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RESEARCH ARTICLE

Employers Investments in Job Crafting for Sustainable Employability in Pandemic Situation Due to COVID-19: A Lens of Job Demands-Resources Theory

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Abstract: Job crafting is beneficial for employees and organizations, more specifically, in the current COVID-19 situation. Sustainable employability is another leading challenge for organizations. A little is known about how job crafting contributes to employee's sustainable employability. Framing in Job Demands-Resources (JD-R) theory, this study examines how employers' investments through job characteristics engage employees in job crafting behaviors that lead to sustainable employability through a motivational process and accumulation of job resources. Data was collected from knowledge workers of healthcare (n=193) and universities (n=290) located in Punjab, Pakistan. Structural equation modeling (SEM) analysis indicates a positive relationship between employers' investment, job crafting and sustainable employability. A moderated-mediation analysis confirms that high work uncertainty strengthens the job crafting process while examining the indirect relationships between employers' investment and sustainable employability through the mediation of job crafting.Organizations need to design jobs while developing human resources management policies and practices to promote job crafting and enable employees to maintain their sustainable employability.

Keywords: Employer Investments, Job Crafting, Sustainable Employability, JD-R Theory, Knowledge Workers
JEL Classification Code: J20, M51

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1 Introduction

Today jobs are more complex, challenging, dynamic and interdependent due to the rise of services and knowledge-based economies Grant et al. (2009); Oldham & Fried (2016). The current pandemic situation due to COVID-19 also dramatically altered the work structures and work methods, making the work more challenging. A unique constellation of working circumstances predominant in each job requires a frequent alteration in the job design (Le Blanc, Demerouti, & Bakker, 2017). It is difficult, even impractical, for managers and organizations to design supportive jobs that best fit all employees' needs (Grant & Parker, 2009; Zhang & Parker, 2019). These situations demand employers to design resourceful and challenging jobs with the flexibility that allow employees to alter tasks and roles proactively whenever needed (Grant, Parker Collins, 2009). Job crafting is an employees' proactive response towards job design that allows employees to alter their task, relational and cognitive job boundaries (Wrzesniewski & Dutton, 2001). Employees may craft their jobs by altering their job demands and job resources (Tims & Bakker, 2010). The job demands and resources perspective on job crafting dominate the literature (Rudolph et al., 2017; Zhang & Parker, 2019).

Job crafting is an emerging, exciting and attractive job design research area (Grant et al., 2009; Ohly et al., 2010; Oldham & Fried, 2016). Managers and scholars permit employees and organization-driven job design approaches together better address work challenges. Literature also supports that job crafting complements the manager-driven job redesign approaches (Demerouti, 2014; Le Blanc, Demerouti, & Bakker, 2017). Job crafting is an individual-level activity that motivates employees to increase well-being, performance, work meaningfulness and work identity (Tims et al., 2012; Wrzesniewski & Dutton, 2001). Meta-analysis and review studies show that job crafting literature is still limited (Lichtenthaler & Fischbach, 2019; Rudolph et al., 2017; Wang et al., 2016). There is a call for further research to explore its antecedents, consequences and boundary conditions (Kim, Im, & Qu, 2018; Kim, Im, Qu, & NamKoong, 2018; Kooij et al., 2017; Lee & Lee, 2018; Niessen et al., 2016). Therefore, this study aims to explore new antecedents, outcomes and boundary conditions to bridge this gap.

Researchers only examine how individual attributes stimulate job crafting behaviors, but it is yet to explore how employers promote job crafting organization-wide by providing resources to craft. Wrzesniewski & Dutton (2001) also suggest that organizations should provide employees with opportunities to craft. Autonomy and workload are essential ingredients for job design and the core components of proactive behavior and JD-R models (Bindl et al., 2019; Schaufeli & Taris, 2014). Autonomy provides employees with the necessary information and opportunities to alter their designed jobs (Tims et al., 2013). Workload is challenging job demand (N. P. Podsakoff et al., 2007). It is similar to job resources (Bakker & Demerouti, 2018). High autonomy and high workload constitute active jobs, support employees to deal with job demands, increase learning and development, and succeed in constituting healthy work (Karasek, 1990). JD-R theory (Baik et al., 2018) also asserts that all types of resources (i.e., tangible and psychological) are motivational, essential and particularly valuable when needed. This study propose that these two job characteristics constitute resourceful and challenging jobs and are label as employer investments. Therefore, this study assume that employers' investments is critical to promote craft jobs in this pandemic situation.

Research on job crafting consequences mainly focuses on establishing linkages with work engagement and several performance measures (Lee & Lee, 2018; Rudolph et al., 2017). Recent studies explore other consequences such as career success, employability and perceived employability (Akkermans & Tims, 2017; Baik et al., 2018; Plomp et al., 2019). Although job crafting contributes to sustainable employability theoretically (Demerouti, 2014; Le Blanc, Demerouti, & Bakker, 2017), it needs empirical verifications. Organizations are looking for ways to design jobs to build and main-

tain a sustainable workforce to gain a strategic advantage (Docherty et al., 2008; Smith, 2010). This study proposes that employee can boost their sustainable employability through job crafting. Sustainable employability is complex, under-research and less developed (Forrier et al., 2015; Van der Klink et al., 2016). Only a single conceptual definition by Van der Heijden (2012) receives much criticism, suggesting further improvements and revision [see (Fleuren et al., 2016)]. Sustainable employability is about the likelihood of continue working (De Cuyper et al., 2014; Vanhercke et al., 2014). Western European scholars conceptualize it through employees' ability to continue working, and in the United States, it conceptualizes through employees' motivation to continue working (Pak et al., 2019). However, both "motivation and ability to continue working" are among the core components for working long (Van der Heijden, 2012). This study conceptualizes sustainable employability as employees' ability and motivation to continue working.

