

Developing a Job Search Platform for SMEs to Resolve Job Mismatch: A Case Study

Junghwan Lee, Chungbuk National University, South Korea

Euiyoung Chung, Gauss Labs, USA

Dongwook Kim, Korea Advanced Institute of Science and Technology, South Korea*

ABSTRACT

The issue of mismatch with small- and medium-sized enterprises (SMEs) for youth job seekers has been a serious social problem in Korea. Many youth job seekers tend to avoid working in SMEs, which is why sometimes there is no one to work. This study built a differentiated platform that provides excellent SME job information from the perspective of youth job seekers: (1) The characteristics of good jobs preferred by job seekers are identified by conjoint analysis in five attributes (annual salary level, performance-based compensation, working environment, corporate image, and organizational culture). (2) A self-evaluation application is developed with 13 items for SMEs to diagnose their own job characteristics, and (3) this process enabled job seekers to more easily and conveniently find good jobs. The job platform created in this study is expanded as a government support policy to resolve the job mismatch issue in Korea. This study will provide a solution to the problem of youth job mismatch and transform the policy from quantitative support to radical qualitative reform.

KEYWORDS

Good Jobs, Job Platform, Self-Diagnosis Application, SMEs, Youth Job Seekers

INTRODUCTION

Korea is facing unemployment due to COVID-19. The decline in youth employment, in particular, exceeded 300,000 overall, with 146,000 of those in their 20s and 165,000 in their 30s. The annual youth unemployment rate for those between 15 and 29 years was 9.0%, which is more than double the overall unemployment rate of 4.0%; moreover, one out of every four youths is reported to be jobless in Korea (KEIS, 2021).

However, despite these difficult situations, some firms face manpower shortages. According to a job search website survey¹, 42% of Korean firms experienced a shortage of workers in 2020. By firm size, small- and medium-sized enterprises (SMEs), which make up 43.8% of all enterprises, showed the highest rate of manpower shortage, followed by middle-standing enterprises (40.9%) and large enterprises (22.7%), indicating that SMEs faced twice the shortage of workers than large

DOI: 10.4018/IJABIM.318645

*Corresponding Author

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

enterprises. This indicates that despite high youth unemployment, SMEs are still unable to recruit youth talent for their workforce.

Young job seekers, however, still perceive SMEs as companies that pay low wages, have excessive working hours, and offer little possibility for promotion (Long et al., 2014). The structural issue of job mismatch between the youth and SMEs is not resolved (Kohnová et al., 2020), so to tackle this social challenge we must improve the negative perception of SMEs, while matching good jobs with young job seekers (KBiz, 2020).

This study establishes a new platform to provide job information on SMEs. Applied here are innovative and differentiated features distinct from other existing job search platforms. First, SME job characteristics preferred by job seekers were identified from the seekers' perspective and reflected on the job matching process. Second, some features were suggested from the job providers' perspective to self-evaluate the job characteristics preferred by job seekers. Third, a system was established to enable SMEs to provide job information on the platform, thereby offering them an opportunity to positively influence potential employees' perception of SMEs.

The next section provides a literature review on good jobs in SMEs, factors affecting preferred jobs, and solutions to job mismatches. A description of the methodology and how it was applied in the research follows. Presented next are the results of the conjoint analysis and its application to the job platform. Finally, the significance of this study, along with its findings, which will contribute to future youth employment youth policies is provided.

LITERATURE REVIEW

Good Jobs in Small- and Medium-Sized Enterprises

While prior studies on job issues in SMEs focused on expanding the quantitative scale, in recent times there has been a growing interest on the qualitative aspects of employment such as adequate income, job security, improvement of work environment, and decrease in industrial accidents (Dodd et al., 2019).

Various related terms are used overseas, including “decent work” by the International Labour Organization (ILO), “*gute arbeit*” by the German Trade Union Confederation, and “good job” by the American Sociological Association (Jencks et al., 1988).

“Decent work” involves opportunities for “work that is productive, delivers a fair income with social protection, and offers prospects for personal development” (International Labour Organization, 1999). Discussions on “good jobs” consider wage as an important determinant; however, nonmonetary attributes such as job details and characteristics, autonomy in task performance, job security, and acquisition of skills have twice as much impact than wages. Moreover, good jobs have various indicators and items that are part of the comprehensive concept of socioeconomic equality; they include not only job opportunities, wage, and working hours but also women and social safety networks (Pickshaus, 2007). Therefore, a “good job” is a complicated and multidimensional concept in terms of job quality, which includes not only wages but also work conditions, environment, and social values (Hussain & Endut, 2018).

With emphasis on the qualitative aspect of jobs, Korea uses terms such as “decent work,” “good jobs,” and “healthy jobs.” “Decent work” requires a “wage higher than the median wage of paid workers nationwide, with more than 14 hours and less than 29 working hours per week” (Kim et al., 2014). “Good jobs” must not only consider monetary aspects such as wage but also job satisfaction, social status, and authority (Bang & Lee, 2006). Jobs in the labor market must generally meet socioeconomic, subjective, and psychological needs, such as job satisfaction.

This discussion has led to several studies. While some studies developed indicators that are suitable to the Korean context (Bang, 2007), others have analyzed the relationship between good jobs, organizational commitment, and job satisfaction (Song, 2016). Other studies have examined the

correlation between good jobs and organizational effectiveness (Lim et al., 2018), while investigating the current state of good jobs (Kim et al., 2014). However, while many aforementioned studies defined good jobs from the perspective of firms that provide the jobs, analysis on the issues from the perspective of job seekers and current employees is required.

