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Craft Your Job and Get Engaged: Sustainable Change-Oriented Behavior at Work

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Abstract: Employees' change-oriented behavior is known to be critical in promoting organizational changes for a sustainable organization. However, few studies have explored how this behavior can be potentially promoted by job-crafting and work engagement. This study examined the relationship between job-crafting and change-oriented behaviors (adaptive and proactive behaviors), as well as the mediating effect of work engagement. Hypotheses were tested with a structural equation modeling analysis. A total of 459 employees in the Korean automobile manufacturing industry participated in the study. The results show that job-crafting had a positive effect on adaptive behaviors and proactive behaviors. Moreover, seeking job resources and seeking job challenges promoted change-oriented behaviors through work engagement. Based on these results, practical implications are suggested for the development of a sustainable organization.

Keywords: job-crafting; change-oriented behavior; adaptive behavior; proactive behavior; work engagement

1. Introduction

The changing nature of work brought by innovative technologies and continuous organizational restructuring challenges employees to work in a sustainable manner [1–3]. Since the working experience of today cannot secure positions for tomorrow, sustainable change-oriented behaviors are crucial to employees. Change-oriented behaviors refer to the ways in which employees initiated changes and can be classified into adaptive and proactive change-oriented practices. Studies have shown that employees' change-oriented behaviors directly influence individual performance as well as organizational outcomes [4–6]. Thus, creating working conditions for employees to both adapt to environmental challenges and to take proactive actions is critical.

One such condition is created in job-crafting, which enables employees to adapt to challenges and design their jobs according to their own desires, abilities, and preferences [7,8]. Job-crafting is thus important for achieving employees' sustainable change-oriented behavior and organizational development. According to Gladwin et al. [9], the essence of a sustainable development process is to enlarge people's choices, in an inclusive, equitable, and secure way. Whereas a top-down process can only adapt to the environmental demands at hand, job-crafting, as a bottom-up process of job design, may develop in advance sustainable change-oriented behaviors that will prepare employees for future challenges. As such, sustainable change-oriented behavior based on job-crafting can increase employees' ability to change work situations and to achieve personal development goals.

Although there is a burgeoning interest in job-crafting as precursors of organizational change, little research has dealt with how job-crafting can promote change-oriented behaviors. Previous research on job-crafting has generally demonstrated its positive effects on work outcomes

and provided insight into the directionality of the relationship between job crafting and change-related outcomes [10,11]. However, these studies are limited in that they have largely dismissed the distinctive effects of job-crafting dimensions on the types of change-oriented behaviors. Given the diverse dimensions of job-crafting, which include seeking job resources, seeking job challenges, and reducing job demands, its function on proactive and adaptive changed-oriented behaviors needs to be specified. To provide a nuanced perspective for job-crafting research, we proposed and tested the different relationships between three dimensions of job-crafting and change-oriented behaviors.

Furthermore, this study explored one potent mediating factor between the different dimensions of job-crafting and change-oriented behaviors—work engagement. Studies have shown that, when employees enjoy autonomy rather than work under coercion, they become enthusiastic about work-related challenges and exhibit high levels of energy, enthusiasm, and pride [12–14]. Work engagement is also an indicator of organizational change [15]. A high level of work engagement is a sign of willingness to accept, suggest and implement changes [16], thus increasing the likelihood of change in the organization. It has been reported that job crafting, usually mediated by work engagement, predicts performance [17,18]. According to the Job Demands-Resource (JD-R) model, when employees are able to utilize their skills and competencies to minimize mental and physical efforts and feel self-motivated at work, they are more likely to be enthusiastic about work, resulting in favorable changes in their attitudes toward organizational change [19]. Building on this work, this study explored the nature of change-oriented behaviors by examining the differentiated mediating effects of work engagement. Thus, the purpose of this study was to assess the associations between the three dimensions of job-crafting for work engagement and change-oriented behaviors.

1.1. Job Crafting and Change-Oriented Behavior

Change-oriented behavior can be divided into adaptive and proactive behaviors. Adaptive behavior involves a positive recognition of an unexpected new environment, while proactive behavior leads to changes that contribute to organizational effectiveness [5]. Organizational change has typically been approached as a top-down process, driven by managers and change agents. However, a recent emphasis has been placed on the role of employees in implementing changes [20]. Job crafting is a useful strategy in a changing work environment because it involves voluntary changes in job boundaries initiated by individuals. Job crafting refers to the independent creation of a job definition by the employee in order to improve the fit between the individual's desires, abilities, and preferences and his or her job characteristics [8].

