

Integrating the AHP and TOPSIS methods to select accounting staff

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ABSTRACT

This study aims to select accountants for a business in Vietnam. The study engaged in focused discussions with experts to establish the criteria for an accountant. Next, structured interviews were conducted with experts to collect data comparing each pair of criteria and expert scoring data for each candidate according to each criterion. Then, the Analytical Hierarchy Process (AHP) was applied to determine the weight W_j of each criterion of an accountant, and finally the TOPSIS method was applied to find the similarity coefficient with the ideal solution C_i^* for each candidate selection option. The result was that candidate A1 was selected because he had the highest C_i^* coefficient of 0.81479; at the same time, through the weighted results W_j of the criteria, it showed that experts highly appreciated the candidate for the following outstanding characteristics: communication skills ($W_1 = 0.4108$), professional skills ($W_4 = 0.2527$), and personal skills ($W_2 = 0.1613$).

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1. Introduction

Currently, Vietnam's economy is growing, businesses, especially private businesses, are growing stronger, and competition between businesses is also increasing. This means that employees in all industries in general, or an accountant in particular, who want to have a stable job position and develop themselves in a business, need to have the skills and characteristics to adapt to this practical change. The current labor market in the accounting field in Vietnam is in a state of supply being much larger than demand. This characteristic shows that businesses have many opportunities in choosing accountants when they have a need. On the other hand, the recruitment and selection of personnel in general or accountants in particular still has shortcomings; many candidates do not tell the truth about their skills and knowledge during interviews, or it is very difficult for employers to check and grasp the ability of candidates when they have never experienced a real working environment after being trained. Therefore, using which method to overcome these limitations and create fairness for candidates, helping businesses choose the best candidates, is an issue of concern to many experts and business owners. The Analytical Hierarchy Process (AHP) is a multi-criteria decision-making method that uses pairwise comparison matrices filled in by decision-makers using linguistic scales, allowing factors/variables to be weighted according to their importance (Shameem et al., 2018). The Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS) is a multi-criteria decision-making tool. This technique aims to determine the best option among the compared options by considering various evaluation criteria. The best alternative/solution must have the shortest distance to the positive ideal solution (PIS) and the longest distance to the negative ideal solution (NIS). TOPSIS is relatively simple and can provide a measure of relative evaluation between alternatives (Hwang & Yoon, 1981). This study uses a combination of the AHP method and the TOPSIS method to determine the weight of the criteria of an accountant and then determine the priority order of candidates according to the similarity coefficient compared to the ideal choice. A specific illustration at a business in Vietnam, in a real context, this business needs to choose a long-term accountant from 3 candidates with whom the business has previously signed a fixed-term employment contract.

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2. Literature review

Several studies have used a combination of AHP and TOPSIS for different purposes. Jiménez-Delgado et al. (2020) used a combination of AHP-TOPSIS to evaluate the process of innovation and integration of management systems in the logistics sector. The proposed management system consists of five stages: MCDM model design, application of the AHP method to calculate the relevance of criteria, use of the TOPSIS method to rank logistics companies, and identification of improvement opportunities. Arslan et al. (2021) applied a combination of AHP and TOPSIS to evaluate the Simav integrated geothermal energy system. In this study, the AHP method importance scale was used to determine the TOPSIS weights and obtain more optimal results. The study concluded that the best design was design 16, which is the solution that includes most of the utilities in Simav-IGES. With this design, the highest residential heating unit is 16,311, and the lowest electricity output is 41,153 kWh. Pishyar et al. (2020) integrated AHP and TOPSIS to assess desertification risk. The desertification risk indicators were identified and prioritized based on AHP, and then the TOPSIS technique was used to find the optimal desertification risk assessment. The results showed that the land use change index with a weight of 0.217 and annual rainfall with a weight of 0.166 were given the highest priority in desertification risk management and control. Marzouk & Sabbah (2021) used a combination of AHP and TOPSIS methods to select suppliers in the construction supply chain. In this study, interviews were held with experts who were practitioners with many years of experience in the field to determine the relative importance of the criteria collected through the AHP method; then the TOPSIS method was applied to evaluate suppliers in the construction supply chain based on the previously identified attributes. Iswari et al. (2019) used a combination of AHP and TOPSIS for supporting the decision of selecting excellent students. This study concluded that the combined AHP-TOPSIS method is better than the TOPSIS method. The Hamming distance of AHP-TOPSIS is smaller than that of the TOPSIS method, which shows that the distance of each criterion is similar and obtained as the decision result of an excellent student.