There is also limited research examining the impact of boundary conditions while examining job crafting relationships with their antecedents or consequences (Rudolph et al., 2017). Recent studies suggest that boundary conditions, such as co-worker support, facilitate the job crafting process (Shin et al., 2020). Work uncertainty is a critical boundary condition for job design but rarely studied (Leach et al., 2013). It is vital in the COVID-19 situation and emerging work environment because employees experience huge variabilities in performing tasks due to variabilities in resources, technologies, or inputs/outputs. This study proposes that work uncertainty boosts the job crafting process. Work uncertainty strengthens the indirect relationships between employers' investments and sustainable employability via the mediation of job crafting.This research mainly builds on the JD-R theory (Bakker & Demerouti, 2017, 2018). Based on JD-R theory, this study proposes that the provision of resourceful and challenging jobs,which motivates employees to engage in job crafting that directs employees to maintain their sustainable employability. Organizations may use these findings to design jobs while developing human resources management (HRM) policies and practices to promote job crafting and enable employees to maintain their sustainable employability.

2 Literature Review

2.1 Job Demands-Resources Theory

The JD-R model (Bakker & Demerouti, 2007; Demerouti et al., 2001) has matured into the JD-R theory. The current version of the JD-R theory states how working conditions influence employees and how employees can influence their working conditions (Bakker & Demerouti, 2018). The JD-R theory's central assumption is that besides the different working conditions, job characteristics are broadly categorized into job demands and job resources. Job demands initiate the health impairment process, undermine performance, and lead to exhaustion and burnout (Bakker & Demerouti, 2007). Job demands are further classified into hindering and challenging job demands (Van den Broeck et al., 2010). Challenging job demands, such as workload and job complexities, are like job resources and help employees perform well (Bakker & Demerouti, 2018). Job resources are motivational, does not cost energy, increase work meaning and work engagement, job-related learning, and improve performance (Bakker & Demerouti, 2018). Job resources are also beneficial in satisfying the employee's basic psychological needs (Deci et al., 2001) and buffer the negative impact of job demands on strain (Bakker & Demerouti, 2017). These job resources specifically influence motivation and work engagement in the presence of high job demands. JD-R theory further asserts that employees can influence their job design through job crafting by initiating a motivational process, activate a gain cycle of job/personal resources, work engagement and positive work behaviors. Based on these assumptions, this study argues that designing resourceful and challenging jobs can boost job crafting

behavior which initiates a motivational process, activate a spiral of resources that leads to sustainable employability. These relationships further strengthen in the presence of high job demands such as work uncertainty.

2.2 Job Crafting

The term job crafting first coins by Wrzesniewski & Dutton (2001), defining it as "the physical and cognitive changes individuals make in the task or relational boundaries of their work" (Wrzesniewski & Dutton, 2001). Scholars assert that this concept constrains job crafting to only three forms, i.e., job relationship, tasks, and work meaning (Rogala & Cieslak, 2019). Later, job crafting reconceptualized by Tims & Bakker (2010) and frames into the JD-R framework (Bakker & Demerouti, 2007). Job crafting is a specific form of proactive behavior (Tims & Bakker, 2010). Job crafting is defined as "the changes that employees may make to balance their job demands and job resources with their abilities and needs" (Tims et al., 2012). Employees make such alterations in their job characteristics to benefit from work engagement, reduced burnout, motivation and person-job fit, making the work more enjoyable and enriched (Tims & Bakker, 2010; Tims et al., 2012). Job crafting by Tims & Bakker (2010) led the foundation of quantitative research (Rudolph et al., 2017).

Besides the development of literature, these two conceptualizations differ in important ways (Zhang & Parker, 2019). Altering job boundaries provides a way to increase work identity and work meaningfulness (Wrzesniewski & Dutton, 2001).Whereas altering job characteristics (Tims & Bakker, 2010) focuses on person-job fit, positive well-being and performance (Zhang & Parker, 2019). It is difficult to integrate both perspectives; however, research on each perspective continues to proceed separately. Recent meta-analysis and review studies mainly discuss the JD-R perspective of job crafting (Lichtenthaler & Fischbach, 2019; Rudolph et al., 2017; Wang et al., 2016). It shows that the JD-R perspective of job crafting dominate the literature due to several benefits for employees and organizations.

Further, this bottom-up job redesign approach brings strategic advantages for organizations (Wang et al., 2016) and supports organizational and employee sustainability (Le Blanc, Demerouti, & Bakker, 2017). Job crafting is not a one-time activity rather a continuous process (Petrou et al., 2018) (because employees may "re-create or craft jobs all the time" (Wrzesniewski & Dutton, 2001). Thus, employees can continuously develop their personal and professional skills, work engagement and cope with work challenges by optimizing their job demands and job resources. Job crafting is operationalized through four different dimensions (Tims et al., 2012): (1) increasing structural job resources (e.g., development opportunities, autonomy) (2) increasing social job resources (e.g., supervisory coaching and feedback, social support) (3) increasing challenging job demands (e.g., mastery, responsibility) (4) decreasing hindering job demands (e.g., negative emotions due to interactions with others).

