

Prioritization of Personnel Selection Criteria Valued by Women Managers in the Context of Employment Transformation Using the IMF-SWARA Method

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Abstract

The increasing number of women in managerial positions and their active involvement in personnel selection processes make it important to identify the criteria they prioritize when selecting employees. The aim of this study is to explore and prioritize the personnel selection criteria considered important by women managers. The sample comprised seven women human resources managers from seven companies operating in different sectors. Two interviews were conducted with the relevant managers. In the first interview, women managers were asked about the criteria they consider important in personnel selection, and based on the data obtained, a pool of 43 items was developed. From the generated pool of criteria, the ten most important criteria were identified based on the opinions of two academics specializing in human resource management and organizational behavior and one human resource manager. The ten most important criteria identified were presented to the women managers in the second interview, and they were asked to rank these criteria in order of importance and to complete a nine-item questionnaire. The data obtained were analyzed using the IMF-SWARA (Improved Fuzzy Step-wise Weight Assessment Ratio Analysis) method, one of the MCDM (Multi-Criteria Decision-Making) techniques. According to the analysis results, the most important criterion that women managers consider in personnel selection was identified as “being trustworthy and moral,” while the least important criterion was identified as “analytical thinking and problem-solving.” These findings indicate that women managers consider being trustworthy and moral more important than factors such as knowledge, skills, experience, and communication in personnel selection.

Keywords: Women manager, Human Resource Management, Personnel selection, Multi-Criteria Decision Making, Criteria Weighting, IMF-SWARA.

1. Introduction

Women’s participation in paid employment as a regular component of the workforce is closely associated with the emergence of modern industrial society. In particular, during the early phases of the Industrial Revolution, rapidly expanding production activities in

Western Europe led to a more intensive participation of women in the production process [1]. While this development led to profound changes in working life, it also significantly transformed the forms of utilization of women’s labor. Previously, women had predominantly worked in agricultural activities, household production, and small-scale workshops; however, with the

industrialization process, they began to be employed as wage laborers in factories [2]. Thus, women's labor has become an important component of the workforce required by industrialization.

Although women's participation in the labor force increased gradually after the Industrial Revolution, the most significant rise occurred during and after the Second World War [3]. During the war years, especially in the United States (U.S.) and the United Kingdom (U.K.), the absence of a large proportion of men who were sent to the front lines created a labor shortage that was filled by women. In this process, women's participation in paid employment was encouraged not only as an economic necessity but also as a duty of national responsibility and patriotism. Intensive policies and social campaigns were carried out to encourage women to temporarily leave their traditionally assigned roles of unpaid domestic labor and become involved in the production process [4]. Thus, the increased visibility of women's labor in the industrial and service sectors led to significant transformations in gender roles.

Since the 1940s, the global expansion of the service sector has contributed significantly to the increase in women's employment [3]. In addition, in the post-World War II period, when respondents were asked whether they approved of a married woman working in the labor market even if her husband could provide for the household, 18% of men in the U.S. answered "yes," whereas by the 1960s this approval rate had increased to nearly 50%. According to the Global Trends 2003 report, 69% of Turkish respondents supported the idea of both spouses working in a marriage, while 29% preferred that only the man should work [5]. These findings also indicate a shift in social attitudes toward women's participation in working life. The sectoral transformation experienced during this period has significantly affected both the structure and level of women's employment. In particular, since the 1950s, the shift of economic activity from the agricultural and industrial sectors toward the service sector has strengthened women's position in the labor market. With the gradual expansion of the service sector, new employment opportunities have emerged for women, and the increase in women's employment has accelerated [6]. Thus, while women's employment rates in the service sector increased significantly, their visibility in working life and participation in economic life also expanded.

In particular, the increase in the share of the services sector in the U.S. economy from 65% to 82% between 1965 and 2010 has significantly increased the demand for knowledge- and skill-intensive jobs within the economic structure [7]. A similar transformation can also be observed in the Turkish labor market. The increasing access of women to higher education has brought about significant changes in the structure of employment. Indeed, the proportion of women employed in professional and associate professional occupations increased from 5.7% in 1988 to 21% in 2018 [8]. This development indicates that the increase in women's educational attainment has contributed to their greater representation in skilled and specialized occupations.

Moreover, the increasing adoption of digital transformation practices in human resource management, together with the growing emphasis on skills-based hiring, has elevated personnel selection to a strategic human resource management function within organizations. The World Economic Forum's Future of Jobs Report 2025 projects that technological transformation will reshape approximately 40% of the skills required for jobs by 2030 [9]. The report further indicates that employers will increasingly prioritize skills-based hiring and invest in workforce reskilling to address evolving labor market demands. These developments have made it increasingly important for both practitioners and researchers to identify the criteria that managers prioritize in personnel selection. Furthermore, although women's representation in managerial positions has increased over time, gender disparities continue to persist in senior leadership roles. Therefore, examining the personnel selection priorities of women managers can contribute to a better understanding of the evolving world of work and contemporary human resource management practices.

In this context, the increasing number of women managers in organizations makes it important to identify the criteria they prioritize in personnel selection. The aim of this study is to identify the criteria that women managers prioritize in personnel selection. In line with this aim, data were collected from women managers working as human resources managers in seven organizations and analyzed using the IMF-SWARA (Improved Fuzzy Step-wise Weight Assessment Ratio

Analysis) method, one of the MCDM (Multi-Criteria Decision-Making) techniques.

