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Job Characteristics Model for Job Rotation in Company Crises such as the COVID-19 Pandemic

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Thesis abstract

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During the COVID-19 pandemic, many companies changed their work practices from workplace to distance working and laid off many employees. Besides, some organizations rotate their employee's tasks and switch them to work from home; even their designations were rearranged due to work pressure. Thus, Job rotation is not always a good practice for organizations; for example, COVID-19 affected organizational performance on a large scale. Hence, companies adopted multiple strategies to manage the pandemic, but achieving operational sustainability is complex. The study refers to the Job Characteristics Model (JCM) for job rotation in crisis. This was used in the past with different situations for job rotation, but this study aims to find the ranking of these factors for the employee at the time of rotation. It used fuzzy-ANP as a technique under super decision software. The qualitative research strategy was employed with interviews and subjective Likert scale measurements. The data was collected from ten experts with more than seven years of experience in their field and who faced crises at their organization.

The super decision software showed a link between the factors and the priorities. The most important factor in the JCM is experience in job responsibility. However, this study focuses on the personal and work outcome cluster. So, the most essential factor obtained from this study is high internal work motivation. It can be concluded that employees with high internal work motivation must be valuable to the organization. This factor is also important from the employer's perspective because all employers want good outcomes from their employees. So, if employees have high internal work motivation, they provide good feedback to the organization and are motivated with their work. Theoretically, this study reveals that decision theory should consider job responsibility and internal work motivation for job rotations in a company's crisis. It also suggests that companies should contemplate job rotation, considering employee responsibility and motivation to perform their duties in a crisis.

¹ Keywords: Job Rotation, Fuzzy, ANP, Covid-19, JCM

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Terms and Abbreviations

JCM	Job Characteristics Model
JDS	Job Diagnostic Survey
CPS	Critical Psychological State
ANP	Analytical Network Process
FANP	Fuzzy-ANP
COA	Center of Area

1 INTRODUCTION

It begins with defining the study's context and explaining the importance of job rotation within the company's operating structure. By diving into the historical backdrop and organizational dynamics, the chapter emphasizes job rotation's value in employee growth, skill diversification, and organizational flexibility. Building on the findings of the literature analysis, the chapter articulates specific research questions and goals designed to fill identified gaps and promote a systematic study of significant issues linked to work rotation. Furthermore, the chapter defines the study scope, including boundaries and limitations, to guarantee a focused approach. Finally, it explains crucial ideas for comprehending the research framework, giving readers a road map for the following chapters. Through these components, the chapter establishes the framework for the subsequent investigation of job rotation patterns inside the organization.

1.1 Background

The COVID-19 pandemic significantly impacted organizational working conditions and the economy (Kooij, 2020). Almost everyone was afflicted by the spread of Covid-19 towards the beginning of 2020. Many organizations had to suspend activities over time due to unknown lengths and a lack of clarity on whether, when, and how they would receive payment. Conversations about the effects of vulnerability on people and their jobs grew near the end of the twentieth century, even before the new huge labor market developments. While the twentieth century provided a secure corporate environment, solid organizations, and a relatively trustworthy labor market, the twenty-first century brought substantial alterations and modifications to the workplace. The current economy is based on a global village, which implies that there are more opportunities now than ever before and that people can migrate more successfully between vocations, regardless of whether they are in another nation. Changes and uncertainties in the global economy can sometimes make people feel worried about their jobs and cause them to feel anxious (Gati & Kulcsár, 2021).

This pandemic is about to end, but research on this topic is essential due to the negative economic impacts. This has a separate but very negative impact on the entire global economy, and the economy of Pakistan has suffered because of this pandemic. Simply put, no one around the globe resists this pandemic because COVID-19 affects everyone at minor or significant levels.

To sustain operations under local government restrictions, organizations had to change the working conditions of employees or rotation policy in adversity (Kalogiannidis, 2020). Like the rotation of health workers, many organizations allow their staff to work from home or designated remote offices. Some may have an uncertain outlook on task selection because they are concerned that other roles are reasonably better than their current ones, whereas others may feel uneasy in their workplace. After all, they fear being replaced (Gati & Kulcsár, 2021). Even though due to high turnover and changing tasks, employees were rotated or transferred from their current positions to work under such panic conditions.

To overcome the operational challenges, the working nature is convincingly changed to additional tasks and duties, change in work shifts, and work from home. At this time, employees were down and needed better opportunities to concentrate on their tasks. Job rotation is intrinsically linked with firm and occupation, explicitly realizing both are necessary for job execution and professional achievement. According to Gati and Kulcsár (2021), there is nothing as certain as uncertainty. Because uncertainty denotes a lack of assurance or certainty about an event. In office, uncertainty refers to the inability to predict or foresee results due to a lack of knowledge or bases on which to do so.

1.2 Research Gaps

This pandemic not only affects Pakistan but also severely affects all countries' economies differently. Some real-time examples of Pakistan's MNCs are here to justify this pandemic effect. The large number of foreign employees affected by the Norwegian government's quarantine clause may put additional demand on staff presently working on projects in Norway. This might include corporations using a rotation arrangement for their employees, in which employees work longer hours than usual while in Norway in exchange for time off later in the rotation to be in their home country. Similarly, Nestle is also affected severely by COVID-19, like other MNCs. They terminated numerous employees and shut down operations centers due to financial and management crises (Ugwu, 2021). Because, at that time, the company could not bear all expenses. So, they terminated a few employees and changed tasks for some staff, and for those employees who were doing work from home, the company paid half of their wages. As per such an example, rotation is not favorable for all employees except those who get better opportunities after rotation.

Task changes are hectic for most employees. Work uncertainty is a dangerous factor that causes employees to take part in damaging behaviors through regrettable mental reactions (Jung et al., 2021); the current research intended to investigate the consequences of occupational frailty during the COVID-19 pandemic by observation. In the COVID-19 pandemic, many MNCs put an extra burden on their employees. In some cases, one person performs three different duties irrelevant to their task, and they have no idea how to perform their additional task. The new position and occupation might be uncertain for the employees; it is hectic to adjust to the new position (Jung et al., 2021). The second most popular topic was providing instrumental assistance to assist employees in dealing with issues and managing their workload. Given Jung et al. (2021), the use of job design ideas to reduce occupational stressors and the need for job rotation and cross-training were viewed as critical stress-reduction strategies. Fostering an open and transparent culture was also addressed, as well as giving emotional support in empathy, listening, comforting, understanding, and soothing.

Organizational reshuffling and downsizing have heightened employees' feelings of job insecurity and the subjective and unconscious fear of job loss, but COVID-19 has intensified the problem. Workers might feel unsure about their jobs for two main reasons: First, when a company goes through changes like layoffs, downsizing, or mergers, certain groups within the organization start feeling insecure about their jobs. Second, various challenges or stressful situations can make employees across different departments feel uncertain about their job security, even if facing different issues. Moreover, job instability is a substantial source of stress for employees, and it has a negative link with parameters related to work attitudes and employee psychological health (Jung et al., 2021).

For instance, Kaufmann et al. (2016) have compared organizational systems and their financial implications for short-term rotation and their performance. They require more research, particularly in the gap of the impact of administrative structures. It focuses on the various characteristics of the market and its effects on organizational performance. Similarly, Hackman and Oldham (1974) presented the JCM, highlighting five critical job characteristics that influence personal and professional outcomes: organizational commitment, turnover, and job satisfaction. The five key work characteristics of job dimensions are autonomy, feedback, skill variation, task identity, and task priority (Simonet & Castille, 2020).

According to a job characteristics theory of work satisfaction, employment happiness is affected by essential job features in all positions. According to Hackman and Oldham's two-factor approach, the perceived presence of these underlying fundamental job traits makes the job meaningful and fulfilling to the job incumbent. In addition, the authors also suggest a link between tough professions and a high level of each of the key core job qualities, as well as motivation, job performance, and job happiness. Four essential job qualities have been continuously considered in the organizational literature since the early studies. The four key employment characteristics are autonomy, variation, task identity, and feedback. Hackman and Oldham's JCM includes all four essential work characteristics, widely regarded as other of the most prominent theories in business literature (Taylor, 2015). Looking into the more significant element of job rotation, the study aims to emphasize job characteristic factors, which are very important in job rotation or specific employees. Specifically in the situation of COVID-19 because this pandemic affects the owners of the business as well as in different sorts of emergencies faced by the organization.

1.3 Research Questions and Objectives

This study intends to address the research question of how JCM can effectively perform job rotation during an organizational crisis. This study tries to achieve the following research objectives to achieve that research question.

- To identify the essential factors of job rotation and measure the effectiveness of these factors in the job characteristic model.
- To develop a hierarchical structure of job characteristics for job rotation.
- To measure the hidden dependencies between the employee's job characteristics and job rotation.
- To develop a priority decision index of job rotation in crisis using the multi-objective approach to job characteristics.