2.3 Sustainable Employability

Sustainable employability is a complex and fuzzy concept (van Harten et al., 2016) due to varied definitions. Only Van der Klink et al. (2016) attempts to define it conceptually. Nevertheless, a provoke criticism by Fleuren et al. (2016) suggests a further refinement of the concept. Following Fleuren et al. (2016) argument, this study reconceptualizes and operationalizes this construct. Sustainable refers to being continuously employable during one's professional life (Thijssen et al., 2008). Employability refers to the individual's ability to retain the current job and have the ability to find a new one whenever needed (Rothwell & Arnold, 2007). The outcome-based approach on sustainable employability focuses on the factors contributing to the likelihood to continue working (De Cuyper et al., 2014; Le Blanc, Van der Heijden, & Van Vuuren, 2017; Vanhercke et al., 2014). In Western

Europe, it conceptualizes employees' ability to continue working whereas in the United States, it is about employees' motivation to continue working (Pak et al., 2019). However, both "motivation and ability to continue working" are among the core components for working long (Van der Heijden, 2012). Because only skills or competencies are not sufficient to remain employable during one's professional life, motivation is of utmost importance. Sustainable employability is defined as the extent to which an employee is able and motivated to continue working productively now and, in the future.

Ability to continue working operationalizes through workability, vitality/work engagement, and employability (Pak et al., 2019). However, vitality, work engagement, and workability conceptually overlap and are well-being variables that need to be consequences of sustainable employability (Berntson & Marklund, 2007; De Cuyper et al., 2012). Employability itself sufficiently addresses the ability to continue working. Employability includes the long-term perspective (Thijssen et al., 2008; Van Vuuren et al., 2011). Researchers propose that individuals who possess high perceived employability are more capable and efficiently handle the changing labor market demands (Vanhercke et al., 2014). Therefore, perceived employability provides a better way to operationalized the ability to continue working (Van der Heijden, 2012). Perceived employability is defined as "the individual's perception of his or her possibilities of obtaining and maintaining employment" (Vanhercke et al., 2014). Motivation is a broader notion, mainly conceptualized by examining employees' motivation at work and intentions to work until or after retirement age ((Kanfer et al., 2013). The last standpoint is most relevant to sustainable employability and motivation to continue working. Because with aging, motivation is the potential driver to keep and remains an employee at work (Kooij et al., 2017). Motivation is also a core component of most job design theories.

2.4 Job Crafting and Sustainable Employability

Job crafting is a socially innovative way' to achieve employee sustainability (Le Blanc, Demerouti, & Bakker, 2017). Job crafting contributes to sustainable employability in different ways (Demerouti, 2014; Le Blanc, Van der Heijden, & Van Vuuren, 2017). It supplements the top-down job redesign process to enhance a worker's performance and well-being. It provides employees with opportunities to redesign their jobs that best tailored their individual needs, thus improve task performance. It also privileges all types of employees (older, working parents and employees with health issues) to adjust their jobs according to their individual needs to retain and improve performance. Job crafting enables employees to maintain their proactivity and adaptability (Baik et al., 2018). According to JD-R theory, employees can influence their own job design through job crafting, which activates a gain cycle of job resources, work motivation, positive work behaviors and work engagement (Bakker & Demerouti, 2018).

Motivation and accumulation of job and personal resources are core components of the job crafting process. That directly contributes to employee's ability and motivation to continue working. When employees perceive opportunities in their career growth, they proactively craft vital job resources (Fried et al., 2007). By crafting a job, employees instigate a learning work environment that helps meet the current job requirements and professional development opportunities. Increasing social, structural and challenging job demands stimulates job-related knowledge, competencies and supervisor's feedback to help job crafters grow professionally. Indeed, scholars show such proactive job redesign initiatives are related to career and work-related outcomes (Akkermans & Tims, 2017; Plomp et al., 2019). The proactive initiatives for professional development and personal growth show employee willingness and adaptability towards changing job requirements to grasp future job opportunities. Because job-related skills, willingness to change, professional developments are among the significant predictors of perceived employability (Wittekind et al., 2010).

Such proactive efforts positively contribute to employment opportunities (van Harten et al., 2016). Some recent studies support these findings. For example, Akkermans & Tims (2017) show that expansion of job resources/demands triggers personal growth, increases individual ability, and positively related to perceived employability. In another study, Plomp et al. (2019) explore that increasing structural, social and challenging job demands are positively related to permanent employees' perceived external employability. In contrast, temporary workers maintain their perceived external employability by increasing structural job resources. Tims et al. (2012) findings also support our argument that job resources are positively related to employability. Thus proactive efforts to learn new skills and knowledge, up-to-date professional competencies by crafting jobs increase the likelihood of sustainable employability. Job crafting itself is a way to attain desirable work outcomes that partly overlap with employability (Tims et al., 2012). When employees aim to craft their jobs for personal growth, professional development and improve person-job fit, it will increase employee's ability and increase motivation to continue working. These findings are supported byVanbelle et al. (2017) who showed that job crafting is positively related to employees' ability and motivation to continue working till the retirement age. Summarizing the above discussion, we may expect that job crafting positively relate to overall sustainable employability.

H_1: Job crafting positively influence sustainable employability measured in the form of ability (H_{1a}) and motivation (H_{1b}) to continue working.

2.5 Employer Investments and Job Crafting

Job characteristics are the primary determinant of proactive behaviors (Ohly & Schmitt, 2017). More specifically, job resources positively and job demands positively or negatively link with proactive behaviors (Frese et al., 2007). Resourceful and challenging jobs create an active work environment leading to increase motivation, learning and development, and support for growth-oriented behaviors ((Vanbelle et al., 2017) and positively influences employee attitude and behavior (Nahrgang et al., 2011). According to JD-R theory, job resources increase work engagement, help employees achieve work goals, buffer the negative effects of job demands, and fulfill basic psychological needs. The JD-R theory further asserts that these resources' motivational potential provides support for employees' engagement in job crafting (Bakker & Demerouti, 2018).