The study begins with a review of the literature on women managers, personnel selection, and studies employing the IMF-SWARA method. It then describes the research methodology, presents the findings, and discusses the results in light of the relevant literature. Finally, the study concludes by outlining the main conclusions, limitations, and suggestions for future research.

2. Literature Review

During the literature review period, numerous studies were found that examine women managers' status in working life, as well as their impact, perceptions, and achievements. Lee-Gosselin and Grisé [10] conducted a study on 400 women business owners in the industrial sector in order to identify the characteristics of women entrepreneurs and their firms, their business start-up experiences, success criteria, and their visions regarding the future of their companies. Johnson and Powell [11] attempted to identify the differences between women and men managers in terms of decision-making and risk-taking. Sturges [12] attempted to identify the personal perceptions of career success among women and men managers. Culpan and Wright [13] examined women who were assigned to international postings. Aycan [14] sought to identify the key factors underlying women's success in management in Turkey. Schein [15] examined how the attitude that "when one thinks of a manager, a man comes to mind" has changed over time and its implications for women's advancement in management today. Phelan et al. [16] examined the criteria expected from women during the recruitment process. Orser and Dyke [17] examined the impact of gender on the success criteria of entrepreneurs and corporate managers. Festing et al. [18] examined gender-specific preferences in global performance management. Moscatelli et al. [19] examined multiple criteria in the evaluation of women job candidates. Pierli et al. [20] examined how women leaders contribute to firms' sustainability-oriented decisions. Madison et al. [21] examined the impact of women on SME (Small and Medium-sized Enterprises) innovation in emerging markets. Maheshwari and Nayak [22] examined the barriers and facilitators of women leaders' career

development. Joubert [23] examined the impact of women leaders on corporate social performance. Bannò et al. [24] examined the impact of women in senior positions on sustainability. Biswas et al. [25] examined women in top management positions. Galsanjigmed and Sekiguchi [26] examined the challenges faced by women in leadership careers. Ciappei et al. [27] examined studies on women in top management positions in companies. Kalbarczyk et al. [28] examined women's leadership in the healthcare sector.

However, it has been observed that many studies that select women or women managers as their sample have used a multi-criteria decision-making method. Indeed, Martin-Peña et al. [29] used a multi-criteria decision-making method to identify factors influencing the career development of women executives. Şimşek [30] used TOPSIS (Technique for Order Preference by Similarity to Ideal Solution), one of the multi-criteria decision-making methods, to examine regional differences in women's employment from a human resources management perspective. Vujičić et al. [31] used Fuzzy VIKOR (VlseKriterijumska Optimizacija I Kompromisno Resenje), one of the multi-criteria decision-making methods, in the selection of female personnel in the agricultural sector. Amrita et al. [32] used fuzzy AHP (Analytic Hierarchy Process), one of the multi-criteria decision-making methods, to identify the key factors influencing the adoption of women's entrepreneurship. Nazam et al. [33] used a multi-criteria decision-making method to identify the barriers faced by women entrepreneurs. Khan and Tomar [34] used AHP and TOPSIS, multi-criteria decision-making methods, to identify the factors that act as barriers and enablers to Muslim women's entrepreneurial intentions. Azzahra' Johari et al. [35] used AHP, one of the multi-criteria decision-making methods, to identify the factors contributing to the performance of SMEs owned by women entrepreneurs. Stefanovic et al. [36] used a multi-criteria decision-making method to rank workplaces in production processes where women work in terms of risk assessment. Ayçin et al. [37] used MEREC (Method Based on the Removal Effects of Criteria) and MARCOS (Measurement of Alternatives and Ranking according to Compromise Solution), multi-criteria decision-making methods, to determine women's human development levels in OECD (Organization for Economic Cooperation and Development) countries. Yadav et al. [38] used

LOPCOW (Logarithmic Percentage Change-driven Objective Weighting) and DEMATEL (Decision-Making Trial and Evaluation Laboratory), multi-criteria decision-making methods, to identify factors contributing to discrimination against women. Patel and Patel [39] used PROMETHEE (Preference Ranking Organization Method for Enrichment Evaluations), one of the multi-criteria decision-making methods, to identify the factors that hinder women's professional advancement in the urban planning and development industries. Adhikari et al. [40] used AHP and TOPSIS, multi-criteria decision-making methods, to identify the key factors influencing women's empowerment. Adhikari et al. [41] used VIKOR, one of the multi-criteria decision-making methods, to identify the critical factors that will facilitate women's empowerment. Debbarma et al. [42] used AHP and TOPSIS, multi-criteria decision-making methods, to identify the critical factor that will empower women. Debbarma et al. [43] used AHP, TOPSIS, and VIKOR, multi-criteria decision-making methods, to identify the best career paths and promote women's empowerment. Gazi et al. [44] used DEMATEL, one of the multi-criteria decision-making methods, to identify the factors influencing women's empowerment in the sports sector. Adhikari et al. [45] used TOPSIS, COPRAS (Complex Proportional Assessment), AHP, fuzzy TOPSIS, and fuzzy COPRAS, multi-criteria decision-making methods, to assess the levels of women's empowerment across various sectors. Mahajan et al. [46] used AHP, SWARA, and CoCoSo, multi-criteria decision-making methods, to evaluate policies developed to enhance women's empowerment. Yıldırım and Köroğlu [47] used Fuzzy TOPSIS and Fuzzy AHP, multi-criteria decision-making methods, to evaluate the impact and outcomes of women's empowerment programs.

