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Identifying Effective Indicators In Managing Customer Complaints Using AHP: Crude Oil Industry In Iraq

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Abstract

Customer complaints serve as a valuable source of market intelligence, enabling companies to address the root causes of problems and improve their products and services. Businesses can enhance customer satisfaction and overall organizational performance by leveraging customer feedback. Accordingly, the purpose of this research was to identify the key factors affecting the management of customer complaints and their prioritization in Iraq's oil industry. The present research is a mixed method in terms of data collection (qualitative-quantitative). First, semi-structured interviews with 8 experts were conducted in the qualitative part. To find themes, qualitative data from reviewing theoretical foundations and interviews with experts were coded and categorized using theme analysis. Then, in the quantitative part, the AHP method and Expert Choice software were used to prioritize the factors. For this purpose, the paired comparison questionnaire was distributed among 20 people. The results of the quantitative analysis showed that the factors affecting customer complaints respectively include 5 main-categories of customer-related factors, factors related to product performance, factors affecting personnel, and process-related factors and at last management-related factors.

Keywords: Customer Complaint Management, Customer Relationship Management, Crude Oil Products.

1. Introduction

In today's era, with ever-changing market conditions, retaining existing customers has become more important than attracting new ones. Based on the evaluations made by Çetinkaya & Durukan, (2020) it seems that the process of re-acquiring lost c¹ustomers requires 5 times more time and energy. This underscores the strategic imperative for businesses to prioritize customer satisfaction and relationship-building initiatives to not only fortify their customer base but also mitigate the resource-intensive nature of reacquisition efforts. So, customer satisfaction is a crucial aspect of business success, as it directly impacts customer loyalty, repeat purchase behavior, and positive word-of-mouth recommendations (Rohmayati, & Hidayat, 2022). Customer satisfaction refers to the level of fulfillment that customers experience after utilizing a company's products or services

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(Angelova, & Zekiri, 2011). Customer satisfaction is an emotional response that occurs when a customer's evaluation of a product exceeds their expectations (Ram et al., 2011). The concept of customer satisfaction in the business-to-business market is different from the B2C market and evaluates the health of customer relationships (Ata, & Toker, 2012). On the other hand, in today's highly competitive market, where customers have numerous options available to them, businesses must prioritize customer satisfaction in order to differentiate themselves from their competitors. By cultivating lasting customer relationships, businesses can navigate the complexities of the contemporary market landscape and position themselves for sustained success. Customer Relationship Management (CRM), plays a crucial role in achieving this objective. CRM encompasses various strategies and technologies that enable businesses to effectively manage their interactions with customers and potential customers. It provides the opportunity for the company to establish a long-term and profitable relationship with its customers (Peker, 2022). One important aspect of CRM is customer complaint management, which presents an opportunity for companies to address customer concerns and improve their overall experience. By promptly and effectively addressing complaints, businesses can not only resolve issues but also demonstrate their commitment to customer satisfaction (YENEN, & KIZGIN, 2022). The services and products of the company must be based on the needs and wants of the customers, because if the customer is dissatisfied with the products and services, the behavior that is called complaining behavior will appear. But it is important that the company can manage customer dissatisfaction and anger to prevent it from spreading to other customers (Johnston, 2017). Due to the difficulty of attracting new customers, the importance of good relations with them, promoting sales in competitive conditions, it is necessary to have an efficient system for managing customer complaints (Omidi et al., 2022). The competitive advantage of some companies is achieved because of the companies' attention to customer complaints and efforts to resolve them, not because of the services they provide (Ghazzawi, & Alharbi, 2019). Complaint management leads to the growth and development of the company, and the company's appropriate response to complaints can turn customer dissatisfaction into satisfaction (Ferguson, & Johnston, 2011).