Job autonomy refers to employees' control over tasks' execution (Bakker et al., 2004). Autonomy is a precondition to job crafting (Wrzesniewski & Dutton, 2001). The employer's discretion and freedom give confidence for effective decision-making about what to craft and when to craft. High autonomy/control on the execution of jobs will lead employees to engage in proactive behaviors (job crafting) because employees feel self-efficacious, have control over the work situations (Grant & Ashford, 2008; Parker et al., 2006). Such control in work situations provides necessary information and opportunities to adjust their job demands and resources as per individual needs, preferences and abilities (Tims et al., 2013). Workload, being a challenging job demands (LePine et al., 2005), helps employees to perform well and act like job resources (Bakker & Demerouti, 2018). It ensures goal attainment (Van den Broeck et al., 2010). Such challenging job demands may lead to the stimulation of favorable outcomes in the form of proactive behaviors (Ohly & Fritz, 2010; Ohly et al., 2010). When employees experience higher workloads, they are motivated to reduce those demands that cause hindrances and search for more resources to cope with such demands (Bakker & Demerouti, 2007). A meta-analysis study by Rudolph et al. (2017) and a study by Vanbelle et al. (2017) supports our argument that autonomy and workload positively contribute to promoting job crafting.

Further, high job resources and high job demands translate into active jobs (Karasek Jr, 1979). Employees experiencing active jobs engage in active problem solving, deal with job demands, mastery experiences and enhance individual learning and development capacity (Karasek, 1990). (Petrou

et al., 2012) examine that employees who experience active jobs (high autonomy, high work pressures) are engaged in seeking resources, seeking challenges, and reducing job demands. Therefore, we expect that employer investments in resourceful and challenging job demands are positively related to job crafting.

H_2: Employer investments in the form of autonomy and workload is positively linked to job crafting.

2.6 Mediation of Job Crafting between Employer Investments and Sustainable Employability

We further suggest that job crafting mediates the relationship between the employer's investments and sustainable employability. Job design that privileges employees with motivation, learning and developmental opportunities and discretion/control over jobs can actively adjust their job demands and job resources according to individual preferences and needs. Resourceful and challenging jobs' motivational potential successfully engages employees in job crafting behaviors. The JD-R theory asserts that job crafting activates a gain cycle of job and personal resources, motivation and engagement at work (Bakker & Demerouti, 2018). Accumulation of job and personal resources contributes to professional development and growth and acquisition of skills and knowledge that meet the job market's current and future requirements. By optimizing job resources and job demands, employees can continuously learn job-related knowledge, cope with emerging work challenges and demands, and secure current employment and increase chance to secure a better employment.

A resourceful person makes further investments of these resources to accumulate new and more resources (Hobfoll, 1989). Job crafting adds to sustainable change-oriented behaviors (i.e., adaptive and proactive) (Baik et al., 2018) and perceived employability (Akkermans & Tims, 2017). Employees may utilize these adaptive strategies to balance their work environment and age-related changes regarding their goals and personal needs (Baltes & Dickson, 2001). Job crafting is an individual proactive optimization of job characteristics, work engagement, performance and effectual functioning at work (Tims et al., 2012). All these factors create an active work environment that increases employees' motivation to work long (Hengel et al., 2012) and the ability to continue working (Pak et al., 2019). Therefore, assuming that resourceful and challenging jobs boost job crafting, which in turn initiates a motivational process, facilitates the accumulation of resources that translate into employee's sustainable employability.

We further suggest that job crafting mediates the relationship between the employer's investments and sustainable employability. Job design that privileges employees with motivation, learning and developmental opportunities and discretion/control over jobs can actively adjust their job demands and job resources according to individual preferences and needs. According to JD-R theory, resourceful and challenging jobs' motivational potential and challenging jobs successfully engage employees in job crafting behaviors. The JD-R theory further asserts that job crafting activates a gain cycle of job and personal resources, motivation and engagement at work (Bakker & Demerouti, 2018). Accumulation of job and personal resources contributes to professional development and growth and acquisition of skills and knowledge that meet the job market's current and future requirements. By optimizing job resources and job demands, employees can continuously learn job-related knowledge and cope with emerging work challenges and demands, which enable them to secure current employment and increase chance to secure a better employment.

H_3: Job crafting mediates the relationship between employer investments and sustainable employability.

2.7 Moderation of Work Uncertainty

In general, and more specifically, in the current pandemic, situation employees perform their routine tasks in entirely different ways as they use to. Almost every employee needs to redesign their jobs frequently to perform their daily activities. A resourceful and challenging job boost their self-initiated proactive and volunteer behavior towards job design. Nevertheless, they are also facing uncertainty or variabilities while performing their routine activities. This variability may arise due to a shortage of resources, access to technology, rising customer demands, or variation occurs during inputs/outputs of results (Cummings & Blumberg, 1987). These variabilities and "lack of predictability of work tasks and work processes" in job design context referred to as work uncertainty. High work uncertainty increases employees' control on task execution, and decision-making enables them to learn about the changes and challenges in task requirement that leads to improved job performance. In contrast, when uncertainty is low, increased control has little effect because it lowers down learning chances. Therefore, it challenges the long-held assumption concerning empowerment or increased control is a "near-universal recipe for organizational success… is incorrect" (Wall et al., 2002).

