IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XVI, Issue: 1, Year: 2026, pp. 119-137

Selection of Customs Representatives for Sustainable Export Operations

İsmail METİN[1]
M. Enes AKPINAR[2]
Ahmed Y. SARIHAN[3]

Received: 22.08.2025, Accepted: 03.05.2026
DOI Number: 10.5281/zenodo.20518346

Abstract

Customs representatives play a critical role in import and export operations as they act as a bridge between companies and the government. Working with the right custom's representative saves companies time, money, and reputation. At this point, choosing the best customs representative is of utmost importance. The aim of this study is to identify the most important criteria for selecting the right customs representative, especially to ensure the sustainable execution of export operations, and to define the ideal profile of a customs representative based on these criteria. To determine the objective weights of the evaluation criteria, the Multi-Criteria Decision-Making (MCDM) methods CRITIC and MOORA were applied. The results indicate that the most important criteria are References, Service Quality, Technology Usage/Digitalization, and Information Security. Furthermore, the analysis revealed that companies C and D, which meet these criteria, achieved the highest scores in the evaluation.

Key words: International Trade, Customs Representatives, Customs Operations, MCDM, Critic, Moora

JEL Code: D81, F14, Q27, Q56

1. Introduction

There are numerous foreign trade policies implemented by countries to protect their interests and producers, to gain competitive advantage, and to ensure the secure transit of goods in trade flows. The implementation of these policies is based on specific laws. These laws are mostly related to the operational aspects of

[1] Assoc.Prof., Manisa Celal Bayar University, Turkiye, ismail.metin@cbu.edu.tr, https://orcid.org/0000-0002-2256-7169
[2] Assoc.Prof., Bakırcay University, Turkiye, enes.akpinar@bakircay.edu.tr, https://orcid.org/0000-0003-0328-6107
[3] Assoc.Prof., Bandırma Onyedi Eylul University, Turkiye, asarihan@bandirma.edu.tr, https://orcid.org/0000-0001-7119-9852

foreign trade. For example, operations based on foreign exchange transfers—namely, payments—are subject to exchange regulations; logistics operations are governed by transportation regulations; and operations related to imports and exports are based on foreign trade legislation. At this point, the laws governing the procedures that goods are subject to during their transit across national borders are defined by customs regulations (Vanhoeyveld et al., 2020). It can be stated here that enterprises may lack the human resources necessary to manage processes in compliance with all relevant regulations, or that ensuring such compliance would require employing an excessively large number of personnel. As a result, the majority of enterprises prefer to outsource services from experts specialized in each area of regulation, rather than employing such extensive internal resources.

By its very nature, international logistics operations are already carried out through outsourced transportation services (Layaoen et al., 2023). Operations partially based on foreign trade regulations and those based on exchange regulations are typically conducted through banks. This leaves a portion of foreign trade legislation and customs regulations, which arguably constitute the most complex part of the process. At this stage, one of the unsung heroes behind the timely, smooth, and efficient execution of international trade operations is the customs representatives (Antov, 2020). This is because customs representatives must not only be well-versed in domestic customs regulations but also understand the international trade laws that vary depending on the source or destination country (Antov, 2023). Naturally, such a profession requires both substantial experience and resources.

This profession, which undertakes significant responsibilities in carrying out critical foreign trade operations and generates income from these demanding tasks, has become a key consideration for companies seeking to ensure the smooth execution of their foreign trade processes. In practice, many businesses are unable to directly represent themselves in customs procedures due to the lack of a sufficiently experienced and competent customs representative. In such cases, customs representatives act on behalf of the companies that appoint them through indirect representation, conducting foreign trade and customs operations in their name and on their behalf (Baş, 2016). Consequently, for companies engaged in foreign trade, the decision to work with the right customs representative becomes crucial. A poor choice of customs representatives can lead to serious consequences such as operational delays, failure to complete transactions, non-payment, or even loss of international reputation, of which are far-fetched scenarios. Despite their critical importance and significant role in business life, scientific research on customs representatives remains extremely limited. In this context, the aim of this study is to identify the most important criteria for selecting the right customs representative, especially to ensure the sustainable execution of export operations, and to define the ideal profile of a customs representative based on these criteria. To achieve this aim, Multi-Criteria Decision-Making Methods (MCDMM) will be employed.

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: 1X, Issue: X, Year: 202X, pp. 119-137

2. Theoretical Framework

The complex structure of international trade, as emphasized in the introduction of this study, indicates that technical competence alone is not sufficient for businesses to succeed in their foreign trade operations. Today, managing foreign trade activities through sustainability-based, institutionalized, and strategically grounded approaches has become almost a necessity. At this point, especially in areas such as customs procedures, which are subject to extensive legal regulation and involve unique risk resorting to customs representation, a form of outsourcing appears to be a clear and effective solution. As such, the selection of customs representatives is no longer merely an operational decision. A proper selection can influence the competitiveness of the business, its legal standing, and the sustainability of its operational performance. This complexity also necessitates that the theoretical framework of this study incorporates multiple theories. Naturally, the relevance of these theories to the subject and to each other will be presented in a synthesized manner, thereby providing a theoretical justification for the research.