Considering the decision-making theory, this study better modifies the existing job characteristic model to implement job rotation in crises like the COVID-19 pandemic. Empirically, this study interviews managers and other professionals from Pakistani companies.

1.3 Scope of the Study

This study intends to address rotation-related issues (i.e., placement issues, demotivation of employees, time management issues, difficulty handling new tasks, not feasible for all industries, and undesirable for employees). This research investigates the effectiveness of a JCM, which examines the elements that influence job rotation and lists the most significant aspects at the time of rotation. This research tries to identify the most favorable aspects that would help organizations make decisions during natural crises and benefit employees and employers. This research focuses on developing a multi-objective approach, where we can prioritize the input factors for job rotation, career change, or redesign. This priority decision index confirms a better understanding of the decision-making during rotation.

1.5 Key Concepts

The present study evaluates how we can effectively address job rotation decisions during an employee's rotation in an emergency or everyday structure routine. This study also modifies the existing JCM to better implement job rotation in a crisis like the COVID-19 pandemic. Therefore, the key concepts in this regard have been highlighted in Table 1.

Table 1. Key Concepts.

Term	Explanation
JCM	According to the Job Factors Model (JCM), five fundamental factors drive job satisfaction and motivation: skill diversity, task identity, task relevance, autonomy, and feedback. All these factors impact employee performance and well-being.
ANY	ANP stands for Analytic Network Process, a decision-making technique for evaluating complex circumstances considering the interdependence of criteria and alternatives. It aids in prioritization and decision-making processes.
Fuzzy	The term "fuzzy" refers to a concept or system that allows for uncertainty or imprecision in data or decision-making, as represented by membership functions or fuzzy logic, and which accepts ambiguity in problem-solving or reasoning processes.
Job Rotation	Employees rotate between occupations or positions within a company to broaden their skills, boost job satisfaction, and reduce boredom, resulting in a more adaptable and motivated workforce.

2 JOB CHARACTERISTICS MODEL FOR JOB ROTATION: THEORETICAL PERSPECTIVE

The Job Characteristics Model (JCM) can provide information regarding job rotation. Rotation plans can intentionally incorporate the five basic qualities of JCM, namely skill variation, task identification, importance, autonomy, and feedback. JCM principles can potentially improve employee experience during job rotation by providing employees with a sense of ownership and exposing them to various jobs.

2.1 Decision Theory

At some point in the previous century, Hester Barnard, a resigned phone executive and researcher of 'The Functions of the Executive,' brought the word decision-making from the language of policy management into the business world. It gradually began to supersede lesser descriptors like policymaking and resource allocation. Decision theory is fundamentally concerned with assisting individuals and organizations in making decisions. It provides a reasonable edge work for substantial direction (Kadoić et al., 2017). The dynamic refers to selecting a demonstration from various other options determined to be excellent under given conditions. The current study begins with a quick overview of decision theory as a theoretical foundation for making professional decisions. This research also looks at the characteristics of career choice-making and how they impact applying decision theory to the situation at the time of rotation. Afterward, the professional JCM is reviewed, and priority decision-making structures are examined during rotation. Priority decisions are a type of decision-making under ambiguity in which the aim is to make the best option among possibilities. Decision-making is the process of picking a course of action from many options. It requires identifying, comparing, and selecting possibilities based on one's beliefs, values, and preferences.

In addition to it, utility refers to a quantitative assessment of the attractiveness of a particular decision outcome (Gati & Kulcsár, 2021). Management must consider stages such as preparation, association, direction, order, and control. While performing such countless exercises, the administration must confront numerous circumstances from which the most ideal decision is taken. This decision-making is called decision-taking or choice-taking.

A choice is just a determination from at least two blueprints. Decision-making might be characterized as a direction of the best choice from a bunch of elective approaches, that action to take which should meet goals up to fulfillment of the decision-makers (Lewis, 1981, p. 5). In its most common form, the choice proposition, the study learned how to avoid the belief that what is best to do is what the expert believes generally results in good. Causal relationships, for example, are not mentioned. The hypothesis is simple, rich, powerful, and deftly conservative. Unfortunately, this is not entirely correct. This no-causal choice hypothesis provides an unsatisfactory response, known as Newcomb issues, in a class of instances almost impossible to miss. It supplements an irrational method of coping with the news to gain fantastic insight into topics you cannot control.

Many savants understand the concerns in general yet cannot stop disputing me about which solution in a Newcomb case is rational. This is about a point that they do not see. The no-causal choice theory addresses these concerns, and no substitution is required. The study is not engaging in banter with them because the discussion is stalled, and nothing new to say (Lewis, 1981, p. 5). Instead, the study addresses those who agree that Newcomb's concerns necessitate some causal choice hypothesis and wonder what form such a hypothesis should take.

2.2 Decision Theory and JCM

The JCM, originally known as the Job Diagnostic Survey (JDS), was intended to evaluate and improve the positions of those employed by others. The primary goal is to investigate present roles and evaluate the consequences of job changes on workers in terms of motivation, efficiency, and contentment. Unlike other work configuration-oriented approaches, this method focuses on creating actual work. The JCM is one of organizations' most significant representative inspiration theories (Olson & Zanna, 1993). According to the principles of this strategy, task features lead to primary mental states, which lead to individual and job outcomes, with each advancement motivated by the need for development. Ability variety, task kind, task importance, independence, and input are the primary employment qualities. The three primary mental states are experienced work importance, experienced liability over results or work, and outcome information. Individual and business outcomes include high internal work motivation, excellent work execution, high job satisfaction, and minimal truancy and turnover.

While these characteristics were initially meant for roles held by others, they also apply to persons who work for themselves. Businesspeople, in particular, consider independence as a critical motivator for starting their firm (Batchelor et al., 2014). Coelho and Augusto (2010) identified that tasks foster the belief that one's employment is meaningful and valuable, motivating one to work wisely. Hackman and Oldham developed the JCM in 1976 and refined it in 1980 to guide successful organizational role improvement (Taylor, 2015). The model suggests five criteria for successful task design: task identity, skill variety, autonomy, feedback, and task significance. Employment characteristics influence creativity since they may motivate employees (Coelho & Augusto, 2010). In general, Complex jobs (i.e., rich in diversity, identity, autonomy, feedback, and importance) promote individuals' excitement about their work activities and drive to complete these tasks, and this excitement should inspire creativity (Straub, 2021).

According to the JCM, these factors influence motivation, satisfaction, and performance. The approach also considers intervening aspects such as meaningfulness, accountability, and awareness of outcomes (Taylor, 2015). According to Fried and Ferris (1987), the JCM has numerous dimensions, although the exact number is unclear. They did find that employment qualities were related to psychological and behavioral outcomes, with psychological states acting as intervening factors. A recent evaluation of job design research provided an overview of the JCM by examining more current studies (Parker et al. 2017). They concur with Fried and Ferris (1987) that while the JCM is linked to a range of emotional and behavioral outcomes, the model has received less support. A recent study shows insufficient evidence that development needs strength as a moderator and limited support for meditational processes. Meaningfulness is the sole intervening variable accepted as a relevant psychological state (Parker et al. 2017). A composite, aggregate strategy for studying the impacts of employment factors is explicit in this research endeavor (Jimmieson et al. 2021).

Job characteristics and work execution behaviors are general to each other inside the organization. While there are other crucial cases, researchers focus the remainder of the results on the immediate and anomalous connections with encountering fill-in as significant (Simonet & Castille, 2020). Many envision business visionaries as influential, famous, knowledgeable, and wealthy. For example, Bill Gates and Mark Zuckerberg established their pioneering firms in their mid-twenties after graduating college.

Reality paints a different picture: An average businessman is a man in his forties who has no ambitions for great wealth and is married to someone who works. The average businessperson is merely trying to make enough money to pay the rent. This second, more realistic depiction of a corporate visionary should fit well with Hackman and Oldham's JCM system (1975). The calculated system of the JCM, which was initially meant for manual employees, now applies in an entrepreneurial situation. Finally, Kalogiannidis (2020) believes that the work of business visionaries may have a more significant impact on their emotions and ways of acting than business executives.

2.2.1 Core Job Dimension

According to the JCM, the five key work dimensions affect specific human and company outcomes, such as position fulfillment. Skill diversity, autonomy, feedback, task identity, and task importance are the five recognized important job aspects. It is vital to grasp the work qualities and what they indicate for the job fulfillment of representatives in an organization. The pleasant outcome caused by job satisfaction supports and motivates an employee to continue executing the tasks assigned, adding to authoritative effectiveness (Ali et al. 2014). The current study initially confirms the model's predictions by focusing on the link between core job features and primary mental states. Skill diversity, task identity, and task importance are more strongly related to significance than the other two fundamental mental states. Furthermore, independence is commonly associated with liability and criticism of information on results. These findings are subtly more consistent with the model than Hackman and Oldham's, where independence is unambiguously linked with significance rather than job responsibility (Chou et al. 2017). Jiang et al. (2021) Claimed that task identification leads to the feeling that the job is significant and desired, encouraging individuals to work intelligently.