Employees perceived such job demands, specifically in the COVID-19 situation, as a challenge. Teachers are using digital platforms to conduct their regular lectures. Doctors are treating patients virtually, or in general, employees are performing their jobs and attending meetings while sitting on beds never happen in our organizational life. Such job demands that provide learning opportunities, control on the execution of tasks act as challenging job demands. This study proposes that when employees experience a high work uncertainty, the relationship between employer investments and job crafting further strengthens and then translates into sustainable employability. Employees perceive a higher level of job autonomy and workload granted by employers, and experiencing higher levels of work uncertainty results in most predictive of job crafting and its associated outcomes (Leach et al., 2013). Therefore, this study assumes that work uncertainty moderates the indirect employers' investments in sustainable employability through the mediation of job crafting.

H_4: Work uncertainty moderates the indirect effects of employer investments in the form of autonomy (H_{4a}) and workload (H_{4b}) on sustainable employability through the mediation of job crafting such that its effects are stronger when work uncertainty is higher as compared to lower.

2.8 Conceptual Framework

Figure 1 provides the model to depict relationships between the studied variables along with the proposed hypothesis.

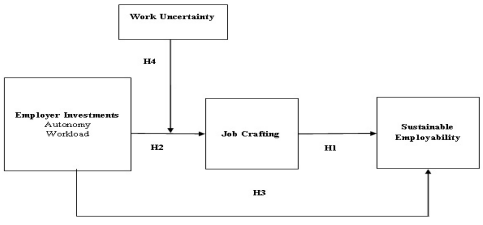


Figure 1: A Moderated Mediation Conceptual Model

3 Methodology

A positivist philosophy and deductive approach were adopted. This study is quantitative and explanatory; therefore, the survey research strategy is most suitable. It allows researchers to measure the studied variables quantitatively. Therefore, a self-administered questionnaire was used to collect data from knowledge workers to validate the proposed theoretical framework. This study is cross-sectional, and data was collected in two-time lag (two weeks). Literature suggests that professionals/knowledge workers (Armstrong & Taylor, 2020) performing dynamic, complex and non-routine jobs are more commonly engaged in job crafting (Peeters et al., 2013). Therefore, two public and private, each from tertiary care teaching hospitals and universities in Lahore, Punjab of Pakistan, were randomly selected. Most of the renowned and ancient universities and tertiary care hospitals are located in this city.

The temporal separation, data from two different sources, using validated scales, reverse coding for some items, and measuring predictors and criterion variables in different time lags are the remedies to overcome procedural biases and statistical solutions (P. M. Podsakoff et al., 2012). Two separate surveys were conducted with an interval of two weeks. The reason being, still there is no thumb rule for setting a time interval between surveys in general (Taris & Kompier, 2014), and even no evidence in job crafting literature (Dubbelt et al., 2019). During this interval, employees have at least some opportunities to craft (Tims et al., 2015). The survey questionnaire at Time 1 includes independent variables and a moderating variable while at Time 2 mediating, and the outcome variables measured. A soft and hard copy of the self-administered questionnaire was used to collect data. Therefore, a delivery and collection method was employed for data collection.

During the first wave, 700 questionnaires were distributed, and only 590 responses were received back. After two weeks, we again sent the second survey to 590 respondents and received only complete 533 responses. The email address and a unique identification code consisting of respondent birth date, birth month, and frequently used mobile numbers (last four digits) were sufficient to match the responses. Neglecting the incomplete and mismatched responses, finally, 483 responses were selected for data collection. The overall response rate was 69%, which is relatively higher than other studies in management sciences using a time lag of two or more weeks. The final sample includes 275 (54%) male and 237 (46%) females respondents. Participant ration from the education and healthcare sector were approximate 60% and 40%, respectively. Female employment in selected sectors is comparatively high as compared to the other sectors of Pakistan.

3.1 Variables and Measures

Job Crafting is measured by using the JCS.Scale developed by Tims et al. (2012) and is widely used in quantitative research (Rudolph et al., 2017). JCS comprised of 21 items further divided into four dimensions and thus constitute a second-order latent variable. Increasing structural job resources consist of five items with a sample item "I try to develop myself professionally." Increasing social job resources include five items with the sample item "I ask others for feedback on my job performance." Increasing challenging job demands comprised of five items and sample items include "When an interesting project comes along, I offer myself proactively as project co-worker." Finally, decreasing hindering demands contains six items, and a sample item is: "I make sure that my work is mentally less intense." Items were rated by the respondents using a "5-point Likert type scale ranging from "strongly disagree to strongly agree"was used to measure responses against these variables. The job crafting scale's reliability was relatively higher than the Cronbach Alpha of 0.70 (Nunnally, 1978). The overall reliability of this construct is 0.79. Following the CFA results (confirmatory

factor analysis), three items were deleted due to poor factor loadings. Finally, eighteen selected items ensured conceptual validity with appropriate factor loadings.

Autonomy was evaluated with a three-itemscale suggested in the job content instrument (Bakker et al., 2003). The sample item includes, "I can decide myself how I execute my work," and the respondent will rate these items using a 5-point scale, 1=never, and 5=always. Values of the Cronbach Alpha was 0.92, which shows high reliability for this scale. Workload was assessed using a four items scale using a 5-point scale Likert scale,1=neverand 5=always. The scale refers to demanding aspects of a job. For example, an item in the scale, "I have too much work to do?"The value of Cronbach Alpha for this variable was 0.84 shows high reliability.