The global energy sector is undergoing a swift transformation that carries extensive consequences for various stakeholders in the energy industry, such as oil companies and nations heavily reliant on oil exports (Fattouh, 2019). As, Oil industry plays a pivotal role in the Iraqi economy, it is crucial to emphasize the significance of customer satisfaction and the establishment of continuous and stable relationships with them. This is because customer satisfaction and relationship management are essential components in ensuring long-term success and sustainability in the oil sector, which in turn significantly impacts the overall Iraqi economy. In the context of the oil industry, customer satisfaction refers to meeting and exceeding the expectations and needs of various stakeholders, including buyers, distributors, and other entities involved in the value chain (Vandapuye, 2018). By focusing on customer satisfaction, oil companies can enhance their reputation, attract new customers, and foster loyalty among existing ones. Satisfied customers are more likely to continue their business relationships with oil companies, leading to increased sales and revenue. Furthermore, establishing continuous and stable relationships with customers is vital for the oil industry due to its unique characteristics and long-term nature of operations. Oil companies often engage in complex and capital-intensive projects that require substantial investments over extended periods. Therefore, maintaining strong relationships with customers, built on trust, reliability, and effective communication, becomes crucial for securing long-term contracts, ensuring a stable demand for oil products, and mitigating market uncertainties. According to the things stated in the research, we aim to identify the factors affecting customer complaints and to prioritize them based on the combination of decision-making methods using the AHP hierarchical analysis process

2. Theoretical Background

Service quality plays a substantial role in influencing the operational efficiency and level of customer satisfaction. In the realm of marketing, customer satisfaction has gained utmost importance as it directly shapes customer behavior, including repeat purchases, positive word-of-mouth referrals, and long-term loyalty (Gelbrich, Gäthke, & Grégoire.2015). Nowadays, Meeting customer demands has become increasingly challenging due to the diverse nature of customer preferences and the heightened consumer awareness observed in recent years. As a result, it has become more difficult to satisfy customers, leading to higher levels of customer dissatisfaction (Hsiao et al., 2016). When customers experience dissatisfaction, their responses are influenced by a multifaceted decision-making process that encompasses various factors. These factors include the type of problem encountered, the initial expectations of the customer, the emotional state of the customer, the consideration of costs and benefits, as well as the existing relationship between the customer and the service provider. The interplay of these elements shapes how customers choose to respond to their dissatisfaction (Nimako & Mensah, 2014). Among various customer responses to dissatisfaction, complaints stand out as a constructive and active approach that offers opportunities for service recovery and improvement (Nimako & Mensah, 2014; Ro, 2015). Unlike other responses that may not contribute to resolving the issue, complaints provide valuable feedback and present companies with strategic benefits. By actively voicing their concerns, customers highlight areas that need improvement, allowing companies to address the specific problem and enhance their overall service quality. Furthermore, effectively handling complaints can lead to increased customer satisfaction, loyalty, positive word-of-mouth, and an improved company reputation. Thus, embracing and successfully managing complaints can be advantageous for companies in the long run. Addressing complaints and improving services has been recognized as an effective and efficient approach that not only resolves issues related to customer dissatisfaction but also enhances customer loyalty and subsequently improves company profitability (Molinillo et al.,. 2022). Failure in service delivery and the subsequent response of a company to rectify the situation reflects a sensitive state within the organization, demonstrating its attentiveness towards customers and exhibiting a desired level of responsiveness to their concerns. This signifies the company's commitment to its customers and its dedication to strengthening the relationship with them. Customer engagement is of utmost importance in building the brand of service-oriented organizations. Considering that effectively addressing complaints can lead to increased customer satisfaction and loyalty, a significant portion of research has focused on understanding customer satisfaction through complaint handling. Customer satisfaction with complaint handling serves as an evaluation of how a service company has addressed an issue. Satisfaction with complaint handling is an effective and efficient tool for reducing customer agitation and maintaining brand-customer relationships (Yang et al., 2015). Maintaining positive relationships with customers is a requirement for continuity in the highly competitive market of the new age (Hassan et al., 2015). Customer relationship management is a macro-strategic tool that aims to create and maintain relationships with customers in order to maximize profits (Ata, & Toker, 2012). Customer relationship management can be defined as a strategic approach that involves managing interactions with existing and potential customers to maximize customer satisfaction and loyalty. It encompasses various activities such as customer segmentation, targeting, acquisition, retention, and relationship enhancement. By focusing on understanding customer needs and preferences, businesses can tailor their offerings accordingly (Zulyanti, & Irawan, 2023). So, the main issue addressed in the research is the "Customer Complaint Model in the Oil Industry of Iraq. Furthermore, Table 1 presents some studies conducted in the field of customer complaint management.

