falls between 0 and -1. The kurtosis values are between 0 and -2. Slightly negatively skewed data with kurtosis below 0 demonstrate a moderate deviation from the normal distribution. For multiple reasons, a slight deviation from the normal distribution is expected in survey data. In survey data, some respondents tend to provide positive responses to all questions, leading to possible bias. This type of bias is called acquiescence bias in survey research (Purcell, 2014).

Though the analysis presented in table 5.5 shows a slight deviation of the data from the normal distribution, we continue with the further analysis as the deviation is moderate and acceptable. According to Stiger, Kosinski, Barnhart, and Kleinbaum (1998), "though the normality assumption is vital for making an inference, it is not mandatory criteria for establishing the validity of linear regressions and t-tests unless there is an extreme departure from the normality."

5.3 Regression Analysis

The primary objective of this study is to understand whether entrepreneurial orientation significantly varies among workers in the gig economy and those in other work settings and to study the impact of work in the gig economy on one's entrepreneurial intention. To achieve this objective, we hypothesized that "the work in the gig economy has a positive impact on entrepreneurial intention. We test this hypothesis by using an ordinary least squire regression on the combined sample. Before going for the regression analysis, we need to know whether the entrepreneurial intention significantly varies among the workers in the gig economy and others. In order to test this, we first run a two-sample T-Test to see whether the mean of entrepreneurial intention varies between these two distinct groups. Table 5.6 presents the result of the T-Test.

Table 5.6 - Two-sample t test with equal variances

Group	Obs	Mean	Std.Err	Std.Dev	[95% Conf.Interval)	
0	405	2.523457	0.0551645	1.110165	2.415011	2.631902
1	434	3.097542	0.0482677	1.005545	3.002674	3.19241
combined	839	2.820421	0.0378035	1.094997	2.746221	2.894622
diff	-	0.5740855	0.0730502		-1.1481709	
diff = mean (0)- mean (l)						t = -7.8588
Ho: diff = 0						degrees of freedom = 837
Ha : diff != 0						
Pr (|T| > |t|) = 0.000						

The result in Table 5.7 suggests there is a significant difference between entrepreneurial intention among gig economy workers and others. To be specific, the mean of entrepreneurial intention is 3.097 and 2.523 for gig economy workers and non-gig workers, respectively. The T-Test rejects the null hypothesis that there is no significant difference between two means and reveals that both means are statistically different. To further investigate the causal relationship between work in the gig economy and entrepreneurial intention, we set a hypothesis that states: that work in the gig economy increases one's intention to be an entrepreneur. We ran an Ordinary Least Squire (OLS) Regression analysis to test this hypothesis. The dependent variable in this regression is the mean score of entrepreneurial intention. A binary variable coded 1 if the respondent works in the gig economy and 0 otherwise is the main explanatory variable. All the other demographic variables are kept as controls in the model. The result of the OLS Regression is presented in Table 5.7.

Table 5.7 - Ordinary Least Squire Regression

Dep.Var: Entrepreneurial Intention	**Coef.**	**St.Err.**	**t-value**	**p-value**	**[95% Conf**	**Interval]**	**Sig**
Gig Worker	.408	.065	6.310	.000	.281	.535	***
Male	.541	.083	6.520	.000	.378	.704	***
Age	-.011	.003	-3.100	.002	-.018	-.004	***
Single	-.095	.078	-1.220	.224	-.249	.058	
Rural	-.785	.061	-12.97	.000	-.904	-.667	***
Education							
High. Sec	.009	.084	.110	.912	-.156	.174	
Grad	.388	.093	4.15	.000	.204	.571	***
Post Grad	.530	.094	5.63	.000	.345	.715	***
Experience							
6-10	.555	.126	4.40	.000	.307	.803	***
11 - 15	.670	.104	6.41	.000	.465	.875	***
16 and above	.160	.112	1.43	.152	-.059	.38	
Income							
5 to 10 lacks	.323	.172	1.870	0.061	-.015	.662	**
10 lacks +	.525	.153	3.43	0.001	.225	.826	***
Constant	2.327	.212	10.97	.000	1.911	2.743	***

Mean dependent var	2.820	SD dependent var	1.095
R-squared	0.432	Number of obs	837
F-test	86.439	Prob > F	0.000

*** *p<.01*, ** *p<.05*, * *p<.1*

The regression presented in table 5.7 answers the primary research question of whether working in the gig economy can influence one's entrepreneurial intention. The result shows that work in the gig economy has a positive and significant effect on intrapreneurial intention. To be specific, the regression coefficient of the dummy variable that denotes the work in the gig economy is 0.408, and it is statistically significant ($p<0.005$). In other words, the individuals who work in the gig economy have, on an average, 0.408 higher level of entrepreneurial intention on a scale of 0 to 5.

The result of the OLS regression also shows that the entrepreneurial intention among males is significantly higher (Beta: 0.541. P=0.00) than among females. It also shows a positive and significant relationship between entrepreneurial intention and determinants such as higher level of education, experience and income, and a negative and significant relationship between entrepreneurial intention and independent variables such as age, marital status (single) and location of residence (rural). The given model of independent variable predicts 43.2 percentage of variation in the entrepreneurial intention as the R-Squared of the regression model is 0.432.

5.3.1 Robustness Check for OLS Result – Logit Regression

Further to check the robustness of the result presented in the Table 5.7, where the outcome variable was a continues variable where 5 means the highest level of entrepreneurial intention and 1 being the least level, we run an additional regressions; a logit model, while keeping a binary variable created from the continues variable as the outcome variable. The results of these two regressions are presented in Table 5.8.

Table 5.8 - Logistic Regression

Dep.Var EI_Dummy	**Coef.**	**St.Err.**	**t-value**	**p-value**	**[95% Conf**	**Interval]**	**Sig**
Gig Worker	.618	.209	2.96	.003	.209	1.027	***
Male	1.433	.322	4.45	.000	.802	2.064	***
Age	-.015	.012	-1.28	.200	-.039	.008	
Single	-.037	.261	-0.14	.889	-.548	.475	
Rural	-2.3	.262	-8.77	.000	-2.813	-1.786	***
Education							
High. Sec	.283	.325	0.87	.383	-.353	.919	
Grad	2.253	.340	6.63	.000	1.587	2.919	***
Post Grad	.276	.421	0.66	.512	-.549	1.101	
Experience							
6-10	1.232	.533	2.31	.021	.187	2.276	**
11 - 15	1.819	.482	3.77	.000	.874	2.765	***
16 and above	1.374	.506	2.72	.007	.383	2.365	***
Income							
5 to 10 lacks	4.719	.344	42.67	.000	14.043	15.395	***
10 lacks +	4.298	.388	36.80	.000	13.537	15.05	***
Constant	-3.609	.857	-4.21	0	-5.289	-1.929	***

Mean dependent var	0.262	SD dependent var	0.440
Pseudo r-squared	0.302	Number of obs	837
Chi-square	165.586	Prob > chi2	0.000

**** p<.01, ** p<.05, * p<.1*

The results presented in table 5.8 reiterate the OLS regression results and reveal a positive and significant relationship between work in the gig economy and entrepreneurial intention (Beta = 0.618 and P = 0.003).

From the regressions presented in tables 5.7 and 5.8, we conclude that compared to regular employees, the workers in the gig economy are more oriented towards entrepreneurship. Though this relationship was not empirically tested before, previous researchers have discussed the contribution of the gig economy to entrepreneurship. The platforms that provide work to gig economy employees have been promoting entrepreneurship and portraying workers as semi-entrepreneurs (Kuhn & Maleki, 2017). They generally see their users working "with them" not "for them". TaskRabbit, one of the major gig platforms, advertises the opportunity to "become an entrepreneur on our platform". Sundararajan (2017) and Van den Born and Van Witteloostuijn (2013) referred to the platform-based gig economy workers as entrepreneurs. Bellesia et al. (2019) opined that gig economy platforms could work as entrepreneurship incubators and increase workers' entrepreneurial orientation. Woronkowicz and Noonan (2019) suggested that artist in the gig economy can be identified as hybrid entrepreneurs. "Hybrid entrepreneur is an individual who is engaged in a paid employment and simultaneously making efforts to launch ventures" (Folta, Delmar, & Wennberg, 2010).

6.4 Structural Equation Modelling

With the above analysis, including various regressions, we tested the hypothesis that the work in the gig economy promotes entrepreneurship intention among the workers.

The results explained in the above tables clearly suggest that there is a positive relationship between gig economy work and the entrepreneurial intention of the workers. To understand the underlying structural relationship between these two key variables and to find out potential channels through which this relationship operates, we propose a structural model and test it with structural equation modelling analysis.

Structural equation modelling is a regression-based analysis that allows us to combine multiple relationships in a single model and test their relationship in a single analysis. As we discussed in the previous chapter, considering the suitability to the present study, we run a covariate-based structural equation modelling analysis to see the path coefficients of the study variables and test multiple analyses at once, including mediation analyses.