Sustainable Employability comprised of motivation to continue working (Hengel et al., 2012) and the ability to continue working (Akkermans et al., 2013). "Motivation to continue working"consists of two items; "I am willing to continue work until the maximum retirement age" and "I am able to continue working until the maximum retirement age."In contrast,the ability to continue working was measured using perceived employability. Based on De Cuyper & De Witte (2008) scale,perceived employability consisting of eight items representing four represents the internal. In contrast, the other four items were meant to measure external employability. Example items are "I would find another job rather quickly if I searched for it," and "In my current job I am capable of doing a better function." Motivation to continue working is measured using two items, an example being "I am willing to continue work until the maximum retirement age." Thus, we expect a second-order factor structure as three different dimensions were used to measure sustainable employability. The overall reliability of this construct was 0.89.

Information on demographic variables such as gender, marital status, age, formal education, total experience, organizational tenure and sector were also collected. We further propose three control variables, namely, gender, age, tenure. These three variables may influence crafting and sustainable employability variables. The selected control variables were used similarlyas it was used in the previous studies (Akkermans & Tims, 2017; Akkermans et al., 2019; Slemp et al., 2015; Van der Klink et al., 2016). The reason being is that these variables may significantly affect job crafting and sustainable employability.

3.2 Analysis Strategy

To identify measurement errors (if any), reliability, convergent validity, discriminant validity for all the studied variables were calculated. Gaskin & Lim (2018) for AMOS was used after performing the CFA, which provides several measures in one click such as average variance extracted (AVE), maximum shared variance (MSV), critical ration (CR), correlation matrix, square root of AVE, and Values for Cronbach Alpha. Preliminary data analysis, such as data screening, descriptive and inferential statistics, were performed through IBM SPSS 24. Further, to determine the relationship between the studied variables, there is a need to perform the first CFA and then SEM technique (Anderson & Gerbing, 1988). The goodness of fit of studied models, measures along their cutoff values are given in table 1.

Table 1: Model Fit Indices

Measure	Threshold	Interpretation
CMIN/DF	Between 1 and 3	Excellent
CFI	>0.90	Acceptable
GFI	>0.90	Acceptable
TLI	>0.90	Acceptable
RMSEA	<0.08	Acceptable

*Source:(Hu & Bentler, 1999)

4 Results and Analysis

4.1 Descriptive Analysis

The study results reported in table 2 show all the measured well meet the criteria and thus provide support for the reliability and validity of scales used. The convergent validity (CR) of all the constructs is more than the threshold value 0.50, and maximum shared variance (MSV) is less than the average variable explained (AVE) that verifies the discriminant validity of the studied construct. Table 2 provides detailed results on these variables. Furthermore, the composite reliability of all the constructs is more than 0.70 (Nunnally, 1978), and the overall reliability of the data was 0.92.

Table 2: Scale Reliability and Validity

	Items	Alpha	AVE	MSV	CR
Autonomy	3	0.79	0.69	0.05	0.82
Workload	4	0.71	0.51	0.05	0.72
Job Crafting	19	0.87	0.6	0.26	0.86
Sustainable Employability	10	0.82	0.62	0.24	0.73
Work Uncertainty	9	0.85	0.59	0.04	0.81

The mean, standard deviation, skewness, kurtosis, correlations and reliabilities of the studied variable reported in table 3. Result in the table shows; respondents were reasonably optimistic about the autonomy (3.47), workload (3.50), job crafting (3.83) and sustainable employability (3.68). Data also highlight the significant variance among variables (SDs between 0.42 and 0.97). No normality issues arise as skewness and kurtosis values were in the prescribed range. Moreover, no issues regarding multicollinearity were reported in bivariate correlation. Autonomy and workload have no association because the workload and job resources are distinct job characteristics (Bakker & Demerouti, 2007, 2017). A positive and significant association is observed among other variables. Autonomy positively associated with job crafting ($r=0.188$, $p<0.01$), and sustainable employability ($r=0.224$, $p<0.01$), workload and job crafting ($r=0.132$, $p<0.01$), workload and sustainable employability ($r=0.09$, $p<0.01$), and job crafting and sustainable employability ($r=0.456$, $p<0.01$). The correlation coefficients were also in the suggested direction.

Table 3: Descriptive and Inferential Statistics

	Mean	SD	Skewness	Kurtosis	1	2	3	4	5
1. ATM	3.47	0.97	-0.55	-0.27	**0.83**				
2. WKL	3.5	0.77	-0.26	-0.06	0.049	**0.714**			
3. JCRAFT	3.83	0.42	-0.63	2.03	.188**	.132**	**0.765**		
4. SEMP	3.68	0.48	-0.76	1.58	.224**	.090*	.456**	**0.787**	
5. WKU	4.18	0.15	1.29	-0.15	0.159*	0.027	0.192**	0.183*	**0.788**

* ** p< 0.01, *p<0.05 SD = standard deviation, ATM=Autonomy, WKL=Workload, JCRAFT=Job Crafting, SEMP=Sustainable Employability, WKU=Work Uncertainty

4.2 Measurement Model

Three different models were developed and compared to check the model fit measures and dimensionality of our hypothesized models for this study. First, for the one-factor model, all items were loaded on a single latent variable. Then we construct a two-factor, where items of respective variables were loaded on each studied variable such as workload, autonomy, job increasing social job resources and perceived employability. Due to poor loading, three items from job crafting and one item from autonomy were deleted. Finally, we extended the two-factor model by including job crafting and sustainable employability. Job crafting is a second-order latent variable comprise of a factor structure with four dimensions and sustainable employability with three dimensions. We expect the third model that represents the main studied variables best fits the observed data. Table 4 shows the CFA results for the three different models, and the hypothesized measurement model provided the best good-fit indices (Bentler & Chou, 1987). Further, we also run a chi-square (χ^2) difference test that provides statistical support in selecting the hypothesized model with the best model-fit indices compare to the other models.