The literature review reveals that numerous studies have focused on women managers as the research sample, examining their perceptions, achievements, influence, performance, and various other factors. However, the literature review revealed no studies specifically investigating the criteria that women managers consider important in personnel selection. Although the number of women managers in organizations has been increasing and merit, competence, and performance-based criteria have become increasingly decisive in organizational human resource selection, the lack of research identifying the criteria considered important by women managers in

personnel selection represents a significant gap in the literature. In this regard, the present study is expected to contribute to the literature by addressing an important gap.

3. The IMF-SWARA Method

The selection of IMF-SWARA as the analytical technique in this study is grounded in both the structure of the data collection procedure and the methodological requirements of the research problem. First, the interview protocol required participants to rank criteria in descending order of importance rather than perform exhaustive pairwise comparisons; this ranking-based elicitation is structurally compatible with the SWARA family of methods, which derive weights from sequential comparisons between adjacent-ranked criteria rather than the $n(n-1)/2$ comparisons required by pairwise matrix-based methods such as AHP. For ten criteria, this reduces the number of required comparisons from forty-five to nine, a consideration of practical relevance given that respondents were practicing Human Resource (HR) managers rather than academic experts accustomed to formal MCDM elicitation tasks. Second, managerial judgments regarding the relative importance of personnel selection criteria are inherently characterized by linguistic vagueness, which the fuzzy extension of SWARA accommodates through triangular fuzzy numbers rather than forcing respondents into artificially precise crisp judgments. Third, IMF-SWARA was preferred over the original fuzzy SWARA because Vrtačić et al. [48] demonstrated that the linguistic scale originally adapted from Chang's fuzzy AHP formulation is procedurally inconsistent with SWARA's sequential comparison logic, a mismatch that compromises the reliability of the resulting weights; IMF-SWARA corrects this inconsistency while preserving the original five-step procedure. Finally, combining the individual weight vectors obtained from seven decision-makers required a fusion mechanism robust to inter-rater disagreement, which motivated the subsequent use of the Bonferroni Mean operator, described in Section 3.1. IMF-SWARA (Improved Fuzzy SWARA) was introduced to the literature by Vrtačić et al. [48] to address the methodological shortcomings of the original fuzzy SWARA method. The original fuzzy SWARA method uses a linguistic scale designed by Chang (1996) for fuzzy AHP. However, the solution steps and approaches of

SWARA and AHP are quite different. This difference compromises the reliability of the criterion weights. In IMF-SWARA, the scale of the original fuzzy SWARA has been modified, and a scale more suitable for the fuzzy SWARA method has been defined. However, no changes have been made to the procedural steps of the fuzzy SWARA method. The method consists of five steps.

Step 1. Decision-makers rank the criteria in descending order of their expected importance. The most important criterion is placed first, while the least important criterion is placed last.

Step 2. For each criterion j ($j = 2, 3, \dots, m$), the relative importance difference compared to the preceding criterion $j - 1$ in the ranking is determined. This value is expressed as $\bar{s}_j = (l_j^s, m_j^s, u_j^s)$ using the TFN (Triangular Fuzzy Number) scale presented in Table 1.

Table 1. IMF-SWARA linguistic scale and TFN equivalents [48].

Linguistic Variable	Abbreviation	TFN (l, m, u)
Definitely less important	ALI	(1.000; 1.000; 1.000)
Significantly less important	DLI	(1/2; 2/3; 1.000)
Much less important	MLI	(2/5; 1/2; 2/3)
Really less important	RLI	(1/3; 2/5; 1/2)
Less important	LI	(2/7; 1/3; 2/5)
Moderately less important	MDLI	(1/4; 2/7; 1/3)
Weakly less important	WLI	(2/9; 1/4; 2/7)
Equally important	EI	(0; 0; 0)

Step 3. The fuzzy coefficient is calculated as $\bar{k}_j$:

$$\bar{k}_j = \begin{cases} \tilde{1} & j = 1 \\ \bar{s}_j + \tilde{1} & j > 1 \end{cases} \quad (1)$$

Where $\tilde{1} = (1, 1, 1)$ represents the unit TFN.

Step 4. The calculated fuzzy weight $\bar{q}_j$ is determined as follows:

$$\bar{q}_j = \begin{cases} \tilde{1} & j = 1 \\ \frac{\bar{q}_{j-1}}{\bar{k}_j} & j > 1 \end{cases} \quad (2)$$

Step 5. The normalized fuzzy weights are calculated:

$$\bar{w}_j = \frac{\bar{q}_j}{\sum_{j=1}^m \bar{q}_j} \quad (3)$$

Finally, the fuzzy weight of each criterion is converted to a crisp value using the following equation:

$$w_j^{crisp} = \frac{l_j^w + m_j^w + u_j^w}{3} \quad (4)$$

The obtained crisp weights are normalized to satisfy the condition $\sum_{j=1}^m w_j = 1$.

3.1. Bonferroni Mean Operator

The Bonferroni Mean (BM) operator was used to combine the IMF-SWARA weights obtained from multiple decision-makers. The BM operator was proposed by Bonferroni [49] and adapted to decision sciences in subsequent studies. Its fundamental difference from the arithmetic mean is that it accounts for the pairwise interactions ($w_i \cdot w_j$ products) between individual values. Thanks to this feature, the influence of outliers on the overall result is reduced, and a more robust combination is achieved against inconsistencies among decision-makers.