The Structural Equation analysis is done in two stages. First, we run a measurement model to understand the relationship between the indicators of the study variable. This is achieved by running a confirmatory factor analysis. Second, we present a structural model where we run path analysis using covariates-based regression between key variables.

6.4.1 Confirmatory Factor Analysis

Confirmatory factor analysis, the preliminary step in the SEM analysis, presents a measurement model that evaluates the association between the observed indicators (items or manifests), and the unobserved variables (latent variables). In SEM terminology, these latent variables are called factors. The associations in the measurement model are evaluated based on the correlations between the items that indicate each factor. These items are called manifests in SEM terminology. In the graphical representation of the confirmatory factor analysis, the latent constructs (factors) are presented in circles, and the manifest variables (items) are presented in squares. The manifests, represented in squares, are connected to the respective factors with covariance paths, and the factors are connected with each other with regression paths. This method primarily analyses the pattern of the individual factor loading and shows how manifests of the measurement model come together to explain respective factors.

Confirmatory factor analysis is run as a pre-requisite for the structural model analysis when the scales used in the study are well established and tested for their reliability and validity in multiple contexts. It further confirms the scale's robustness in the present context. It facilitates further evaluation of the model by finding out the invariance of a single indicator among a group of indicators and running regressions between latent constructs (Brown, 2015).

Confirmatory factor analysis, which has become one of the most common methods used in applied research, is used primarily for the psychometric analysis of the test instrument and validation of the constructs. In other words, CFA involves the test of reliability and validity of the tools used for the study. Reliability is the ability of the scale or the tool to measure the same construct consistently. The validity is the relevance of the scale in measuring the construct represented by it. “reliability is the value of the extent to which study results are reproducible and validity' is an evidence for integrity- of the research findings” (Bell & Bryman, 2007). The measurement model of the study construct is presented in Figure 5.1

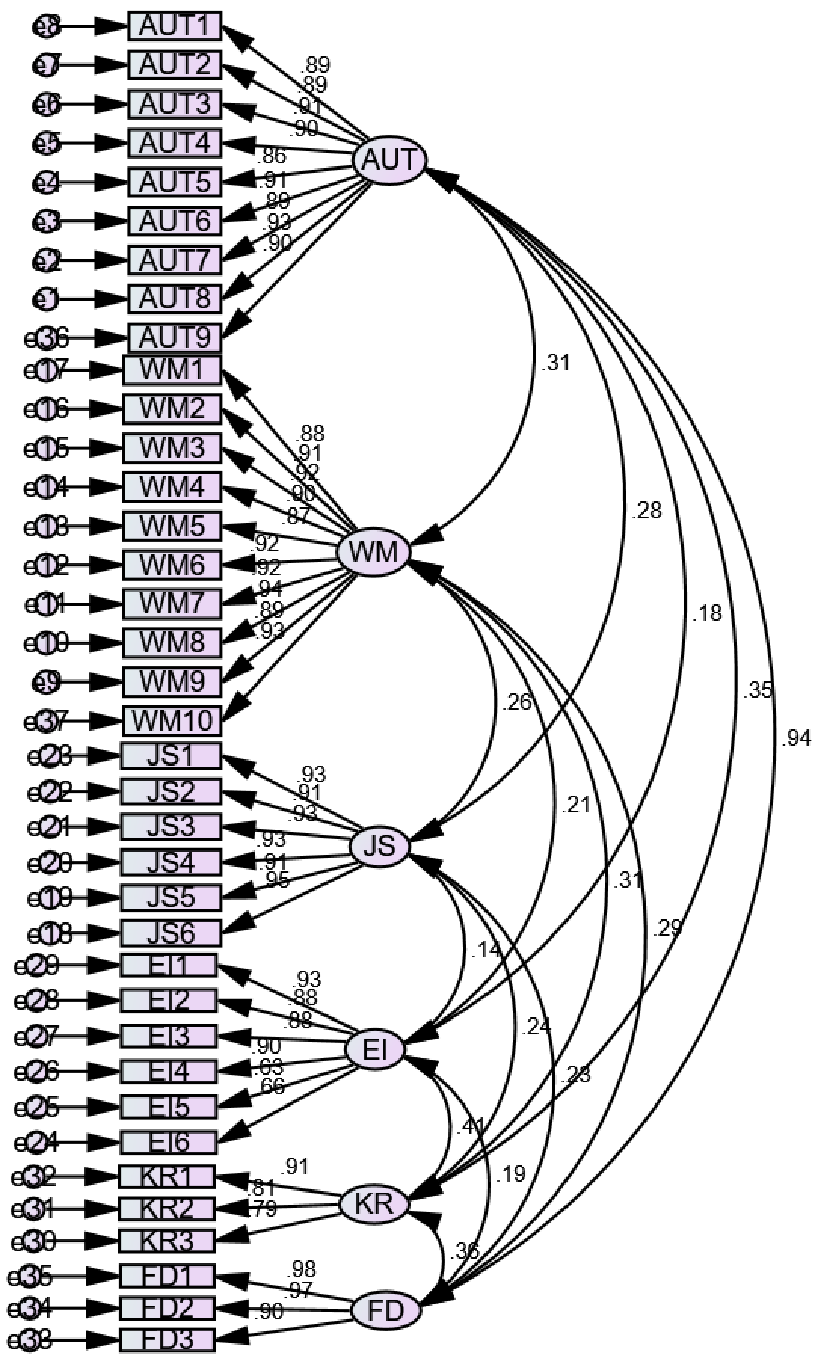
The following tests are conducted to test the reliability and validity of the constructs:

a. Reliability using Cronbach's alpha

b. Convergent Validity and Discriminant Validity

c. Model Fit Indices

Figuer 5.1 - Measurement Model:



Reliability

Reliability tests the replicability of the findings. In other words, the test for the reliability of a scale represents its consistency and uniformity. Here we will be checking if the scale items representing a study factor represent or measure the same thing. It is determined be Cronbach's alpha, which corresponds to the mean of all split-half correlations of the items in the questionnaire (Tavakol & Dennick, 2011). SPSS has a built-in reliability analysis tool that gives Cronbach's alpha Values for each construct. An alpha value above 0.7 indicates adequate reliability for a given construct (Bland & Altman, 1997; Nunnally, 1978). The internal reliability of the study constructs represented by Cronbach's alpha is shown in table 5.9.

Table 5.9 - Construct Reliabilities

Construct	**Cronbach's alpha**
AUT	0.974
FD	0.963
WM	0.979
KR	0.877
JS	0.973
EI	0.926

Convergent Validity and Discriminant Validity

Two Indicators measures the validity of a measurement model in a SEM analysis. A specific analysis for construct validity that determine convergent and discriminant validity and second test by achieving prescribed level of goodness of fit with various indicators. Campbell and Fiske (1959) defined convergent validity as “the degree to which a particular scale relates to similar constructs" and discriminant validity as "the degree to which a particular scale exhibits low or no correlations with measures that are different".

The convergent validity tests two items that measure the same construct and analyse if that both are related to each other. Discriminant validity on the other hand, test two items that are not measuring the same construct and check if they are unrelated. Both convergent validity and discriminant validity must be tested to establish excellent construct validity.

Convergent validity finds the items with maximum common variance and converges to define a construct. The analytical techniques used to estimate the convergent validity are Composite Reliability (CR), and Average Variance Extracted (AVE). The values derived from these two analyses explain the convergent validity of the measurement model.

There are different rules of thumb for the accepted level of values for composite reliability and average variance extracted, suggested by various researchers. Fornell and Larcker's (1981) criterion for convergent validity requires the Average Variance Extracted (AVE) to be greater than 0.5. The criteria for convergent validity suggested by Hair, Anderson, Babin, and Black (2010) require the AVE greater than 0.5, standardized factor loading of all items not less than 0.5, and composite reliability not less than 0.7.

The composite reliability (CR) and the average variance extracted (AVE) for the measurement model is given in Table 5.10.

Table 5.10 - Convergent Validity

	CR	AVE	MSW	Convergent Validity
AUT	0.974	0.806	0.776	Yes
FD	0.965	0.903	0.876	Yes
WM	0.980	0.828	0.099	Yes
KR	0.879	0.708	0.164	Yes
JS	0.974	0.860	0.080	Yes
EI	0.925	0.678	0.164	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". It aims to confirm that a construct has the strongest association with its own indicators compared to other indicators in the same model (Hair et al., 2010). A comparison between the extent of the variance explained (AVE) and its shared variance with unrelated constructs (Fornell & Larcker, 1981). The rule of thumb to an adequate Discriminant Validity is that the average variance extracted for each construct in the model should not be less than its highest correlation with others.