Hackman and Oldham (1974) believe autonomy describes a vertical increase in responsibility, decision-making authority, and employee autonomy. According to Coelho and Augusto (2010), employee autonomy may motivate and empower people to try new things, learn from their failures, and broaden their domain-relevant abilities. According to Hackman and Oldham (1974), feedback is the extent to which an employee learns about the efficacy of their performance by executing the necessary work duties on the job.

Employees must get feedback from top management to discover areas for development and gain a better grasp of their workplace. Furthermore, Batchelor et al. (2014) noted that a two-stage JCM lacking the primary mental states may better fit the first three-stage model. As a result, we follow in the footsteps of previous researchers by investigating the effects of job qualities on various JCM outcomes and the immediate effects of job attributes on inner work inspiration for business visionaries.

2.2.1 Critical Psychological State

Hackman and Oldham (1974) introduced the critical psychological state (CPS) as a theoretical link between perceived job characteristics and internal motivation. Three CPS are predicted to promote job motivation: experienced meaningfulness, experienced responsibility, and understanding of outcomes. Experienced meaningfulness refers to how much an individual feels their employment is meaningful compared to their value system. Experienced accountability addresses an individual's level of responsibility for their job output (Foroutan et al. 2021). Furthermore, knowledge of outcomes refers to the level to which a person is aware of the individual's work performance.

The past review has demonstrated that the level of a representative's natural inspiration or other primary mental states intervenes in this relationship. Other mediating factors in the connection between work characteristics and turnover expectations are conceivable (Agarwal and Gupta, 2018). The past review has demonstrated that the level of a representative's natural inspiration or other primary mental states intervenes in this relationship. Other mediating factors in the connection between work characteristics and turnover expectations are conceivable. The primary psychological states and the result factors of general fulfillment, interior work inspiration, and development fulfillment may be seen very well. These are all in the anticipated course and, most importantly, arrive at satisfactory degrees of factual importance. It does not indicate the free-specific commitments of the two indicator variables (particularly, center work aspects and primary mental states) to the outcome factors.

The intervention linkage (e.g., intervening in the job of work commitment between the relationship of occupation attributes with authoritative commitment and occupation fulfillment) gets solid help from the JCM. At the JCM, the primary mental states (for example, encounters weightiness, experienced liability, and criticism) are given as arbiters between work qualities and occupation fulfillment. The three mental states are like the proposed fundamental state of commitment (e.g., seriousness, security, and accessibility). In particular, the accomplished seriousness is much like the mental state of significance of commitment. Thus, the consistency between the mental conditions of the JCM and the fundamental state of commitment is maintained (Rai & Maheshwari, 2021). Because the JDS covered seven work components, only five were judged central. The JCM's primary idea is that these work qualities lead to three basic mental states, ultimately leading to many individual and work outcomes.

Furthermore, it is believed that these relationships are led by development need strength, the desire to gain growth fulfilments from employment (Parker et al. 2017, p. 408). According to this approach's principles, the features of a task lead to primary mental states, which lead to individual and job outcomes, with each step driven by one's desire for development. The primary job characteristics are task personality, task significance, independence, and input. Hackman and Oldham (1974) state that an individual's CPS interferes with the job characteristics or fulfilment relationship. Hackman and Oldham essentially employed the CPS to establish a reasonable link between job attributes and work inspiration, claiming that work inspiration arose from CPS-promoted work. As mentioned by Foroutan et al. (2021) despite their intended claim, Hackman and Oldham determined that the CPS was only a sliver of a middle person, implying that the job attributes job satisfaction relationship may not intervene.

2.2.3 Personal and Work Outcome

Employees whose roles were improved through the JCM feel more accountable and believe their work is more meaningful. As a result, their internal motivation increases. Work fulfillment improves when representatives feel independent, get significant and convenient execution, and believe their work is essential. Therefore, execution happens. Work productivity had an important role in creating the work characteristics model, as evidenced by DeVaro et al. (2007). Hierarchical analysts need to increase their performance by using these technologies.

Assessing and improving the position for each categorization enhances execution. Employees who are delighted and drawn in are more motivated to come to work and less likely to leave, which explains why turnover and absenteeism are low. Work quantity and quality. When implemented effectively, this approach may improve the quality and amount of labor and representative satisfaction. It delivers the finest outcomes for both representatives and directors. The Job-Characteristics Model's final section concerns the work outcome when the fundamental job characteristics and psychological states are applied. Internal motivation is achieved by responsible, autonomous, and valuable work, which cannot be obtained through external sources such as monetary rewards. The importance of job performance and effectiveness cannot be overstated. All organizations desire great work to be provided, which can only be done when employees feel a psychological state. As mentioned by Kamani (2020) when an employee believes that his or her employment is meaningful, that positive psychological state contributes to a sense of fulfillment. When employees are intrinsically motivated, absenteeism and job turnover are reduced.

The concepts of this method show that the qualities of a task lead to primary mental states, which lead to individual and job outcomes, with each stage being led by one's need for growth. The essential job characteristics are expert selection, task personality, importance, independence, and criticism. The three primary mental states are experienced severity of work, experienced liability over work results, and information about results. (Batchelor et al. 2014). Personal and professional outcomes include strong internal work inspiration, excellent work execution, high job fulfillment, and low non-appearance and turnover. While these characteristics were initially meant for roles held by others, they also apply to persons who work for themselves. Businesspeople consider independence an essential source of inspiration. We use the term "job the board findings" to refer to a wide variety of potential benefits and costs of pivot that surfaced during the authoring and pilot testing. Almost all research areas suggest job turnover has vocation-related outcomes such as representative fulfillment, inspiration, inclusion, and responsibility. Work on chief improvement suggests additional benefits. Counting, for example, further developed authoritative information concerning business systems and contacts in various places, and self-improvement, for example, further developed the capacity to adapt to vulnerability and self-understanding of qualities and shortcomings (Kamani, 2020). Depending on the jobs held, pivoting could be a sort of expansion or improvement for a worker.

The work plan writing suggests other benefits, such as increased variety, challenge, and accomplishment. Finally, other benefits mentioned in the pilot study include the expertise that rotating representatives may bring to their new positions and the prospect that pivot may, as mentioned by Cappelli and Crocker-Hefter (1996, p. 17) companies assist with grooming the organization's culture across the organization.

2.3 JCM FOR JOB ROTATION

Job rotation refers to the precise progression of employees from one occupation to another and any change in task, work content, or division within the organization. It denotes a change in the worker system by transferring employees between different areas of responsibility to improve employee experience (Zin, 2015). The job revolution has significant implications for business realization, providing information on numerous occupation representative matches. He explored many reasons why an execution would be required. Initially, when there is uncertainty regarding the usefulness and productivity of different people in different jobs, in organizations that embrace new technologies, the work revolution could ensure that employees acquire the skills that new technologies necessitate.

Finally, work turn is used to learn about the activities of various representatives in the organization (Kaymaz, 2010). Writing on utilitarian adaptability, on the other hand, suggests that work swing is a focal component within the edge of discussion on representative adaptability (Agarwal & Gupta, 2018). Utility adaptability is usually associated with distinct work framework types, such as work development, work revolution, and semi-independent work gatherings. Their findings imply that by taking on new jobs and practicing capacity freely and skillfully, workers' knowledge and skills grow, and they understand the organization's diverse initiatives (Friedrich et al., 2004). Job rotation is the deliberate replacement of personnel among different tasks to improve skills and job independence, which results in increased motivation, job performance, and productivity (Agarwal & Gupta, 2018). Similarly, Job rotation entails working in different positions or situations at different times, depending on an employee's knowledge, ability, and capacity (Rai & Maheshwari, 2021). Job rotation, also known as cross-training (Ho et al., 2009), attempts to extend people's knowledge, abilities, and experience by transferring them from job to job or department to department (Dhanraj & Parumasur, 2014). Job rotation is moving people between different areas of responsibility to improve their experience on the job (Zin, 2015).

In this context, Dhanraj and Parumasur (2014) found that if workers prioritize job security, more lateral transfers would be necessary in the future to allow for organizational transformation and development. This is a somewhat narrow view of the role played by job aspects, particularly considering their multifaceted nature. Each job feature has its center of interest and requires a unique set of cognitive processes. This implies that each job feature influences creativity distinctly (Coelho & Augusto, 2010).