For the $w_1, w_2, \dots, w_n$ weight values obtained from the decision-maker, the BM operator is defined as follows using the parameters, $q \geq 0$:

$$BM^{p,q}(w_1, w_2, \dots, w_n) = \left(\frac{1}{n(n-1)} \sum_{\substack{i,j=1 \\ i \neq j}}^n w_i^p \cdot w_j^q \right)^{\frac{1}{p+q}} \quad (5)$$

The BM operator was preferred over simpler aggregation approaches, such as the arithmetic or geometric mean, for three reasons specific to this dataset. First, unlike the arithmetic mean, which aggregates each manager's weight independently and therefore treats managers as fully interchangeable, the BM operator incorporates pairwise cross-products ($w_i \cdot w_j$) between every pair of managers' judgments. This property is particularly relevant here because the seven participating managers were drawn from different sectors (Section 4), and their judgments cannot be assumed to be independent of shared professional norms within the HR management profession; the pairwise structure of the BM operator allows the aggregation to reflect this inter-rater dependency rather than assuming full independence. Second, the geometric mean, although also capable of penalizing extreme values, becomes degenerate when any single manager assigns a weight at or near zero, in which case the aggregated result for that criterion collapses toward zero regardless of the other six managers' judgments; because several managers in this study

assigned very low weights to individual criteria (e.g., criterion C10 in Table 3), the geometric mean was judged too sensitive to this pattern, whereas the BM operator does not exhibit this degeneracy. Third, the BM operator provides a tunable mechanism, through its parameters p and q , for controlling the degree of interrelationship captured between decision-makers, which allows the aggregation behavior to be adapted to the structure of the data rather than fixed a priori.

In this study, $p = q = 1$ was selected, corresponding to the simplest and most widely used symmetric specification of the BM operator, in which each pairwise interaction is weighted equally and no additional assumption is imposed regarding the relative importance of any manager's judgment over another's. This choice is consistent with the aggregation literature, where $p = q = 1$ is the standard starting specification for the Bonferroni Mean and is analytically tractable, since it reduces the general form in Equation (5) to a symmetric quadratic combination of the input weights. We did not explore higher-order parameter values (e.g., $p = q = 2$) because such settings assign disproportionately greater influence to managers with higher individual weights, which is undesirable given that no a priori basis existed for treating any manager's judgment as more reliable than another's. The raw BM values obtained are normalized to determine the final criterion weights:

$$w_c^{BM} = \frac{BM^{1,1}(w_1^c, \dots, w_n^c)}{\sum_{c=1}^m BM^{1,1}(w_1^c, \dots, w_n^c)} \quad (6)$$

In this study, the number of decision-makers is $n = 7$ and the number of criteria is $m = 10$. For each criterion, the binary product $7 \times 6 = 42$ was calculated, and then the normalized BM weights were obtained.

3.2. Application

This study was conducted in accordance with the principles of research and publication ethics. The confidentiality principles were strictly adhered to, and the identities of the participants were anonymized. The participants were informed that the information obtained from them would be used solely for scientific purposes, would not be shared with third parties, and that no individual, institution, or organization names would be disclosed in the study. The sample comprised seven

women human resources managers with substantial hands-on experience in personnel selection within their respective organizations. Participants were recruited through the "İstihdam Buluşması" (Employment Meeting) seminar; survey invitations were extended to fourteen women HR managers attending this event, of whom seven completed and returned the instrument, corresponding to a response rate of 50%. Eligibility for participation was restricted to women holding an active human resource's managerial role with direct, experience-based responsibility for candidate evaluation and hiring, a criterion intended to ensure that respondents' judgments reflected practical selection experience rather than general familiarity with HR functions. The seven participating managers were drawn from organizations operating in different sectors, which introduces sectoral heterogeneity acknowledged as a limitation in Section 5.

The initial pool of 43 personnel-selection criteria, generated from the first-round interviews with the seven managers, was reduced to a final set of ten criteria through evaluation by a three-member expert panel. The panel consisted of two academics with an established research background in human resource management and one practicing human resources manager with ten years of professional HR experience, distinct from the seven managers who participated in the main sample; this composition was intended to combine theoretical grounding in HRM (Human Resource Management) with first-hand practitioner insight into personnel-selection practice. Panel members reviewed the 43-item pool and voted independently on which items should be retained, and items were included in the final criterion set on the basis of majority agreement among the three panel members. This majority-vote procedure served as the study's content-validation mechanism for criterion retention, although no additional quantitative content-validity index was computed, a point we now acknowledge explicitly as a methodological limitation (Section 5). The resulting ten criteria were subsequently presented to the seven women managers in the second interview for ranking, forming the basis of the IMF-SWARA weighting reported in Section 3.

Data was provided by 7 women managers in this study. The weights of the criteria were calculated separately for each manager. The weights of the criteria determined by the manager coded as MNG-1 are presented in Table 2.

Table 2. Criteria weights for MNG-1.