Studies on Employment in Small- and Medium-Sized Enterprises

Studies have analyzed the decision-making process to increase employment in SMEs. For example, factors affecting employment in SMEs can be classified in terms of firms, individuals, and environment. Location, size, social awareness, job details, employment status, and work environment are considered important factors for firms as well (Al-Haddad et al., 2019). Individual factors include socioeconomic, school life, employment preparations, occupational values, and psychological characteristics (Xerri & Brunetto, 2011), whereas environmental factors include job security and employment flexibility (O'Reilly III et al., 2014). Lobburi (2012) focuses on improving the high turnover rates in SMEs where factors such as job satisfaction, college specialty-job match, working hours, wage level, and youth employment policy benefits had a significant effect on turnover. Two studies analyzed the effect of employee job satisfaction on turnover, or determinants of turnover, in SMEs among graduates of regional universities (Ferris et al., 2003; Yang et al., 2014). While the studies above identify the factors that affect employment of SMEs and also confirm the positive effect of job quality (e.g., job satisfaction and job security), measures to improve job quality and perspective of job seekers need to be analyzed.

Studies on “job mismatch” (Kim & Choi, 2018) classified the cause of this problem into compensation, skills, and information mismatch. “Compensation mismatch” refers to the difference in interests such as work conditions between job seekers and the company. “Skills mismatch” happens when job seekers do not have the skills and abilities desired by the company, and “information mismatch” refers to the lack of information about SMEs (Avram et al., 2019; Kohnová et al., 2020). This is similar to how businesses rely on informal sources despite the availability of formal sources, and Chiware and Dick (2008) highlights the need for a consolidated, officially certified information source. Thus, to reduce the gap between the talent demand by companies and the job perception of college students, it is necessary to formulate more specific policy improvement plans based on a causal analysis of mismatch by identifying factors that affect job preference (Kim & Hwang, 2015). However, despite various analyses of causes and alternatives, job issues remain unresolved. The majority of studies thus far have suggested monetary and environmental improvements such as increasing employee wages of SMEs, enhancing working conditions and environments, and self-improvement opportunities, which have constraints in terms of cost, time, and system (Song & Lee, 2017).

Therefore, it is necessary to first select fields that can be improved, establish strategies, and determine practical and workable strategies for SMEs, while simultaneously addressing negative SME's perceptions among young job seekers (De Wit & De Kok, 2014; Park et al., 2014).

Job Search Platforms

There is an abundance of research in the area of job search platforms. There is research that focused on the use of already existing online job/career information platforms. For example, Dillahunt et al. (2021) investigated how U.S. job seekers utilize different types of job information platforms to include social network services and how patterns differ among different cohorts of people. They highlight that higher-income users are more active and more likely to receive a callback than lower-income users. Lee (2020) analyzed the adoption of artificial intelligence by job information platforms and how it affects the continuous usage of the platform users, where the quality of AI in providing accurate and appropriate job-seeking information increases the continuous usage intention by the users. Jones and Sen (2022) identified that the use of digital informal jobs platforms result in better work outcomes for women.

There are also platforms that are concerned with technological algorithms and implementations of the job matching process. Balazon et al. (2018) explores various algorithms to be applied to job matching platforms and demonstrates their feasibility. Similarly, Koh and Chew (2015) test self-learning recommendation engines for job matching, and Yan et al. (2019) utilizes profiling memories to improve the quality of job matching recommendations. In addition, there is a job platform for workers in the construction industry (Won et al., 2021), which was prompted by COVID-19 to address the demand for contactless job matching.

The studies on job platforms mentioned above indicate that there have been investigations into various perspectives of the job platforms, but more work needs to be done in terms of providing platforms that specialize in matching SMEs and young job seekers and provide SME tailored features.

METHODOLOGY

Research Process and Conjoint Analysis

Two methodologies are involved to develop the job search platform specialized for SMEs. First, conjoint analysis is conducted on job seekers to identify their preference and priority. Then, based on the results, the platform is designed, and features implemented to match SMEs and job seekers based on their preferences. The latter is qualitative and therefore will be explained further in the results and discussions section. The former merits the following additional description.

Conjoint analysis is a statistical technique that combines quantitative and qualitative information and assists in determining how people value different attributes in their preferences. Selected for this research is choice-based conjoint analysis as the job seekers will need to make a choice on work as a potential employee rather than rating or ranking jobs as an external reviewer. The respondents are given different, two in many cases, examples to choose from. The choices they make are then decomposed into quantitative scores and help identify which criteria are more important than others and what specific aspects of the criteria are considered critical.

Conceptualizing Preferred Jobs by Job Seekers

This study aims to build a platform that provides job information for young job seekers to help them easily and conveniently locate ideal SMEs for employment. The new application developed here is different from existing job search platforms, as it provides two-way job information and matching features, while enabling SMEs to evaluate and diagnose their own jobs from the perspective of job seekers.

Job characteristics desired by job seekers were first identified based on a literature review on factors affecting employment in SMEs, job mismatch, and job seeking process. Then, 15 industry, academia, and research experts with research knowledge, survey, and work experience in jobs at SMEs were selected. These experts included five college professors, five human resources managers, and five policy researchers, as recommended by the Korea Federation of SMEs. Expert meetings were held in June 2020 to conceptually specify preferred jobs in SMEs by generally reflecting on SME job preference factors from the perspective of job seekers as well as employers. This procedure was concluded with a conjoint² analysis, as the experts agreed that developing a hypothetical alternative and forming the optimum combination is valid, as “good jobs” of SMEs are not academically defined (Lee et al., 2015; Suerdem & Akalin, 2015). Finally, the characteristics of preferred jobs in SMEs were structured as follows into five attributes, with three levels for each attribute as seen in Table 1.

These preferred jobs are combined with various attributes and levels, and the survey respondents repeatedly compared and selected their choices with two concepts as shown in Table 2.