Table 5.11 - Discriminant Validity

	AUT	FD	WM	KR	JS	EI
AUT	**0.898**					
FD	0.736***	**0.950**				
WM	0.314***	0.293***	**0.910**			
KR	0.350***	0.357**	0.307***	**0.842**		
JS	0.283***	0.228***	0.264**	0.240***	**0.928**	
EI	0.178***	0.193***	0.206***	0.405***	0.139**	**0.823**
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 5.11 report the inter-correlation of the constructs in the study. The results indicate acceptable discriminant validity as the square root of AVE values (shown in the bold characters) are greater than all inter-construct correlations.

Model fit Indices

The measurement model derived from the confirmatory factor analysis is based on the observed covariance matrix of the indicator items of each construct. To understand how best the measurement model represents the covariance matrix, we use the goodness of fit statistics. It tests the similarity between the estimated and observed covariance matrix from the given items.

The goodness of fit statistics compares both observed and the estimated covariance matrices to test how the observed reality matches the proposed theoretical model. The observed covariance matrix represents the reality, and the estimated covariance matrix represents the theoretical model. In theory development and testing, a higher level of similarity between these two matrices demonstrates ideal theory development. Hair et al. (2010), suggests that "the higher the similarity in values of matrices, the better the model fit".

The study uses the following indices to check the model fit:

Absolute Fit Indices: These indices are direct measures of similarity between the theoretical model and the observed reality in the sample. In other words, it tests how the sample data replicate the model specified by the theory. Root Mean Square Error of Approximation (RMSEA), Goodness-of-fit (GFI) and Normed Chi-square (CMIN/df) are the most commonly used absolute fit indices.

Incremental Fit Indices: These are the indices that estimate the fit values of the estimated model by comparing it to a specific baseline model. The analysis assumes a baseline model where there is no correlation between observed variables and compares that null model with the estimated model from the sample data. Tucker Lewis Index (TLI), Normed Fit Index (NFI), and Comparative Fit Index (CFI) are among the common incremental fit indices.

Parsimonious Fit Indices: In order to assess the best fit for a given model, these indices specify alternate models from the given data and compare them with the actual model in relation to its complexity. These indices suggest the strength of the observed model among the other competing models. Adjusted Goodness-of-fit Index (AGFI) is the most commonly reported parsimonious fit index.

As Arbuckle (2007) suggested, this study used maximum likelihood estimation method to estimate measurement model fit. The literature suggest that a model can be found best fit when the value for Normed fit index is above 0.9, comparative fit index is equal to or greater than 0.95, Root Mean Square Error of Approximation is less than or equal to 0.05, Goodness-of-fit greater than 0.9, Normed Chi-square less than 3 with a P value less than 0.05 and Adjusted Goodness-of-fit Index greater than or equal to 0.8 (Bentler & Bonett, 1980; Hair et al., 2010). Table 5.12 presents the model fit indices for the study variables and recommended cut-off values for each index.

Table 5.12 - CFA - Model Fit indices

Structural model	**Fit statistics**	**Recommended cut off value**
CFI	0.965	>0.95
CMIN/DF	2.196	<3
P-VALUE	0.000	>0.05
AGFI	0.856	>0.80
NFI	0.938	>0.90
GFI	0.869	>0.95
RMSEA	0.052	<0.05
Note: “Reported fit indices indicate adequate model fit”		

6.4.2 Common Method Bias

Common method bias is the error misrepresentation of the variance observed in the data used for the study. When the data collected for the study is cross-sectional as the data collection is carried out in a single point of time using a questionnaire with common scale anchors and common scale format, the data is said to be exposed to socially desirable responses. The social desirability of the responses is a great source of common method bias, where actual predispositions of the respondents do not drive the variance in the data, rather, it is driven by the questionnaire itself. This may lead to biased results in the analysis done using such data. Major sources of common method bias in cross-sectional survey research are common rater effects, item context effects and measurement context effects (Podsakoff, MacKenzie, & Podsakoff, 2012). In order to assess the degree of common method bias present in the current data and report, two recommended tests have been carried out - the Harman single factor test and the use of common latent factor (CLF).

Herman single factor test is the most common method used to report the degree of common method bias in the data. It uses an unrotated factor analysis using principal component analysis as a method of extraction for the factors. The unrotated EFA will result in a single factor majority variance which is denoted by the Eigen value. The Eigenvalue that explains the variance in the single factor can be used as a measure of the common method bias. According to Harman (1976), eigenvalue less than 50% shows a non-occurrence of common method bias. Table 5.13 presents the result of the Herman single factor test.

Table 5.13 - Herman Single Factor Test Result

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	13.807	37.317	37.317	13.262	35.842	35.842
2	6.366	17.207	54.524			
3	4.447	12.018	66.542			
4	4.167	11.262	77.804			
5	1.893	5.115	82.919			
6	.695	1.878	84.798			
7	.453	1.224	86.021			
8	.378	1.021	87.042			
9	.314	.848	87.890			
10	.293	.791	88.681			
11	.277	.747	89.428			
12	.251	.678	90.106			
13	.234	.633	90.739			
14	.229	.618	91.357			

15	.216	.583	91.940			
16	.204	.552	92.493			
17	.199	.537	93.030			
18	.192	.519	93.549			
19	.182	.492	94.041			
20	.180	.486	94.527			
21	.171	.462	94.989			
22	.162	.437	95.426			
23	.160	.432	95.859			
24	.148	.401	96.259			
25	.147	.396	96.655			
26	.139	.376	97.031			
27	.133	.359	97.390			
28	.130	.352	97.742			
29	.120	.325	98.067			
30	.116	.313	98.381			
31	.108	.291	98.671			
32	.103	.280	98.951			
33	.100	.269	99.220			
34	.094	.253	99.474			
35	.081	.218	99.692			
36	.073	.197	99.889			
37	.041	.111	100.000			

Extraction Method: Principal Axis Factoring.

From the result of the analysis shown in table 5.13, we can conclude that there is no common method bias in the data as the cumulative percentage of extraction sum square of loading is way less (35.842%) that the prescribed limit of 50%.

6.4.3 Structural Modal Evaluation

The second step in structural equation model analyses after CFA is to run the structural model where all the constructs and the relationship between those constructs are put together in the model, and a covariance-based regression is run. The structural model evaluates the relationship between various dependent and independent variables specified in the model using a number of multiple regression equations. This multivariate statistical technique combines both factor analysis and multiple regression analysis. It is one of the most common techniques used to evaluate theoretical models and the best tool that combines multiple relationship in a single analysis (Kaplan, 2008).

The popularity and wide acceptance of structural equation modelling in quantitative research can be attributed to the soundness of underlying statistical theories, the ability to address multiple complex research questions, and the availability of simple and dedicated software packages for SEM. “SEM has three major advantages over traditional multivariate techniques: (1) explicit assessment of measurement error; (2) estimation of latent (unobserved) variables via observed variables; and (3) model testing where a structure can be imposed and assessed as to fit of the data” (Kaplan, 2008).

To summarize, SEM, a hypothesis-driven multivariate technique, analyses multiple, distinct, yet interdependent hypotheses presented in a structural model developed based on theories, observation and research question in hand. In an SEM model, dependent variables in a given relationship can act as independent variables in subsequent analyses. This is because a series of dependent and independent variables and their potential relationships are tested in a single model. This calls for more vivid differentiation between each variable used in the structural model. In SEM literature, such latent constructs are denoted as exogenous constructs and endogenous constructs (Hair et al., 2010). In our study, job characteristics, autonomy and feedback are the exogenous constructs. All other study constructs, including work meaningfulness, knowledge of result, job satisfaction and entrepreneurial intention, are endogenous constructs.

Among various estimation methods available in the structural equation model, the present study uses the maximum likelihood method as it is recommended for studies with less sample size, and the questionnaire uses Likert scale for responses (Breckler, 1990). In an SEM estimated by MLE "the parameter measures are estimated by enabling observed data to leverage the parameter likelihood with the given data" (Hair et al., 2010). The maximum likelihood estimate examines whether the proposed theoretical model fits the collected sample for the study.