Code	Criterion	Rank	$\bar{s}_j$ (TFN)	$\bar{k}_j = \bar{s}_j + \Gamma$ (TFN)	$\bar{q}_j$ (TFN)	$\bar{w}_j$ (TFN)	Crisp Weight (norm.)
C6	Experience	1	–	(1.0000, 1.0000, 1.0000)	(1.0000, 1.0000, 1.0000)	(0.150052, 0.156179, 0.163922)	0.156310
C7	Adaptability to work conditions and teamwork	2	EI: (0.0000, 0.0000, 0.0000)	(1.0000, 1.0000, 1.0000)	(1.0000, 1.0000, 1.0000)	(0.150052, 0.156179, 0.163922)	0.156310
C9	Being trustworthy and moral	3	EI: (0.0000, 0.0000, 0.0000)	(1.0000, 1.0000, 1.0000)	(1.0000, 1.0000, 1.0000)	(0.150052, 0.156179, 0.163922)	0.156310
C10	Commitment to the organization and the work	4	MDLI: (0.2500, 0.2857, 0.3333)	(1.2500, 1.2857, 1.3333)	(0.7500, 0.7778, 0.8000)	(0.112539, 0.121473, 0.131138)	0.121400
C8	Conscientiousness	5	EI: (0.0000, 0.0000, 0.0000)	(1.0000, 1.0000, 1.0000)	(0.7500, 0.7778, 0.8000)	(0.112539, 0.121473, 0.131138)	0.121400
C2	Effective communication and empathy	6	LI: (0.2857, 0.3333, 0.4000)	(1.2857, 1.3333, 1.4000)	(0.5357, 0.5833, 0.6222)	(0.080385, 0.091104, 0.101996)	0.090925
C5	Effective use of technology	7	MDLI: (0.2500, 0.2857, 0.3333)	(1.2500, 1.2857, 1.3333)	(0.4018, 0.4537, 0.4978)	(0.060289, 0.070859, 0.081597)	0.070730
C3	Openness to development and active learning	8	MDLI: (0.2500, 0.2857, 0.3333)	(1.2500, 1.2857, 1.3333)	(0.3013, 0.3529, 0.3982)	(0.045217, 0.055113, 0.065278)	0.055059
C4	Time management and setting priorities	9	MDLI: (0.2500, 0.2857, 0.3333)	(1.2500, 1.2857, 1.3333)	(0.2260, 0.2745, 0.3186)	(0.033912, 0.042865, 0.052222)	0.042888
C1	Analytical thinking and problem-solving	10	MLI: (0.4000, 0.5000, 0.6667)	(1.4000, 1.5000, 1.6667)	(0.1356, 0.1830, 0.2276)	(0.020347, 0.028577, 0.037301)	0.028667
TOTAL							1.000000

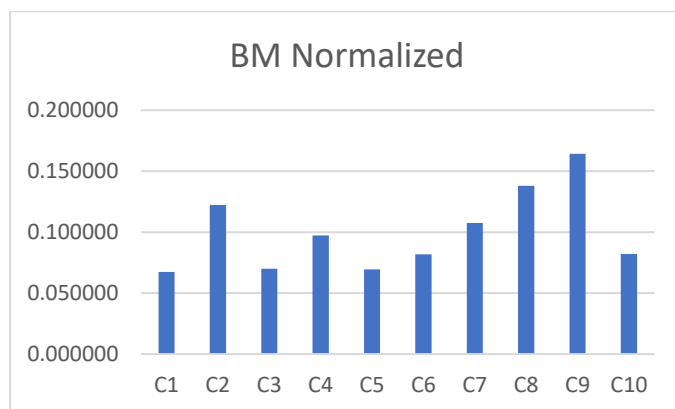
The ranking of the criteria based on their weights is presented in Table 2 as follows: Experience (0.156310), adaptability to work conditions and teamwork (0.156310), being trustworthy and moral (0.156310), commitment to the organization and the work (0.121400), conscientiousness (0.121400), effective communication and empathy (0.090925), effective use of technology (0.070730), openness to development and active learning (0.055059), time management and setting priorities (0.042888) and analytical thinking and problem-solving (0.028667). Therefore, according to MNG-1, the most important criteria in personnel selection are experience, adaptability to work conditions and teamwork, and being trustworthy and moral. The least important criterion is analytical thinking and problem-solving.

The weight of each manager is calculated in a similar manner, and these individually calculated criterion weights are combined using the Bonferroni Mean Operator. The results are presented in Table 3. The criteria are ranked in the following order based on their combined weights: “Being trustworthy and moral (0.164263)”, “conscientiousness (0.138013)”, “effective communication and empathy (0.122159)”, “adaptability to work conditions and teamwork (0.107451)”, “time management and setting priorities (0.097300)”, “commitment to the organization and the work (0.081956)”, “experience (0.081895)”, “openness to development and active learning (0.070038)”, “effective use of technology (0.069541)” and “analytical thinking and problem-solving (0.067384)”.

Table 3. Combined weights of criteria.

Code	Criterion	BM Raw Value	BM Normalized	Rank
C1	Analytical thinking and problem-solving	0.066141	0.067384	10
C2	Effective communication and empathy	0.119904	0.122159	3
C3	Openness to development and active learning	0.068745	0.070038	8
C4	Time management and setting priorities	0.095504	0.097300	5
C5	Effective use of technology	0.068258	0.069541	9
C6	Experience	0.080384	0.081895	7
C7	Adaptability to work conditions and teamwork	0.105468	0.107451	4
C8	Conscientiousness	0.135466	0.138013	2
C9	Being trustworthy and moral	0.161232	0.164263	1
C10	Commitment to the organization and the work	0.080443	0.081956	6

Based on the integrated weights of the criteria, women managers identified “being trustworthy and moral” as the most important criterion in personnel selection, whereas “analytical thinking and problem-solving ability” was identified as the least important criterion. Figure 1 presents the BM Normalized values.