The frequency of choices compared with the frequency of exposure to each attribute and level of the respondents can be calculated. Logit analysis was conducted with “the intention to get a good job at SMEs” as the dependent variable and “attribute levels” as the input variables to calculate part-

Table 1. Attributes and levels of preferred jobs in SMEs

Component Attribute (Upper Level)	Evaluation Index Level (Subordinate Level)	Details	References
Annual salary level	Low annual salary but low workload	Determines the physical and psychological burden of individuals based on work at the level of average annual salary (\$25,000)	Long et al. (2014); Tsang et al. (2015)
	Average annual salary and adequate workload		
	High annual salary but high workload		
Customized performance-based compensation	Preferred training	License, degree course, and training at a specialized external institution	Beaver and Hutchings (2005); Egan et al. (2004)
	Incentives	Performance-based bonuses and stocks aside from annual salary	
	Promotion benefits	Promotion bonus points and special promotion schemes	
Working environment	Welfare system	Medical checkups, birthdays, family anniversaries, and medical expenses	Plester and Hutchison (2016); Croucher et al. (2013)
	Convenient commuting	Good location and convenient transportation for commuting	
	Modern office facilities	Advanced facilities/equipment, pleasant working environment, and office machines	
Corporate image	Secure employment	Long years of employee service and low turnover rates	Al-Haddad et al. (2019); Xerri and Brunetto (2011)
	High growth potential	Continuous sales revenue growth and above a certain level of operating profit	
	Fulfillment of social responsibility	Valuing corporate social responsibility (CSR)	
Internal organizational culture	Respect for private life	Guaranteeing work-life balance, working hours, and life with evenings	Hussain and Endut (2018); Cegarra-Leiva et al. (2012); O'Reilly et al., (1991)
	Employee bonding	Valuing teamwork and family-like atmosphere	
	Fun and enjoyment	Exciting and cheerful work atmosphere	

Table 2. Concept of options and selection example

Category	Concept 4	Concept 6
Annual salary level	Lower than average annual salary (KRW 28.4 million) but low workload	Average annual salary and adequate workload
Performance-based compensation	Individualized training	Early promotion
Work environment	Convenient commuting	Modern facilities
Corporate image	Growth potential	Secure employment
Organizational culture	Respect for private life	Job itself is fun and enjoyable
Selection	⊙	⊙

worth (utility) and relative importance of each attribute and level, through which the characteristics of good jobs preferred by young job seekers could be specified.

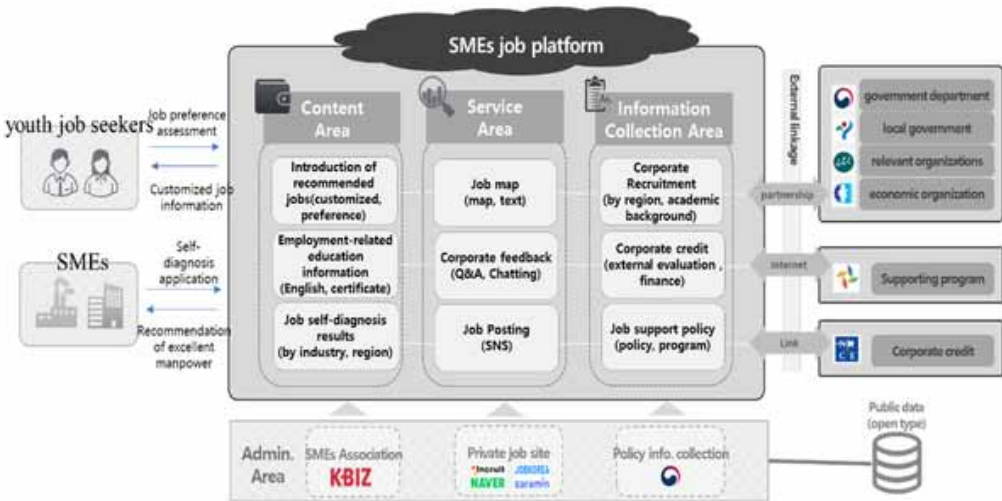
Job Platform High-Level Features and Architecture

This study developed an evaluation application for young job seekers to assess job information of ideal SMEs on the job platform. This application enabled SMEs to compare and diagnose the jobs preferred by job seekers with their own job characteristics. This study selected 30,000 out of 100,000 companies that were certified as outstanding by the central and local governments as job information providers based on the following six criteria: a credit rating of BB- or above, operating profit, job retention, illegal activity records, type of business, and size. The first four characteristics are important as they ensure a degree of quality of the companies for the government and job seekers alike. The job seekers can be assured that these companies will not soon go out of business. The latter two serve to ensure diversity of companies for addressing the broad interests of the job seeker community. Information about these companies was constantly updated based on public-private partnership in alignment with Korea Enterprise Data, Job Korea, JobPlanet, and Industrial Bank of Korea.

To differentiate the platform from other existing job search websites, a feature for conditional search on the map and finding excellent SMEs registered nearby based on the current location was added. In addition, other information including public transportation routes, navigation, and nearby amenities that companies' users may be interested in were provided on a real-time basis. See Figure 1.

SMEs participating in the good job platform could self-diagnose based on five criteria in the diagnosis application. The job levels diagnosed cannot be viewed as a tool to rank job preferences of certain SMEs or select companies with ideal jobs. It is intended to help SMEs compare themselves with other types of businesses or companies, while supporting them in rationally diagnosing themselves from the job seekers' perspective to enhance their strengths in job quality and devise improvement plans.

Figure 1. Preferred job platform in SMEs



RESULTS AND DISCUSSION

Characteristics of Jobs Preferred by Job Seekers

Job seekers' preferred job characteristics that were applied to the platform changed dynamically depending on user input. Therefore, conjoint analysis was conducted to specify the preferred jobs and create a starting point. 700 job seekers with a high school diploma or higher were selected based on stratified random sampling by place of residence and education level to participate in an online survey for two weeks in June 2021. The study sample comprised 40% men (280) and 60% women (420); further, 50% of the sample lived in the Seoul metropolitan areas (350), whereas 50% lived in non-capital areas (350). By education level, 14.2% were about to be employed after graduating high school (100), 71.4% were college graduates (500), and 14.2% completed graduate school (100).