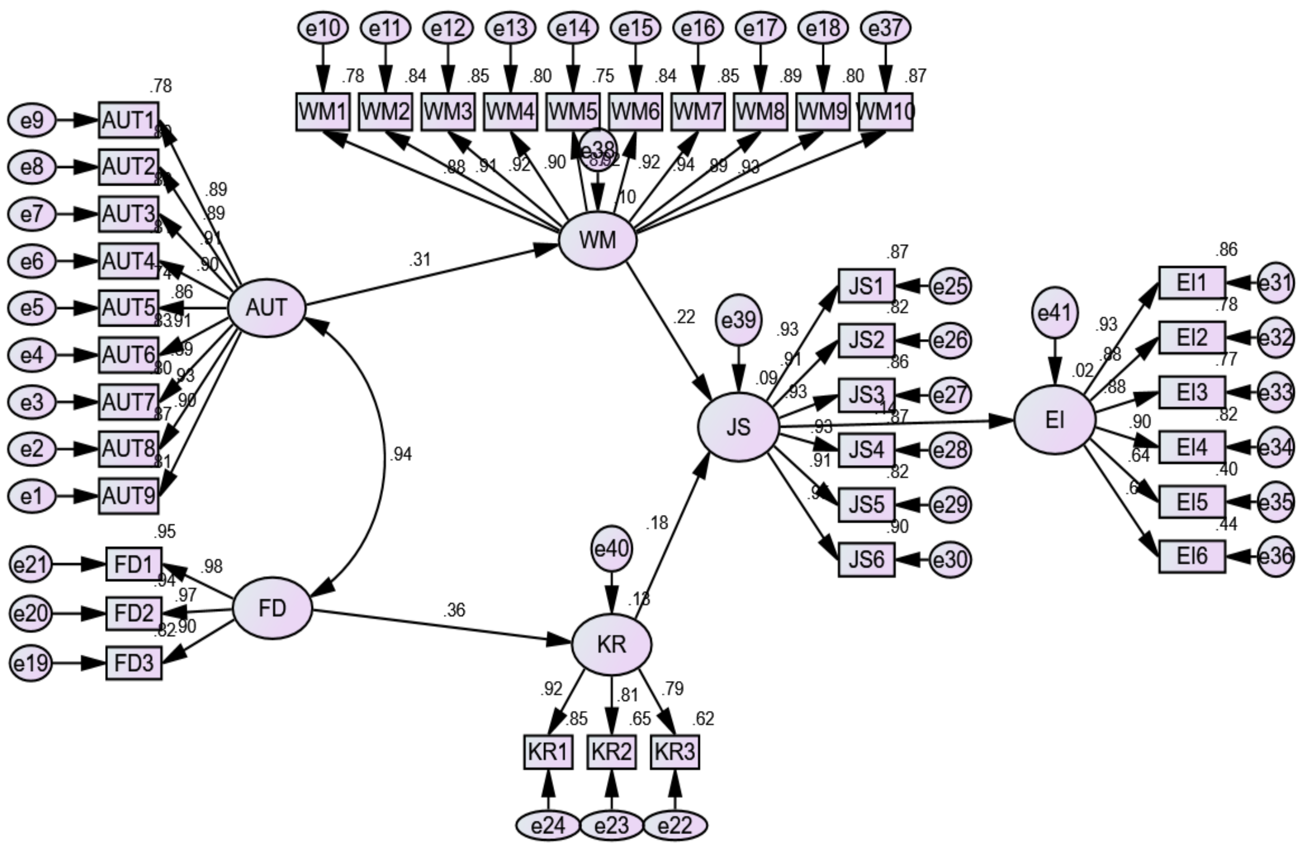
The results of the structural equation model analysis are presented the following steps:

1. Match the theorized covariance model and the observed covariance matrix to validate the model fit by reporting:
    a. Squared multiple correlations (R^2)
    b. Path coefficients
    c. Obtained fit indices

2. Run a path analysis to understand the relationship between latent factors in the model.
3. Report the path coefficients and their statistical significance to validate the proposed hypotheses.

AMOS-24, a macro dedicated for SEM analysis in SPSS software was used to perform the analysis. The result of the structural model analysis is presented in figure 5.3:

Figure 5.3 - Structural Equation Model



The structural model estimation analyses the overall model fit of the hypothesized structural model. The indices of the goodness of fit for the structural model are given in table 5.14. The fit indices such as χ_2/df = 2.329, GFI= 0.848, CFI = 0.961 and RMSEA = 0.055 are above well within the prescribed limits and show acceptable model fit.

Table 5.14 - SEM- Model Fit Indices

Structural model	**Fit statistics**	**Recommended cut off value**
CFI	0.961	>0.95
CMIN/DF	2.329	<3
P-YALUE	0.000	>0.05
AGFI	0.829	>0.80
NFI	0.934	>0.90
GFI	0.848	>0.95
RMSEA	0.055	<0.05
Note: "Results show that the proposed model is deemed to be fit"		

R^2 values are presented from the result of the regression analysis which tests the hypothesised relationship between independent variables and dependent variables where the regression equation tests the magnitude of variance in the dependent variable explained by the variance in the independent variable. Table 5.15 presents the R^2 values for each of the proposed relationships in the model.

Table 5.15 - Squared Multiple Correlations

Path	**Estimate (R^2)**
Work Meaningfulness	0.099
Knowledge of Result	0.131
Job Satisfaction	0.088
Entrepreneurial Intention	0.200

The model estimation output from the structural equation model analyses describes the variance explained by the model with the R^2 values, and gives regression coefficient for each path which is dented by standardised direct effects. R^2 values represents the degree of variance explained by each of the independent variables in the model on the dependent variables corresponding to it. The R^2 value of work meaningfulness is 0.99. It suggests that 9 percentage of variation in work meaningfulness is explained by its antecedent autonomy. Similarly, the R^2 of knowledge of result is 0.131, and it denotes that the feedback explains 13 percentage of variation in it. The R^2 values of job satisfaction and entrepreneurial intention are 0.088 and 0.200. These values denote that the corresponding antecedents of these two variables explain 8 percentage and 20 percentage of its variations respectively.

Table 5.16 - Result of Hypothesis Testing

Exogenous Construct	**Endogenous Construct**	**Hypothesis**	**Standard Estimate (β)**	**Standard Error**	**t-Statistics**	**P-Value**	**Interpretation**
Autonomy	Work Meaningfulness	H2	0.314	0.050	6.673	0.000	Accepted
Feedback	Knowledge of result	H3	0.362	0.048	7.244	0.000	Accepted
Autonomy	Entrepreneurial Intention	H4	0.321	0.021	9.331	0.000	Accepted
Feedback	Entrepreneurial Intention	H5	0.221	0.025	9.211	0.121	Rejected
Work Meaningfulness	Job Satisfaction	H6	0.216	0.044	4.587	0.000	Accepted
Knowledge of result	Job Satisfaction	H7	0.163	0.052	3.711	0.000	Accepted

Job Satisfaction	Entrepreneurial Intention	H8	0.140	0.053	2.874	0.004	Accepted

The structural model path estimates of the model, along with significance values, are reported in Table 5.16. It presents the result of testing of the hypothesis and explains the regression coefficient (Beta), standard error and the significance level denoted by t values and p values.

Table 5.16 reveal that autonomy significantly impacts work meaningfulness (β = 0.314, t = 6.673, p = .000). This positive and significant relationship supports hypothesis 2 of the study. It also reveals that feedback is positively associated with knowledge of result (β = 0.362, t = 7.244, p = .000) thus, support the third hypothesis. The relationship between autonomy and entrepreneurial intention is positive and significant (β = 0.321, t = 9.331, p = .000) and supports hypothesis 4, which states that autonomy positively impacts entrepreneurial intention. However, the relationship between feedback and entrepreneurial intention is insignificant (β = 0.221, t = 9.221, p = .121), thus, reject the hypothesis five. Hypothesis six is supported as the relationship between work meaningfulness and job satisfaction is positive and significant (β = 0.215, t = 4.587, p = .000). knowledge of result also has a positive and significant relationship with job satisfaction (β = 0.163, t = 3.711, p = .000) thus, support hypothesis seven. The final hypothesis test through the path analysis, which states that job satisfaction has a positive and significant impact on intrapreneurial intention, is also supported (β = 0.140, t = 2.874, p = .004)

6.5 Mediation Analysis

Mediation analysis seeks to identify the underlying mechanism through which an observed relationship between an independent and dependent variable works. There are three essential criteria to establish mediation between variables. First the independent variable and the dependent variables must be significantly related. Second, the mediating variable must be significantly related with the dependent variable and finally, the relationship between the independent variable and the mediator must be significant.

In our model, we propose two serial mediation hypotheses. Serial mediation hypothesizes a causal chain linking of the mediators with a specified direction flow. The hypotheses set to test the serial mediations in this model are:

H9 – "Work Meaningfulness and Job Satisfaction mediates the relationship between Autonomy and Entrepreneurial Intention."

H10 – "Work Meaningfulness and Job Satisfaction mediates the relationship between Feedback and Entrepreneurial Intention."

6.5.1 Serial Mediation of Work Meaningfulness and Job Satisfaction between Autonomy and Entrepreneurial Intention

To investigate the potential channel by which the relationship between autonomy and entrepreneurial intention is facilitated, all of the path parameters in the structured path model and serial mediation were simultaneously evaluated. Her we are interested in testing multi-path mediation effects which includes two mediators. With this method, we can disentangle the indirect mediation effects of both job satisfaction and work meaningfulness. This method evaluates how an indirect effect moves through various mediators in a particular order. In Figure 5.1, the conceptual model for the mediation analysis is displayed. Version 25 of the SPSS process macro was utilised to test the suggested model. The bootstrapping procedure suggest by Preacher and Hayes (2004) was used to test the serial mediation.