Studies on accountants are mostly studies on the skills of an accountant. These studies have shed light on some of the skills an accountant needs to have to meet the demands of the job. The professional skill of an accountant is the systematic recording of financial transactions, which is a service activity with the function of identifying, measuring, recording, and providing truthful information about the financial situation of the enterprise (Salome, 2012; Chaplin, 2017). In addition, accountants must master accounting principles and standards, the ability to synthesize and analyze financial data to interpret them to ensure compliance with legal regulations (Mohamed & Lashine, 2003). Personal skills are a good attitude, independent thinking, flexibility, initiative, time management ability, and positive thinking (Cernuşca, 2020; Ghani & Suryani, 2020). Personal skills are related to accountants' attitudes and behaviors such as self-management, initiative, creativity, and lifelong learning, along with professional knowledge, setting priorities, and anticipating and adapting to change (Barišić et al., 2022). An employee's teamwork skills are the ability to interact and cooperate with other members of the same group to carry out a task or plan set by the business. This is considered an important skill that directly and indirectly affects the long-term commitment of employees to the business (Gallie & colleagues, 2012; Derekoy, 2019). Teamwork skills affect an employee's ability to control work and personal judgment skills (Al Salman & Hassan, 2016). Communication skills are the ability of an employee to listen, observe, convey ideas, and empathize with colleagues or partners (Siriwardane & Durden, 2016). An accountant's communication skills directly affect their work performance and indirectly affect the decision-making of the business management (Rouwelaar et al., 2021). Tan & Laswad (2018) argue that good communication skills are the most valued behavioral skills by employers. This reflects the changing role of accountants, from those who often only face books and figures to dynamic business professionals. Technology skills are the ability to use and interact with technology tools and software (Nicolaeşcu et al., 2017; Jackson et al., 2023). Information technology skills are one of the essential skills that can help auditors address many of the work needs of accountants (Tan & Laswad, 2018). Managers/recruiters emphasize the importance of applying information technology and the ability to access new technologies such as blockchain, artificial intelligence, automation, and data analysis of accountants (Jackson et al., 2022).

This study approaches from another perspective, specifically the integrated use of the AHP and TOPSIS methods for selecting accountants.

3. Method

3.1. Analytic hierarchy process

The AHP method is specifically applied in group decision-making, prioritizing the selection of optimal options in all fields. AHP is a measurement technique that compares each pair of factors based on the judgment of experts followed by a specific direction to obtain factor priorities (Saaty, 2008). Dyer (1990) argued that the full use of AHP requires integration with the concept of multi-attribute utility theory. AHP allows for inconsistency in pairwise judgments (Bruno et al. 2012). AHP can help find the weights of the criteria used in the selection process. AHP can detect inconsistencies in the subjective decisions of the evaluators. In this method, priorities are obtained by comparing the relative importance of each pair of criteria instead of comparing all the criteria at once. By comparing the importance of each pair of criteria, priorities are established. In practical applications, the AHP method often requires performing multiple comparisons of the importance of each pair of criteria and redoing the entire process if the criteria or alternatives change (Falsini et al., 2012). A computationally simple, theoretically sound decision-making method supports the evaluation, analysis, and decision-making of given alternatives or the handling of multi-attribute decision-making problems (Aminbakhsh et al.,

2013).

According to Saaty & Vargas (1980), the AHP method consists of the following four steps:

Step 1: Identify the problem to be decided and select criteria.

Step 2: Establish the priority of the criteria by comparing each pair.

Step 3: Calculate the weights.

Step 4: Make the final decision on the selection.