Studies on job crafting have focused on establishing meaning and identity in the workplace [21,22]. According to these studies, job crafting is a physical, relational, and cognitive change that an employee initiates at the boundary of a job or relationship, emphasizing the discretionary power to define and act on his or her job. Inspired by JD-R model, recent studies have shifted to focus on the creation of balance between job demands and job resources [14,17]. According to the JD-R model, all work environments are characterized by job resources and job demands. Job resources are sources of support available to employees in the organization, including backing from superiors and colleagues, the opportunity to participate in decision making, performance feedback, and autonomy. That is, the more job resources an employee has, the more likely he or she will exhibit high levels of motivation and work engagement [23]. On the other hand, job demands require cognitive and emotional efforts from the employee; whose level of job demands is determined by factors including job intensity, emotional demands, time pressure, role conflicts, role ambiguity, and role overload. In sum, job crafting is the task of changing the work environment by optimizing the balance between job resources and job demands [10].

Tims and Bakker [24] proposed three dimensions of job-crafting based on the JD-R model: increasing job resources, seeking job challenges, and reducing job demands. Similarly, Petrou et al. [7] referred to these three dimensions as seeking job resources, challenging demands, and reducing demands. Since the essence of job crafting involves proactive changes employees make to find a

balance between job demands and resources and personal needs, Tims and Bakker [18] asserted job crafting represents the orchestration of proactive behaviors. For instance, seeking job resources includes behaviors that aim to increase autonomy and skill variety and to ask for feedback and support, while seeking job challenges involves behaviors such as asking for more responsibilities and volunteering for special projects. Reducing demands entails behaviors that aim to minimize physical, cognitive, and emotional demands. Despite the conceptual overlap of these job-crafting dimensions, studies show that reducing job demands has a negative or non-significant association with work outcomes [25].

Given that reducing job demands appears less of a proactive nature and may influence outcomes in a unique way, it seems to relate only with adaptability. This dimension can increase individuals' adaptability to change by reducing anxiety and feelings of incompetence in the process of change [25]. For instance, reducing job demands is likely to solve health problems caused by excessive job demands, and employees who balance their job resources by reducing excessive job demands are likely to show adaptive behaviors related to change [26]. These possible effects, however, have been scarcely addressed in previous research. To investigate these effects, the following hypotheses were generated for this study:

Hypothesis 1. *Seeking job resources, seeking job challenges, and reducing job demands relate positively to adaptive behavior.*

Hypothesis 2. *Seeking job resources and seeking job challenges relate positively to proactive behavior.*

1.2. The Mediating Role of Work Engagement

Work engagement has been proposed as an indicator for successful change adaptation [26]. That is, work engagement tends to increase the possibility of successful organizational change [27]. Work engagement refers to affirmative, self-motivated emotional states associated with work. Engaged employees are more likely to meet challenging goals, solve immediate problems, and develop innovative services. Employees who use job-crafting strategies to create a work environment that balances job resources and job demands can enhance work engagement by increasing vitality, concentration, and commitment.

Previous studies have identified a positive relationship between the three dimensions of job-crafting and work engagement [28,29]. Studies have also indicated that job crafting is associated with a variety of favorable work outcomes and indicators of occupational well-being such as work engagement [30]. In particular, seeking job resources is found to be positively correlated with work engagement [27], as when people voluntarily link work resources to personal needs and preferences, work engagement is likely to increase. Seeking job challenges also has a positive correlation with work engagement [29]. Job challenges are conducive to the development of positive emotions and active coping [31]. Employees with challenging jobs are enthusiastic about their work because they are motivated to utilize their skills and competencies to meet challenges and to achieve personal growth and job satisfaction in the process. Reducing job demands can improve employee well-being, reduce exhaustion, and minimize mental and emotional burden, as well as physical work load, which can lead to more positive psychological states and increase work engagement [26]. Factors that add to job demands, such as conflicting goals, task ambiguity, task burdens, time pressure, and emotional demands, consistently show negative correlations with work engagement [28]. Based on these findings, the following research hypothesis was generated:

Hypothesis 3. *Seeking job resources, seeking job challenges, and reducing job demands relate positively to work engagement.*