The individual path coefficient of the serial mediation was tested in structural model evaluation. Test of hypothesis 2 concluded that autonomy has a significant impact on work meaningfulness, and test hypothesis 4 revealed a positive relationship between autonomy and entrepreneurial intention. Hypothesis tests 6, and 8 revealed a positive relationship between work meaningfulness, job satisfaction and entrepreneurial intention. In the following section, we analyse how these relationships work together as serial mediation.

The two-path mediation result for direct and indirect effects of work meaningfulness and job satisfaction on the relationship between autonomy and entrepreneurial intention is given the table 5.17 and table 5.18, respectively. The path coefficient for individual relationships is also given in table 5.17.

Table 5.17 - Direct Effects

Direct Paths	**Standard Estimate (β)**	**Standard Error (SE)**	**P-Value**	**Result**
AU -> EI	.166	.050	.002	Significant
AU -> WM	.337	.045	.000	Significant
AU -> JS	.224	.049	.000	Significant
WM-> JS	.252	.042	.000	Significant
WM -> EI	.158	.053	.034	Significant
JS-> EI	.106	.053	.043	Significant

Table 5.18 – Result of Path Mediation Analysis (Indirect Effects)

Indirect paths	**Standard Estimate (β)**	**Standard Error (SE)**	**LLCI**	**ULCI**	**Decision**
AU> WM- >EI	.0051***	.0152	.0121	.1490	Supported
AU-> JS-> EI	.0560**	.0152	.0120	.0817	Supported
H9: AU->WM->JS>EI	.0090***	.0041	.0020	.0210	**Supported**

The values shown in the in table 5.19 support the hypothesized serial mediation. The Lower Limit of Confidence Interval (LLCI) and the Upper Limit of Confidence Interval (ULCI) are the key indicators on which the mediation hypothesis is tested. The values are at 95% of the bias-corrected confidence interval for the estimated paths. All the three hypothesized indirect paths are significant as 0 is not included in the range between LLCI and ULCI.

The serial mediation analysis results presented in the above tables show that the direct and indirect effect autonomy on entrepreneurial intention is positive and significant. Thus, it can be concluded that work meaningfulness and job satisfaction partially mediate the relationship between autonomy and entrepreneurial intention

6.5.1 Serial Mediation of Knowledge of Result and Job Satisfaction between Feedback and Entrepreneurial Intention

We have found in the hypotheses test 5 presented in the structural model analysis that the direct effect of feedback on entrepreneurial intention is insignificant. We further analyse whether this relationship becomes significant when mediated through knowledge of result and job satisfaction. This forms our final hypothesis, which tests the serial mediation effect of knowledge of result and job satisfaction on the relationship between feedback and entrepreneurial intention. The path coefficient and p values for the direct and indirect effects are presented in table 5.19 and table 5.20.

Table 5.19 – Direct Effects

Direct Paths	Standard Estimate (β)	Standard Error (SE)	P-Value	Result
FD -> EI	.192	.054	.323	Not Significant
FD -> KR	.350	.049	.000	Significant
FD -> JS	.165	.052	.002	Significant
KR-> EI	.440	.063	.000	significant
KR-> JS	.263	.053	.000	Significant
JS-> EI	.111	.052	.000	Significant

Table 5.20 - Result of Path Mediation Analysis (Indirect Effects)

Indirect paths	Standard Estimate (β)	Standard Error (SE)	LLCI	ULCI	Decision
FD> KR- >EI	.029	.0120	- .0090	.0440	Not Supported
FD-> JS-> EI	.092***	.0060	.0045	.0612	Supported
H10: FD->KR->JS->EI	.010***	.0017	.0008	.0145	**Supported**

The values of the indirect paths presented in table 5.21 support the serial mediation hypothesis (H10), and conclude that though there is no significant direct relationship between feedback and entrepreneurial intention, the relationship becomes statistically significant when operated through knowledge of result and job satisfaction altogether. In other words, feedback leads to knowledge of result, and the knowledge of result increases satisfaction, and thus it positively impacts entrepreneurial intention.

From the results presented in table 5.19, and 5.20 it can be observed that the indirect paths of the serial mediation are positive and significant. However, the direct effect of the feedback on entrepreneurial intention is insignificant. Thus, we conclude that feedback has a positive effect on entrepreneurial intention only when mediated through knowledge of result and job satisfaction. In other words, knowledge of result and job satisfaction serially mediate the relationship between feedback and entrepreneurial intention among workers in the gig economy.

Table 5.21 – Summary of Hypothesis Testing

Hypothesis	**Relationship**	**Decision**
Hypothesis 1	H1: “Work in the gig economy has a positive effect on entrepreneurial intention”	Accepted
Hypothesis 2	H2: “Autonomy has a positive effect on entrepreneurial intention of workers in the gig economy”	Accepted
Hypothesis 3	H3 – “Feedback has a positive effect on entrepreneurial intention of workers in the gig economy”	Rejected

Hypothesis 4	H4 – “Job Satisfaction has a positive effect on entrepreneurial intention of workers in the gig economy”	Accepted
Hypothesis 5	H5 – “Autonomy has a positive effect on work meaningfulness of workers in the gig economy”	Accepted
Hypothesis 6	H6 – “Feedback from work has a positive effect on knowledge of result of workers in the gig”	Accepted
Hypothesis 7	H7- “Work Meaningfulness a has positive effect on Job Satisfaction of workers in the gig economy”	Accepted
Hypothesis 8	H8- “Knowledge of result a has positive effect on Job Satisfaction of workers in the gig economy”	Accepted
Hypothesis 9	H9 – “Work Meaningfulness and Job Satisfaction mediates the relationship between Autonomy and Entrepreneurial Intention.”	Accepted
Hypothesis 10	H10 – “Work Meaningfulness and Job Satisfaction mediates the relationship between Feedback and Entrepreneurial Intention.”	Accepted

6.6 Chapter Summary

This chapter presented the results of analyses used to test the hypotheses of the current study. The chapter began with an explanation of the demographic profile of the respondents and the descriptive statistics of the study variables. Further, the chapter presented the results of baseline ordinary least squire regression and logistic regression that test the initial hypothesis. Finally, the chapter presented the results of the Structural Equation Model that tests multiple relationships together.

Chapter 6

Conclusion

The final chapter of the thesis provides a discussion on the results and the finding of the study and summarizes the research work. It includes discussion on how the study meets the set objectives, the result of hypothesis testing, how it matches with other studies, practical and theoretical implications, limitations of the study and avenues for further research.

6.1 Discussion

The primary objective of the current study was to understand the entrepreneurial orientation among the gig economy workers and revisit the relationship between job characteristics and its outcomes in the context of the gig economy. Specifically, the study examined the relationship between two job characteristics and its relationship with the entrepreneurial intention among workers in the gig economy. Further, the study tested the mediating role of work meaningfulness, knowledge of result and job satisfaction in the relationship between job characteristics and entrepreneurial intention. These objectives constituted a model that proposed that autonomy and feedback drives job satisfaction through work meaningfulness and knowledge of result and it further promotes the entrepreneurial intention. This segment discusses each of these objectives in details.

6.1.1 The Gig Economy and Entrepreneurial Intention

The first objective of the study was to test whether being in the gig economy drives one's intention to be an entrepreneur. In order to achieve this objective, a logistic regression was run on the entire sample, including gig economy workers and non-gig workers. The result disclosed that being in the gig economy can drive an employee's intention to be an entrepreneur. Thus, it increases the propensity to be an entrepreneur in future. This finding indicates that the emergence of the platform-based gig economy can act as a key promotor for entrepreneurship in countries like India, where entrepreneurship promotions are considered a critical driver for economic growth and employment generation. This finding is important for two reasons: first, it answers a key question on whether the rise of the platform-based gig economy is good for the labour market or a tool of exploitation for multinational companies. Second, it contributes to the debate prevailing in the popular media and the academic community on the impact of gig economy platforms on entrepreneurial activity. The Flexible ad hoc employment may increase entrepreneurial activity because it gives aspiring entrepreneurs the chance to strategically use their time in order to gather the resources needed to launch a project or establish a business. (Agrawal, Catalini, & Goldfarb, 2015; Douglas & Shepherd, 2000). The gig economy platforms provide workers an unparalleled level of freedom, enabling them to create their own schedules while receiving consistent money, as observed by both research work and the popular press (Hall & Krueger, 2018). On the other hand, researchers have also noted necessity entrepreneurship accounts for a major part of the entrepreneurial activities in developed economies. Necessity entrepreneurs are those who are compelled to start their own business due to lack of employment or under employment. (Acs & Armington, 2006; Fairlie, 2002). If this is the case, the increase in platform based gig economy jobs will potentially reduce entrepreneurial activities by providing alternate employment opportunities for these entrepreneurs who are compelled to opt this path (Block & Koellinger, 2009). Our study contributes to this debate and argues that even though the platforms provide temporary jobs to unemployed and under-employed, it has the potential to turn one to an entrepreneur eventually.