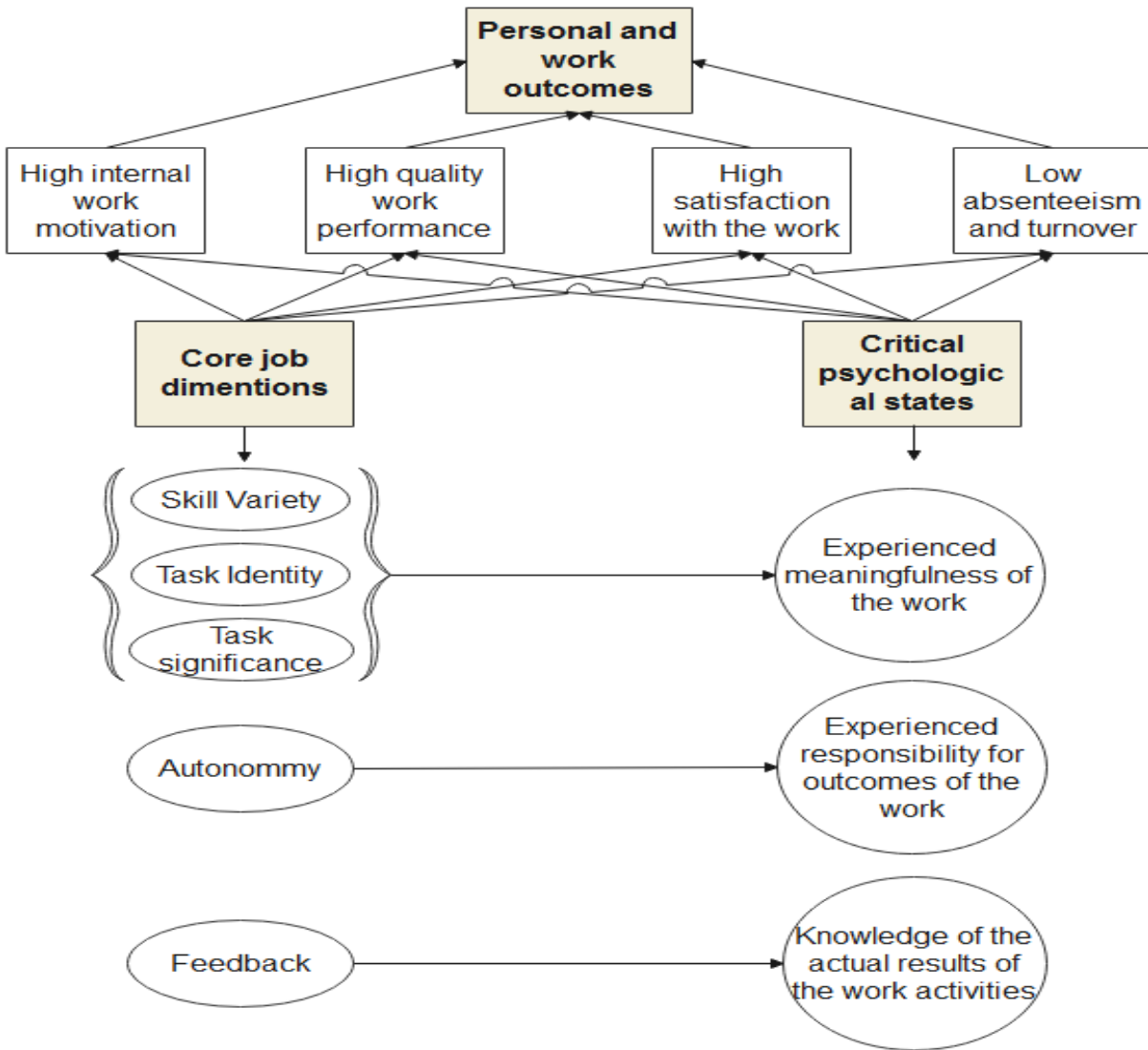


Figure 1. JCM Framework

According to the work characteristics model, the variety of talents required to carry out a task is one of three elements, together with task character and importance, that lead to favorable person and work outcomes via the interceding mental condition of the experienced weightiness of labor. As a result, all else being equal, more expertise assortment should result in people experiencing higher critical outcomes such as inspiration and fulfillment. In addition, Batchelor et al. (2014) noticed that a wide range of abilities are required for business people to progress, and a range of abilities are required for adaptation and development. He also suggests that businesspeople who were previously business managers may have created explicit ways of operating in this manner in their previous profession, obstructing the presentation of their new goal.

As a result, to be engaging, businesspeople must move away from a narrow display of abilities acquired while working for others. Furthermore, experimental findings demonstrate that businesspeople report greater assignment variety than continuing work directors (Desrochers & Sautet, 2008). In general, this conversation demonstrates that expertise diversification is a concept that applies to both company visionaries and business leaders. While Batchelor et al. (2014) highlighted that businesspersons appear to experience higher levels, the impact of the trademark is sufficiently comparative to allow the JCM to be extended to apply to businesspeople.

The Covid-19 pandemic altered and influenced everyone, either directly or indirectly. This process caused each business operation to come to a halt. Workers employed explicitly in small businesses had to lose their jobs, while small businesses needed more money to retain their employees during that period. Due to a lack of funds, a few groups elected to permanently shutter down, while others chose a temporary closure and may reopen after recovering their losses (Kalogiannidis, 2020). The Covid-19 pandemic has increased occupational uncertainty in the area. As a result, administrators must make wise and effective decisions to mitigate the adverse effects of job insecurity to the maximum extent possible (Jung et al., 2021). As a result, we plan to extend this by investigating the impact of each job feature on creativity. Human resource managers may need to provide chances for job rotations so that employees may have a more diverse range of work experiences.

Employees with a wide range of experiences and talents are anticipated to have higher levels of creative self-efficacy (Mohamed, 2016). Job rotation offers several apparent benefits when it is well-planned and formally established, and it is especially beneficial in the manufacturing business (Dhanraj & Parumasur, 2014). A few literary works argue that revolution is linked to advancement in three distinct ways. In studies on flexibility, the pace of future work change is unsurprising compared to the pace of prior work change. Second, research on portability and leadership development reveals that the quantity of professional experiences is critical to career success. Third, advancement research suggests that broad experience within an organization is linked to advancement because representatives acquire association-specific skills and the subsequent drive for organizations to advance from within.

If job pivot is associated with advancement, it may also be associated with pay development, as advancements are often characterized to some extent as increases in pay grade (Straub, 2021). Almost all research fields suggest that turning is associated with obtaining and securing abilities. Experience with turn may significantly impact workers' perceptions of ability securing for two reasons. First and foremost, understanding the pivot may improve knowledge of its outcomes. As a result, if the ability is associated with revolution, the view of expertise results increase as a representative adds experience with pivot. Moreover, Agarwal and Gupta (2018) highlighted that mental consistency hypotheses suggest that the more notable people's interests in revolution, the faster they move, and the more probable they notice a precise turn.

3 METHODOLOGY

This study follows the qualitative research approach used to find JCM for Job Rotation in Crisis. It picked a modern solution methodology of Analytical Network Process (ANP) and fuzzy set theory because of the priorities of the job characteristics factors, which one is more important in decision making. ANP and fuzzy are applied in any wide area of this research problem. The analytical hierarchy process (AHP), sometimes called the analytic network process (ANP), is a multi-criteria decision analysis technique. ANP represents a choice issue as a network, whereas AHP represents a hierarchy with a purpose, decision criteria, and options. Fuzzy is used to handle complexity, such as uncertainty and unclear preferences of factors. Data is collected on the expert's opinion. The strategy of this research includes a review of current research studies, collection of data from experts' opinions, and analysis of the results. An integrated priority decision index (IPDI) by Afzal and Sajid (2020), a multi-criteria decision model, was utilized to determine the breakdown structure of essential interdependencies vs unique job characteristics alternatives contributing to work rotation in a broader context.

3.1 EXPERTS

Experts were asked to report their aggregate assessments on the required question formats using the structured questionnaire method. Data is collected from ten experts' opinions facing the COVID-19 scenario and other rotations like crisis management. They have over seven years of building experience and participated in making decisions for documenting subjective assessments. The identity of experts is not supposed to be revealed due to the need for secrecy. Many organizations have changed their structure because of this recent scenario, like the COVID-19 pandemic. Organizations have shifted their management operations; for example, office work has been converted into work-from-home or online work, and shifts have also changed. This modification is suitable for certain workers and is easy to implement, but it is not suited for all workers.

As a result of these developments, some businesses terminate their employees or modify the work discipline for certain employees. Some employees see this as a chance to change jobs and pursue a better opportunity. However, these opportunities might be stressful for specific individuals. Experts were requested to record their aggregate assessments on the required forms of the questions during the procedure.

Experts must respond to these questions. After getting the expert's opinion, analyze it to find the results. First, the fuzzy set theory is run on the data, and then ANP prioritizes the factors. Fuzzy is used to handle complexity, such as uncertainty and unclear preferences of factors; it is essential to utilize explicit tools, strategies, and ideas that permit the available data to be addressed with suitable granularity. ANP is used to rank the factors. For a list of Managers (see Appendix 1).

3.2 MEASURES AND SCALING

The evaluation technique begins with numerical assessments of job attributes factor nodes (job rotations) and clusters (priority decision index). To evaluate the relevance of job characteristics factors, a five-point assessment scale with random values was used for relative pair-wise comparisons against a linguistic scale, where five indicates highly important and one indicates least important (Afzal & Sajid, 2020).