**Figure 1.** The BM normalized values.

3.3. Sensitivity analysis

Since the combined criterion weights reported in Table 3 are obtained by aggregating the judgments of seven individual managers through the Bonferroni Mean operator, it is important to verify that this aggregate ranking is not disproportionately driven by the idiosyncratic judgment of any single manager. To this end, a leave-one-manager-out (LOMO) sensitivity analysis was performed. In each of seven scenarios, one manager's weight vector was excluded and the Bonferroni Mean aggregation described in Section 3.1 was recomputed using the remaining six managers. The

resulting criterion ranking in each scenario was then compared with the baseline ranking obtained from all seven managers (Table 3) using Spearman's rank correlation coefficient (ρ), where values closer to 1 indicate that the exclusion of that manager had little effect on the overall ranking, and lower values indicate greater sensitivity to that manager's judgment. Figure 2 presents the resulting ρ values across the seven exclusion scenarios.

As shown in Figure 2, the Spearman rank correlation coefficients across the seven leave-one-manager-out scenarios ranged from 0.842 to 0.988 (mean = 0.927), indicating that the overall criterion ranking is generally robust to the influence of any single manager's judgment. The lowest correlation was observed when MNG-6 was excluded ($\rho = 0.842$), the scenario most sensitive to a single manager's input; this shift was primarily driven by a change in the relative position of “commitment to the organization and the work” (C10), which moved from sixth to tenth place once MNG-6's judgments were removed. By contrast, excluding MNG-4 left the ranking virtually unchanged ($\rho = 0.988$), suggesting this manager's judgments closely mirrored the group consensus. Importantly, the top-ranked criterion, “being trustworthy and moral,” retained the first position across all seven exclusion scenarios, and the second-ranked criterion, “conscientiousness,” likewise remained stable throughout. This consistency in the upper ranks reinforces the robustness of the study's central finding, even though moderate reordering is observed among the lower- and mid-ranked criteria.

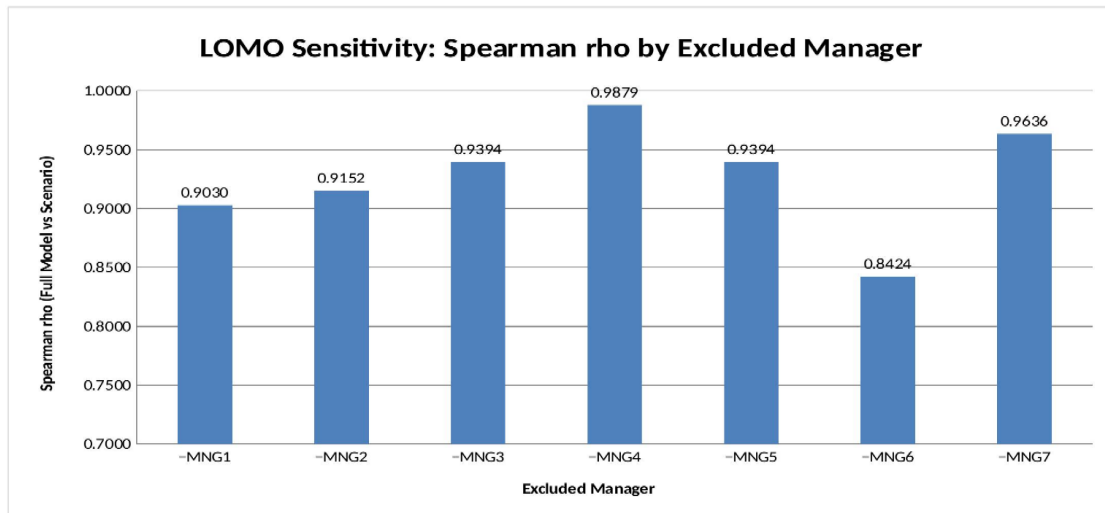


Figure 2. The resulting Rho values across the seven exclusion scenarios.

4. Discussion

This exploratory study examined the criteria prioritized in personnel selection by the seven women human resources managers included in the sample. The findings were discussed in relation to the relevant literature. The findings reflect only the assessments of the managers who participated in the study and should not be interpreted as generalizable conclusions about women managers as a whole.

Before discussing the findings, it is important to note that, as this study did not include a comparison sample of male managers, the reported priorities describe the criterion rankings of the women HR managers in this sample and should not be interpreted as evidence that these priorities are specific to gender; the same pattern could plausibly reflect shared professional norms among HR managers more broadly, irrespective of gender.

To identify the criteria that women managers consider important in personnel selection, data were collected from women managers working as human resources managers in seven organizations operating in different sectors. The collected data were analyzed using the IMF-SWARA method, one of the multi-criteria decision-making techniques. According to the analysis results, “being trustworthy and moral” was identified by women managers as the most important criterion in personnel selection. It can be stated that these findings are consistent with the literature. Indeed, previous studies indicate that among the factors associated with women’s success is the presence of trust in the organization. In addition, women

entrepreneurs’ associate success with honesty, sincerity, integrity [10], and trustworthiness [14], and they place importance on ethics [28]. Moreover, the fact that competence, sociability, and morality are decisive factors in hiring decisions for female candidates [19] may lead women managers to regard being trustworthy and moral as the most important criterion in personnel selection.

Another criterion that women managers consider important is “conscientiousness”. It can be stated that these findings are consistent with the literature. Indeed, previous studies have shown that women associate their success in business life with determination, self-confidence, and discipline [10], as well as with seriousness at work, concentration, and dedication [14]. In addition, it has been found that women managers enhance the quality of organizational oversight, corporate social responsibility, sustainability [27], and social performance [23]. These findings suggest that women act with a strong sense of responsibility and, for this reason, they may also attach importance to conscientiousness in personnel selection.