In this study, the AHP method was only used up to Step 3, and the selection decision step was performed by TOPSIS. Step 1 of the AHP method was performed by reviewing the studies by Tan & Laswad (2018), Jackson & Associates (2023), Rouwelaar & Associates (2021), Jackson & Associates (2022), Mohamed & Lashine (2003), Salome (2012), Cernuşca (2020), Barišić & Associates (2022), Gallie & Associates (2012), Al Salman & Hassan (2016), Siriwardane & Durden (2016). Five skills of an accountant commonly mentioned in previous studies were selected in this study, which includes communication skills, technology skills, professional skills, personal skills, and teamwork skills.

Next, a focus group discussion with experts will follow immediately. The expert group consists of members from a business in Vietnam. These experts have been assigned to monitor the candidates from before until the time of evaluating the candidates, including 4 real experts and 1 virtual expert. The virtual expert here is understood as the evaluation result of the expert with the title of chief accountant that will be used twice, because this is the expert who interacts with the candidates the most during the time the candidates perform the fixed-term contract at the company, and after all, the selected candidate will be the one who interacts regularly with the chief accountant, so the evaluation of the chief accountant expert will be more interesting than other experts. For the five skills of an accountant preliminarily selected in this study, the experts participating in the discussion all agreed with them. At the same time, experts believe that reporting skills are essential skills for an accountant, so the reporting skills criterion should be included in the hierarchical model. Further explaining this, experts believe that accountants are responsible for synthesizing, processing, analyzing, and providing financial information of a business. This information and financial data are presented in the form of specific financial reports such as business performance reports, cash flow reports, and balance sheets. These reports play an important role, so the skills of writing and presenting reports are essential for an accountant. During the discussion, the experts paid special attention to communication skills and professional skills. Therefore, these are two skills that need attention. The expert group reached consensus on a list of criteria (Table 1), summarized the basic characteristics of each candidate (Table 2), and created a hierarchical model for prioritizing accountant selection (Fig. 1).

Table 1

List of criteria for selecting accountants

Criteria	Research Sources	Description
Communication skills	Rouwelaar et al. (2021) Siriwardane & Durden (2016) Tan & Laswad (2018)	Ability to listen, observe, and empathize; ability to use spoken language and body language to communicate employee ideas to colleagues, leaders, and partners.
Professional skills	Salome (2012) Mohamed & Lashine (2003)	Knowledge of law, application of accounting/auditing standards, methods of recording and synthesizing financial data to analyze and interpret to ensure compliance with legal regulations.
Technology skills	Jackson et al. (2022) Jackson et al. (2023)	Ability to access and use new technology equipment and accounting software to meet work needs.
Personal skills	Cernuşca (2020) Ghani & Suryani (2020) Barišić et al. (2022)	Good attitude, independent thinking, flexibility, proactive, time management skills, adaptability, and ability to work under pressure.
Teamwork skills	Gallie et al. (2012) Al Salman & Hassan (2016)	The combination of skills that an employee uses to contribute to the team is considered an important skill both in terms of direct impact and indirect impact through motivating employees to be more committed to the organization.
Reporting skills	Expert Discussion	The preparation and presentation of specific financial statements such as income statements, cash flow statements, and balance sheets.

Table 2

Summary of basic characteristics of each candidate from experts' comments

	Characteristic
Candidate 1	Very good communication skills, knows how to listen to leaders' opinions, good professional knowledge of accounting, good understanding of specialized software; however, teamwork ability and reporting skills are limited compared to the other 2 candidates.
Candidate 2	Relatively good communication skills, flexible thinking, professional knowledge of accounting, and the ability to use accounting software superior to the other 2 candidates, the ability to work in a team, and reporting skills at a fair level.
Candidate 3	Good communication skills, solid accounting knowledge, the ability to use accounting software, and reporting skills at a fair level, meeting job requirements, teamwork ability, and adaptability superior to the other 2 candidates.