Previous studies have indicated a positive correlation between work engagement and adaptive behavior [32,33]. Engaged employees can internalize the reasons for change, emotionally accept changes, and feel confident about those changes [34]. The process of internalizing the reasons for

change has a positive effect on implementation of change, as shown in an increase in change-related adaptive behaviors. In addition, proactive actions such as innovative behavior are observed in highly engaged employees [35]. Frederickson [36] argued that positive psychological states such as work engagement can extend the range of individual thought and behavior and build personal resources. Therefore, with a high level of work engagement, new ideas and proactive actions to implement the ideas are likely to occur. Thus, the following hypothesis was generated:

Hypothesis 4. *Work engagement relates positively to adaptive and proactive change-oriented behavior.*

Job-crafting that helps employees increase their job resources and enjoy on-the-job challenges can promote adaptive and proactive behaviors through work engagement. In relation to the self-determination theory [37], job-crafting motivates employees to perceive opportunities for personal growth as well as organizational development, which impacts their work engagement and subsequent change-oriented behaviors in the organization. Positive employment perception of job initiatives encourages the adaptive behaviors consistent with organizational goals and values [38]. Employees demonstrating self-initiatives tend to develop more job resources and believe themselves to be competent and worthy members of the company [39]. Positive emotional states such as work engagement can enable employees to integrate a variety of ideas and engage in a wide range of thought processes and behaviors. This can lead to innovation and improved performance. Thus, work engagement is expected to mediate between job crafting and change-oriented behaviors. Accordingly, the following research hypotheses were generated:

Hypothesis 5a. *Work engagement mediates the relationship between job-crafting (i.e., seeking job resources, seeking job challenges, and reducing job demands) and adaptive behavior.*

Hypothesis 5b. *Work engagement mediates the relationship between job-crafting (i.e., seeking job resources, seeking job challenges, and reducing job demands) and proactive behavior.*

2. Methods

2.1. Participants

A total of 459 Korean employees working in four automobile and automobile-related manufacturing companies completed a survey questionnaire in 2016. Automobile-related manufacturing companies were chosen due to the high demand for change-oriented behaviors in that industry. Korea was the world's sixth largest automobile producer in 2015, and automobile industry comprised 13.6% of the entire national manufacturing industry. However, under conditions of growing economic uncertainty, the industry has been confronted with many issues such as production decline and export decline. As positive changes are called for in the industry, employees' abilities to respond to changes and to voluntarily initiate changes are necessary. Despite the importance of change-oriented behaviors, automobile manufacturing companies in Korea typically hire people with more years of work experience due to a high demand for skilled workers. Thus, finding an optimal path to prompt change-oriented behaviors is a critical issue.

Industry professionals, identified through a marketing listserv, were invited to complete the questionnaire. Of a total of 473 questionnaires returned, 459 (response rate 97%) were used for data analysis, while the remaining were excluded due to missing data and outliers in the sample. Among the respondents, 391 (85.2%) were male and 68 (14.8%) were female. The participants varied widely in age, with 67 (14.6%) in their 20s, 264 (57.5%) in their 30s, 100 (21.8%) in their 40s, and 28 (6.1%) over 50 years old. In terms of educational attainment, 26.1% held graduate school degrees, 72.2% held college degrees, and 1.7% were high school graduates. In terms of work duration period, 138 (30.1%) had worked for 1–5 years, 141 (30.7%) had worked for 5–10 years, 93 (20.3%) had worked for 10–15 years, 40 (8.7%) had worked for 15–20 years, and 47 (10.2%) had worked for more than 20 years. As for job

classifications, 321 (69.9%) were office workers, 17 (3.7%) were sales representatives, 110 (24.0%) were research and development agents, and 11 (2.4%) were production workers. They worked in companies of various sizes, with 32 participants (7.0%) in an organization with fewer than 1000 workers, 99 (21.6%) in an organization with 1000–3000 workers, 18 (3.9%) in an organization with 3000–5000 workers, and 310 (67.5%) in an organization with more than 5000 workers.