The findings of the study revealed that young job seekers considered "annual salary level" (37.9%) the most important of the five attributes, followed by "organizational culture" (24.5%), "working environment" (12.6%), "corporate image" (13.6%), and "performance-based compensation" (11.4%). In the annual salary level, the utility for "the level of work suitable for the average annual salary" (0.695) was high, whereas that of "higher annual salary than average but high workload and responsibility" (-0.443) and "lower annual salary than average but low workload" (-0.252) was low. This may be attributed to the fact that, since wages of SMEs are lower than large enterprises, annual salary level is considered an important factor that determines a good job. In the organizational culture, the preference for "fun and enjoyable job" (0.542) and "respect for private life" (0.253) was high, whereas that for "family-like bond" (-0.795) was low. This is because youth want to have fun at work, while having their private life respected. This is in contrast to the previous generations that valued family-like, close relationships as members of an organization.

In the working environment, the respondents preferred "convenient commuting" (0.247) and "excellent benefits" (0.144) with positive utility values, whereas they did not attach much importance to the superficial environment including "modern office facilities" (-0.391). In the corporate image, they preferred "secure employment" and "growth potential," whereas for performance-based compensation, they preferred "performance-based incentives" (see Table 3).

The analysis showed that from the perspective of young job seekers, a good job in SMEs can be defined as a "job with an average monthly salary and is fun and enjoyable, that guarantees respect for private life, is convenient to commute and offers excellent benefits, and provides fair performance-based compensation with secure employment and growth potential."

Implemented Features in the Platform

The "SMEs job platform" is an online platform developed for youth job seekers to find ideal SMEs to work at easily and conveniently and check all kinds of job information. The service was launched on the mobile app and website in April 2021.

This platform allows simple search of information preferred by job seekers such as salaries, working hours, and convenience in commuting with features such as "Find on Map," "Find Preferred Workplace," and "Find by Condition."

"Find on Map" (see Figure 2) provides job searches on a map, offering information such as transportation, benefits, leisure, and amenities near the company. "Find Preferred Workplace" provides a simple self-diagnosis (i.e., desired annual salary level, working environment, organizational culture) to find the type of company preferred. "Find by Condition" offers search with detailed conditions such as 108 benefits and five corporate competencies. This service reflects the needs of youth job seekers and constantly updates information on ideal SMEs and good jobs.

SMEs using this platform can evaluate the jobs they offer from the perspective of young job seekers. The detailed items were developed based on conjoint attributes and levels of jobs preferred by young job seekers. Annual salary and three levels were simplified into one item after considering that the self-evaluation application is targeting those currently working in SMEs. The system was

Table 3. Results of conjoint analysis on preferred jobs in SMEs

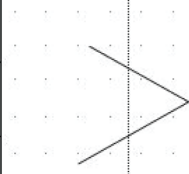
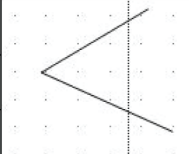
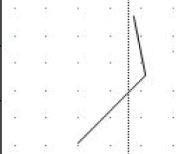
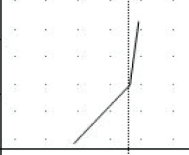
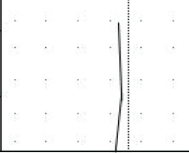
Component-Attribute (Upper-Level)	Evaluation-Index-Level (Subordinate-Level)	Part-Worth		Importance
Annual-salary-level	Low-annual-salary-but-low-workload	-0.252		37.9%
	Average annual-salary-and-adequate-workload	0.695		
	High-annual-salary-but-high-workload-and-responsibility	-0.443		
Organizational-culture	Respect-for-private-life	0.253		24.5%
	Family-like-bonds	-0.795		
	Fun-and-enjoyable-job	0.542		
Work-environment	Excellent-benefits	0.144		12.6%
	Convenient-commuting	0.247		
	Modern-office-facilities	-0.391		
Corporate-image	Secure-employment	0.281		13.6%
	Growth-potential	0.121		
	Fulfillment-of-social-responsibility	-0.402		
Performance-based-compensation	Individual-training	0.001		11.4%
	Performance-based-incentives	0.05		
	Early-promotion	-0.051		

Figure 2. Good job platform: main page and map feature



Main page of the platform

Job map search

Note: URL: <https://gsmb.mss.go.kr/>

built to assign importance (%) to each item that reflects the evaluation results and was updated on a real-time basis (see Table 4).

The thirteen items and weights of each could be evaluated on the web browser or the application to self-diagnose the current job levels and easily compare the results with other types of businesses and companies (Figure 3).

The items aim to aid SMEs in diagnosing their relative levels from the perspective of job seekers to change their perception and improve the jobs that they offered. Moreover, the results can be used to recommend and suggest preferred job types to job seekers.

Feedback on the evaluation is provided using individual scores (my diagnostic score) or relative level (radial diagram) based on the average score of good jobs. Items with high scores (job type of diagnosed company) are displayed as strengths, whereas low scores on items indicate the need for improvement (Figure 4 on the right). In particular, the weights of each item in this model are regularly updated depending on the change in the job environment. Further, data can be constantly updated and used to diagnose companies with good jobs by company size, year, and area.

The results of self-evaluation suggested in this study can be managed systematically by type of business, region, and year, which is differentiated from other existing job search websites (e.g., Saramin, Job Korea, WorkNet) Thus, it can be used to improve perceptions of good jobs. In other words, current employees can receive news about SMEs through the platform and create related content through associations of SMEs (i.e., self-diagnosis, campaigns, reviews of employment training,

Table 4. Self-evaluation items on good jobs

Category	Item
Annual salary level	1. How would you rate your company in terms of paying salaries suitable for workload or job characteristics?
Performance-based compensation	2. How would you rate your company in terms of providing employees with preferred training (e.g., license, training at a specialized external institution, degree courses, etc.)?
	3. How would you rate your company in terms of offering bonuses other than the annual salary for job performance?
	4. How would you rate your company in terms of providing promotion benefits for job performance (evaluation bonus points, special promotion system, etc.)?
Working environment	5. How would you rate your company's welfare system (medical checkups, family anniversaries, birthdays, medical expenses, etc.)?
	6. How would you rate your company in terms of good location and convenient transportation for commuting?
	7. How would you rate your company in terms of pleasant office facilities and business machines?
Corporate image	8. How would you rate your company in terms of long employee service and low turnover rates?
	9. How would you rate your company in terms of potential growth in sales revenue and operating profit?
	10. How would you rate your company in terms of valuing corporate social responsibility (CSR)?
Organizational culture	11. How would you rate your company in terms of respecting the private life of employees (guaranteeing working hours, work-life balance, and life with evenings)?
	12. How would you rate your company in terms of valuing teamwork and providing a family-like work atmosphere?
	13. How would you rate your company in terms of providing an exciting and cheerful work atmosphere?