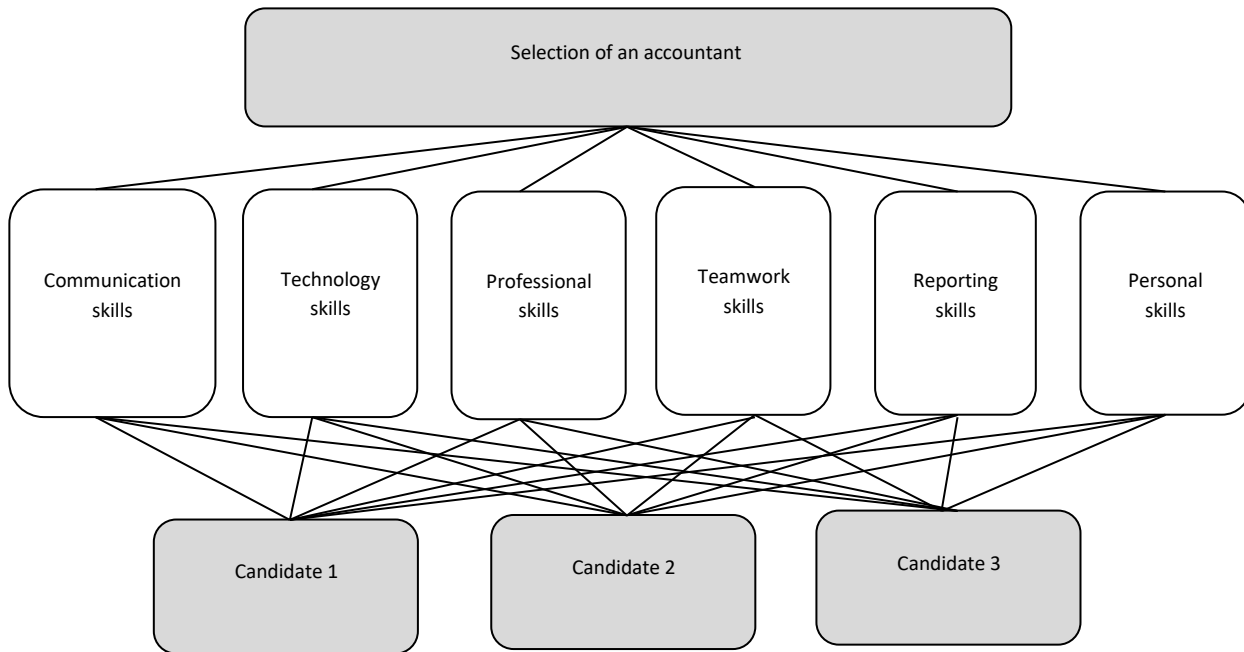


Fig. 1. Hierarchical diagram of accountant selection model

Point data collection will be conducted immediately after the hierarchical model is agreed upon. Data were collected by comparing the relative importance of each pair of criteria to an accountant. The scale used in the paired comparison questionnaire is presented in Table 3.

After prioritizing the criteria of an accountant based on their perception, the experts were asked to compare the importance of each pair of criteria. The data were then processed, and a matrix was constructed to compare the criteria (Table 4). The basic principle of data processing was to use the majority opinion of the experts when determining the more important criterion in each pairwise comparison. This majority consensus determined whether the weight should be placed to the left or right of 1 in the matrix.

The construction of the comparison matrix followed a systematic approach. If the weight assigned to a particular criterion was considered to be to the left of 1 (indicating greater importance), that value was entered directly into the matrix. Conversely, if the weight is evaluated to the right of 1, the inverse of that value is used. Completing this means that Step 2 of the AHP method has been performed.

Table 3

Pairwise comparison scale with AHP

Definition of importance	Explanation	Intensity
Extreme importance	An activity is overwhelmingly favored over another.	9
Very, very strong		8
Very strong	An activity is favored very strongly over another.	7
Strong plus		6
Strong importance	Experience and judgment strongly favor one activity.	5
Moderate plus		4
Moderate importance	Experience and judgment slightly favor one activity.	3
Weak or slight		2
Equal importance	Two activities contribute equally to the objective.	1

Source: Saaty (2008)

Table 4

Comparison matrix of criteria of an accountant

Tiêu chí	C1	C2	C3	C4	C5	C6
C1	1	3	5	2	7	9
C2	1/3	1	2	1/2	4	5
C3	1/5	1/2	1	1/3	2	3
C4	1/2	2	3	1	5	7
C5	1/7	1/4	1/2	1/5	1	2
C6	1/9	1/5	1/3	1/7	1/2	1

Note: C1 (Communication skills); C2 (Personal skills); C3 (Technology skills); C4 (Professional skills); C5 (Teamwork skills); C6 (Reporting skills).