The statistical value components for each category of the variable under research were assessed using a five-point Likert scale, with one indicating least important, two suggesting slightly important, three indicating moderately important, four signaling important, and five indicating extremely important. Using this scale, experts' opinions would be obtained using a questionnaire, following which the fuzzy set theory approach would be used to prioritize the aspects. (see Appendix 2). To determine the contingency plan, this study method includes the following phases:

- Step 1: Develop a conceptual structure of job characteristics factors.
- Step 2: To capture experts' subjective evaluations for job characteristics elements on a pair comparative scale.
- Step 3: Development of an appropriate linguistics scale and fuzzy trapezoidal function.
- Step 4: Using the fuzzy-ANP method, hidden dependencies, ranking, and priorities of job characteristics factors in job rotation.

3.3 Analytical Network Process (ANP)

Saaty (1996) developed the analytic network process (ANP) to be a non-exclusive variation on the analytic hierarchy process (AHP) for handling complex dynamic problems. The analytical hierarchy process (AHP), sometimes the analytic network process (ANP), is a decision-making analysis technique. ANP represents a decision problem as a network, whereas AHP represents a hierarchy with a goal, decision criteria, and choices.

In practice, the ANP enables analysts to study impacts independently based on multiple fac-pinnacles before consolidating them into a single outcome (Ayağ & Özdemir, 2007). Valipour et al. (2015) said the ANP was the most reliable tool for showing complicated dynamic difficulties. The ANP-based choice investigation approach can gauge all tangible and theoretical measures for the model; the ANP is a generally basic, natural methodology that directors and other leaders can acknowledge; the ANP considers more confusing relationships among choice levels and traits as it does not need a severe progressive construction, and the ANP is more adjusted with genuine issues. The ANP involves two sections. The first contains a control pecking order or an organization comparative with the objective, models, and sub-measures that administer associations simultaneously.

The second hugs an impact network among the components and the groups. The choice organization incorporates the bunches, components, and connections. There are pertinent components inside an organization or sub-network in a group. The bunches with their components are resolved by thinking about each control standard. Inward and external conditions in the ANP can be noticed. Communication and input inside the bunches are called inward conditions, while cooperation and criticism between the groups are called external conditions (Saaty, 1996) (see Appendix 3).

3.4 FUZZY-AND

The theory of fuzzy sets addresses difficulties with clarifying actions and discernments and psychologically complicated judgments. There are five branches of fuzzy set theory: Fuzzy mathematical concepts include fuzzy set theory, fuzzy reasoning and machine learning, fuzzy structures, uncertainties and knowledge, and fuzzy decision-making (Kaur & Mahanti, 2008). Fuzzy set theory's fundamental commitment is its capacity to uncover problematic information. While fuzzy logic involves a variety of mind-boggling tasks, it also has several practical applications (Ertuğrul & Karakaşoğlu, 2009). Triangular and trapezoidal fuzzy numbers are widely used in programs because they are straightforward to compute, valuable in data management, and progressing display in a fuzzy environment.

The ANP effectively applies fuzzy set theory using a fuzzy percentage in paired assessment rather than a new proportion, as in Saaty's nine-point scale. The ANP approach proposes fuzzy-ANP (FANP), which offers various advantages. The FANP approach employs a linguistic scale to assist an expert or decision-maker develop a more adaptable decision-making procedure. The research by Valipour et al. (2015) It has used the FANP to handle a wide range of complex dynamic challenges since it is a comprehensive, multi-reason decision approach.

The fuzzy triangular membership function, a well-known decision technique for uncertainty quantification, enables the duty of job rotation occurrences based on subjective evaluation. Fuzziness refers to the change of an element in a set of non-membership and membership states (Kabir et al. 2016). Like other multi-criteria decision models, fuzzy models fail to account for complex considerations when choosing the JCM. ANP uses a pair comparison method to detect hidden interactions inside a task cycle. As a result, the FANP technique was used in this study to tackle substantial work rotation difficulties while also studying important job characteristics (Afzal et al. 2020). In this study, an extended trapezoidal fuzzy membership function was used to change the likelihood and effects of a risk event.

ANP does not consider pair-wise comparisons of criterion and sub-criteria across several occurrences. As previously stated, this study investigated the components of job attribute interdependence explored using pair-wise comparisons in ANP. The ANP technique (an improved version of the paired-wise analytical hierarchy procedure) prioritizes criteria and sub-criteria that interact with high- and low-level system components (Afzal & Sajid, 2020). Since 2000, ANP has increased in popularity and proven to be the most effective method for dealing with a wide range of project issues, including subjectivity.

ANP has become essential for resolving interdependencies between interconnected project risk networks. It is also employed in a variety of construction management (Fang & Marle, 2012). Boateng et al. (2015) used ANP and a risk priority index to create a new method for prioritizing the reasons for cost overruns across a network of mega-building projects. Several studies have addressed the recent growth in ANP in infrastructure development projects. However, their focus extends beyond exploring the links between risk and complexity in the context of high uncertainty.

4 ANALYSIS AND RESULTS

To evaluate the level of risk severity, a direct-approach positioning computation with degree inspection of fuzzy weights was utilized, along with developing a strategy for accounting for all conceivable project or condition challenges. This includes assessing the likelihood of each problem arising and the severity of the consequences if it does. Then, we choose the most essential items to focus on and assign them a score based on their importance. To deal with the reality that we are not always sure of everything, we choose a flexible strategy that allows us to deal with ambiguity. Following that, we ensure we can fairly compare the many things we consider. Finally, we create a single number indicating the threats' significance, allowing us to choose what requires the most excellent attention. This approach allows us to understand better and manage risks, even when they are difficult.

4.1 Construction of Analytical Network Processing (ANP)

The ANP model has been applied. After defining the logical nodes and clusters from the JCM that constitute the structural issue (see Appendix 2). The ANP model was used to create the priority of the factors of the JCM and present the relationship between these factors by using the Super Decision Software to get the relationship structure between the variables in the form of nodes and clusters (see Appendix 3). These diagrams show the key criterion categories and the options that constitute the clusters. A judgment procedure begins with numerical evaluations of network model nodes and clusters against a common cost criterion.

4.2 Fuzzy Scaling

JCM likelihood and magnitude are assessed using a Fuzzy linguistic scale (see Appendix 4). During a center gathering study, specialists provided phonetic information on the probability and extent of each recognized risk. The executives were consulted during the judgment cycle to decide on the pair-comparison scale. As a result, managers are advised to deliver fair and complete comments regarding their judgments after careful consideration, without imparting their solitary understanding to bypass predisposition in decisions. The following pair-comparison compares the states of n risk factors (see Appendix 5). Following the pair comparison matrix, super judgment software displays the fuzzy matrix shown in Appendix 6.

4.3 Un-Weighted, Weighted and Limited Super-Matrix

The following stage was to generate unweighted, weighted, and limited super grids. Local priorities that were unaffected by pairwise comparisons are included in the unweighted super-matrix. While a component is determined to have no relevance to another element, its impact need was lowered to zero (Valipour et al., 2015). Regarding this technique, the element was weighted based on its comparable cluster matrix weight. The weighted supermatrix was then turned into a restricted matrix by raising it to powers and multiplying it by itself. The findings of factor priority were extracted and acquired from the restricted matrix. The following computation was done with Super Decision software's ANP version 2.2.4. These tables illustrate the unweighted and weighted super-matrices that fall within the category of factors concerned (see Appendix 7).

4.4 Weighted, Un-Weighted & Limit Matrix Structure

To understand the unweighted super matrix generated from super decision software (see Appendix 7). After estimating the demands of the neighborhood, an unweighted super-matrix is produced. The pairwise correlation network results are all super-matrices. We equal 0 if the group does not affect the bunch (an example of inward reliance). The weighted super-grid is also discovered by duplicating each component and comparing group weights. Finally, a weighted super-matrix's weight scores are used to create a limit super-matrix (Kadoić et al., 2017). (see Appendix 8). (See Appendix 9) to understand the limit matrix that is generated from super decision software.

4.5 Priorities of JCM

Here are the priorities of the JCM model. By using super decision software, we get normalized values and limiting values of all factors. According to these normalized values, we get the model's ranking. The FANP matrix was then solved using Microsoft Excel's pairwise comparison matrix. Matrices were generated using the hierarchical network design of pairwise comparison to analyze the relative effect of risk groups and risk factors within the same groupings. The ranking of each attribute begins with normalizing the vector. Fuzzy is used to normalize the data and then rank them using the ANP.

4.6 Ranking of JCM Factors

The analysis of the Job Characteristics Model based on the results, along with their rankings, has been presented in Table 2.