Figure 3. Good job platform: finding SMEs and self-evaluation

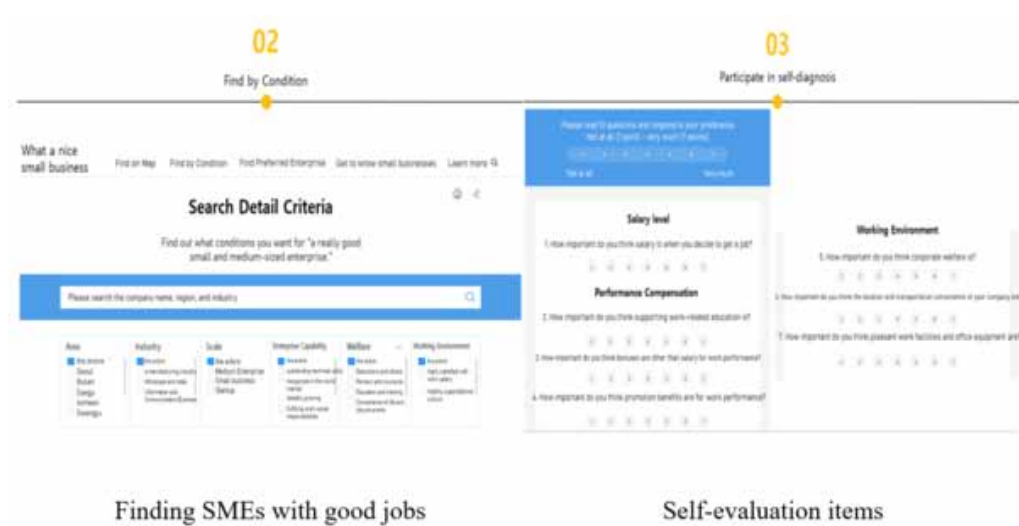
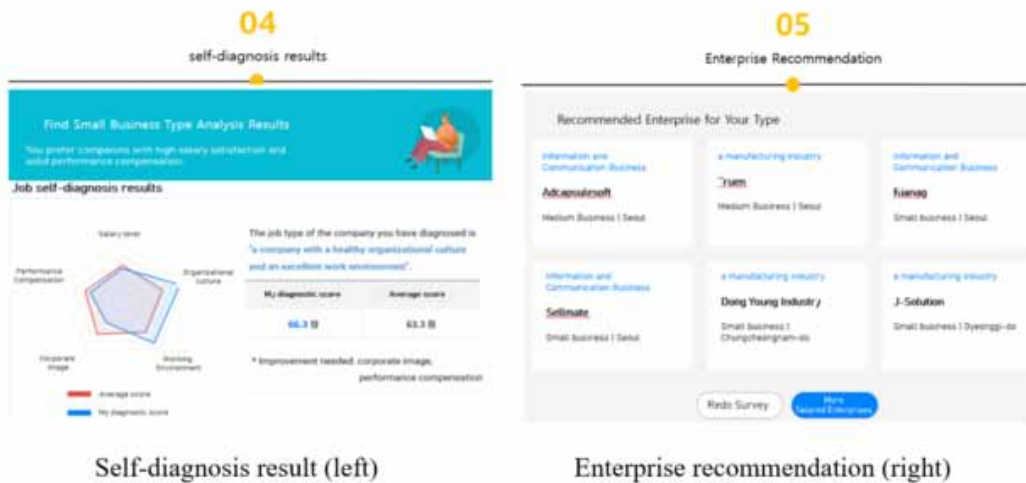


Figure 4. Good job self-evaluation result



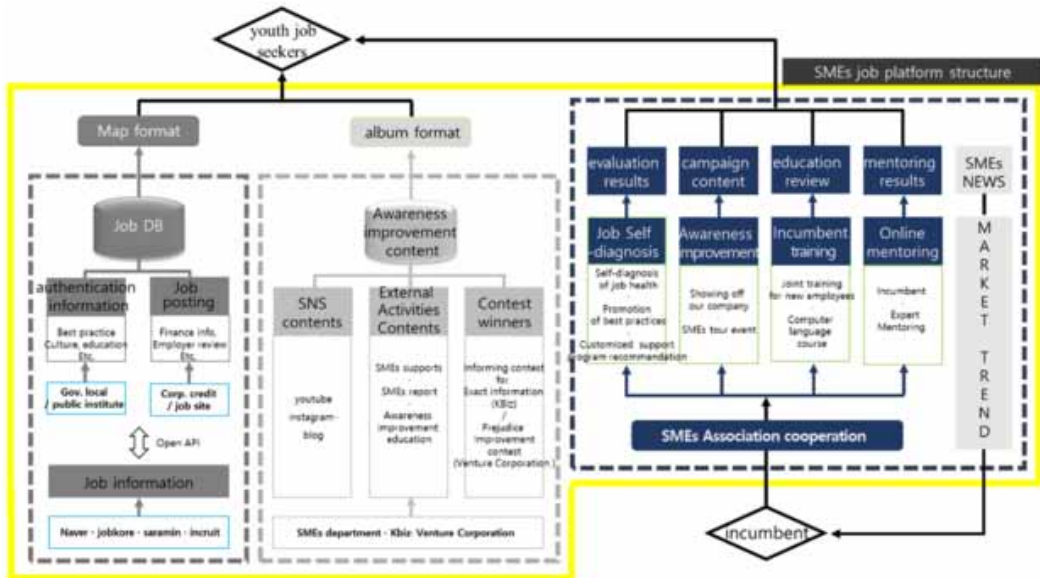
mentoring) for young job seekers to view. Further, youth job seekers can search and view the job map and other information to improve their awareness of SMEs through the platform (see Figure 5).