2.2. Measures

Job Crafting. The job-crafting scale developed by Tims, Bakker, and Derks [25] and modified by Petrou et al. [7] was used in this study. The job crafting scale consists of 13 items, covering three types of strategy: seeking job resources (6 items), seeking job challenges (3 items), and reducing job demands (4 items). The items were scored on a five-point scale. The questions about seeking job resources concern strategies related to asking for feedback and advice from superiors and colleagues (e.g., "I ask others for feedback on my job performance"). The questions about seeking job challenges concern the employee's willingness to take on responsibilities other than those required (e.g., "I seek additional tasks if I finish my work"). The questions about reducing job demands concernd strategies undertaken to reduce emotional, physical, and mental burdens (e.g., "I try to ensure that my work is emotionally less intense"). The reliability of the job-crafting scale was high, with a Cronbach's α of over 0.70. For seeking job resources, the Cronbach's α was 0.708. For seeking job challenges, the Cronbach's α was 0.747. For reducing job demands, the Cronbach's α was 0.767. In accordance with the results of the confirmatory factor analysis for job crafting, 12 items out of the total of 13 were used, after one item (related to reducing job demands) was excluded due to low factor loading. These 12 items ensured conceptual validity since their factor loadings were appropriate.

Change-oriented behavior Adaptive behavior was measured using the Individual Task Adaptability Scale developed by Griffin, Neal, and Parker [6] (three items, Cronbach's $\alpha = 0.739$). Each item was measured on a five-point scale. The Individual Task Adaptability Scale measures the extent to which individuals can adapt to changes in a task. A sample question is: "Adapted well to changes in core tasks". Proactive behaviors were evaluated using the Individual Task Proactivity Scale (3 items, Cronbach's $\alpha = 0.778$) developed by Griffin, Neal, and Parker [6]. Individual task proactivity is a measure of the degree to which changes in tasks are initiated by the employee in question. An example of this type of question is: "Initiated better ways of doing core tasks". The confirmatory factor analysis for change-oriented behavior revealed factor loadings of 0.721 and 0.739 for adaptive behavior and proactive behavior, respectively.

Work Engagement. The concept of work engagement used in this study was based on the Dutch Utrecht Work Engagement Scale (UWES-9) developed by Schaufeli, Bakker, and Salanova [40]. Nine sub-elements were measured on a seven-point scale, including vigor (three items, Cronbach's $\alpha = 0.863$, e.g., "At work, I feel bursting with energy"), dedication (three items, Cronbach's $\alpha = 0.897$, e.g., "I am enthusiastic about my job"), and absorption (three items, Cronbach's $\alpha = 0.8$, e.g., "I am immersed in my work"). The confirmatory factor analysis for work engagement revealed an average factor loading of 0.845. Therefore, the conceptual validity of these variables was established, and all nine items were used for the work engagement analysis, with no items excluded. All measured variables and internal validity are shown in Table 1.

We controlled for demographic variables such as gender, age, tenure, and job title. Tenure and job title were important variables to consider as they tend to influence the level of self-efficacy or autonomy, and, thus, an employee's probability of enacting job-crafting skills.

Table 1. Measured variables and internal validity.

Variables		Number of Items	Sample Items	Source	Cronbach α
Job crafting	Seeking job Resources	6	"I ask others for feedback on my job performance"	Tims, Bakker, and Derks [25]	0.73
	Seeking job challenges	3	"I seek additional tasks if I finish my work"		0.747
	Reducing job demands	4	"I try to ensure that my work is emotionally less intense"		0.767
Change-oriented behavior	Adaptive behavior	3	"Adapted well to changes in core tasks"	Griffin, Neal, and Parker [6]	0.739
	Proactive behavior	3	"Initiated better ways of doing core tasks"		0.778
Work engagement	Vigor	3	"At work, I feel bursting with energy"	Schaufeli, Bakker, and Salanova [40]	0.863
	Dedication	3	"I am enthusiastic about my job"		0.897
	Absorption	3	"I am immersed in my work"		0.8

2.3. Analysis

We performed structural equation modeling with the AMOS maximum likelihood procedure to test Hypotheses 1–4. To test for mediating effects, bootstrapping with bias-corrected confidence estimates was conducted.

3. Results

Table 2 shows descriptive statistics and correlations for the study variables. The highest rated skill was seeking job resources (M = 3.935, SD = 0.459), followed by reducing job demands (M = 3.711, SD = 0.659) and seeking job challenges (M = 2.859, SD = 0.695). As for adaptive and proactive behaviors, the mean scores for adaptive behavior, proactive behavior, and perceived work engagement were 3.736, 3.691, and 4.926, respectively. All variables were positively correlated with each other except for seeking job challenges and reducing job demands. As shown in Table 2, correlations between reducing demands and change-oriented behaviors were weaker than those between the other job-crafting dimensions and change-oriented behaviors. Correlations were found between perceived reducing demands and adaptive behavior ($r = 0.32$, $p < 0.01$) and between reducing demands and proactive behavior ($r = 0.20$, $p < 0.01$).