6.1.2 Job characteristics and entrepreneurial intention of gig economy workers.

Building on the finds of the first objective, where we find that compared to regular employment, work in the gig economy can promote entrepreneurship, the study tries to find out what is the impact of certain job characteristics particular to the gig economy on entrepreneurial intention. Previous researchers have highlighted the importance of autonomy and feedback from the work as two major characteristics of work in the gig economy context. We tested the impact of these two characteristics on the entrepreneurial intention of the gig economy workers. We found that these two have a positive and significant effects of entrepreneurial intention.

Although the gig economy is advertised and promoted as a job market where everyone enjoys the autonomy and flexibility in choosing their work, scheduling, and delivering it, recent studies and reports have shown that this is not the case in all gig economy platforms. Some of the platforms have rigid roles that make employees' life much harder. Even though the work is done remotely, the algorithmic controls put on employees are perceived to be much higher that of a standard work setup. These show that there is a significant variation in the level of perceived autonomy among gig economy workers. We tested the impact of this varying level of autonomy on entrepreneurial intention and found that a higher level of autonomy leads to a higher level of intention to turn entrepreneur. This finding suggests that the very nature of the job in the platform-based gig economy work settings can encourage someone to take upon self-employment and entrepreneurial ventures, which will offer more autonomy to his career.

Another key job characteristic of workers in the gig economy is the feedback that they receive from the job itself. The study finds that there is no significant impact of feedback on entrepreneurial intention in these work settings. This result can be attributed to how the gig economy workers perceive the feedback from the job. Contrary to regular job settings, the gig workers tend to perceive feedback as a part of the job itself. In many senses, feedback stands for many other critical job-related variables in the regular job setting, such as performance appraisal.

6.1.3 Relationship between Job Satisfaction and Entrepreneurial Intention among gig economy workers

Job satisfaction is considered to be the most desirable psychological outcome of a job. Thus, it has been found to reduce attrition and keep an employee in the same job for long. However, in the gig economy, this cannot be the case as the satisfaction is derived from the nature of work that gives workers more autonomy and flexibility. We hypothesized that these characteristics overlap with the characteristics of an entrepreneur and thus it can promote entrepreneurship. The study found out that the positive level of job satisfaction among gig economy workers is associated with a higher level of entrepreneurial intention.

6.1.4 Potential channels of the relationship between job characteristics and Entrepreneurial Intention

The results of the first two hypotheses suggested that work in the gig economy positively impacts entrepreneurial intention and autonomy is the key characteristic that drives this impact. To further understand these relationships, the study tested a theoretical model that studies the mechanism through which these relationships operate. We tested the mediating effect of Work Meaningfulness and Job Satisfaction among the relationship between Autonomy and Entrepreneurial Intention. The theoretical model also tests the serial mediation of Knowledge of Result and Jobs Satisfactions among the relationship between Feedback and Entrepreneurial Intention. Work Meaning fullness, and Knowledge of result are two positive psychological states resulting from a positive level of perceived autonomy. Job Satisfaction is a job-related outcome that results from positive job characteristics. We found that Work Meaningfulness and Job Satisfaction work channels through which the relationship between Autonomy and Entrepreneurial Intention. Another interesting finding from the model testing is that the Feedback which has no direct effect on Entrepreneurial Intention has a positive indirect effect on it when it is mediated through Knowledge of Result and Job Satisfaction.

In support to the job characteristics theory, these results show that key job characteristics of the workers in the gig economy lead to a positive level of critical psychological state and further lead to a higher level of work and job satisfaction. The tested model also extends the well-known theoretical model by adding a further outcome: the Entrepreneurial Intention.

6.2 Theoretical contribution

This study contributes to the theoretical understanding of job characteristics and gig economy literature in many ways. This research has tested a model that includes variables related to job characteristics, job-related psychological outcomes and entrepreneurial intention. This includes testing several relationships in a relatively new and less explored work setting, thus significantly contributing to the academic literature.

The present study developed a model on the foundation of theories such as job characteristics theory, theory of planned behaviour and entrepreneurial event model. While the job characteristics theory is used as the principal theory to explain the mechanism in which certain job characteristics drive positive job outcomes, the theory of planned behaviour entrepreneurial event model supports the relationship related to the entrepreneurial intention resulting from job characteristics. The relationships found in the study reiterate the prepositions of these theories and combine it to explain the hypothesized relationships.

Shapero's Entrepreneurial Event Model is a theory that argues that desirability, feasibility and a propensity to act are the most crucial factors influencing an individual's intention to start a venture. Entrepreneurial event happens when an individual finds it as a credible career alternative. Credibility depends on the perceptions of feasibility and desirability. In support of these theoretical prepositions, we hypothesized that desirable job characteristics can lead to entrepreneurial action. We tested if autonomy and feedback can act as perceived feasibility for the entrepreneurial event.

The job characteristics theory and the model has been tested and validated in various work settings and geographic locations with distinctive characteristics in past four decades. The current study partially validates the model in a novel work setting and extent the theoretical model by introducing the variable entrepreneurial intention as an outcome in the model.

The question of why an individual choose to start their own venture has been an academic interest for a long. Douglas and Shepherd (2000) suggested that " an individual choose self-employment if the utility associated with this option exceeds the one of an equivalent paid position". According to (Rees & Shah, 1986) "better prospects of income from self-employment relative to wages are a major stimulus toward self-employment". However, literature on the antecedents of self-employment choice suggest in addition to pecuniary reasons there are multiple other factors that impact employment choices. Shapero and Sokol (1982) highlighted the importance of "emotional aspects", such as "displacement or insecurity". According to Hofstede et al. (2004), "the risk of falling into unemployment", "boredom or frustration" positively affect the entrepreneurial choice. Douglas and Shepherd (2000) suggested that "people expect to gain utility from work effort, risk bearing, independence, and other working conditions". Brockhaus (1982), outlined that "self-employed individuals generally evaluate previous jobs as unsatisfactory in terms of both the job itself, and of supervision and career opportunities". The positive emotional outcomes of a job have been regarded as having negative impact once intention to turn self-employed. On contrary to this popular argument, we find that in the case of gig economy workers, greater level of satisfaction lead to higher level of entrepreneurial intention. Most of the studies in this regard have been ex-post evaluation, where the data is collected once the transition has been made. However, in this study, the data is from the workers, and we are using the intention to measure their future actions. The empirical evidence provided in this study contributes to the literature that discusses the antecedents of entrepreneurial transition.

This study responds to the call for revisiting established organizational behavioural models, developed and validated in traditional work settings, in the context of gig economy where workers are considered self-employed and lack several key variables such as organizational support and organizational citizenship. The study, therefore, validate specific relationships proposed in the job characteristics model in the context of gig economy and contribute to the theoretical understanding of the behavioural aspects of the workers who are largely underrepresented in the academic literature (Schroeder, Bricka, & Whitaker, 2021b).

In the past two decades India has witnessed a steady increase in the number of employees who opt platform-based gig works. According to the BetterPlace report 2019 “the gig economy has evolved in a major way in urban India, and is providing employment to millions of workers, and has the potential for generating more employment in the future”. However, this labour market has been underrepresented in the academic literature. This study contributes to understanding job related behavioural aspects of gig economy workers in a developing economy.

6.3 Practical implications

The practical implication of this study can be viewed in two folds. First the findings of the study have policy-level implications. This study can help policymakers make informed decisions on promoting and regulating the gig economy. For instance, this study explores whether the work in the platform-based gig economy encourages the employee to turn entrepreneur. The result of the analysis has potential implications for formulating policies that promote entrepreneurship among gig economy workers. For many years, there has been a continuous effort from governing bodies in India to promote entrepreneurship. With more regulations on how the work is done and benefits are distributed, the gig economy can be a great avenue for those promotions. As the study assesses the impact of different job characteristics on entrepreneurial intention and different mechanisms through which these relationships work, it can inform the policymakers on decisions regarding regulating and promoting this particular labour force. The study finds that women are underrepresented in these work settings. The autonomy and flexibility they can enjoy while having greater job satisfaction can encourage them to opt for online gig work as a career option, which can encourage them to go for self-employment options.

Secondly, from a worker's standpoint, this study can show them directions on whether to choose gig works as a career option, especially for those with entrepreneurial aspirations. Contrary to the prevailing notion in the literature that the comfort and the satisfaction derived from a regular job will decrease the intention to switch to more risky options, this study suggests that the entrepreneurial intention among satisfied gig economy workers is higher. This has implications for individual workers' career choices and the larger actions of the governmental and non-governmental entities aiming at promoting entrepreneurship.

6.4 Limitations of the Study

Although the current research has theoretical and practical implications, it is not free from limitations. Some of the methodological limitations can be addressed in future studies, and it provides directions to potential future research. The study is cross-sectional research in nature, and it has inherent limitations in determining causality. Acknowledging these limitations, we had to rely on cross-sectional data for the study because of time and financial constraints. Addressing this limitation, future studies can use longitudinal data and determine the causality between the variables in this study.