Table 2. Ranking of JCM Factors

Name	Normal	Ranking
Experienced from the work	0.39542	1
Feedback from the company	0.33981	2
Motivation from the work	0.33844	3
Understanding of the actual outcomes of the work tasks	0.32037	4
Work Satisfaction	0.30264	5
Experienced the work significance	0.28421	6
Autonomy	0.26101	7
Best quality work performance	0.24558	8
Skill Variety	0.15748	9
Task Importance	0.15073	10
Low absenteeism and turnover	0.11334	11
Task Identity	0.09097	12

Here is the ranking from Super Decision Software. Accordingly, the most essential component for the JCM throughout rotation is experienced from work responsibility for job outcomes, whereas the least important factor is task identity. According to the employer, taking responsibility for the work's outcomes is critical since it determines how much the employee feels accountable and responsible for the work's outcomes. The least essential is Task Identity because no employer wants an employee to have only task identity. If an employer wants a good outcome from the work, they are not concerned with the employee's task identity. In addition, the results for the personal work and outcomes are shown in Table 3.

Table 3. Ranking of Personal and Work Outcome Cluster.

Name	Normal	Ranking
High internal work motivation	0.33844	1
High satisfaction with the work	0.30264	2
High-quality work performance	0.24558	3
Low absenteeism and turnover	0.11334	4

According to the above ranking, the outcome of the work is the most important of all the factors of the JCM at the time of rotation in any organization. It is a need of every organization to get a good outcome or work. However, when the study gets the Personal and Work outcome cluster ranking, the most critical factor is Higher internal work motivation. Because an employee has high internal work motivation. As a result, they are committed to their work and provide positive feedback to the business. Within the organization, employee motivation is critical to the success of any firm. It represents the dedication, passion, and enthusiasm people regularly bring to their employment. Without it, companies have decreased production and output and are more likely to fail to accomplish essential objectives.

5 KEY FINDINGS AND DISCUSSIONS

The COVID-19 pandemic substantially influenced organizational working conditions and the economy in the previous few years. Firms must adjust employee working conditions or implement a rotation strategy to continue operations in the face of local government constraints. This study focuses on addressing the job rotation issues during the COVID-19 pandemic using JCM factors. It also intends to find the ranking of the JCM and get the most crucial factor from the JCM. To cover all the objectives, the study first gathers some previous literature to spot the problem. Then, the researcher gets the data from experts using a questionnaire and runs a suitable and recent method on the collected data. This research uses the fuzzy-ANP method to rank the factors. Results should be significant from the employer's perspective as well as the employee's perspective.

The FANP matrix was then solved in Microsoft Excel using pairwise comparison matrices. A hierarchical network structure of pairwise comparison matrices was built to investigate the relative effect of multiple risk groups and risk variables within the same groupings. By using Fuzzy, normalize the values and then rank them using ANP. By using Super Decision Software, we get the ranking of all factors in the JCM. As a result, overall, in the model, the most critical aspect of the JCM during rotation is taking responsibility for the outcomes of your effort, and then Feedback is second. High internal work motivation comes in third, followed by knowledge of the actual results of job activities in fourth. High satisfaction with the work is fifth. The experienced significance of the work is sixth; Autonomy is seventh number; high-quality work performance is eighth; skill variety is ninth; ask significance is tenth; and Low absenteeism and turnover are eleventh. In contrast, task Identity is the twelfth number and the least relevant factor.

However, this study corresponds to the 'Personal and Work Outcome' cluster. Therefore, the most significant node is internal work motivation, while the least important is low absenteeism and turnover. High job satisfaction is ranked second, followed by high-quality work performance. According to the employer, experiencing ownership of the job's results is vital since the worker feels accountable and responsible for the results. Moreover, the least important is Task Identity since no employer wants that employee to have merely task identity; an employer is concerned with the work's outcome and unconcerned with the employee's task identity.

According to the ranking, the outcome of the work is the most essential in all the JCM components at the time of rotation in any business, as it is evident that every organization requires a favorable outcome or work. However, when the researcher looks at the personal and work outcome cluster ranking and sees that the most crucial element is higher internal work motivation. Since a person has excellent internal work motivation, they are dedicated to their work and provide positive feedback to the organization. Internal employee motivation is essential to the success of any business. It describes the degree of devotion, passion, and excitement that people bring to their jobs regularly. Businesses suffer from decreased productivity and production levels and are more likely to miss crucial objectives without it. Employee motivation is an essential aspect of the workplace that influences departmental and maybe overall performance.

Motivating your staff should be a regular occurrence. Employee motivation is essential for several reasons. It is highly beneficial to management to realize the company's aims. Companies lacking a motivated workforce may find themselves in a vulnerable position. Employee motivation may boost productivity and help a firm achieve higher output levels. Consider an employee who is dissatisfied with their employment. They most likely spend their time at their desk perusing the internet for personal entertainment or looking for a new job. This wastes time and resources.

Moreover, one interview was conducted with a human resource manager from firm A to check the study results. Who has over seven years of expertise in the industry? During the interview, various questions were asked. According to the respondent, excellent job satisfaction leads to high-quality work performance because there is a direct association between high internal work motivation and satisfaction. As a result, the interviewee placed the highest value on work motivation, followed by employee job satisfaction. High-quality work performance was ranked third, while minimal absence and turnover were ranked the least important. The interviewee's feedback supports the conclusions of this study.

6 CONCLUSION AND IMPLICATIONS

The COVID-19 pandemic made it particularly difficult to switch jobs since it required a shift away from typical office settings and toward remote ones. This impacted both employers and employees. This study uses the Job Characteristics Model (JCM) to solve the issues. The findings are helpful to employers seeking to increase staff productivity and profitability and employees wishing to elevate their input and gain recognition within the organization.

6.1 Conclusion

The problem that is faced at the time of the Covid-19 pandemic is job rotation. Because all physical work switches to working from home. So, it was a critical condition for both employees and the employer. Hence, the study uses JCM variables to solve the job rotation problem. Using some previous literature, this research justifies the problem. After that, the study developed a conceptual model of the JCM. Then, questionnaires are made to get the expert's opinion. After that, the Super Decision Software was used with the responses to get the results. Then, all values are normalized using the fuzzy trapezoidal function. Moreover, ANP is applied to rank the factors. As a result, the study receives the consequence of the work. Internal work motivation is the most essential variable for employees and employers.

Employee inspiration is a significant component of the working environment that influences the exhibition of the division and maybe the organization. Rousing your representatives ought to be a successive event. Worker inspiration is fundamental for an assortment of reasons. It empowers the executives to achieve the organization's goals. Organizations that do not have a roused labor force might wind up in perilous circumstances. Worker inspiration can quickly expand efficiency and assist an organization with achieving more elevated levels of results. Consider an employee who is unmotivated working. They undoubtedly invest their energy in their work area, examining the web for individual pleasure or looking for another profession. This is a wasteful utilization of your time and assets. According to the employer perspective, this research is essential because an organization hires an employee who gives better outcomes and maximizes the organization's profit. According to the employee perspective, this research is helpful because if employees adopt the most crucial factor, they give better feedback to their organization. In return, the organization is satisfied with that employee and provide benefits; maybe the organization provides bonuses for that employee or increments in their salary or any other facilities.

6.2 Theoretical Implications

Decision theory shows how separate organizations make choices. It makes a theoretical contribution by examining decision-making possibilities, values, and uncertainty. Employees whose roles were upgraded utilizing the JCM feel more accountable and believe their work is more meaningful. As a result, their intrinsic motivation increases. Work fulfillment rises when employees have high internal work motivation, receive significant and convenient execution, and believe their work is vital. As a result, execution takes place. Work productivity was a key motivator in the creation of the JCM. Hierarchical analysts need to improve their performance by using these techniques carefully. Assessing and enhancing each classification's position increases execution. Employees who are happy and attracted to their jobs are far more inclined to show up and far less inclined to quit, which explains why there are low turnover and absenteeism rates. The quantity and quality of work When implemented correctly, this method can increase both the quality and quantity of labor and worker satisfaction. It provides the finest outcomes for both agents and directors.

Previous research based on the JCM, for example, has demonstrated that core work qualities can activate a variety of individual and hierarchical outcomes. Regardless, substance for the three mental states' intervening work remains scarce. The study attempted to manage this issue in our focus by developing a model based on previous scientists' proposals and the reasoning of the JCM, presenting work commitment as a middle person about occupation traits with job fulfillment and hierarchical commitment. Our decision to replace the three earlier proposed mental states in this concentrate with work commitment is a consistent interpretation of the JCM regarding the model's excessive number of go-betweens (Rai & Maheshwari, 2021).

6.2 Managerial Implications

From a business perspective, this investigation is significant because an association hires an employee who gives better results and expands the association's benefit. From a worker's perspective, this investigation is helpful because, in a case where a worker takes on the primary variable, they give better criticism to their association. In response, the association is pleased with that worker and provide bonuses, such as incentives for that employee or an increase in their income or other offices.