To begin with, attention must be directed toward the available resources. Businesses that resort to customs representatives typically do so because they either lack the internal human resources required to handle such tasks or because performing them in-house would involve high costs and the full assumption of associated risks. The Resource-Based View (RBV) approaches such decisions as a matter of strategic resource management (Ristyawan et al., 2023). Proposed by Barney (1991), this perspective argues that firms need to possess and effectively manage resources that are valuable, rare, inimitable, and non-substitutable in order to gain a competitive advantage. Therefore, when firms lack the internal resources necessary to manage foreign trade processes (Leonidou, 2000), customs representatives become the critical external resources they rely on. This issue becomes even more significant for small and medium-sized enterprises (SMEs), for whom creating or managing such a resource internally points to a more critical concern: cost (Wu et al., 2023). In fact, considering that such operations also require substantial time and effort—not just money, it is fair to say that the cost of direct representation would be even higher. But does this mean that businesses relying on customs representatives as external resources face no cost? This is precisely where a different theory comes into play.

Transaction Cost Theory (TCT) can be considered a complementary framework to RBV in this context. According to TCT, outsourcing such a function requires careful consideration of certain factors, including the frequency of transactions, their asset specificity, and the level of uncertainty involved (Williamson, 1985). One of the core arguments of TCT is that processes such as negotiation and contracting impose additional burdens on the firm (Rindfleisch, 2020). Given that customs representatives operate through direct negotiations and contractual agreements, and that customs procedures inherently involve uncertainty and risk, it seems reasonable to outsource these processes. However, in doing so, the fees demanded by customs representatives may themselves become a cost factor

and thus a key selection criterion. These costs can escalate significantly, especially in cases of selecting an inappropriate customs representative or facing penalties related to direct representation (Rbehat ve Marafi, 2024). Therefore, customs representatives must not only possess expertise but also be competent enough to minimize costs effectively and efficiently, while instilling a sense of trust.

Customs representatives serve as a bridge between government customs authorities and exporting firms. This role is based on an indirect relationship. As such, a principal-agent relationship is established between firms and these professionals, who are utilized as external resources and are expected to operate with a cost-oriented perspective. Agency Theory (Jensen & Meckling, 1976) suggests that such relationships may involve monitoring challenges and potential conflicts of interest. One example is the initial distrust firms (Matinheikki et al., 2022) may have regarding whether customs representatives will conduct operations properly and in accordance with the law. Therefore, reputation-based indicators such as the customs representative's references, transparency reports, or Authorized Economic Operator (AEO) status may become highly significant selection criteria (Caballini ve Benzi, 2023). At this point, Institutional Theory (DiMaggio & Powell, 1983) comes into play. From the perspective of this theory, the relationship between customs representatives and the firms they represent is shaped not only by their mutual negotiations but also by institutional pressures such as international regulations and legal frameworks. Such institutional pressures, especially those that companies are legally obliged to comply with—may require firms to assess (Sahin ve Mert, 2023) whether potential customs representatives meet these expectations. In other words, a competent customs representative must be well-versed in multiple regulatory systems and capable of interpreting changes in them effectively. Alternatively, they should have a strong team of employees capable of doing so on their behalf.

Finally, beyond the dimensions of resources, costs, representation, and institutional pressures, it is believed that the issue of sustainability—one of the most prominent focal points of the modern era—should also be addressed from a theoretical perspective. The Triple Bottom Line (TBL) approach (Elkington, 1998) argues that businesses should not focus solely on economic aspects but also consider their social and environmental performance. Accordingly, customs representatives must demonstrate environmental sensitivity, especially considering global developments such as the European Green Deal (EGD)adhere to ethical principles and be mindful of their societal impact (Hereu-Morales et al., 2024). When assessed within the TBL framework, customs representatives are expected to act diligently in areas such as paperless declaration systems, the use of recyclable documentation, respect for employee rights, and maintaining the sustainability and reputation of companies' export relationships.

Considering all these theoretical perspectives, it can be stated that the selection of customs representatives holds critical importance in areas that may initially appear independent but in fact have complementary effects at various levels. In the next section, scientific studies focusing on selection criteria will be presented.

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: 1X, Issue: X, Year: 202X, pp. 119-137

3. Literature Review

Before presenting the findings of the literature review conducted in this study, it is important to explicitly delineate the research gap that motivates this work. Existing studies on customs representatives remain limited, and, more critically, no prior research has systematically examined the selection of customs representatives within a rigorous analytical or empirical framework. In other words, extant literature lacks any scientifically grounded investigation into the criteria used by firms engaged in international trade when selecting customs representatives. Only one study indexed in the Web of Science database addresses customs representation, and it does so solely within the narrow scope of import operations (Fruscione, 2022). This absence reveals not merely a gap in empirical evidence but a deeper theoretical and methodological void. Despite the central role of customs representatives in ensuring regulatory compliance, operational efficiency, and cost management in international trade, their selection has been largely overlooked as a strategic decision problem.