Table 1. Background related to customer complaints

| Title | Researchers/Years | Findings |
|-------------------------------|----------------------|--|
| The Effect of Complaint | Jusuf, H.(2015) | The findings indicated that |
| Handling Towards | | improving customer |
| Customers Satisfaction, | | complaints leads to |
| Trust And Loyalty To | | increased customer |
| Bank Rakyat Indonesia | | satisfaction with the |
| (Bri) Southeast | | respective organization and |
| Sulawesi | | its suppliers. Furthermore, |
| | | this practice fosters |
| | | customer loyalty and trust |
| | | in the organization in |
| | G 1 (2015) | question. |
| Managing complaints to | Cambra et al.,(2015) | In this study, a conceptual |
| improve customer | | framework is proposed |
| profitability | | where the impact of three |
| | | organizational responses to |
| | | customer complaints (timeliness, compensation |
| | | (timeliness, compensation, and communication) on |
| | | improving customer |
| | | profitability is contingent |
| | | upon the strength of the |
| | | relationship and the type of |
| | | failure. The results indicate |
| | | that (1) different complaint |
| | | handling initiatives have |
| | | varying effects on |
| | | customer profitability for |
| | | different segments of |
| | | complaining customers, |
| | | and (2) these |
| | | heterogeneous responses to |
| | | complaint handling are |
| | | explained by differences in |
| | | relationship direction and |
| A novel framework for | Using at al. (2016) | failure type. This paper introduces a |
| | Hsiao et al.,(2016) | framework that combines |
| customer complaint management | | the decision tree approach, |
| management | | a data mining tool, with |
| | | Six Sigma methodology to |
| | | analyze customer |
| | | complaints on a broader |
| | | scale and enhance service |
| | | quality by identifying and |
| | | resolving the root causes of |
| | | service failures. The |
| | | findings revealed a |
| | | substantial 60% reduction |
| | | in the number of customer |
| | | complaints reported, |
| | | indicating immediate |

| | | positive impacts. Furthermore, long-term benefits are anticipated as a result of the implemented improvements. |
|---|---|--|
| Kumar & Kaur (2020) | Complaint management-review and additional insights | This study sheds light on the current state of complaint management research in the marketing discipline and serves as a foundation for further advancements in this area. The study emphasizes the importance of efficient complaint management, which can serve as a competitive advantage for businesses. Overall, this paper aims to consolidate knowledge, identify research gaps, and inspire future investigations into complaint management practices. |
| Turning Complaining Customers into Loyal Customers: Moderators of the Complaint Handling— Customer Loyalty Relationship | Morgeson et al.,(2020) | Customer loyalty is higher in rapidly growing economies that require more competition, as well as for luxury products. Additionally, customers' expectations of product/service reliability differ for goods produced for men compared to women. |
| Why should you respond to customer complaints on a personal level? | López-López et al.,(2021) | A personal response to a complaint, as compared to a non-personal and organizational response, contributes to a more favorable brand image and leads to an intention to purchase. |

| The Effect of Complaint Management Performances of Businesses on Customers' Repurchasing Intention: A Research on Bank Customers | YENEN, S., & KIZGIN,(2022) | The study's findings indicated that the performance of businesses in managing customer complaints directly impacts customers' intentions to make repeat purchases. Moreover, customers' lifestyle and loyalty were identified as influential factors in assessing the effectiveness of customer complaint management. Furthermore, the study revealed that the impact of customer complaint management performance on repurchase intentions is mediated by customer |
|--|----------------------------|--|
| Presenting a model for industrial marketing customer complaint management in home appliance industry | Omidi et al.,(2022) | loyalty. In the home appliance industry, the study identified 60 indicators and 10 main variables for effective customer complaint management. These variables include tracking customer feedback, understanding customer behavior, identifying customer expectations, engaging with customers, promoting positive employee behavior, implementing an efficient grievance system, enhancing product performance, prioritizing customer satisfaction, providing compensatory measures, and demonstrating commitment and timely response. |

With a review of the research background, it was generally found that limited studies have been conducted on the customer complaint management model in the field of oil industry. Most of the conducted research has primarily focused on consumer markets and final consumers. However, considering the limited number of studies in this area, the present research aims to take a step forward in filling the research gap and addressing the deficiencies in existing studies.