CONCLUSION

Overview of the Study

This study formulated solutions to the unemployment issue as well as the shortage of youth in the Korean SMEs' workforce, especially during COVID-19. More specifically, this study identified job characteristics preferred by young job seekers, based on which it established a self-evaluation application for SMEs to diagnose their own jobs from the perspective of job seekers on the job platform.

Figure 5. Job platform information diagram



In this process, characteristics of good jobs from the perspective of job seekers were derived through conjoint analysis. The self-diagnosis application on good jobs of SMEs comprised 13 detailed items in terms of annual salary level, performance-based compensation, working environment, corporate image, and organizational culture.

Contribution of the Study

This study is significant as jobs in SMEs were evaluated based on qualitative indicators from job seekers' perspectives, and not on quantitative indicators (e.g., sales revenue, operating profit, and length of service).

Previous studies on building a system for customized job information about SMEs merely performed a pilot test or provided indicators that were not universal. Therefore, these systems were not applicable in real-world contexts. As a result of emphasizing solutions in terms of systems, the difference in importance among items could not be reflected appropriately since the changes in perception were not applied, evaluation items on the platform had no consistency, or there were too many or few items in the actual evaluation process. In addition, the customized company recommendation process could not overcome fundamental limitations, as the procedures were complicated and not aligned with the policies.

However, the SME job platform of this study reflected the awareness and perspectives of young job seekers, thus, creating a system that can be aligned with the job policies in Korea by developing features for SMEs and helping them evaluate their own jobs. In particular, the job evaluation of this system is not intended to provide rankings or scores for selection and review. It is built to identify the factors of imbalance by diagnosing overall job preference factors of SMEs and enhancing young job seekers' perceptions of SMEs.

Implications: Managerial

The result of the study provides major managerial implications. First, this study identifies that organizational culture and corporate image are important attributes for job seekers. While it is true that salary level is most important, the organizational culture and corporate image combined are as

important as salary level. Since these two attributes are the ones that the company can modify relatively easier than others, these are the areas where SMEs can focus to attract more talent.

Second, within the organizational culture, the aspect of fun and respect for private life have been identified as important indices, whereas family-like bonds were contributing negatively. This may be unique to Korea but nevertheless can provide SMEs a hint that young job seekers give more weight towards the joy of the work and the possibility to separate work and life, rather than forming social bonds within the company.

Third, within the corporate image, it should be highlighted that the fulfillment of social responsibility had a negative effect on the job preference. Rather, the potential for growth and secure employment were viewed as positive. This needs to be investigated further, but SMEs should focus on growth potential rather than social responsibility to attract young job seekers.

Fourth, within the work environment, it was noteworthy that modern office facilities were not considered a positive. Rather, the SMEs should divert their investment towards benefits to attract young job seekers.

Lastly, it is interesting to note that the job seekers refrained from low salary and low workload and high salary and high workload combinations. This is a difficult balance to strike because young job seekers will most likely be applying for entry level jobs, where salary will be low. Nevertheless, the slightly less negative preference towards low salary and low workload suggests that the firms should advertise and push for low workload entry-level jobs.

Implications: Practical

The SME job platform in Korea enables SMEs to understand jobs preferred by young job seekers and diagnose their own good job characteristics and levels. This will promote awareness on the jobs offered by SMEs and will help to resolve the job mismatch between SMEs' talent demand and the preferences of young job seekers.

The platform also created an opportunity to resolve job-related issues in SMEs using a qualitative reform approach, rather than one of cost-centered support, with the SMEs being able to identify where their weakness lies. While it is difficult to turn all SME jobs into good jobs, this study can help SMEs understand young job seekers through self-job evaluation and take necessary steps to become more attractive.

Resolving the issue of youth employment due to COVID-19 as well as that of low preference for SMEs is challenging due to the mismatch between companies and job seekers, persistent prejudice, and insufficient job information. Therefore, by precisely identifying this mismatch on the job platform and resolving identifiable issues, more competent youth will show interest in healthy jobs and improve the performance of SMEs, creating a virtuous cycle. This platform is intended to serve as an information and communications technology (ICT) application that can stimulate the creation of ventures in Korea as well as other nations. As highlighted by Lee and Lio (2018), this application will enhance the effects of ICT on venture creation in middle- to high-income countries.

Limitation and Future Research

A limitation of this study was that some indices within some of the attributes could be decomposed and analyzed in more granularity. For example, the fun aspect of work and the fulfillment of social responsibility could be decomposed further to identify what aspect of fun and what aspect of social responsibility are viewed positively or negatively by the job seekers. Second, the platform deployment could be outlined in more technical detail for other nations to benchmark, but it was condensed for the sake of brevity. Third, the platform is relatively new and therefore does not have accumulated data to provide inter-temporal analysis, only cross-sectional analysis.

Future research should focus on certain aspects of job search platforms. First, further investigation is required with respect to attributes such as the fulfillment of social responsibility, fun and enjoyable jobs, and family-like bonds. These will identify the aspects that the firm should focus on or avoid

in order to attract talent. Second, reference implementation and further technical description of the platform should follow, for other nations to benchmark and adopt. Lastly, once there is enough data, further analysis involving differences of job preference per different time should proceed. For example, it would be interesting to analyze how job preferences have changed with the lifting of COVID-19 restrictions.