Accordingly, this study positions the selection of customs representatives as a multi-criteria decision-making (MCDM) problem and aims to develop a structured, analytically robust framework for evaluating alternative representatives. By doing so, it contributes to the literature in three keyways: (i) by introducing a previously unexamined decision domain, (ii) by integrating insights from outsourcing and international trade theories, and (iii) by providing a practical decision-support model for export firms. In terms of its scientific contribution, the most valuable aspect of this study is expected to be its potential to address and help close this gap.

Due to the scarcity of research specifically focused on customs representatives, it is necessary to draw on adjacent literature, particularly studies examining the use of external resources and the selection of third-party service providers by exporting firms. From a theoretical perspective, this study conceptualizes customs representatives as both strategic resources and agency-based intermediaries, thereby linking the analysis to the resource-based view (RBV) and agency theory.

Liang et al. (2025) argue that outsourcing fosters innovation and enhances export performance, particularly in service exports. Dardati and Saygili (2021) demonstrate that outsourcing can contribute to a firm's environmental positioning. Garcia-Vega and Huergo (2021) highlight the strategic nature of outsourcing decisions in the internationalization process, while Canello (2022) suggests that outsourcing may serve as a mechanism for capability acquisition through imitation. Veeramani and Anam (2021) further emphasize the growing importance of digital outsourcing in the post-pandemic expansion of service exports.

However, a critical limitation of these studies is that they treat outsourcing decisions at a general level and do not differentiate between distinct types of intermediaries. Customs representatives—despite their regulatory and operational significance—have not been conceptualized as a distinct analytical category. This study addresses this limitation by explicitly incorporating customs representation into the outsourcing decision framework.

Within this context, customs representation can be understood as a specialized form of outsourcing that has the potential to enhance exporter efficiency, ensure compliance with complex regulatory frameworks, support environmentally sustainable trade practices, and facilitate international market expansion. Unlike conventional outsourcing decisions, the selection of customs representatives involves unique institutional and regulatory considerations, which necessitate a tailored set of evaluation criteria. Identifying and structuring these criteria constitutes a core contribution to the present study.

Outsourcing decisions in export firms often extend beyond customs representation to include logistics, insurance, and financial services. Among these, the selection of logistics service providers has received considerable attention in literature.

Tu et al. (2021) identify delivery reliability, cost, service quality, and technological capability as key criteria using MCDM methods. Tren and Do (2021) emphasize operational capacity and human resources, while Abbasi et al. (2024) highlight price, delivery time, flexibility, and reliability. Gupta et al. (2022), employing a fuzzy AHP-TOPSIS approach, incorporates environmental sustainability dimensions such as green operations and recycling practices. Although these studies provide a valuable foundation, their direct application to customs representative selection is limited. Customs representation entails additional dimensions—such as regulatory expertise, documentation accuracy, and compliance capability—that are not fully captured in logistics-focused models. This study extends the existing criteria sets by incorporating these domain-specific factors into an integrated evaluation framework.

Similarly, insights can be drawn from studies on insurance and banking service selection. Masake and Lipinge (2021) highlight the role of social and behavioral factors, while Mourmouris and Poufinas (2023) demonstrate the importance of policy attributes in insurance selection through MCDM methods.

These findings reinforce the relevance of structured decision-making approaches in selecting external intermediaries, particularly when such decisions have significant implications for firm performance and risk management. From the perspective of customs representation, the range and conditions of services offered can be seen as analogous to insurance policies, in that they define the scope of responsibility and liability.

Finally, existing MCDM studies in the export domain primarily focus on market selection, export performance, and logistics decisions, as summarized in

Table 1. Notably, none of these studies address the selection of customs representatives, thereby underscoring the novelty of the present research. By introducing customs representative selection as a new application area for MCDM methods, this study broadens the analytical scope of the literature and opens new avenues for future research.

Table 1. Brief Summary of Export and MCDM Literature

Authors and Year	**Scope of the Study**	**Methodology**
Sharkasi et al., 2023	Export potential analysis of Vietnamese bottled coconut water	AHP, M-CRITIC-RP, Gravity Model
Özekenci, 2024	International market selection in iron and steel sector	FUCOM, LOPCOW, SPOTIS, RSMVC, CoCoSo, Borda
Öztürkçü, 2025	Target market selection for dried apricot exports from Türkiye	Entropy, ARAS, CAPMA
Baena-Rojas et al., 2023	International market selection in SMEs producing coffee	Hybrid MCDM with qualitative validation
Baki, 2024	Market selection for Turkey's fig exports	CAPMA
Nguyen et al., 2022	Selection of cold chain logistics providers in Vietnam	Grey AHP, Grey COPRAS
Özaytürk & Özekenci, 2024	Trade competitiveness in the global textile sector	IDOCRIW, MABAC, MAIRCA
Özekenci, 2023	Export performance of metropolitan cities in Turkey	CRITIC, MULTIMOORA, WASPAS
Unal & Metin, 2021	Factors influencing Incoterms® selection	Fuzzy AHP (FAHP)
Sadeghi et al., (2021)	Export performance of SME's	Fuzzy AHP

Source: Composed by Authors

As demonstrated in Table 1, MCDM methods have been successfully applied across a wide range of export-related decision problems. Building on this methodological foundation, the present study develops and applies an MCDM-based model specifically tailored to the evaluation of customs representatives. This approach not only ensures methodological rigor but also enhances the practical relevance of the findings for decision-makers in export firms.