Finally, calculating the weight of each criterion and checking for consistency is performed. This is step 3 of the AHP

method. The calculation tool used by the author is Excel software.

The calculation to find the vectors is performed on each matrix by adding the sum of the values of the matrix by column, then each value of the matrix will be divided by the sum of the values of the corresponding column, and the obtained value is replaced with the calculated value. The weight of each criterion (C1, C2, C3, ... Cn) will be equal to the average of the values in each horizontal row. The result is a 1-column matrix with n rows. The calculated value is only accepted when the consistency ratio $CR \leq 10\%$ (0.1); if the consistency coefficient is greater than 10%, the expert's comparison results must be checked again (Saaty, 2008). With CI, CR is calculated according to the following formula: CR consistency ratio: $CR = CI / RI$.

In which RI is the random consistency index (Table 5), and CI is the consistency index? $CI = (\lambda_{max} - n) / (n - 1)$. λ_{max} is the eigenvalue of the matrix, $\lambda_{max} = \sum_{i=1}^n wi \times \sum_{j=1}^n aij$.

Table 5
RI (Random Consistency Index)

n	1	2	3	4	5	6	7	8	9	10
RI	0	0	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.49

Source: Saaty (1984)

3.2. *Technique for Order of Preference by Similarity to Ideal Solution*

The TOPSIS method is one of the most widely used multi-criteria decision-making methods, which has attracted the attention of researchers (Çelikkilek & Tüysüz, 2020). There is a limitation of reversing the ranking when alternatives are added, the ranking depends on the relationship of the added alternative to the existing alternatives (García-Cascales & Lamata, 2012). The closeness of each alternative to the PIS is determined by the ratio of the distance from the NIS to the sum of the distances from the PIS and the NIS. The alternatives are then ranked according to the closeness index. In multi-criteria decision-making methods, joint models increase the power of the model and eliminate any drawbacks found in the classical multi-criteria decision-making technique. Joint models allow for the evaluation of different information that is evaluated based on conflicting and interrelated criteria in an uncertain environment (Zavadskas et al., 2016).

In this study, the selection decision step was performed by TOPSIS. The collection of each expert's assessment score data for each candidate will be performed. The evaluation scale is on a 100-point scale (lowest is 0 points and highest is 100 points). From the collected evaluation scores in this section, the author team will apply the TOPSIS method to find the C_i^* value of each candidate.

The calculation of coefficient C_i^* will be carried out in 6 steps.

Step 1: Build a decision matrix

The data for the experts' scores for each candidate in each criterion will be compiled and processed by the author team. The processing principle will take the average of the experts' scores for each candidate in each criterion. The decision matrix will have the following form:

$$X = \begin{bmatrix} X_{11} & \dots & X_{1n} \\ \vdots & \ddots & \vdots \\ X_{m1} & \dots & X_{mn} \end{bmatrix}$$

Where X_{ij} is the average value of the choice A_i corresponding to criterion C_j scored by the experts.

$$i = 1, 2, \dots, m$$

$$j = 1, 2, \dots, n$$

Step 2: Normalize the decision matrix

The normalization matrix has the following form:

$$R = [rij]_{m \times n}$$

Where $i = 1, 2, \dots, m$

$$j = 1, 2, \dots, n$$

The process of normalizing the decision matrix is performed according to the formula:

$$r_{ij} = \frac{x_{ij}}{\sqrt{\sum_{i=1}^m (x_{ij} \times x_{ij})}} \tag{1}$$

Step 3: Build a weighted normalization matrix

The weighted normalized matrix has the form $V = [v_{ij}]_{m \times n}$

where $i = 1, 2, \dots, m$

$j = 1, 2, \dots, n$

The weighted normalization matrix v_{ij} is product of each column of matrix r_{ij} with weight W_j . W_j is determined based on AHP method, $v_{ij} = r_{ij} \times w_j$

Step 4: Identify the positive ideal solution (PIS) and the negative ideal solution (NIS)

The ideal positive solution (PIS) : $A^+ = (v_{1+}, v_{2+}, \dots, v_{n+})$ with $v_{j+} = \{(\max j (v_{ij}), j \in J'; \min j (v_{ij}), j \in J'')\}$