Table 4: CFA and Results of Model Comparison

	χ^2	Df	$\Delta\chi^2$ df	CFI	TLI	RMSEA
Measurement Model 1	4500.27	779		0.341	0.306	0.097
Measurement Model 2	1497.571	724	3002. 699 (55)*	0.863	0.845	0.046
Measurement Model 3	1205.739	703	291.832 (21)*	0.909	0.899	0.037

*p<0.001

4.3 Hypothesis Testing

SEM approach was used to conduct the path analysis. Results obtained from this technique is given in table 5. The regression coefficient for ATM and JCRAFT was (β=0.183, p<0.001), providing us with evidence that these two relationships are positive and statistically significant. It shows that if autonomy (ATM) increases by one-unit, job crafting (JCRAFT) increases at the rate of 0.183 units, showing high autonomy causes an increase in job crafting. Relationships between workload (WKL) and job crafting (JCRAFT) were observed (β=0.127, p<0.05) was positive and statistically significant. Statistically, we observed that an increase in workload also causes to increase in job crafting behavior. These two results show that employer investments significantly and positively contribute to promoting job crafting.

Table 5: Summary of Direct and Indirect Effects

Relationships	Estimates	95% CI	Results
ATM → JCRAFT	0.231***	(0.095,0.269)	H2 Supported
WKL → JCRAFT	0.177**	(0.049,0.205)	
JCRAFT → ATCW	0.480***	(0.335, 0.613)	H1a Supported
JCRAFT → MTCW	0.710***	(0.533, 0.910)	H1b Supported
JCRAFT → SEMP	0.688***	(0.332, 0.521)	
ATM → SEMP	0.170*	(0.021, 0.142)	
WKL → SEMP	0.27 (ns)	(-.054, 0.072)	
ATM x WKU → JCRAFT	0.340**	(0.255, 0.399)	
WKL x WKU → JCRAFT	0.341***	(0.262, 0.420)	
ATM → JCRAFT → SEMP	0.153**	(0.023, 0.097)	H3 Supported
WKL → JCRAFT → SEMP	0.118**	(0.024, 0.109)	
ATM x WKU → JCRAFT → SEMP	0.129***	(0.011,0.021)	H4a Supported
WKL x WKU → JCRAFT → SEMP	0.145***	(0.012,0.023)	H4b Supported

* ***p < 0.001, ** p < 0.01, *p <0.05, ATM = Autonomy, WKL = Workload, JCRAFT = Job Crafting, MTCW = Motivation to continue working, ATCW = Ability to continue working, WKU= Work Uncertainty,SEMP = Sustainable employability, ns = not significant.

A positive relationship between JCRAFT and ability to continue working (ATCW) and motivation to continue working (MTCW) was observed (β =0.48, p<0.001) and (β =0.71, p<0.001), respectively. This shows that if job crafting increases by one unit, ATCW and MTCW increase at 48 and 71 units, respectively. This statistical evidence supports justifying our second hypothesis that altering job demands and job resources significantly and positively contributes to sustainable employability in the form of ability and motivation to continue working.

Autonomy was positively and significantly related to sustainable employability (SEMP) (β =0.17, p<0.05). Table 5 also indicated that ATM-JCRAFT-SEMP, showing a partial mediation, thus supporting hypothesis H3. Furthermore, workload (WKL) does not provide a significant positive relationship with sustainable employability, but job crafting positively and significantly moderate the relationships between WKL and SEMP, which shows a full mediation and thus supporting hypothesis H4. Finally, we proposed that workuncertainty moderate the indirect effects of resourceful and challenging jobs (autonomy and workload) on sustainable employability through the mediation of job crafting. To proceed for moderated mediation analysis, we test the interaction of work uncertainty and autonomy, work uncertainty and workload and found these two interactions are statistically significant related to job crafting with (β =0.340, p<0.01) and (β =0.341, p<0.001) and were positive.

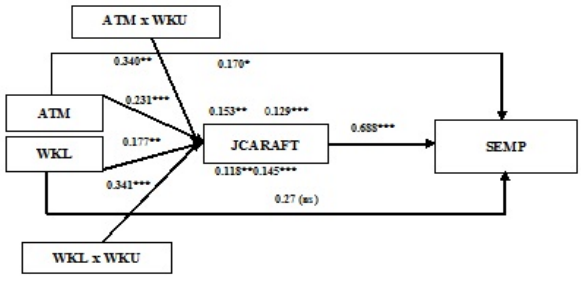
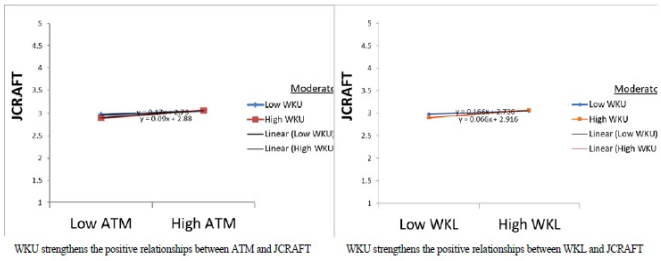


Figure 2: Measurement Model

This shows that the indirect effects of autonomy and workload on sustainable employability through the mediation mechanism of job crafting strengthen in the presence of high levels of work uncertainty, which was 0.129 (95% CI (0.011,0.021)) and 0.145 (95% CI (0.012,0.023)) respectively. The contingency of work uncertainty strengthens this indirect effect as with a 1-unit increase in autonomy and workload. Sustainable employability increased by 0.129 and 0.145 through the moderated mediation of job crafting and work uncertainty. From these observations, we can say that in the presence of high work uncertainty, the effect of resourceful and challenging jobs on job crafting was also high, which ultimately translated into sustainable employability. The moderated mediation effects were also plotted to gain more insights into these relationships. Clearly, it shows that employer investment observed through autonomy and workload with job crafting become stronger when work uncertainty was high than it was low.