Despite the growing body of literature on outsourcing and logistics provider selection, the proposed model in this study differs from existing approaches in several important aspects. First, unlike prior studies that focus primarily on logistics providers or general outsourcing decisions, this study explicitly conceptualizes customs representatives as a distinct and critical decision-making domain. Second,

while previous studies employ various MCDM techniques, they do not integrate the selection of customs representatives within a sustainability-oriented export framework. Third, the proposed model combines the CRITIC method for objective weighting with the MOORA method for ranking, providing a data-driven and bias-minimized evaluation structure specifically tailored to customs representation. Finally, this study incorporates domain-specific criteria such as regulatory compliance capability, documentation accuracy, and institutional pressures, which are not sufficiently addressed in existing models. These distinctions position the proposed framework as both a novel application and a methodological contribution to literature.

4. Methodology

In this section, information about the CRITIC and MOORA methods is provided, and analyses are performed.

4.1. CRITIC Method

The CRITIC method is an MCDM technique used to determine the objective weights of evaluation criteria. Developed by Diakoulaki et al. (1995), the CRITIC method is particularly useful in scenarios where subjective judgments might introduce biases, as it relies on the intrinsic properties of the data to assign weights to criteria. This method considers both the contrast intensity of each criterion and the conflict or correlation between criteria, thus providing a comprehensive approach to weight determination.

The CRITIC method involves several steps:

1. Normalization: The first step in the CRITIC method is to normalize the decision matrix. This is being done to bring all the criteria to a comparable scale. The normalized value r_{ij} of each element is calculated using the formula:

$$r_{ij} = \frac{x_{ij} - \min(x_j)}{\max(x_j) - \min(x_j)} \tag{1}$$

2. Standard Deviation Calculation: The standard deviation σ_j of each criterion is then calculated. This measures the contrast intensity or the degree of differentiation of each criterion:

$$\sigma_j = \sqrt{\frac{1}{n}\sum_{i=1}^{n}(r_{ij} - \bar{r_j})^2} \tag{2}$$

3. Correlation Coefficient Calculation: The correlation coefficient ρ_{jk} between criteria j and k is calculated to assess the degree of conflict between criteria:

$$\rho_{jk} = \frac{\sum_{i=1}^{n}(r_{ij} - \bar{r_j})(r_{ik} - \bar{r_k})}{\sqrt{\sum_{i=1}^{n}(r_{ij} - \bar{r_j})^2 \sum_{i=1}^{n}(r_{ik} - \bar{r_k})^2}} \tag{3}$$

4. Information Content Calculation: The amount of information provided by each criterion *Cj* is then determined. This considers both the standard deviation and the correlation with other criteria:

$$C_j = \sigma_j \sqrt{\sum_{k=1}^{m} (1 - \rho_{jk})} \tag{4}$$

5. Weight Calculation: Finally, the weight w_j of each criterion is calculated by normalizing the information content values:

$$w_j = \frac{C_j}{\sum_{j=1}^{m} C_j} \tag{5}$$

4.2. MOORA Method

MOORA method was introduced by Willem Karel Brauers and Edmundas Kazimieras Zavadskas in 2006 with their work named "Control and Cybernetics". The feature that distinguishes this method from other methods is that it takes all criteria into the evaluation framework, considers all interactions between alternatives and criteria at the same time, and uses objective and non-directional values instead of subjective weighted normalization. The most important conditions to be considered when applying this method are that the data are up-to-date and all relationships between the data are considered. However, the results obtained by applying different MOORA methods should be evaluated together. (Karaca, 2011, p.24).

MOORA Method Stages

The MOORA method, which enables the rankings obtained because of different MOORA methods (Ratio Method, Reference Point Matrix and Significance Coefficient) to be evaluated according to their dominance, increases the consistency of the studies. The steps of the MOORA method are as follows; (Brauers et al., 2008, p.248; Brauers and Ginevicius 2010, p.15; Önay and Çetin 2012, p. 94-95; Karaca, 2011, p.26)

Step 1. Preparing the Decision Matrix:

While creating the decision matrix, alternatives were placed in its rows and criteria in its columns.

Step 2. Application of the normalization process:
By dividing the criteria related to the square root of the sum of the squares of each alternative, the normalization process is realized.

$$r_{ij} = \frac{w_{ij}}{\sqrt{\sum_{i=1}^{j} w_{ij}^2}} \quad (6)$$

$i = 1,2,\ldots\ldots,m$ number of alternative
$j = 1,2,\ldots\ldots, n$ number of criteria

Step 3. Ratio Approach:

It is determined and summed according to whether the criteria in the normalized decision matrix are maximum or minimum. The collected minimum criteria values are subtracted from the collected maximum criteria values.

$$y_i^* = \sum_{j=1}^{g} x_{ij}^* - \sum_{j=g+1}^{n} x_{ij}^* \quad (7)$$

y_i^*; i is the normalized evaluation of the alternative for all purposes. the process is completed by sorting y_i*s.