Table 2. Descriptive statistics and correlation.

	1	2	3	4	5	6	7	8
1. Seeking job resources	—							
2. Seeking job challenges	0.189 **	—						
3. Reducing job demands	0.280 **	0.069	—					
4. Work engagement-vigor	0.171 **	0.452 **	0.126 **	—				
5. Work engagement-dedication	0.213 **	0.366 **	0.120 **	0.751 **	—			
6. Work engagement-absorption	0.216 **	0.392 **	0.08	0.665 **	0.716 **	—		
7. Adaptive behavior	0.323 **	0.296 **	0.287 **	0.475 **	0.441 **	0.441 **	—	
8. Proactive behavior	0.280 **	0.329 **	0.195 **	0.418 **	0.457 **	0.443 **	0.541 **	—
Mean	3.935	2.859	3.711	4.452	5.022	5.304	3.736	3.691
SD	0.459	0.695	0.659	1.258	1.193	1.010	0.547	0.608
Skewness	−0.313	0.021	−0.433	−0.367	−0.808	−0.906	−0.427	−0.214
Kurtosis	1.329	0.668	0.793	−0.189	0.743	1.261	0.938	0.579

** $p < 0.01$.

A confirmatory factor analysis (CFA) was conducted with a maximum likelihood estimation. Table 3 demonstrates the measurement model fit evaluation: all factor loadings were statistically significant, with reasonable model fit (Chi-square = 624.892; Tucker–Lewis Index = 0.90; Comparative Fit Index = 0.93; Root Mean Squared Error of Approximation = 0.05).

Table 3. Measurement model.

	Chi-Square	*df*	**TLI**	**CFI**	**RMSEA**
Measurement model	624.892	279	0.909	0.933	0.050
Level of acceptance			>0.90	>0.90	<0.08

Note. TLI, Tucker-Lewis Index; CFI, Comparative Fit Index; RMSEA, Root Mean Squared Error of Approximation.

A structural equation model analysis was conducted to examine the relationships between variables. This model yielded a good fit to the data (x^2 = 624.892, *df* = 279, *p* = < 0.001, TLI = 0.909, CFI = 0.933, RMSEA = 0.050, SRMR = 0.057). Figure 1 shows standardized parameter estimates associated with the hypothesized model. First, job-crafting significantly related to change-oriented behaviors. Specifically, seeking job resources (β = 0.199, *p* < 0.05) and reducing job demands (β = 0.183, *p* < 0.001) were positively related to adaptive behavior. However, seeking job challenges did not significantly relate to adaptive behavior (β = 0.042, *p* > 0.05). Thus, Hypothesis 1 was partially supported.
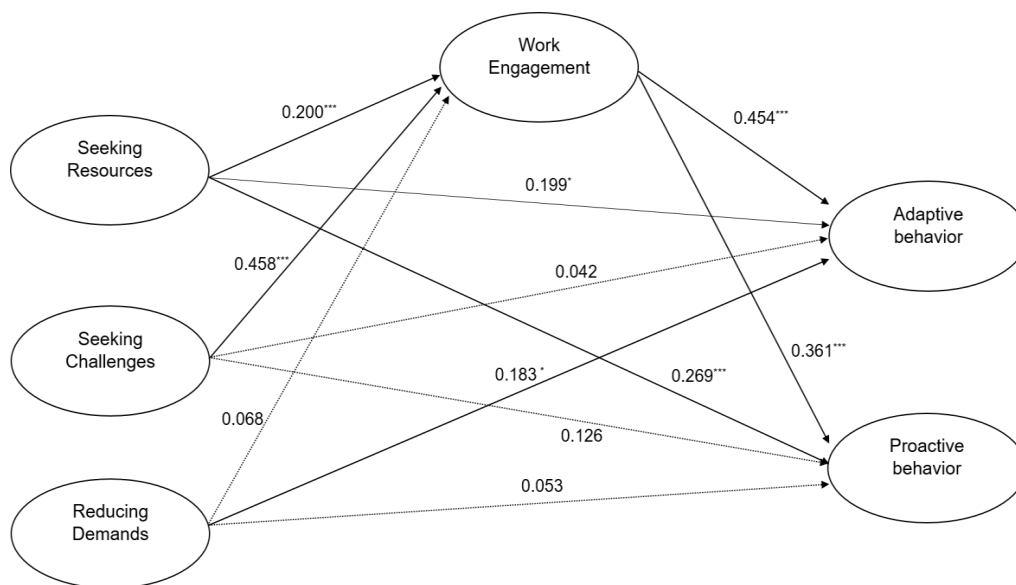