Negative ideal solution (NIS) : $A^- = (v_{1-}, v_{2-}, \dots, v_{n-})$ with $v_{j-} = \{(\max j (v_{ij}), j \in J'; \min j (v_{ij}), j \in J'')\}$

Step 5: Calculate the distance of each candidate choice from PIS and NIS

The distance calculation from the selected option i to the positive ideal solution A^+ is given by the formula:

$$S_i^+ = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^+)^2} \tag{2}$$

The distance calculation from alternative i to the negative ideal solution A^- is given by the formula:

$$S_i^- = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^-)^2} \tag{3}$$

where $i = 1, 2, \dots, m$

$j = 1, 2, \dots, n$

Step 6: Calculate the similarity coefficient compared to the ideal solution of each candidate selection option (C_i^) and make a selection decision.*

$$C_i^* = \frac{S_i^-}{S_i^+ + S_i^-} \tag{4}$$

where $i = 1, 2, \dots, m$

$j = 1, 2, \dots, n$

Formulas (1), (2), (3), and (4) are used from the study of Menon & Ravi (2022). The selected candidate solution is the one with the largest similarity coefficient to the ideal solution (C_i^*).

4. Research result

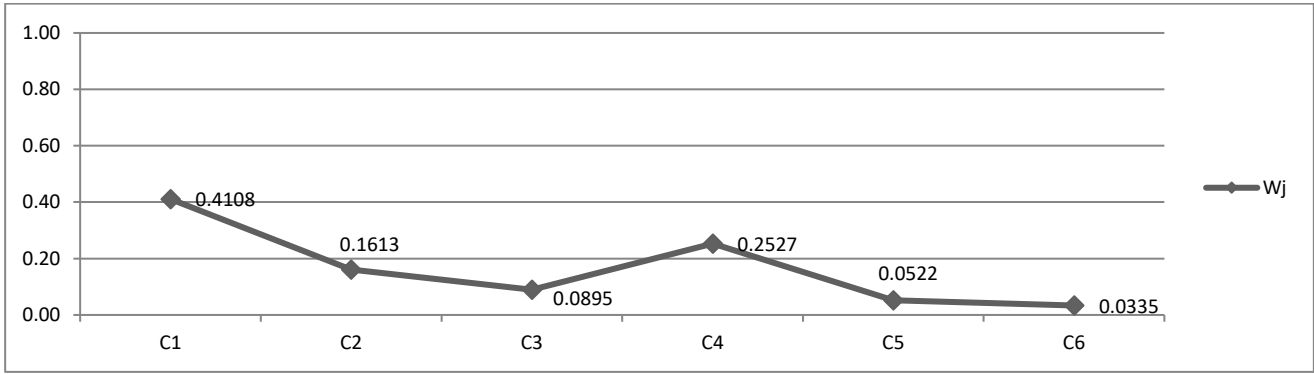
Weighted results W_j of the criteria

Table 6
Weighted results of criteria

Criteria	C1	C2	C3	C4	C5	C6	Weight W_j
C1	1	3	5	2	7	9	$W_1= 0.4108$
C2	1/3	1	2	1/2	4	5	$W_2= 0.1613$
C3	1/5	1/2	1	1/3	2	3	$W_3= 0.0895$
C4	1/2	2	3	1	5	7	$W_4=0.2527$
C5	1/7	1/4	1/2	1/5	1	2	$W_5=0.0522$
C6	1/9	1/5	1/3	1/7	1/2	1	$W_6=0.0335$

Note: C1 (Communication skills); C2 (Personal skills); C3 (Technology skills); C4 (Professional skills); C5 (Teamwork skills); C6 (Reporting skills).

$n= 6$; $\lambda_{max}= 6.0926$; $CI= \frac{\lambda_{max}-n}{n-1} = \frac{6.0926-6}{6-1} = 0.0185$; $CR= \frac{CI}{RI} = \frac{0.0185}{1.24} = 0.0149$. With value $CR = 0.0149 < 0.1$, so there is consistency in decision making.



Note: C1 (Communication skills); C2 (Personal skills); C3 (Technology skills); C4 (Professional skills); C5 (Teamwork skills); C6 (Reporting skills).