Step 4. Reference Point Approach:

For each criterion; If the criterion is maximum, the maximum points, if the criterion is minimum, the minimum points are determined, and the maximum criterion reference points, ie r_j's, are determined. The distance values from each point x_{ij}^* to these determined points are found and these values are prepared as a matrix again.

$$r_j - X_{ij}^* \quad (8)$$

$i = 1,2,\ldots\ldots,m$ number of alternative
$j = 1,2,\ldots\ldots, n$ number of criteria
x_{ij}^* = Normalized value of alternative i in criterion j,
$r_j = j$ indicates the reference point of criterion.

Tchebycheff min - max metric operation is applied to the created matrix. Thus, the sorting of the alternatives is done.

$$\left\{ maksj\left(\left| r_j - x_{ij}^* \right| \right) \right\} \quad (9)$$

Step 5. Significance Coefficient Approach:

This approach assumes that the criteria do not affect alternatives to the same degree. In the normalized data obtained by the Ratio Approach, various priorities were given to the criteria, and the values of the alternatives were calculated with the formula below.

$$\ddot{y}_j^* = \sum_{i=1}^{i=g} s_i x_{ij}^* - \sum_{i=g+1}^{i=n} s_i x_{ij}^* \quad (10)$$

$\ddot{y}_j$ = evaluation of the normalized j alternative for all purposes

s_i = importance weight of criterion i

x_{ij}^* = normalized value of alternative i in criterion j,

$i = 1,2,3,\ldots\ldots,g$ maximizing criteria

$i = g+1, g+2, g+3,\ldots,n$ minimization of criteria

5. Findings

In the increasingly competitive field of international trade, the selection of an appropriate customs representative firm is a strategic decision that directly affects the efficiency, cost, and reliability of import–export operations. Customs representatives act as intermediaries between companies and government agencies, managing the complex documentation, regulatory compliance, and operational procedures required for cross-border trade. Given the diversity of available service providers, companies must evaluate multiple, and often conflicting, criteria to identify the most suitable partner. In this study, the decision-making process involves ten distinct criteria, encompassing cost-oriented factors (e.g., Commission Fee), performance measures (e.g., Transaction Time, Service Quality), operational capabilities (e.g., Technical Knowledge Level, Technology Usage/Digitalization), and trust-based factors (e.g., References).

The evaluation process incorporates the judgments of five decision-makers (DMs), each providing scores for all criteria based on their expertise and experience, as presented in Table 1. Due to the subjective nature of such evaluations and the potential variability among decision-makers, the CRITIC method is employed to objectively determine the relative importance (weights) of each criterion. Unlike subjective weighting approaches, the CRITIC method derives weights based on the statistical properties of the decision matrix. Specifically, it considers two key components: (i) the standard deviation of each criterion, which reflects its discriminating power, and (ii) the correlation between criteria, which captures the level of conflict or redundancy among them. Criteria with higher variability and lower correlation with others are assigned greater weights, as they provide more unique information for the decision-making process. The calculated weights and the application steps of the CRITIC method are presented in Table 2, ensuring a transparent and data-driven weighting procedure.

The evaluation process was conducted with the participation of five experts who have professional experience in foreign trade and customs operations. These experts include practitioners such as export managers, logistics specialists, and customs consultants. Each decision-maker independently evaluated the criteria based on their knowledge and experience using a numerical scale. The individual evaluations were then aggregated to form the decision matrix used in the CRITIC and MOORA analyses. This approach ensures that the model reflects both practical expertise and analytical rigor.

Subsequently, the MOORA method is applied to rank the alternative customs representative firms. This approach normalizes the performance matrix, incorporates the derived weights, and distinguishes between benefit and cost criteria to calculate an overall utility score for each alternative. The combination of CRITIC and Multi-MOORA provides a robust MCDM framework that minimizes bias and maximizes consistency in the evaluation process.

K1 – Commission Fee (Cost): The fee charged for the service provided, usually expressed as a percentage of the transaction value or a fixed amount. In decision-making, this is considered a cost criterion, meaning lower values are preferable.

K2 – Transaction Time (Speed): The duration required to complete a service or process from start to finish. Shorter transaction times increase efficiency and customer satisfaction.

K3 – Payment Terms (Cash/Deferred): The agreed conditions under which payments are made, such as paying upfront (cash) or after a certain period (deferred). Flexible and favorable terms can improve financial planning for clients.

K4 – Level of Technical Knowledge: The expertise and competence in the relevant technical field, often reflected in qualifications, certifications, and experience. A higher level of technical knowledge ensures more accurate and effective service delivery.

K5 – Information Security: Measures and practices that protect sensitive data from unauthorized access, breaches, or misuse. Strong information security safeguards client trust and comply with legal standards.

K6 – Service Quality: The overall standard of the provided service, including reliability, responsiveness, and meeting client expectations. High service quality leads to stronger customer loyalty.

K7 – Communication (Response Speed to Inquiries): The promptness and effectiveness in replying to customer questions or requests. Faster and clearer communication enhances client satisfaction and trust.

K8 – Technology Usage / Digitalization: The extent to which modern technologies and digital tools are used in operations. Effective technology adoption improves efficiency, reduces errors, and supports innovation.