The study used two distinct sets of data to compare the entrepreneurial intention among the gig economy workers and the employees in the traditional work settings. However, the data on the non-gig workers is limited to their demographics and entrepreneurial intention. This data was used to meet only first objective of the study which addresses the question whether being in the gig economy has a significant impact on one's entrepreneurial intention. We restricted further objectives of the study, including testing the hypothesised model, to the data on gig economy workers.

The methodology used to establish causality in the study is structural equation modelling. This regression-based method has its own limitation in asserting the causality. An experimental approach with control groups and treatment groups can give a much better understanding of the phenomenon.

The study used non-random sampling technique owing to the non-availability of an exhaustive list of the workers in the given context of the study. This could limit the generalizability of the research and the model need to be further examined in random sample settings. The data used for this study is self-reported assessment of employees' perceptions. Even though self-report data is prone to common method variance, maximum care was taken to mitigate its potential occurrence. Following the suggestions of Lindell and Whitney (2001), and Podsakoff, MacKenzie, Lee, and Podsakoff (2003), deliberate attempt has been made designing the survey constructs, and structuring the questionnaire.

6.5 Scope for Further Research

Addressing the key limitation of this study further research can use longitudinal approach with randomized sampling techniques to yield more robust identification of the presented model. In order to establish causality, further studies can use experimental approaches with randomized control trails or quasi experiments using advanced statistical techniques such as propensity score matching, regression discontinuity design or natural experiment method.

This study attempts to understand the perceptions of gig economy workers on their gig experiences by measuring the characteristics of their work and its outcomes. However, a comparison with similar experiences in organized sectors with all type of activities will help to achieve a generalisable understanding of the studied model. A microeconomic model where the relationship between job related outcomes and different occupational choices including gig work could improve the identifications in the model and address the theoretical limitations to an extent. Introduction of certain variables that can moderate the studied relationships will also yield better results and broader explanation for the phenomenon.

Finally, we encourage further research to understand the emerging context of the gig economy work settings and how it shapes the entrepreneurial land scape in a platform-based labour market. Future studies can explore the data on new venture creations resulted from the boom of platform-based gig economy. The findings of this study show that the entrepreneurial behaviour triggered by work in the gig economy could result in entrepreneurial intention. Thus, platform-based gig economy enables entrepreneurial actions, but this has not explored this emergent issue in detail. We also suggest exploring the end results and how successful or unsuccessful are the new venture resulted from the emergence of the gig economy.

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Annexures

Questionnaire I:

Job Characteristics, Satisfaction, and Entrepreneurial Intention.

Dear Sir/Madam,

I am Muhammed Rafi, a doctoral research scholar at the School of Management Studies, University of Hyderabad. This questionnaire is designed to study Job Characteristics, Job Satisfaction and Entrepreneurial intention among Gig Economy workers. Your participation will be a valuable contribution to this research study. The data provided by you will be kept strictly confidential and used only for academic research purpose. The result of the study will be provided to you if you are interested to know the findings of the study (Kindly provide the email id). Thank you very much for sparing your precious time.

Answer questions as they relate to you. For most answers, check the box(es) most applicable to you or fill in the blanks.

A. Personal Information

1. Name : ____
2. Age : ____________
3. Gender: ☐ Female ☐ Male ☐ Other
4. Education: ☐ Primary ☐ Secondary ☐ Higher Secondary ☐ Graduation ☐ Post Graduate
5. Marital Status: ☐Single ☐ Married
6. Location: ☐Urban ☐ Rural

7. Annual Income: ☐ Less than 5 Lack ☐ 5 to 10 lacks ☐ 10 lacks and above

8. Contact no. : ______________________

9. E-mail id :_______________________

B. Your Job

10. Which of the following describes your primary job?

☐ Fulltime private job ☐ Fulltime government job

☐ Part-time private job ☐ Self-employed (Business)

☐ Self-employed (Freelancer) ☐ Other

11. Your experience (in years): _____________

C. Answer only if you are a self-employed freelancer

12. What is the type of job you do?

☐Content writing/translation ☐ Coding/programming ☐ Data Entry

☐Graphic Designing / Video Editing ☐ Other

13. For how long you have been working as a freelancer? : ______________

14. Do you use any of the co-working spaces as you work location? ☐ Yes ☐ No

15. How many clients you have worked with?: __________________

4. Please mark a tick on the appropriate response. There are no right or wrong answers

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The job allows me to make my own decisions about how to schedule my work					
The job allows me to decide on the order in which things are done on the job					

The job allows me to plan how I do my work					
The job gives me a chance to use my personal initiative or judgment in carrying out the work					
The job allows me to make a lot of decisions on my own					
The job provides me with significant autonomy in making decisions					
The job allows me to make decisions about what methods I use to complete my work					
The job gives me considerable opportunity for independence and freedom in how I do the work					
The job allows me to decide on my own how to go about doing my -work					
The work activities themselves provide direct and clear information about the effectiveness (e.g., quality and quantity) of my job performance					
The job itself provides feedback on my performance					
The job itself provides me with information about my performance					
I have found a meaningful career					
I view my work as contributing to my personal growth					
My work really makes no difference in the world					
I understand how my work contributes to my life's meaning					
I have a good sense of what makes my job meaningful					
I know my work makes a positive difference in the world					

My work helps me better understand myself					
I have discovered work that has a satisfying purpose					
My work helps me make sense of the world around me					
The work I do serves a greater purpose					
I don't have trouble figuring out whether I am doing well or poor					
I usually know whether or not my work is satisfactory on this job					
My opinion of myself goes up when I do this job well					
Overall, I am satisfied with my job?					
In general, the type of work I do corresponds closely to what I want in life					
The conditions under which I do my work are excellent					
Until now, I have obtained the important things I wanted to get from my work					
If I could change anything at work, I would change almost nothing					
Overall, I am satisfied with my financial benefits					
I am ready to do anything to be an entrepreneur					
My professional goal is to become an entrepreneur					
I will make every effort to start and run my own firm					
I am determined to create a firm in the future					
I have very seriously thought of starting a firm					
I have the firm intention to start a firm someday					

Questionnaire II:

Entrepreneurial Intention Questionnaire.

Dear Sir/Madam,

I am Muhammed Rafi, a doctoral research scholar at the School of Management Studies, University of Hyderabad. This questionnaire is designed to study Entrepreneurial intention. Your participation will be a valuable contribution to this research study. The data provided by you will be kept strictly confidential and used only for academic research purpose. The result of the study will be provided to you if you are interested to know the findings of the study (Kindly provide the email id). Thank you very much for sparing your precious time.

Answer questions as they relate to you. For most answers, check the box(es) most applicable to you or fill in the blanks.

A. Personal Information

1. Name : ____
2. Age : ____________
3. Gender: ☐ Female ☐ Male ☐ Other
4. Education: ☐ Primary ☐ Secondary ☐ Higher Secondary ☐ Graduation ☐ Post Graduate
5. Marital Status: ☐Single ☐ Married
6. Location: ☐Urban ☐ Rural
7. Annual Income: ☐ Less than 5 Lack ☐ 5 to 10 lacks ☐ 10 lacks and above
8. Contact no. : ______________________
9. E-mail id :_______________________

B. Your Job

10. Which of the following describes your primary job?

☐ Fulltime private job
☐ Fulltime government job
☐ Part-time private job
☐ Self-employed (Business)
☐ Self-employed (Freelancer)
☐ Other

11. Your experience (in years): ____________

C. Answer only if you are not self-employed/freelancer

12. What is the type of job you do?

☐Media ☐ Coding/programming ☐ BPO – Non-IT
☐ Management ☐ Other

4. Please mark a tick on the appropriate response. There are no right or wrong answers

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am ready to do anything to be an entrepreneur					
My professional goal is to become an entrepreneur					
I will make every effort to start and run my own firm					
I am determined to create a firm in the future					
I have very seriously thought of starting a firm					
I have the firm intention to start a firm someday					

Energy Economics 101 (2021) 105427

Contents lists available at ScienceDirect

Energy Economics

journal homepage: www.elsevier.com/locate/eneeco

Multidimensional energy poverty and human capital development: Empirical evidence from India

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ARTICLE INFO

Keywords:
Energy poverty
Human capital development
Health
Education
India

ABSTRACT

Energy poverty is believed to have crucial socio-economic impacts on people's lives, making it a major concern for the policy agenda in many countries, especially in the Global South. Evidence-based inferences on the antecedents and outcomes of energy poverty would aid policymakers in the formulation of better-informed policy decisions. However, measuring energy poverty at the micro-level has always been a challenge, especially in developing countries. This study uses household-level survey data from India to construct a multidimensional measure of energy poverty, which focuses on quantifying energy deprivation, covering both accessibility to and affordability of a broad range of energy forms, and examines its impact on human capital development indicators. Our instrumental variable-based estimations reveal that energy poverty has significant negative effects on children's health and educational achievements. Our results are robust to alternative ways of measuring energy poverty, a suite of estimation approaches, and other sensitivity checks.