In addition, more topics can be studied further. Future studies can use the data collected from the SME job platforms to analyze the different perceptions between job seekers and SMEs, categorize companies with good jobs, specify job information in terms of SME job branding, and measure the improvement effect in the awareness of jobs in SMEs.

AUTHOR NOTE

The authors of this publication declare there are no competing interests.

DISCLAIMER

The views presented in this paper are of the authors and not of the employers.

ACKNOWLEDGMENT

This work was supported by Chungbuk National University BK21 Program (2021).

REFERENCES

- Al-Haddad, L., Sial, M. S., Ali, I., Alam, R., Khuong, N. V., & Khanh, T. H. T. (2019). The role of small and medium enterprises (SMEs) in employment generation and economic growth: A study of marble industry in emerging economy. *International Journal of Financial Research*, 10(6), 174–187. doi:10.5430/ijfr.v10n6p174
- Avram, A., Benvenuto, M., Avram, C. D., & Gravili, G. (2019). Assuring SME's sustainable competitiveness in the digital era: A labor policy between guaranteed minimum wage and ICT skill mismatch. *Sustainability*, 11(10), 2918. doi:10.3390/su11102918
- Balazon, F. G., Vinluan, A. A., & Ambat, S. C. (2018). Job matching platform using latent semantic indexing and location mapping algorithms. *Asia Pacific Journal of Multidisciplinary Research*, 6(4).
- Bang, H. (2007). *Quality of job: Macro, enterprise, individual level index development and evaluation*. Korea Labor Institute.
- Bang, H., & Lee, S. (2006). Conceptual composition of “good job” and analysis of determinants. *Korean Sociology*, 40(1), 93–126.
- Beaver, G., & Hutchings, K. (2005). Training and developing an age diverse workforce in SMEs: The need for a strategic approach. *Education + Training*, 47(8/9), 592–604. doi:10.1108/00400910510633134
- Cegarra-Leiva, D., Sánchez-Vidal, M. E., & Cegarra-Navarro, J. G. (2012). Work life balance and the retention of managers in Spanish SMEs. *International Journal of Human Resource Management*, 23(1), 91–108. doi:10.1080/09585192.2011.610955
- Chiware, E. R. T., & Dick, A. L. (2008). Information needs and information seeking patterns of small, medium and micro enterprises in Namibia. *Information Development*, 24(1), 24–36. doi:10.1177/0266666907087694
- Croucher, R., Stumbitz, B., Quinlan, M., & Vickers, I. (2013). *Can better working conditions improve the performance of SMEs? An International Literature Review*. Academic Press.
- De Wit, G., & De Kok, J. (2014). Do small businesses create more jobs? New evidence for Europe. *Small Business Economics*, 42(2), 283–295. doi:10.1007/s11187-013-9480-1
- Dillahunt, T. R., Israni, A., Lu, A. J., Cai, M., & Hsiao, J. C.-Y. (Eds.). (2021). Examining the use of online platforms for employment: A survey of US job seekers. *Proceedings of the 2021 CHI conference on human factors in computing Systems*.
- Dodd, V., Hooley, T., & Burke, C. (2019). Decent work in the UK: Context, conceptualization, and assessment. *Journal of Vocational Behavior*, 112, 270–281. doi:10.1016/j.jvb.2019.04.002
- Egan, T. M., Yang, B., & Bartlett, K. R. (2004). The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention. *Human Resource Development Quarterly*, 15(3), 279–301. doi:10.1002/hrdq.1104
- Ferris, G. R., Perrewé, P. L., Anthony, W. P., & Gilmore, D. C. (2003). Political skill at work. *Organizational Influence Processes*, 7, 395–407.
- Hussain, A. B., & Endut, N. (2018). Do decent working conditions contribute to work-life balance: A study of small enterprises in Bangladesh. *Asia Pacific Journal of Innovation and Entrepreneurship*. doi:10.1108/APJIE-04-2018-045
- International Labour Organization. (1999). *“Decent work”: Report of the Director-General to the 87th Session of the International Labour Conference*. Author.
- Jencks, C., Perman, L., & Rainwater, L. (1988). What is a good job? A new measure of labor-market success. *American Journal of Sociology*, 93(6), 1322–1357. doi:10.1086/228903
- Jones, S., & Sen, K. (2022). *Labour market effects of digital matching platforms: Experimental evidence from sub-Saharan Africa*. Academic Press.
- KBiz. (2020). *A survey on young people's perception of employment in SMEs* [Online forum post]. KBiz.
- KEIS. (2021). *2020 National youth policy status and characteristics*. KEIS.