K9 – Accessibility (Within/Outside Working Hours): The ease of reaching the service provider both during and beyond standard working hours. Greater accessibility increases flexibility and client convenience.

K10 – Number of Employees: The size of the workforce available to handle tasks and provide services. While more employees may improve capacity, it should align with operational efficiency.

K11 – References (Personal Recommendations): Endorsements or referrals from previous clients, colleagues, or trusted contacts. Strong references build credibility and reduce perceived risk for new clients.

Table 2: Decision Matrix

Criteria	*DM1*	*DM2*	*DM3*	*DM4*	*DM5*
K1	78	62	41	61	54
K2	91	50	63	100	86
K3	68	50	83	83	90
K4	54	63	69	64	83
K5	82	92	77	88	94
K6	47	75	41	66	91
K7	100	79	99	98	9
K8	60	63	60	81	42
K9	78	42	72	67	76
K10	97	61	51	99	90
K11	58	92	97	55	46

Source: Authors' Calculations

According to Table 3, the highest weight was assigned to K11 (References) 0.1774. This indicates that references (recommendations/referrals) carry the most information in this evaluation and are therefore the most important criterion. The second most important criteria are K6 (Service Quality) ≈ 0.1331 and K8 (Technology Usage/Digitalization) ≈ 0.1240. The lowest weight was assigned to K5 (Information Security): 0.0460.

Table 3: CRITIC Weights

Criteria	Standard deviation	Cj	Weight
K1	12.0233	137.8073	0.0898
K2	18.5796	159.4232	0.1039
K3	14.5794	118.0955	0.0770
K4	9.5205	92.7701	0.0605
K5	6.1514	70.5023	0.0460
K6	18.2866	204.2169	0.1331
K7	8.5650	82.6323	0.0539
K8	16.4365	190.1628	0.1240
K9	13.0537	104.4595	0.0681
K10	12.6111	101.9427	0.0664
K11	20.7711	272.1605	0.1774

Source: Authors' Calculations

Since the weights of the proposed method are calculated, the MOORA steps are applied to the decision matrix. The decision matrix is provided in Table 4.

Table 4: Decision Matrix

Alternatives	1	2	3	4	5	6	7	8	9	10	11
A	0	00	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
C	0	0	0	00	00	00	00	00	00	0	00
D	0	00	00	00	00	00	00	0	00	0	00
E	0	0	0	0	00	0	0	0	0	0	0

Source: Authors' Calculations

In this table (Table 4) five different customs brokerage firm and the criteria evaluation data are provided.

Table 5: Normalized values

Alt	1	2	3	4	5	6	7	8	9	10	11
A	.425	.512	.449	.367	.300	.412	.359	.396	.436	.421	.412
B	.567	.307	.449	.420	.400	.360	.359	.528	.387	.758	.412
C	.354	.461	.449	.525	.500	.515	.513	.660	.484	.421	.515
D	.354	.512	.561	.525	.500	.515	.513	.132	.484	.084	.515
E	.496	.409	.280	.367	.500	.412	.462	.330	.436	.252	.360

Source: Authors' Calculations

The MOORA normalized step is applied, and the calculated values are provided in Table 5.

Table 6: Weighted Normalized Matrix

Alt	1	2	3	4	5	6	7	8	9	10	11
A	.038	.053	.034	.022	.013	.054	.019	.049	.029	.028	.073
B	.050	.031	.034	.025	.018	.047	.019	.065	.026	.050	.073
C	.031	.047	.034	.031	.023	.068	.027	.081	.032	.028	.091
D	.031	.053	.043	.031	.023	.068	.027	.016	.032	.005	.091
E	.044	.042	.021	.022	.023	.054	.024	.040	.029	.016	.062

Source: Authors' Calculations

The weighted normalized matrix is provided in Table 6. And Benefit-Cost calculations are provided in Table 7.

Table 7: Benefit-Cost Calculations

Alt	Σ benefits	Σ Cost	Utility
A	0.378019	0.038243	0.339824
B	0.393108	0.050973	0.342182
C	0.467800	0.031863	0.435972
D	0.393852	0.031863	0.362023
E	0.340621	0.044599	0.296061

Source: Authors' Calculations

According to Table 7, the final MOORA evaluation results are provided, and the best score belongs to alternative C with a 0.43597 score. D is the second-best alternative with a 0.36202 score. B, A, and E are the other best Alternatives sequentially.

These results provide actionable insights for managers by clearly indicating which type of customs representative profile should be preferred under multiple criteria. Firms can directly interpret the ranking results as a decision-support output for real-world partner selection.

6. Conclusions

The European Union's customs brokerage sector is contracting because of the implementation of the electronic customs environment. This transformation implies that only the most capable customs brokers will remain competitive. In an optimal context, customs brokers should possess not only specialized knowledge in customs procedures but also competencies in facilitating international trade, managing supply chains, handling financing and financial transactions, addressing security concerns, and ensuring regulatory compliance (Gwardzińska, 2014: 68). Over the past 20 years, digitization efforts have been underway at Turkish customs, and the "single window system" has been successfully implemented. In this context, customs consultants who keep up with current regulations and make good use of technology will stand out in the competition.