Job happiness is influenced by essential work attributes that are present in all employment, according to the JCM to job rotation. According to Hackman and Oldham's two-factor approach, the perceived presence of these underlying fundamental job traits makes the job meaningful and fulfilling to the job incumbent. They also suggest a link between challenging professions that are regarded to have a high level of the fundamental core job traits and motivation, job performance, and job satisfaction. Four essential job qualities have been continuously considered in the organizational literature since the early studies. The four key employment characteristics are autonomy, variation, task identity, and feedback. All four essential work characteristics are included in Hackman and Oldham's JCM. It is primarily considered one of the most famous models in organizational research. For bettering occupations, the JCM uses job design. Jobs are separated into specific responsibilities, and employees are authorized to fulfill those jobs. Desrochers and Sautet (2008) highlighted that employees have greater control over their work environment, which enhances job satisfaction.

According to the work characteristics approach to job fulfillment, essential work attributes inherent in all professions impact work fulfillment. According to the two-variable hypothesis (e.g., Herzberg, 1966), According to Hackman and Oldham, the seeming presence of these natural center work attributes makes the temporary officeholder's employment essential and gratifying. They additionally contend that a beneficial relationship exists between sophisticated, endless occupations and a higher level of innate center work attributes, inspiration, work execution, and occupation fulfillment (Desrochers & Sautet, 2008).

6.3 Limitations and Suggestions for Future Research

Though the findings are supposed to contribute to the engagement literature by giving a complete approach for future research, the limitations of this study must be clearly stated. Because the COVID-19 pandemic is viewed as a career shock, it presents a unique opportunity to study the impacts of such a shock on all workers, namely the mechanisms they adopt to self-regulate and restore or maintain their person-environment fit. Conducting qualitative interview research to understand the kind of self-regulation mechanisms that all workers use to respond to the effects of the COVID-19 epidemic on their work is one way to investigate this (Kooij, 2020). The first is that this research does not cover all the dimensions of the rotation. It just covers the COVID-19 scenario and only considers that this study is beneficial for other types of rotation but not implemented in these situations to justify.

Future research must determine how this priority decision index influences employee and employer decisions. If it influences so, what issues do employees and employers have with job rotation, and does this study include all types of rotation? The second topic concerns whether job rotation positively or negatively influences a company's future performance. The third restriction is the nation's point of view: Does this research include all organizations around the globe, or is it just beneficial to Pakistani organizations? Because maybe this study is not suitable for other countries' organizations. Other countries might have better backup plans.

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APPENDICES

Appendix 1. Expert Details

Appendix 2. Super Decision Software Questionnaire

Appendix 3. ANP Network Structure from Super Decision Software

Appendix 4. Fuzzy Scaling

Appendix 5. Pair Comparison Matrix

Appendix 6. Fuzzy Matrix

Appendix 7. Unweighted supermatrix

Appendix 8. Weighted supermatrix

Appendix 9. Limit Matrix

Appendix 1. Expert Details

Organization	Designation	Experience
Company A	Head Supply chain	20 y
Company B	Store Manager	15 y
Company C	Manager Supply chain	10 y
Company D	Zonal Sales Manager	10 y
Company E	Regional Sales Manager	18 y
Company F	COO	20 y
Company G	HR manager	8 y
Company H	HR manager	17 y
Company I	Manager supply chain	15 y
Company J	HR manager	12

Appendix 2. Super Decision Software Questionnaire

Comparisons for Super Decisions Main Window: Untitled.sdmod

1. Choose

Node Cluster

Choose Node ◀ ▶

High internal ~

Cluster: Personal and wo~

Choose Cluster ◀ ▶

Core job dimen~

Restore

2. Node comparisons with respect to High internal work m~

Graphical Verbal Matrix Questionnaire Direct

Comparisons wrt "High internal work motivation" node in "Core job dimentions" cluster

Feedback is moderately to strongly more important than Autonomy

1. Autonomy	>=9.5	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	>=9.5	N
2. Autonomy	>=9.5	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	>=9.5	N
3. Autonomy	>=9.5	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	>=9.5	N
4. Autonomy	>=9.5	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	>=9.5	N
5. Feedback	>=9.5	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	>=9.5	N
6. Feedback	>=9.5	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	>=9.5	N
7. Feedback	>=9.5	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	>=9.5	N
8. Skill Variety	>=9.5	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	>=9.5	N
9. Skill Variety	>=9.5	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	>=9.5	N
10. Task Identity	>=9.5	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	>=9.5	N

3. Results

Normal Hybrid

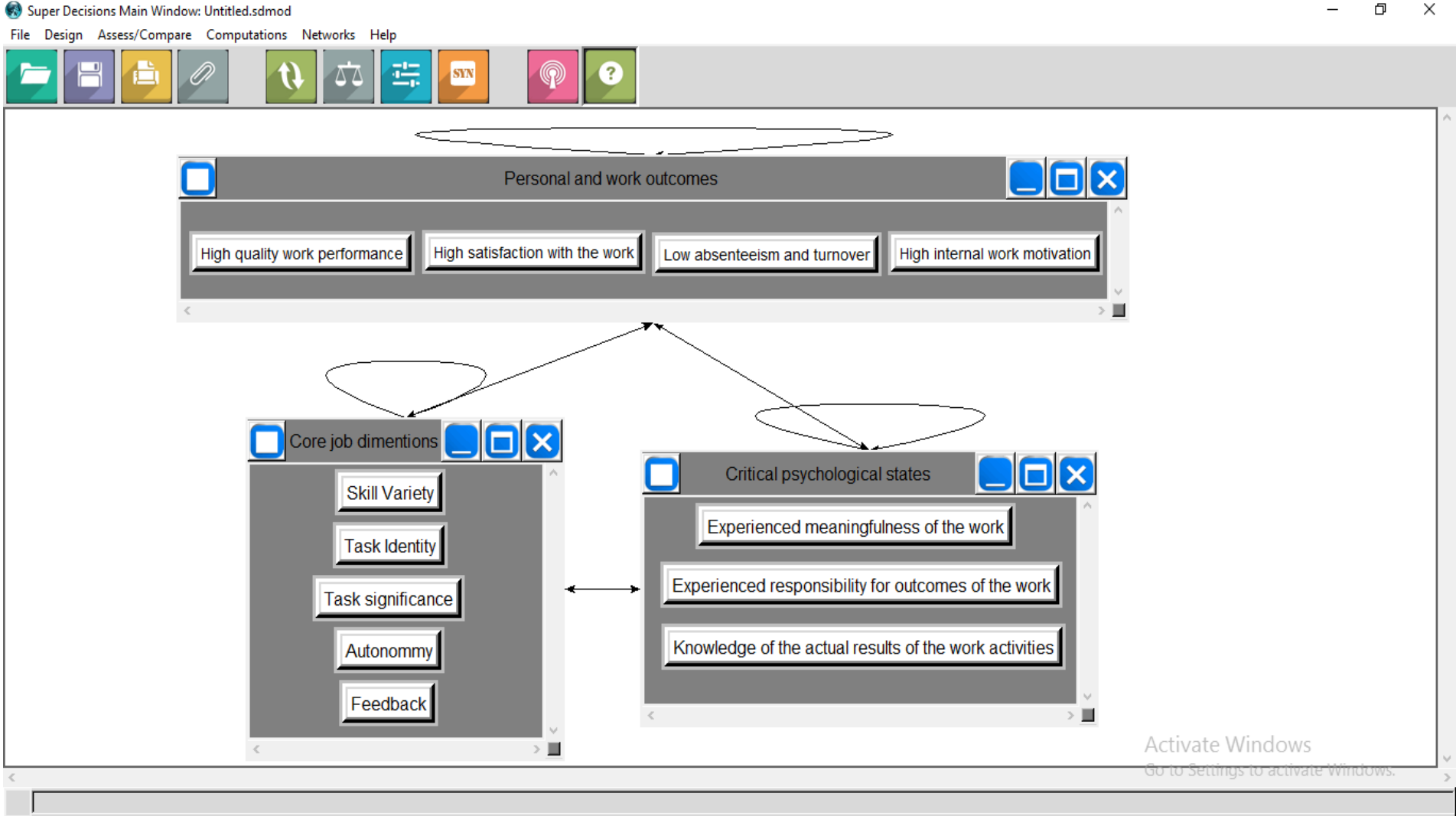
Inconsistency: 0.08992

Autonomy	<div style="width: 5%;"></div>	0.05804
Feedback	<div style="width: 17%;"></div>	0.17742
Skill Var~	<div style="width: 26%;"></div>	0.26038
Task Iden~	<div style="width: 8%;"></div>	0.08022
Task sign~	<div style="width: 42%;"></div>	0.42393

Completed Comparison

Copy to clipboard

Appendix 3. ANP Network Structure from Super Decision Software



Appendix 4. Fuzzy Scaling

Linguistics scale	Description	Crips Val- ues	Fuzzy Mem- bership	
			Function	Reciprocal Fuzzy Numbers
EI	Equally more important equally to moderately more	1	1, 1.5, 2	1/1, 1/1.5, 1/2
EMI	important	2	2, 2.5, 3	1/2, 1/2.5, 1/3
MI	Moderately more important moderately to strongly more	3	3, 3.5, 4	1/3, 1/3.5, 1/4
MSI	important	4	4, 4.5, 5	1/4, 1/4.5, 1/5
SI	Strongly more important	5	5, 5.5, 6	1/5, 1/5.5, 1/6