WKU strengthens the positive relationships between ATM and JCRAFT

WKU strengthens the positive relationships between WKL and JCRAFT

Figure 3: Moderation of Work Uncertainty

4.4 Discussion and Conclusion

The main objective was to examine how resourceful and challenging jobs, promote job crafting and how the individual employee contributes to their sustainable employability. Further, we also intend to investigate the role of boundary conditions in facilitating/mitigating job crafting. First of all, resourceful and challenging jobs create an active work environment providing job discretion and opportunities for learning and development is motivational and thus stimulate job crafting behaviors. Active participants at jobs are more involved in increasing their job resources and less in reducing their job demands (Petrou et al., 2012). Employees in active jobs try to challenge job demands to accumulate resources further. Autonomy and workload are the primary determinant of proactive behaviors (Bindl & Parker, 2010; Ohly & Schmitt, 2017). Job crafting is also a specific form of proactive behaviors (Tims & Bakker, 2010). Meta-analytic study confirms that autonomy and workload are positively related to job crafting (Rudolph et al., 2017). Results also confirm a positive and significant relationship between resourceful and challenging jobs and job crafting. Thus, providing us strong evidence that employer investments significantly contribute to facilitate all employees to involve in job crafting irrespective of the employee's personality traits or their individual differences.

Secondly, we propose that sustainable employability is the motivational outcome of job crafting. Results of this study show that job crafting is positively related to sustainable employability. Job crafting is a continuous process, and by crafting jobs, employees can continuously build their desired job/personal resources. The JD-R theory also asserts that job crafting activates a gain cycle of resources, increased motivation, and work engagement (Bakker & Demerouti, 2018). Akkermans & Tims (2017) provide support for positive relationships between job crafting perceived employability. Another study from Vanbelle et al. (2017) confirms a positive relationship between job crafting and

motivation to continue working. Together, this study's results support our hypothesis that job crafting positively relates to sustainable employability.

Thirdly, based on JD-R theory, we examine whether job crafting acts as a process variable between employer investments and sustainable employability. Results show that job crafting partially mediates the relationships between workload and sustainable employability. However, full mediation occurs between autonomy and sustainable employability. Finally, results support the moderating role of work uncertainty. Thus, providing evidence that when work uncertainty is high compared to low employees will be more involved in job crafting, which boosts sustainable employability. Therefore, designing resourceful and challenging jobs provides a way to promote sustainable employability. High work uncertainty further boosts the job crafting process. These results also offer us insights that job crafting contributes to sustainable employability while maintaining their health and well-being (increased work engagement and reduced burnout). The findings of this study also validate Van der Klink et al. (2016) argument that sustainable employability refers to employees' ability and willingness to continue working throughout their professional lives while maintaining their well-being and health.

4.5 Practical Implications

This study tests and expands the JD-R theory by showing that resourceful and challenging job demands initiated a motivational mechanism where job crafting being a process variable and sustainable employability being an outcome of this process. This motivation causes to induce a gain-cycle of job resources through job crafting, which leads to improved employee's well-being and performance outcomes. Designing resourceful and challenging jobs by the employers provides a pool of job resources that provides resilience, feelings of discretion, control on jobs, and consequently, activate motivation to engage in job crafting. This study also confirms that when employees perceive job demands as a challenge, they voluntarily participate in such demands and expand their social and structural job resources (Tims et al., 2012). By summarizing, we highlighted that employer investments through job design provide sufficient resources to accomplish tasks (i.e., work motivation) translating into proactive behaviors (i.e., job crafting), which boost employee's ability and motivation to continue working. Managers and professionals can benefit from this proactive behavior toward job design by designing resourceful and challenging jobs. Therefore, employers' investments through these job resources in job crafting lead to sustainable employability while keeping employees motivated and healthy.

4.6 Conclusions, Limitations and Future Directions

Despite these contributions to the existing body of knowledge, a few limitations need to address that nurture this research. First, this study's longitudinal replications provide more useful insights and provide more clarity on patterns not displayed within a shorter time interval. Secondly, data from other service sectors and manufacturing sectors help to generalize the results. Data from similar sectors from other developing countries in Asia with the same cultural norms and behavioral patterns may lead to generalizability. Thirdly, examining each dimension of work uncertainty provides further clarity about the moderating impact. Future studies may also investigate the impact of work uncertainty on job crafting-sustainable employability relationships. Other boundary conditions such as calendar age, life-span age, functional age, and organizational age (Le Blanc, Van der Heijden, & Van Vuuren, 2017) may be applied to examine the proposed relationships. This study only considers the resourceful and challenging jobs as antecedents; however, other contextual variables such as managerial support, quality of workplace relationships that may trigger job crafting behaviors also needs to be examined in future studies.

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