In this study, the criteria that are effective in selecting the best customs consultant for sustainable export operations were determined using the Critic method. The best customs consultant with these criteria was identified using the Moora method. The results indicate that the most important criteria are References, Service Quality, Technology Usage/Digitalization, and Information Security. Furthermore, the analysis revealed that companies C and D, which meet these criteria, achieved the highest scores in the evaluation.

This study makes several contributions to existing literature, practice, and policy. From an academic perspective, it enriches the body of research on sustainable export operations by integrating the CRITIC and MOORA methods into the evaluation and selection of customs representatives, an area that has received

limited scholarly attention. For practitioners, the findings offer a structured framework for identifying the most critical criteria—References, Service Quality, Technology Usage/Digitalization, and Information Security, thereby enabling firms to make more informed decisions when selecting customs representatives. From a policy standpoint, the results provide insights that can guide the development of regulations and support mechanisms aimed at enhancing the quality and competitiveness of customs services.

This research was conducted within the context of Turkiye, focusing exclusively on the identification of the most suitable customs representative firms for sustainable export operations. The analysis employed only two Multi-Criteria Decision-Making (MCDM) techniques—CRITIC and MOORA—which may limit the generalizability of the findings. Future studies applying different methodological approaches or conducted in other geographical contexts may yield varying results.

From a practical standpoint, the findings of this study can directly support firms in selecting customs representatives by providing a clear prioritization of evaluation criteria. For instance, firms can use the identified weights to construct their own evaluation scorecards and compare alternative service providers systematically. The results also suggest that decision-makers should prioritize references, service quality, and digital capabilities when shortlisting customs representatives. In addition, the proposed model can be integrated into corporate decision-support systems, enabling firms to make faster, more transparent, and data-driven outsourcing decisions in international trade operations.

Future research could explore the use of alternative or hybrid MCDM methods to validate and compare the robustness of the findings. Moreover, studies might expand the scope by incorporating qualitative insights from industry experts to complement quantitative assessments. For firms, it is recommended to place particular emphasis on the four key criteria identified in this study when evaluating potential customs representatives. Policymakers are encouraged to design incentive mechanisms that promote technology adoption, service quality improvement, and data security standards among customs service providers.

REFERENCES

Abbasi, S., Sıcakyüz, Ç., Santibanez Gonzalez, E. D. R., and Ghasemi, P. (2024). A systematic literature review of logistics services outsourcing. Heliyon, 10, e33374.

Antov, M. (2020). The Role and Importance of Customs Representation to the Old Customs Control System in the Republic of Bulgaria. World Customs Journal, 14(1), pp. 17-30.

Antov, M. (2023). Challenges to Customs Imposed by the New European Union Value-Added Tax Rules on Cross-Border E-Commerce–the Case of Bulgaria. World Customs Journal, 17(1), pp. 33-53.

Baena-Rojas, J. J., Morales-Alonso, G., and Navarro-García, A. (2023). International market selection for SMEs: A hybrid multi-criteria decision model. Journal of Small Business Strategy.

Baki, R. (2024). Evaluating and classifying market alternatives using the CAPMA technique to assess potential export volume: an application for Turkey's fig exports. British Food Journal, 126(8), pp. 3301-3315.

Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), pp. 99–120.

Baş, M. N. (2016). Gümrük Müşavirlerinin Mesleki Faaliyetleri Kapsamında Dolaylı Temsil Yetkileri ve Hukuki Sorumlulukları. Hacettepe Hukuk Fakültesi Dergisi, 6(1), pp. 193-212.

Caballini, C., and Benzi, M. (2023). Fast Corridors: innovative customs processes and technology to increase supply chain competitiveness. The case of IKEA Italy. Transportation Research Interdisciplinary Perspectives, 21, 100909.

Canello, J. (2022). Mimetic isomorphism, offshore outsourcing and backshoring decisions among micro and small enterprises. Regional Studies, 56(5), pp. 719–736.

Dardati, E., and Saygili, M. (2021). Are exporters cleaner? Another look at the trade-environment nexus. Energy Economics, 95, 105097.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. American Sociological Review, 48(2), pp. 147–160

Elkington, J. (1998). Cannibals with Forks: The Triple Bottom Line of 21st Century Business. Gabriola Island, BC: New Society Publishers.

Fruscione, A. (2022). 'Import Operations into the European Union Require Established Operators (Or Identification of an Indirect Customs Representative)', 17, Global Trade and Customs Journal, Issue 6, pp. 255-258.

García-Vega, M., and Huergo, E. (2021). Organization of R&D outsourcing: Asymmetric cross-effects between locations. Journal of Economics & Management Strategy, 30(3).

Gupta, A., Singh, R. K., and Mangla, S. K. (2022). Evaluation of logistics providers for sustainable service quality: Analytics based decision making framework. Annals of Operations Research, 315, pp. 1617–1664.

Gwardzińska, E. (2014). The Role of Customs Brokers in Facilitating International Trade, World Customs Journal, 8(1), pp. 63-70.

Hereu-Morales, J., Segarra, A., & Valderrama, C. (2024). The European (Green?) Deal: A systematic analysis of environmental sustainability. Sustainable Development, 32(1), pp. 647-661.