Another criterion that women managers consider important is “effective communication and empathy”. It can be stated that these findings are consistent with the literature. Indeed, previous studies have associated women managers’ success with empathy and listening skills [20], feedback [18], and interpersonal relationships [10]. This suggests that women place importance on communication [27] and empathy. Indeed, effective communication with stakeholders and gaining their trust

are crucial for organizational success [10]. It can be stated that all these factors lead women managers to attach importance to effective communication and empathy in personnel selection.

Another criterion that women managers consider important is “adaptability to work conditions and teamwork”. It can be stated that these findings are consistent with the literature. Indeed, previous studies indicate that women associate their success with job suitability, sensitivity in interpersonal relationships, and adaptability [14]. In addition, it has been found that women managers tend to be more sharing and collaborative [20], place greater emphasis on group-oriented evaluations compared to men managers [18], are reported in some studies to show higher levels of cooperative behavior in workplace settings [11], and demonstrate greater harmony in relationships with employees, customers, and suppliers [10]. Moreover, women tend to view career advancement more as a means of overcoming a series of challenges or “keeping up” [12], and in this context, they adapt to working conditions and teamwork. This may lead women managers to attach importance to adaptability to work conditions and teamwork in personnel selection.

Another criterion that women managers consider important is “time management and setting priorities”. It can be stated that these findings are consistent with the literature. Indeed, previous studies have shown that women associate success with planned work, effective time management [14], and discipline [10]. The fact that women managers regard these factors as key sources of success may lead women managers to also regard *time management and setting priorities* as an important criterion in personnel selection.

Another criterion that women managers consider important is “commitment to the organization and the work”. It can be stated that these findings are consistent with the literature. Indeed, previous studies have shown that 79% of women entrepreneurs stated that, if they were working for someone else, they would not accept a similar level of income in return for their contributions. Some women have stated that they started their own businesses in order to have something they can call their own, control, and use to express themselves [10]. This indicates that women are committed to their businesses and work. In addition, women have associated success with love for

work [14]. Women entrepreneurs have stated that they would not sacrifice a job they love for status [12] and have described disloyalty as a disappointment [10]. In this context, women managers positively affect organizational culture and climate [2] as well as environmental and social performance [24] by demonstrating commitment to the organization and the work. All these factors may lead women managers to consider commitment to the organization and the work as an important criterion in personnel selection.

Another criterion that women managers consider important is “experience”. It can be stated that these findings are consistent with the literature. Indeed, women entrepreneurs establish businesses to realize themselves and seek to gain experience in their respective fields [10]. This may also be reflected in their personnel selection decisions. Some studies have also proposed a “think crisis-think female” perspective, in which women managers are viewed as particularly well-suited to managing organizational crises, a framing that has occasionally been linked in the literature to caregiving-related experience [26]. We note that this framing has been criticized for resting on essentialist assumptions about women's traits, and we raise it here only as a perspective documented in prior research rather than as an explanation we endorse. A more parsimonious account, independent of gender, is that experienced personnel generally require less time to adapt to organizational culture and job requirements, which may be the primary reason managers of either gender tend to favor experience in personnel selection. Moreover, it takes time for inexperienced employees to adapt to the job and organizational culture. In this case, women managers may prefer experienced personnel in order to save time and costs in the adaptation and training process.

Another criterion that women managers consider important is “openness to development and active learning”. It can be stated that these findings are consistent with the literature. Indeed, previous studies have shown that women associate success with learning, openness to development [14], and hard work. In addition, women have emphasized the importance of receiving technical support and coaching services when starting a job [10]. Moreover, job enrichment leads women to gain intrinsic rewards and to experience higher levels of job satisfaction [13]. Considering these findings in the

literature, it can be stated that women value openness to development and active learning. This may lead women managers to attach importance to openness to development and active learning in personnel selection.

Another criterion that women managers consider important is “effective use of technology”. It can be stated that these findings are consistent with the literature. Indeed, previous studies have found that in SMEs owned and managed by women, technology management systems produce more innovation outputs. In addition, it has been suggested that organizations led by women may be more innovative [21], and that women managers enhance innovation [28]. These findings in the literature indicate that women place importance on innovation, innovativeness, and technology. This may be reflected in personnel selection criteria and may lead women managers to consider effective use of technology as an important criterion in personnel selection.

The least important criterion that women managers consider in personnel selection is Analytical thinking and problem-solving. It can be stated that these findings are consistent with the literature. Indeed, previous studies have shown that some women entrepreneurs reported that, when establishing their businesses, they did not consider their chances of success and did not perceive themselves as possessing high levels of creativity and imagination [10]. This finding should be interpreted with caution. One possible interpretation, drawn from prior literature, is that documented perceptions within organizational settings that undervalue women’s competence relative to men [19], together with a tendency in recruitment decisions to emphasize women’s social skills over technical competence [16], may have indirectly shaped how importance is assigned to competency-related criteria within this sample. We emphasize that this interpretation reflects documented biases in workplace perception rather than any actual difference in ability, and it remains speculative. An equally plausible interpretation is that the lower ranking of analytical thinking and problem-solving reflects the relatively higher priority placed on interpersonal and integrity-related criteria in this sample (see the discussion of trustworthiness and conscientiousness above), rather than a devaluation of analytical skill itself.