Fig. 2. Weight W_j of each criterion of an accountant

Through the weighted results W_j of each criterion of an accountant, it shows that the criteria selected by experts are communication skills, professional skills, and personal skills. In which the weight of the communication skills criterion is much higher than that of the remaining skills.

The decision matrix results are as follows:

Table 7

Decision Matrix

	C1	C2	C3	C4	C5	C6
A1	89	83	82	75	75	69
A2	80	92	92	76	77	77
A3	86	89	73	77	78	72

Note: C1 (Communication skills); C2 (Personal skills); C3 (Technology skills); C4 (Professional skills); C5 (Teamwork skills); C6 (Reporting skills); A1 (Candidate 1); A2 (Candidate 2); A3 (Candidate 3).

The normalized decision matrix results as follows:

Table 8

Normalized decision matrix

	C1	C2	C3	C4	C5	C6
A1	0.604	0.544	0.572	0.570	0.565	0.548
A2	0.543	0.603	0.642	0.577	0.580	0.611
A3	0.584	0.583	0.510	0.585	0.587	0.571

The weighted normalized decision matrix results as follows:

Table 9

Weighted Normalized Decision Matrix

	C1	C2	C3	C4	C5	C6
A1	0.248	0.088	0.051	0.144	0.029	0.018
A2	0.223	0.097	0.057	0.146	0.030	0.020
A3	0.240	0.094	0.046	0.148	0.031	0.019

Positive ideal solution (PIS) and negative ideal solution (NIS) results

Table 10

PIS and NIS results table

PIS	0.248	0.097	0.057	0.148	0.031	0.020
NIS	0.223	0.088	0.046	0.144	0.029	0.018

The distance results of each candidate selection option compared to PIS and NIS are as follows:

Table 11

Distance results table of each candidate selection option compared to PIS and NIS

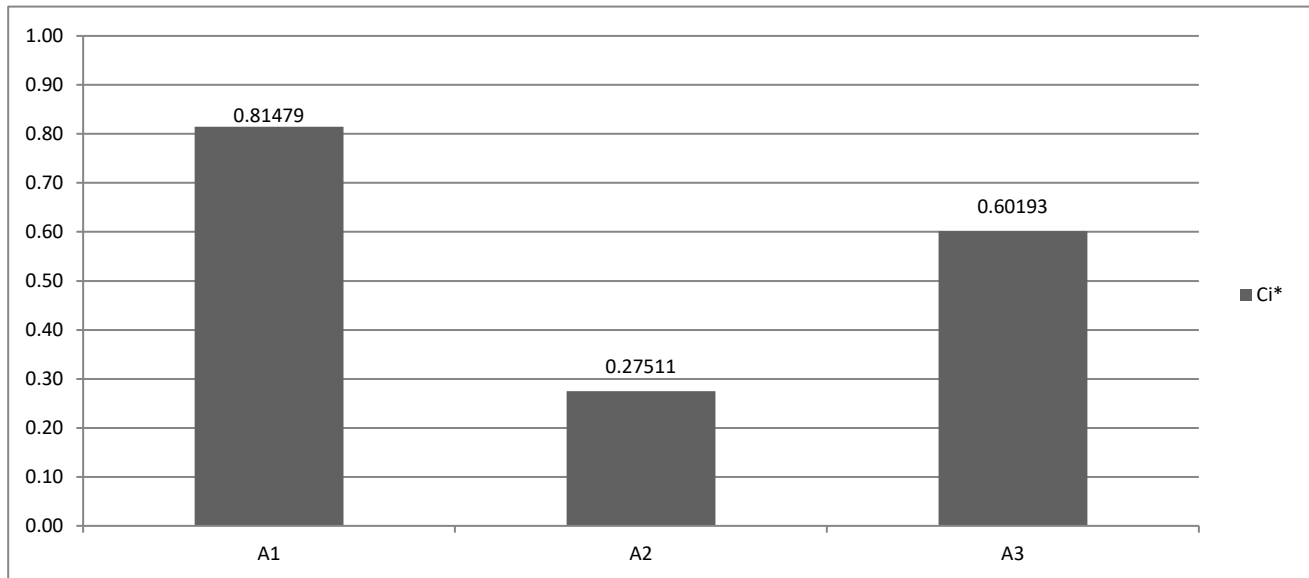
	$\sum S^+$	$\sum S^-$
A1	0.000150	0.000661
A2	0.000633	0.000240
A3	0.000223	0.000337