Jensen, M. C., and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3(4), pp. 305–360.

Layaoen, H. D. Z., Abareshi, A., Abdulrahman, M. D. A., and Abbasi, B. (2023). Sustainability of transport and logistics companies: an empirical evidence from a developing country. International Journal of Operations & Production Management, 43(7), pp. 1040-1067.

Lee, J. W., Park, J. H., and Lee, H. S. (2018). Logistics service provider selection with risk criteria using fuzzy AHP and TOPSIS. The Asian Journal of Shipping and Logistics, 34(4), pp. 330–337.

Leonidou, L. C. (2000). Barriers to export management: an organizational and internationalization analysis. Journal of International Management, 6(2), pp. 121-148.

Liang, W., Yu, W., and Yao, X. (2025). Does the development of the service outsourcing industry enhance green product exports? Energy Economics, 149, 108727.

Maseke, B. F., and Iipinge, D. N. (2021). Factors influencing clients in choosing insurance companies. Open Access Library Journal, 8, e6944.

Matinheikki, J., Kauppi, K., Brandon–Jones, A., and van Raaij, E. M. (2022). Making agency theory work for supply chain relationships: a systematic review across four disciplines. International Journal of Operations & Production Management, 42(13), pp. 299-334.

Mourmouris, J., and Poufinas, T. (2023). Multi-criteria decision-making methods applied in health-insurance underwriting. Health Systems, 12(1), pp. 52-84.

Nguyen, N. A. T., Wang, C. N., Dang, L. T. H., Dang, L. T. T., and Dang, T. T. (2022). Selection of cold chain logistics service providers based on a grey AHP and grey COPRAS framework: a case study in Vietnam. Axioms, 11(4), pp. 154.

Özaytürk, İ., and Özekenci, E. K. (2024). Analysis of Trade Competitiveness of the World's Leading Textiles Exporters by Hybrid MCDM Methods. İşletme Araştırmaları Dergisi, 16(1), pp. 166-186.

Özekenci, E. K. (2023). Analysis of metropolitan cities export performance in Turkey by integrated MCDM methods. Dicle Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, (34), pp. 89-118.

Özekenci, E. K. (2024). İnternational market selection based on integrated mcdm methods: a case study of iron and steel sector. Selçuk Üniversitesi Sosyal Bilimler Meslek Yüksekokulu Dergisi, 27(1), pp. 274-293.

Öztürkçü, N. (2025). Evaluation of potential alternative markets for dried apricot exports using the CAPMA technique: An application to Türkiye. Tarım Ekonomisi Dergisi, 31(1), pp. 77-90.

Rbehat, A. M., and Marafi, H. B. (2024). The role of customs process in facilitating international trade. Saudi Journal of Business and Management Studies, 9(1), pp. 7-14.

Rindfleisch, A. (2020). Transaction cost theory: past, present and future. AMS Review, 10(1-2), pp. 85-97.

Ristyawan, M. R., Putro, U. S., and Siallagan, M. (2023). Decision making mechanism in resource-based theory: A literature review, synthesis, and future research. Cogent Business & Management, 10(2), 2247217.

Sadeghi, H., Naderi, A., and Zolfaghari, A. (2021). Export performance measurement in SMEs: A contingency and analytic hierarchy approach. Journal of Global Marketing, 34(2), pp. 100–115.

Sahin, K., and Mert, K. (2023). Institutional theory in international business studies: the period of period of 1990–2018. International Journal of Organizational Analysis, 31(5), 1957-1986.

Sharkasi, A., Van Tran, T. H., and Nguyen, T. T. T. (2023). Market potential assessment for Vietnam's bottled coconut water exports using hybrid MCDM models and gravity model. Heliyon, 9(5), e14864.

Tran, T. T., and Do, Q. H. (2021). Critical factors affecting the choice of logistics service provider: An empirical study in Vietnam. Journal of Asian Finance, Economics and Business, 8(4), 145–150.

Tu, L., Lv, Y., Zhang, Y., and Cao, X. (2021). Logistics service provider selection decision making for healthcare industry based on a novel weighted density-based hierarchical clustering. Advanced Engineering Informatics, 48, 101301.

Unal, T. D., and Metin, I. (2021). Do the factors affecting Incoterms® selection differ for exporters and importers? A fuzzy analytical hierarchy process (FAHP) application. LogForum, 17(2).

Vanhoeyveld, J., Martens, D., and Peeters, B. (2020). Customs fraud detection: Assessing the value of behavioural and high-cardinality data under the imbalanced learning issue. Pattern Analysis and Applications, 23(3), pp. 1457-1477.

Veeramani, S., & Anam, A. (2021). COVID-19 Impact on Exports of Services: Opportunities, Challenges and Suggestions for India. FIIB Business Review, 10(4), pp. 315–326.

Williamson, O. E. (1985). The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting. New York: Free Press.

Wu, Q., Yan, D., and Umair, M. (2023). Assessing the role of competitive intelligence and practices of dynamic capabilities in business accommodation of SMEs. Economic Analysis and Policy, 77, 1103-1114.