- Kim, M., & Hwang, B. (2015). Differences in perceptions of employment competency between SMEs and college students. *Competency Development and Learning Research*, 10, 77–98.
- Kim, S.-J., & Choi, S. O. (2018). The effects of job mismatch on pay, job satisfaction, and performance. *Journal of Open Innovation*, 4(4), 49–61. doi:10.3390/joitmc4040049
- Kim, B., Kim, M., & Hwang, M. (2014). *Analysis of decent jobs in Seoul and policy direction*. Academic Press.
- Koh, M. F., & Chew, Y. C. (2015). Intelligent job matching with self-learning recommendation engine. *Procedia Manufacturing*, 3, 1959–1965. doi:10.1016/j.promfg.2015.07.241
- Kohnová, L., Papula, J., Papulová, Z., Stachová, K., & Stacho, Z. (2020). Job mismatch: The phenomenon of overskilled employees as a result of poor managerial competencies. *Entrepreneurship and Sustainability Issues*, 8(1), 83–102. doi:10.9770/jesi.2020.8.1(6)
- Lee, J., Kim, D. W., & Zo, H. (2015). Conjoint analysis on preferences of HRD managers and employees for effective implementation of m-learning: The case of South Korea. *Telematics and Informatics*, 32(4), 940–948. doi:10.1016/j.tele.2015.04.010
- Lee, M.-H., & Lio, M.-C. (2018). Can information and communication technology promote venture creation? A cross-country study using an instrument variable approach. *Information Development*, 34(4), 321–333. doi:10.1177/0266666917697368
- Lee, Y.-C. (2020). Artificial intelligence and continuous usage intention: Evidence from a Korean online job information platform. *Business Communication Research and Practice*, 3(2), 86–95. doi:10.22682/bcrp.2020.3.2.86
- Lim, J., Kwon, H., & Park, S. (2018). A comparative study on the influence of work satisfaction on venture and SME workers. *Management Education Research*, 33(4), 187–215.
- Lobburi, P. (2012). The influence of organizational and social support on turnover intention in collectivist contexts. *Journal of Applied Business Research*, 28(1), 93–104. doi:10.19030/jabr.v28i1.6687
- Long, C. S., Ajagbe, M. A., & Kowang, T. O. (2014). Addressing the Issues on employees' turnover intention in the perspective of HRM practices in SME. *Procedia: Social and Behavioral Sciences*, 129, 99–104. doi:10.1016/j.sbspro.2014.03.653
- O'Reilly, C. A. III, Caldwell, D. F., Chatman, J. A., & Doerr, B. (2014). The promise and problems of organizational culture: CEO personality, culture, and firm performance. *Group & Organization Management*, 39(6), 595–625. doi:10.1177/1059601114550713
- Park, S., Kim, B.-Y., Jang, W., & Nam, K.-M. (2014). Imperfect information and labor market bias against small and medium-sized enterprises: A Korean case. *Small Business Economics*, 43(3), 725–741. doi:10.1007/s11187-014-9571-7
- Pickshaus, K. (2007). *Gute arbeit-vom projekt zum gewerkschaftlichen arbeitsfeld? Versuch einer zwischenbilanz. Grenzkonflikte der Arbeit*.
- Plester, B., & Hutchison, A. (2016). Fun times: The relationship between fun and workplace engagement. *Employee Relations*, 38(3), 332–350. doi:10.1108/ER-03-2014-0027
- Song, J. (2016). A study on the effects of a good job on organizational commitment and job satisfaction from the employee's perspective. *Korean Corruption Studies Review*, 21(3), 113–133.
- Song, Y., & Lee, Y. (2017). Analysis of the influence of job preference factors as a cause of youth job mismatch and information utilization policy direction. *Vocational Competency Development Research*, 20(2), 61–68.
- Suerdem, A., & Akalin, M. G. B. (2015). Using conjoint analysis to determine the requirements of different users for designing online solution tools: job matching platform. In *Innovation, finance, and the economy* (pp. 239–252). Springer. doi:10.1007/978-3-319-15880-8_19
- Tsang, S., Wang, W., & Ku, H. (2015). The intention of job seekers to apply for jobs in small and medium-size coastal enterprises based on the theory of planned behavior. *Journal of Coastal Research*, 73, 665–675. doi:10.2112/SI73-115.1

Won, D. Y., Jeong, S. W., Jeon, S. Y., Kim, Y. J., Kim, J. S., Ahn, Y. J., & Kim, K. A. (Eds.). (2021). Smart job matching platform for a daily workers in construction industry. *Proceedings of the Korean Society of Computer Information Conference*.

Xerri, M. J., & Brunetto, Y. (2011). The impact of the perceived usefulness of workplace social networks upon the innovative behaviour of SME employees: A social capital perspective. *International Journal of Innovation Management*, 15(5), 959–987. doi:10.1142/S1363919611003350

Yan, R., Le, R., Song, Y., Zhang, T., Zhang, X., & Zhao, D. (2019). Interview choice reveals your preference on the market: To improve job-resume matching through profiling memories. *Proceedings of the 25th ACM SIGKDD international conference on knowledge discovery & data mining*.

Yang, J., Hwang, S., & Kim, S. (2014). Analysis of the determinants of employment and turnover in local small- and medium-sized enterprises (SMEs) of local university graduates. The Korean Society for Employment and Career Studies.

ENDNOTES

- ¹ “Looking back on 2020 Hiring” survey on 326 firms by Saramin, the job seeker-employer matching platform (Dec. 2020).
- ² This analytical technique finds the part-worth of product or service attributes and determines how it affects the intention to purchase or use the products or services, and which level leads to high preference. It is used in various fields such as new product concept surveys, market share forecasting, product positioning in the market, optimal pricing, and market segmentation.

Junghwan Lee is an associate professor in the Department of Management Information Systems, Chungbuk National University, Korea. He gained his PhD in technology management from KAIST. His research interests are mobile business, education innovation, and quantitative analytics. His papers have been published in Journal of Renewable and Sustainable Energy, Telematics and informatics, Information technology and management, British Journal of Educational Technology, among others.

Euiyoung Chung is Senior Program Manager of the PMO at Gauss Labs. Before his current role, Euiyoung was a senior manager of the ICT committee at SK SUPEX Council and the Future Technology & AI at SK hynix. He also previously served as senior engineer of the future technology strategy team in SK hynix's DRAM R&D and CTO. Euiyoung has experience in technology strategies of conventional memory devices (DRAM), memory solutions such as Hybrid DIMM, Managed DRAM Solution (MDS), System-in-Package (SiP), New memory solution (PCM) and AI accelerators such as Processing-in-Memory (PiM). He received Ph.D. in science and technology policy at Yonsei University.

Dongwook Kim is an Independent Consultant and also works as the Technical Officer in the European Telecommunications Standards Institute (ETSI), France. Prior to joining ETSI, he was a Technical Specialist working for Telecom Infra Project (TIP). He spent majority of his career at the GSM Association (GSMA) as Networks Technical Specialist of Future Networks Programme providing 5G thought leadership and IMS interconnection best practices. He started his career in Korea Telecom (KT) as Research Engineer in the technology strategy department. He holds his PhD in Technology Management, M.Eng in Management Science and B.A in Physics from KAIST. His research interests lie in telecom technology management, telecom policy, social impact of technology and managing innovation in high tech context.