1. Introduction

Energy poverty refers to the lack of adequate, reliable, fine quality, and environmentally sustainable energy sources for people to meet their daily needs (Reddy et al., 2000). It has remained a vital development issue across the globe, especially in developing countries. It is estimated that more than 40% of the world's population, i.e., 3 billion people, still depend on unhealthy fuels for cooking, raising serious health and environmental concerns.[1]

Energy has both macroeconomic and microeconomic implications. It is vital for productivity and the delivery of essential services, such as health care, employment, and education at the macro level. At the micro-level, energy and energy-related tariffs have been associated with household welfare, income, and poverty (Bridge et al., 2016; Krauss, 2016). Thus, the inability or failure to access energy is a severe impediment to an individual's upward mobility in society and his/her pursuit of wellbeing. Owing to this realization, of late, there has been a significant surge of interest among academicians and policymakers to study the antecedents and outcomes of energy poverty.

Scholars have explored various outcomes of energy poverty in the last two decades. It is identified that energy poverty significantly reduces human wellbeing and household welfare (Awaworyi Churchill et al., 2020). It is also suggested to have a detrimental effect on socio-economic outcomes, such as education, health, and job attainment (Green and Gilbertson, 2008; Liddell and Guiney, 2015; Mould and Baker, 2017; Tod and Thomson, 2017; Wilkinson et al., 2007). It can be found that these negative effects of energy poverty are transgressive of the developmental status of the countries and act in different ways in different socio-economic contexts. For example, in European countries, the inability to avail adequate air-conditioning and heating facilities results in cold and damp housing that acts as a significant reason for illness (Hood, 2005). Healy (2003) also found that the risk of mortality in wintertime in Europe is high and is linked to indoor temperature rather than the cold weather outside. Likewise, in countries like India, poor households mainly rely on unsustainable energy sources, such as cow dung cake, kerosene, and firewood, for cooking and other household energy needs, which have significant environmental and health implications (WHO, 2018). Several of these studies point out that such impacts are more severe among children than adults (Thomson et al., 2003).

Like health, the detrimental effect of energy poverty on children's educational attainment is also pervasive, though it may affect children from diverse backgrounds in different ways. The impact of energy poverty on educational attainment is theoretically unclear as there could

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[1] http://report.hdr.undp.org/

https://doi.org/10.1016/j.eneco.2021.105427
Received 12 February 2021; Received in revised form 27 May 2021; Accepted 30 June 2021
Available online 7 July 2021
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be multiple mechanisms at work. In developed nations, where a significant portion of pedagogic arrangements is online, the inability to access reliable energy may hinder a child's chances of availing of educational resources. In developing countries, it may hinder pupils' learning opportunities as reliable night lighting and other support systems are not accessible to them as and when required.

All these points to the importance of studying the incidence of energy poverty and its impacts in the context of each country in order to formulate targeted policy interventions. Despite the accelerated economic growth post liberalization and the introduction of several targeted schemes by the governments, energy poverty is still a serious concern in India, especially in rural areas (Bhide and Monroy, 2011). However, the academic literature exploring this aspect in the context of India is relatively scarce. Various policies have been designed to address India's growing energy deficits and develop alternative sources of energy ever since its independence. As a significant milestone in its journey toward universal electrification, in April 2018, the Government of India announced that all areas, including villages and cities in the country, are electrified.[2] However, this declaration does not mean that all the households in the country are electrified; it merely means that the basic infrastructure for electricity supply had been made available to all inhabited areas in the country.[3] Despite these efforts toward universal electrification, the reliability of electricity supply has not yet been achieved in many parts of the country (Heynen et al., 2019).

In spite of government schemes, such as "Pradhan Mantri Ujjwala Yojana", which aim to provide free or subsidized LPG connections to poor households, people's reliance on unhealthy sources for meeting household energy needs is also very much prevalent still. The unclean cooking fuels that 0.2 billion Indian poor people use include 49% firewood, 1.5% kerosene, 8.9% cow dung cake, and 2.9% different types of coal.[4] The emission of perilous pollutants such as nitrogen oxides, carbon monoxides, and particulate matter in the course of combustion of such unclean fuels by means of inefficient indoor stoves gravely risks the health of household members. The air quality in many Indian households is lethal owing to the use of these biomass fuels coupled with poor ventilation on the premises.[5] This poor indoor air quality has been reported to be the second-largest killer, with 1.3 million deaths being reported each year. This fact calls for studies that explore the incidence of energy poverty in Indian households and how it impacts human capital development.

The present study attempts to address this gap by exploring a nationally representative household-level dataset from India that captures various socio-economic indicators. The study examines the impact of energy poverty on human capital development indicators such as children's health and education. Any scholarly pursuit in this regard would begin with the measurement of energy poverty. However, measuring energy poverty quantitatively has always been a challenging task, thanks to the complex nature of the phenomenon. Though the idea of energy poverty has existed in the economics literature ever since Boardman introduced this concept in 1991, a universally accepted scale for the measurement of energy poverty is yet to be ascertained.

Boardman (1991) suggested a single indicator measure, where a household is considered energy poor if its energy expenditure is more than 10% of its income. Initial studies in the domain followed this suggestion of Boardman and attempted to measure energy poverty through the prism of affordability alone (Barnes et al., 2011; Barnes et al., 2004). Though this approach was suitable in the context of developed countries, it failed to capture the nuances of the energy poverty phenomena in the contexts of developing countries. However, studies on developing countries mainly focused on the accessibility aspect of the energy poverty phenomenon (Malla, 2013; Sadath and Acharya, 2017; Tang and Liao, 2014). Recent developments in the literature acknowledge the multidimensional nature of the concept and call for employing new measurements which could capture different aspects of energy poverty, which are relevant to the specific context of the study region. Our measure of energy poverty is informed by these debates and is formulated considering the peculiar socio-economic realities of India. Following Nussbaumer et al. (2012), we attempt to build a composite index of energy poverty, which focuses on quantifying energy deprivation on multiple fronts, such as modern cooking fuel, electricity access for lighting, ownership of appliances used for household chores and entertainment, and the ownership of telecommunication devices. Such a composite measure captures not only the incidence of energy poverty but also its intensity.

Another serious impediment to measuring energy from a developing country context is the lack of nationally representative data focusing on various aspects of energy economics. We rely on data from the India Human Development Survey (IHDS) to identify relevant information to build our multidimensional measure of energy poverty and report some interesting findings. Results of our instrumental variable-based estimations reveal that energy poverty has a significant negative impact on children's health and their educational achievements. Our results are robust to alternative ways of measuring energy poverty, a suite of estimation approaches, and other sensitivity checks. These findings are in line with various studies which were undertaken in different parts of the world and underscore the need for serious policy interventions. As is evident from the results that the negative impact of energy poverty is intergenerational and acts as an impediment to children's health and educational attainment, a multi-fronted approach should be followed in the formulation of policy actions, especially in socio-economic contexts of countries like India.

The rest of the paper is organized as follows. Section 2 presents a brief review of related literature. Section 3 describes the data and variables. Section 4 presents the results and discusses the policy implications and Section 5 concludes.

2. Literature review

Understanding energy poverty has been the focus of many research articles and led to a growing interest among policymakers in using energy poverty measures to evaluate its implications in society and formulate better-informed policy decisions. The key contributions of this paper to the limited literature on energy poverty are as follows: First, it provides a robust analysis of the link between energy poverty and various human capital development indicators, such as children's health and education. In this way, it joins the bandwagon of many recent studies that explored the antecedents and outcomes of energy poverty. Second, it employs a multidimensional measure of energy poverty to ensure more refined empirical estimations. Finally, the study contributes to the growing literature by focusing on a developing country from the Global South, a region often underrepresented in the literature.

Any efforts to alleviate energy poverty begin with a structured approach in defining, measuring, monitoring, and reporting it (Pachauri and Spreng, 2011). A significant challenge from a social policy perspective is to define suitable measures of energy poverty to explore its implications on human life and wellbeing (Llorca et al., 2020). Measuring energy poverty is difficult as it is a private condition, specific to the household, and it changes over time and place. Moreover, it is a multidimensional concept that is culturally sensitive (Thomson and Liddell, 2015).

The literature has used various measures of energy poverty, including subjective and objective measures as well as multidimensional measures that combine both (Awaworyi Churchill and Smyth, 2020).

[2] https://twitter.com/narendramodi/status/990455176581517312?lang = en

[3] https://thewire.in/government/narendra-modi-government-rural-electrification-power

[4] http://www.businessworld.in/article/1-3-Million-%20Deaths-Every-Year-In-India-Due-To-Indoor-Air-Pollution/09-09-2017-125739/

[5] https://www.who.int/airpollution/household/pollutants/combustion/en/

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