Consequently, the tendency to prioritize competence over morality and sociability when evaluating men, while

assigning equal importance to all three dimensions when evaluating women [19], may influence the criteria that women managers subsequently consider important in personnel selection decisions.

5. Conclusion

Women’s participation in working life has changed significantly with industrialization, the expansion of the service sector, and increases in educational attainment. This transformation has not only increased women’s labor force participation rates but has also contributed to their greater representation in skilled occupations and managerial positions. The increasing visibility of women managers in organizations and their growing role in recruitment processes make it important to examine the criteria they consider important in personnel selection. Accordingly, women managers working as human resources managers in seven organizations operating in different sectors were selected as the sample of the study, and data were collected from them. The collected data were analyzed using the IMF-SWARA method, one of the multi-criteria decision-making methods.

The findings of this exploratory study indicate that “being trustworthy and moral” was considered the most important personnel selection criterion by the seven women human resources managers included in the sample. This finding suggests that the participating managers prioritized candidates’ commitment to moral values and trustworthiness over the other individual attributes examined in the study. In contrast, “analytical thinking and problem-solving ability” was rated as the least important criterion by the participants. However, these findings reflect only the assessments of the seven women human resources managers included in the study and should not be generalized to women managers more broadly.

Moreover, the participating managers ranked “conscientiousness”, “effective communication and empathy”, “adaptability to work conditions and teamwork”, “time management and setting priorities”, “commitment to the organization and the work”, “experience”, “openness to development and active learning”, and “effective use of technology” as important personnel-selection criteria, in descending order of importance. The findings suggest that the seven women

human resources managers included in this exploratory study prioritized not only technical knowledge and skills but also attributes reflecting candidates' organizational fit, sense of responsibility, and interpersonal relationships. In this respect, the study contributes to the literature by providing an exploratory assessment, using a multi-criteria decision-making method, of the personnel-selection criteria prioritized by the participating managers. These findings are specific to the study sample and should not be generalized to women managers more broadly.

On the other hand, the study provides empirical evidence that, together with the increasing representation of women in managerial positions, personnel selection processes may be shaped by different managerial priorities. The participants were recruited through a seminar titled "İstihdam Buluşması" (Employment Meeting), where survey invitations were distributed to 14 women managers working in human resources across different organizations; seven of these managers completed and returned the survey, corresponding to a response rate of 50%. This recruitment procedure, together with the resulting sample, gives rise to several limitations beyond the small sample size acknowledged above. First, the seven participating managers were drawn from different sectors, and the heterogeneity in sectoral context may have influenced the criteria they consider important, a possibility we cannot disentangle within the current design. Second, the sample was recruited entirely from organizations operating in Turkey, so the findings reflect a specific cultural and institutional labor-market context and should not be generalized to other countries without further validation. Third, participants were selected through purposive, seminar-based sampling rather than random or stratified sampling, which may introduce self-selection bias, as managers who chose to attend the seminar and complete the survey may differ systematically from non-participants. Fourth, the criterion weights are based on managers' self-reported judgments, which are subject to social desirability bias and may not fully correspond to the criteria actually applied in real hiring decisions. Finally, as noted above, the absence of a male-manager comparison group means that the observed priorities cannot be attributed to gender rather than to shared characteristics of the HR management profession. Future research employing larger, randomly sampled, cross-sectoral, and cross-national samples, together with

a male comparison group, would help address these limitations and strengthen the generalizability of the findings. In particular, because the study did not include a comparison sample of male managers, the findings cannot establish whether the observed criterion priorities are attributable to gender or to shared characteristics of the HR management profession; this distinction should be treated as an open empirical question rather than a conclusion of the present study. Therefore, future studies including different sectors, samples from different countries, and managers serving at different managerial levels will contribute to obtaining more comprehensive results regarding the subject. In addition, future research is recommended to comparatively examine the criteria that women and men managers consider important in personnel selection. In particular, it is anticipated that determining how "being trustworthy and moral", which was evaluated as the most important criterion by women managers in this study, and "analytical thinking and problem-solving", which was evaluated as the least important criterion, are evaluated by men managers will make significant contributions to understanding whether the priorities assigned to personnel selection criteria differ by gender and to further developing the relevant literature.

Finally, future research employing larger samples would improve the generalizability of the findings. Moreover, the use of different multi-criteria decision-making methods would enable the comparison of the findings and the assessment of the robustness of the results. In this context, future studies employing the Grey SWARA and Grey SIWEC (Simple Weight Calculation) methods are expected to make significant contributions to the literature. Additionally, applying alternative fuzzy weighting methods, such as the original Fuzzy SWARA, Fuzzy AHP, or Fuzzy BWM (Best-Worst Method), to the same or a comparable dataset would allow future research to cross-validate the criterion rankings obtained in this study and to assess the robustness of the results to the choice of weighting technique.

In addition, future studies could systematically test the sensitivity of the aggregated criterion weights to alternative Bonferroni Mean parameter values (e.g., $p, q \neq 1$) and to alternative aggregation operators, such as the arithmetic or geometric mean, in order to assess the extent to which the final ranking depends on the specific aggregation procedure adopted.

Competing Interests Statement

The authors declare that they have no competing interests.

Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Author Contributions

Conceptualization, N.K., M.D., D.T. and A.U.; methodology, A.U.; formal analysis, A.U.; investigation, N.K.; data curation, A.U. and N.K.; writing-original draft preparation, N.K., M.D., D.T. and A.U.; writing-review and editing, N.K., M.D., D.T. and A.U. All authors have read and agreed to the final version of the manuscript.

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