Figure 1. Completely standardized parameter estimates for the final structural model. * *p* < 0.05; *** *p* < 0.001

Similarly, seeking job resources was positively related to proactive behavior (β = 0.269, *p* < 0.001). However, neither seeking job challenges (β = 0.126, *p* > 0.05) nor reducing job demands (β = 0.053, *p* > 0.05) significantly related to proactive behavior. Thus, Hypothesis 2 was partially supported.

Next, job crafting was positively related to work engagement. Seeking job resources had a significantly positive effect on work engagement (β = 0.200, *p* < 0.001) and seeking job challenges (β = 0.458, *p* < 0.001) positively related to work engagement. However, reducing job demands did not significantly related to work engagement (β = 0.068, *p* > 0.05). Thus, Hypothesis 3 was verified except for reducing job demands. Work engagement positively related to change-oriented behaviors including adaptive behavior (β = 0.454, *p* < 0.001) and proactive behavior (β = 0.361, *p* < 0.001). Thus, Hypothesis 4 was verified.

Finally, to further explore whether work engagement acted as a mediator in the relationship between dimensions of job crafting and change-oriented behaviors (Hypotheses 5a and 5b), a bootstrap approach was used. We computed 95% confidence intervals (CIs) for the indirect effects using 1000 bootstrapped samples. Bootstrap analysis revealed that the indirect effects of job-crafting on adaptive behavior through work engagement were as follows: 0.091 (CI = 0.035, 0.157, $p < 0.01$) for seeking job resources and 0.208 (CI = 0.124, 0.315, $p < 0.001$) for seeking job challenges. Thus, Hypothesis 5a was partially supported. Then, bootstrapped CI estimates for the indirect effects of job crafting on proactive behavior through work engagement were calculated. Bootstrap analyses revealed the indirect effects as follows: 0.072 (CI = 0.059, 0.367, $p < 0.01$) for seeking job resources and 0.165 (CI = 0.018, 0.176, $p < 0.001$) for seeking job challenges. Thus, Hypothesis 5b was also partially supported. Table 4 presents the indirect effects of mediating path.

Table 4. Indirect effects of mediating path.

Independent Variable	Mediator Variable	Dependent Variable	Indirect Effect	Bootstrapping (95%) CI	
				Lower	Upper
Seeking job resources	Work engagement	Adaptive behavior	0.091 **	0.035	0.157
Seeking job challenges	Work engagement	Adaptive behavior	0.208 ***	0.124	0.315
Reducing job demands	Work engagement	Adaptive behavior	0.31	−0.013	0.084
Seeking job resources	Work engagement	Proactive behavior	0.072 **	0.059	0.367
Seeking job challenges	Work engagement	Proactive behavior	0.165 ***	0.018	0.176
Reducing job demands	Work engagement	Proactive behavior	0.024	−0.01	0.07

** $p < 0.01$, *** $p < 0.001$. Perceived bootstrap sample size = 5000. CI, confidence interval.

4. Discussion

The purpose of this study was to shed light on the idea of job crafting as an antecedent of change-oriented behavior and examine how work engagement may be an explanatory variable in the relationship between job crafting and change-oriented behavior. Results show that job crafting does influence change-oriented behaviors, which is consistent with the results of previous studies showing that job-crafting can increase adaptability and proactivity in confronting change [7,8]. Given that change-oriented behaviors include adaptability and proactivity, the results indicate that different dimensions of job-crafting tend to promote different types of change-oriented behaviors.

First, in terms of adaptability behavior, seeking job resources and reducing job demands were rated as helpful in increasing participants' adaptability to change. These results are consistent with findings that increasing job resources such as advice and support from supervisors and colleagues and obtaining feedback on difficult work processes and outcomes are helpful [41–43]. In addition, reducing the demands, through strategies that help reduce mental and emotional burden, as well as physical work load, was also seen as helpful in enhancing their psychological and mental preparedness for change.