The following formula is used to compute fuzzy triangular distributions versus crisp values: $x + 0.5x$ and $x - 0.5$

Appendix 5. Pair Comparison Matrix

	Au- ton- omy ~	Feed- back	Skill v~	Task Id~	Task si~	Expe- rie~	Expe- rie~	Knowled ~	High In~	High qu~	High sa~	Low abs~
Au- tonom~	1	5	2	5	3	4	5	4	5	5	4	3
Feed- back	0.2	1	4	5	4	4	4	5	5	5	5	5
Skill V	0.5	0.25	1	3	2	3	5	5	3	5	5	3
Task Id	0.2	0.2	0.33	1	5	4	5	5	5	3	3	3
Task si	0.33	0.25	0.5	0.2	1	3	3	5	5	3	5	5
Experie~	0.25	0.25	0.33	0.25	0.33	1	5	5	3	4	5	5
Experie~	0.2	0.25	0.2	0.2	0.33	0.2	1	3	4	4	4	4
Knowled ~	0.25	0.2	0.2	0.2	0.2	0.2	0.33	1	3	4	4	4
High in	0.2	0.2	0.33	0.2	0.2	0.33	0.25	0.33	1	5	4	5
High qu	0.2	0.2	0.2	0.33	0.33	0.25	0.25	0.25	0.2	1	4	5
High sa	0.25	0.2	0.2	0.33	0.2	0.2	0.25	0.25	0.25	0.25	1	5
Low abs~	0.33	0.2	0.33	0.33	0.2	0.2	0.25	0.25	0.2	0.2	0.2	1

Appendix 6. Fuzzy Matrix

	Au- tono m~	Feed- back	Skill v~	Task Id~	Task si~	Expe- rie~	Experie~	Knowl ed~	High In~	High qu~	High sa~	Low abs~
Au- tonom~	1, 1.5, 2	5, 5.5, 6	2, 2.5, 3	5, 5.5, 6	3, 3.5, 4	4, 4.5, 5	5, 5.5, 6	4, 4.5, 5	5, 5.5, 6	5, 5.5, 6	4, 4.5, 5	3, 3.5, 4
Feed- back	0.2	1, 1.5, 2	4, 4.5, 5	5, 5.5, 6	4, 4.5, 5	4, 4.5, 5	4, 4.5, 5	5, 5.5, 6	5, 5.5, 6	5, 5.5, 6	5, 5.5, 6	5, 5.5, 6
Skill V	0.5	0.25	1, 1.5, 2	3, 3.5, 4	2, 2.5, 3	3, 3.5, 4	5, 5.5, 6	5, 5.5, 6	3, 3.5, 4	5, 5.5, 6	5, 5.5, 6	3, 3.5, 4
Task Id	0.2	0.2	0.33	1, 1.5, 2	5, 5.5, 6	4, 4.5, 5	5, 5.5, 6	5, 5.5, 6	5, 5.5, 6	3, 3.5, 4	3, 3.5, 4	3, 3.5, 4
Task si	0.33	0.25	0.5	0.2	1, 1.5, 2	3, 3.5, 4	3, 3.5, 4	5, 5.5, 6	5, 5.5, 6	3, 3.5, 4	5, 5.5, 6	5, 5.5, 6
Experie~	0.25	0.25	0.33	0.25	0.33	1, 1.5, 2	5, 5.5, 6	5, 5.5, 6	3, 3.5, 4	4, 4.5, 5	5, 5.5, 6	5, 5.5, 6
Experie~ Knowled ~	0.2	0.25	0.2	0.2	0.33	0.2	1, 1.5, 2	3, 3.5, 4	4, 4.5, 5	4, 4.5, 5	4, 4.5, 5	4, 4.5, 5
	0.25	0.2	0.2	0.2	0.2	0.2	0.33	1, 1.5, 2	3, 3.5, 4	4, 4.5, 5	4, 4.5, 5	4, 4.5, 5
High in	0.2	0.2	0.33	0.2	0.2	0.33	0.25	0.33	1.5, 2	5, 5.5, 6	4, 4.5, 5	5, 5.5, 6
High qu	0.2	0.2	0.2	0.33	0.33	0.25	0.25	0.25	0.2	1, 1.5, 2	4, 4.5, 5	5, 5.5, 6
High sa	0.25	0.2	0.2	0.33	0.2	0.2	0.25	0.25	0.25	0.25	1, 1.5, 2	5, 5.5, 6
Low abs~	0.33	0.2	0.33	0.33	0.2	0.2	0.25	0.25	0.2	0.2	0.2	1, 1.5, 2

Appendix 7. Unweighted supermatrix

	Autonom~	Feedback	Skill v~	Task Id~	Task si~	Experie~	Experie~	Knowled~	High In~	High qu~	High sa~	Low abs~
Au- tonom~	0	0.51891	0.25009	0.49693	0.27517	0.25368	0.25654	0.27516	0.05804	0.34744	0.23954	0.26831
Feedback	0.4919	0	0.55228	0.28583	0.52026	0.45046	0.41669	0.44574	0.17742	0.11589	0.24869	0.26831
Skill V	0.12193	0.22844	0	0.11941	0.12228	0.15318	0.14302	0.12659	0.26038	0.18116	0.16565	0.24939
Task Id	0.1835	0.15177	0.08	0	0.08229	0.08808	0.06933	0.06622	0.08022	0.06135	0.07869	0.12118
Task si	0.20267	0.10088	0.11763	0.09783	0	0.0546	0.11442	0.0863	0.42393	0.29416	0.26744	0.09281
Experie~	0.12196	0.13965	0.11722	0.33252	0.49339	0	0.25	0.75	0.26837	0.59363	0.1958	0.23849
Experie~	0.55842	0.52784	0.26837	0.13965	0.1958	0.25	0	0.25	0.61441	0.24931	0.49339	0.62501
Knowled~	0.31962	0.33252	0.61441	0.52784	0.31081	0.75	0.75	0	0.11722	0.15706	0.31081	0.1365
High in	0.29321	0.18512	0.12392	0.49429	0.27281	0.31605	0.49923	0.4692	0	0.25828	0.26837	0.11722
High qu	0.14733	0.24038	0.52107	0.25319	0.13729	0.17957	0.28364	0.19417	0.11722	0	0.61441	0.61441
High sa	0.47575	0.45822	0.28812	0.18037	0.51495	0.41933	0.08279	0.25239	0.61441	0.63699	0	0.26837
Low abs~	0.08371	0.11628	0.0669	0.07215	0.07495	0.08505	0.13434	0.08424	0.26837	0.10473	0.11722	0

Appendix 8. Weighted super matrix

	Autonom~	Feedback	Skill v~	Task Id~	Task si~	Experie~	Experie~	Knowled~	High In~	High qu~	High sa~	Low abs~
Autonom~	0	0.16129	0.07773	0.15445	0.08553	0.07885	0.07974	0.08552	0.01218	0.07291	0.05026	0.0563
Feedback	0.15289	0	0.17166	0.08884	0.1617	0.14001	0.12951	0.13854	0.03723	0.02432	0.05219	0.0563
Skill V	0.0379	0.071	0	0.03712	0.03801	0.04761	0.04445	0.03934	0.05464	0.03802	0.03476	0.05233
Task Id	0.05704	0.04717	0.02487	0	0.02558	0.02738	0.02155	0.02058	0.01683	0.01287	0.01651	0.02543
Task si	0.06299	0.03136	0.03656	0.03041	0	0.01697	0.03556	0.02682	0.08896	0.06173	0.05612	0.01947
Experie~	0.06017	0.0689	0.05783	0.16406	0.24343	0	0.04895	0.14685	0.14759	0.32647	0.10768	0.13115
Experie~	0.27552	0.26043	0.13241	0.0689	0.0966	0.04895	0	0.04895	0.33789	0.13711	0.27134	0.34372
Knowled~	0.1577	0.16406	0.30314	0.26043	0.15335	0.14685	0.14685	0	0.06446	0.08637	0.17093	0.07507
High in	0.05741	0.03625	0.02426	0.09678	0.05341	0.15594	0.24631	0.2315	0	0.06204	0.06446	0.02816
High qu	0.02885	0.04707	0.10202	0.04958	0.02688	0.0886	0.13994	0.0958	0.02816	0	0.14759	0.14759
High sa	0.09315	0.08972	0.05641	0.03532	0.10083	0.20689	0.04085	0.12453	0.14759	0.15301	0	0.06446
Low abs~	0.01639	0.02277	0.0131	0.01413	0.01468	0.04196	0.06628	0.04156	0.06446	0.02516	0.02816	0