The results of the similarity coefficient compared to the ideal solution of each option (C_i^*) and the decision on the candidate selection:

Table 12

Results of the similarity coefficient compared to the ideal solution of each option (C_i^*)

	Value
Coefficient C_1^* corresponds to candidate A1	0.81479
Coefficient C_2^* corresponds to candidate A2	0.27511
Coefficient C_3^* corresponds to candidate A3	0.60193



Note: A1 (Candidate 1); A2 (Candidate 2); A3 (Candidate 3)

Fig. 3. Diagram showing the C_i^* coefficient of each candidate selection option

According to the results in Table 7, it can be seen that candidate A2 is rated higher by experts than candidate A1 in almost all criteria, specifically 5 criteria; however, in criterion C1 (Communication skills), candidate A1 is rated higher by experts. In terms of the number of criteria rated higher by experts, candidates A2 and A3 are equal, both with 3 criteria, or compared to candidate A1, candidate A3 is higher than A1 in this aspect, with 2 more criteria. However, the results of the C_i^* coefficient in Table 12 and the visual chart showing the C_i^* coefficient value in Fig. 3 show that the C_i^* similarity coefficient of the candidate A1 selection option is the highest, and candidate A1 is selected. This shows the superiority of the combination of AHP and TOPSIS methods, which can help managers make logical and optimal decisions. If the decision-making is somewhat emotional, it is very difficult to choose candidates appropriately. At the same time, through the above research results, it can be seen that business managers often give special priority to accountants with good communication skills, which can be considered the most important prerequisite skill of interest to employers and business managers.

5. Conclusion and Policy implications

5.1. Conclusion

This study can be considered as a basic premise in selecting accountants. This study used a combination of the AHP method and the TOPSIS method to select accountants for a business in Vietnam. There were 3 candidates evaluated by experts based on different criteria through the weights W_j of the criteria determined by the AHP method. Next, the group of authors determined the coefficient C_i^* of each candidate selection option through the steps of the TOPSIS method. Finally, the selected candidate was candidate A1, with the highest similarity coefficient compared to other candidates, the value $C_1^* = 0.81479$. At the same time, through the weights W_j of the criteria, it showed that experts highly appreciated the candidate's outstanding skills in the following skills: communication skills, professional skills, and personal skills.

5.2. Policy implications

For business administrators

In the selection of accounting personnel, managers need to focus on candidates with outstanding skills such as communication skills, professional skills, and personal skills; especially communication skills need to be prioritized as a prerequisite in selecting accounting personnel for the enterprise. In training and developing human resources, business managers need to focus on fostering and improving the skills of accountants through training, regular training courses,

and enhancing the communication skills of accountants through developing groups in the company to meet the increasing requirements of the job as well as gradually perfecting the necessary skills in the work of accountants.

For students majoring in accounting

During the time in school, this is an important time for students to be exposed to and absorb the necessary skills to meet the job requirements after graduation. Students should focus on absorbing knowledge in school and specialized knowledge in the field of accounting. At the same time, they should increase social activities, help themselves interact better with the community, and improve communication skills; these are necessary preparations for students to be exposed to the real working environment after graduation.

For organizations and schools that provide specialized training in accounting

It is necessary to focus on building a streamlined training program, increasing cooperation with businesses to create conditions for students to have practical spaces at businesses, and helping students to be exposed to real work right from when they are still in school. At the same time, it is necessary to increase extracurricular activities, helping students interact more with the outside environment and interact with the community to help students improve their communication skills.

5.3. Limitation

This study has some limitations as follows: The experts participating in the study are experts in a business in Vietnam; the assessment perspective of the experts is personal. This study was conducted with a small number of experts. In the future, scholars and researchers can combine the AHP method and the TOPSIS method to select accountants in a different scope, use a larger sample size and number of candidates, or apply a combination of the AHP method and the TOPSIS method for other research subjects such as selecting company leaders, selecting a coach for a football team, and selecting investment projects, etc.

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