However, seeking job challenges was not found to relate positively to adaptive behavior. A possible reason may be that employees' perceptions, as state of affect, direct behavior intention. Prior research has found that affect mediates between cognitive states such as motivation and work intention [44]. Given that adaptive behavior refers to individual reactions to changes, how employees perceive certain job crafting practices can affect the employees' attitudes toward their jobs. While positive perceptions can bolster intrinsic motivation and lead to positive behavioral outcomes, negative perceptions can decrease motivational regulation and fail to generate change-oriented outcomes. Since the participants in this study were employees of Korean automobile manufacturing companies who were trying to reduce excessive workloads and stress, it could be inferred that seeking job challenges such as expanded tasks and new projects might be perceived negatively, as shouldering more work and responsibility.

Next, in terms of proactive behavior, strategies related to seeking job resources had a significant positive effect on proactive behavior as consistent with the results of previous studies [17,18]. Assistance and feedback from superiors and colleagues, information on job processes and outcomes,

and job resources can facilitate problem-solving and boost confidence in change, and encourage active engagement in tasks. In contrast, reducing job demands was not positively related to proactive behavior. These findings are consistent with the results of previous studies, which found that reducing the dimensions of job crafting does not positively correlate with positive outcomes such as work engagement and work performance and thus shows different associations with antecedents and outcomes [28,29]. This result empirically supports a finding of the previous study [11] that reducing job demands seems to be less reflective of proactive nature of overall job-crafting construct.

Interestingly, seeking job challenges was not significantly related to proactive behavior, but may influence change-oriented behavior only via the mediating role of work engagement. Given that proactive behavior requires one not only to react to change but also to voluntarily act to create change, the job characteristics of the workers in this study might not be conducive to proactive behaviors due to an emphasis on assigned workloads and responsibilities. This can also be explained by the assumptions of the conservation of resources theory [45]. According to the conservation of resources theory, individuals hold on to important resources that are valuable in their own right and may lead to the attainment of future goals. The theory also assumes that one resource is linked to others, such that certain resources may cause other resources to be available in the future. Thus, seeking job challenges is not as powerful as seeking resources. Seeking job challenges may take a longer time to be effective and increase change-oriented behavior.

Another significant finding of this study is that job-crafting is an important antecedent variable of work engagement, which accords with previous studies showing that job resources can increase work engagement [17,33]. According to the JD-R model, antecedent variables of work engagement include identifying aspects of the job that are functional for achieving work goals, reducing job demands, and pursuing personal growth [46]. Attempts to voluntarily seek job resources and job challenges provide internal and external motivation for employees, thus affecting work engagement. Seeking job resources for work engagement is particularly important in demanding work situations, such as during the organizational change process. Since work engagement results from resourceful working conditions, employees proactively seek job resources on their own initiative, thus affecting their work engagement. Seeking job resources not only helps employees deal with the demands of the job but also enhances their motivation to achieve work goals and fosters growth as it fulfills psychological needs for autonomy, relatedness, and competence. Therefore, by satisfying these psychological needs, seeking job resources can enhance a positive motivational process leading to work engagement. Reducing job demands, however, did not turn out to have a significant positive effect on work engagement, probably because it is considered passive and is used primarily to avoid burnout [14,15].

Moreover, this study found that work engagement could influence change-oriented behaviors in an organization, as suggested by previous studies [33,34]. Studies on organizational change have mainly examined job performance or absences due to inattention as the individual outcome variables relevant to organizational change. The findings of this study show that positive emotions and attitude-related variables such as work engagement could also stimulate organizational change. Buttressing employees with job resources is likely to boost both their confidence and their motivation to pursue change [25,39]. While still fulfilling prescribed tasks, employees focus more effectively or take on additional tasks that satisfy their need to enrich their jobs. According to self-determination theory [37], the satisfaction of job crafting enables employees to become more deeply engaged in their work, which leads them to sustain their change-oriented behavior. Therefore, employees who craft jobs to better satisfy their own needs will be intrinsically motivated. These engaged employees tend to put more effort into their work, probably leading to change-oriented behavior in performing prescribed tasks.

Lastly, this study determined that work engagement could mediate between job crafting and change-oriented behavior, as evidenced in previous studies [34]. Work engagement was found to have a partial mediating effect on the relationships between seeking resources and both adaptive and proactive behaviors. This supports the work of Fredrickson [36], confirming that both the ability to

secure job resources and engagement-related states such as vitality, dedication, and commitment ought to be considered in helping employees adapt to and initiate change. Moreover, work engagement had a full mediating effect on the relationships between seeking challenges and both adaptive and proactive behaviors. Behaviors related to seeking challenges influenced work engagement, while work engagement influenced adaptive and proactive behaviors. One possible reason for the full mediating effect of work engagement might be that certain job-crafting practices are effective in specific contexts, i.e., in relation to particular job characteristics or duties. Seeking challenges is a primary psychological antecedent of engagement, thus, theoretically, challenges on the job generate the motivation to change because they create the potential for positive feelings of accomplishment, but, despite this close theoretical relationship, in practice, seeking challenges on the job requires employees to take on a high workload, broad job scope, and high level of responsibility and thus might be stressful and fail to stimulate change-oriented behaviors. Thus, seeking challenges was only influential on adaptive/proactive behaviors through the medium of work engagement.

5. Conclusions

This study demonstrated a mechanism that can help employees thrive and thus build thriving companies, and has practical implications for those interested in managing organizational sustainability. First, this study identified the relation between job-crafting and change-oriented behaviors. Findings suggest that employees' proactive strategies are more crucial to organizational change than a change of job characteristics stemming from a top-down job redesign. Hence, the new self-initiated approach known as a bottom-up process should be in dealing with the challenging work environments. This approach identifies employees as proactive agents capable of changing and creating their own jobs through altering job characteristics. Employees customize their job roles and tasks individually in the bottom-up approach.

Change-oriented behavior developed through seeking resources and challenges allows employees to be engaged and even to thrive in combating the changing challenges of work. Given the close relationship between antecedent variables such as job crafting and work engagement and change-oriented behaviors, employers should consider the underlying variables of the proactive personality to promote more change-oriented behaviors and create sustainable organizations. For instance, rather than simply emphasizing change-oriented behaviors, employers may need to provide job-crafting opportunities to employees so that they can change the nature of their work and help to build a more effective organization. In particular, this study on automobile manufacturing industry employees in the Korean context undoubtedly serves a valuable case by capturing an understudied group of employees.

Second, the relation between job-crafting behaviors and work engagement suggests the importance of job resources as an antecedent variable of work engagement. According to the JD-R model, three strategies are important: providing sufficient job resources, cultivating personal resources related to self-efficacy, and maintaining an appropriate level of job demands. This study demonstrated the importance of social, psychological, and physical resources in human resource development (HRD), providing managers and HRD practitioners with the means to help employees to become more fully engaged in their work. Next, detailed job-crafting strategies need to be developed and put into practice. For instance, in the case of seeking job challenges, it is necessary to identify the types of challenging tasks that employees might take upon themselves to improve capabilities and take their careers to a new level.

Third, facilitating work engagement can also help employees accept changes as challenges on the path to developing individual competences. With a high level of work engagement, employees are likely to be motivated to adopt changes enthusiastically and confidently [30]. Therefore, organizations need to devise interventions to promote engagement and to create environments conducive to encouraging adaptive and proactive behaviors related to change.

The findings of this study need to be placed in the context of several limitations. First, the study employed self-reported measures which may increase the risk of common method variance [47]. Future studies should strive to include observable data, such as supervisor-rated task performance related to change-oriented behavior, to gain a better understanding of the potential consequences of job crafting. Second, the cross-sectional research design of this study precludes any inference of causality. Future research adopting a longitudinal design may be better placed to ascertain the causal basis of the relationships we reported. Third, job crafting, in this study, was analyzed in terms of three dimensions (seeking job resources, seeking job challenges, and reducing job demands) based on the Job Demands-Resources model [48]. Future studies should further clarify job crafting by including more dimensions [49,50]. For instance, Tims et al. [25] specified four types of job-crafting, while Nielsen et al. [51] measured five different dimensions. In addition, alternative perspectives on job crafting, such as positive meaning and identity at work, need to be examined [52]. Fourth, the issue of construct validity was not addressed in the study, which has emerged in a line of engagement research. Given the background of the participants in this study, job-crafting behaviors, engagement, and change-oriented behaviors are relational constructs that can be affected by a number of factors including job characteristics, organizational culture, national/regional culture, etc. Thus, the findings were restricted to the samples, variables, and time frame unique to the design of this study. Future research, particularly conducted in a Korean context, should ensure the validity of the construct by ascertaining whether outcomes may vary across industries, on different scales, and in relation to diverse job functions. Last, this study examined an individual-level model of the processes through which job crafting related to change-oriented behavior. Given that job-crafting behavior takes place in an organizational context, future research should examine a cross-level model in which organizational-level factors may activate engagement leading to change-oriented behavior and organizational outcomes.

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