3. Methodology

The present research is a mixed method in terms of data collection (qualitativequantitative). First, in qualitative part, in order to identify the factors affecting the management of customer complaints in the Iraqi oil industry, semi-structured interviews using purposive sampling with 8 experts were conducted until theoretical saturation. To find themes, qualitative data from reviewing theoretical foundations and interviews with experts were coded and categorized using theme analysis. Then, in the quantitative part, the AHP method and Expert Choice software were used to prioritize the factors. For this purpose, the paired comparison questionnaire was distributed among 20 people. In order to ensure the validity of the research in qualitative part, the researcher has used methods of triangulation of data sources and review by colleagues. Triangulation of data sources refers to the use of multiple sources of data to analyze the same phenomenon. It means to obtain our findings from different channels so that we can better judge the correctness of the obtained findings. For this purpose, three main sources, i.e. oil industry executives, faculty members, and theoretical and research literature about customer complaint management were used to collect data in order to obtain more comprehensive information from various sources involved in the topic. Also, review by colleagues has been done. In this method, the data analysis process and the obtained results are provided to experts and colleagues who participate during the research to provide the correctness and accuracy of the process and results (Khaki, 2014). If they are satisfied with the process and the results obtained, it is possible to ensure the validity of the analysis and results. To ensure the validity of the quantitative part of the questionnaire, face validity was also used, for this purpose, the questionnaire was shown to the professors and its accuracy was ensured.

4. Findings

4.1. Qualitative part

In this part, in relation to the B2B customer complaint management in the crude oil industry in Iraq, purposive interviews have been conducted until reaching theoretical saturation. The respondents' demographic characteristics of the qualitative section are presented in the table 2.

Table 2. Demographic characteristics of qualitative interviews

| Row | gender | education | position | tenure |
|-----|--------|--------------------|-------------------------------|--------|
| 1 | Male | Bachelor of | Manager of Petroleum | 20 |
| | | Petroleum | products distribution | |
| | | engineering | | |
| 2 | Male | Bachelor | Vice President of Oil | 20 |
| | | | Extraction Company | |
| 3 | Male | Master's degree | Auditor and controller of gas | 10 |
| | | | products | |
| 4 | Male | Bachelor of | Production and Operations | 16 |
| | | Petroleum | Manager | |
| | | Engineering | | |
| 5 | Male | Ph.D. | Supervisor of production and | 13 |
| | | | operations department | |
| 6 | Male | Master's degree in | Supervisor | 18 |
| | | Oil and drilling | | |
| 7 | Female | Bachelor | Supervisor of Laboratory and | 17 |
| | | | quality control | |
| 8 | Male | Bachelor | Laboratory | 12 |

By analyzing the findings derived from the relevant literature and conducting interviews with industry experts and managers within the crude oil indutry, the following themes were identified as influential factors in customer complaints within the oil industry in Iraq:

Table 3. The themes resulting from the interviews.

| Initial code | Sub-category | Main-category |
|--|------------------------|---------------------|
| reinforcing a positive customer | Interaction with | Factors related to |
| relationship, Keep customers informed | customers | customers |
| about the progress of their complaints, | | |
| Be transparent about any challenges or | | |
| delays, offer alternative solutions or | | |
| compensation if applicable, Utilize | | |
| various communication channels | | |
| Express appreciation for customer | Pursuing the voice of | |
| feedback, Seek feedback on the | customers and | |
| complaint handling process, Categorize | remedial actions | |
| and prioritize customer complaints based | | |
| on their severity and impact, Regularly | | |
| monitor and analyze customer feedback, | | |
| Establish a culture of continuous | | |
| improvement in complaint management | | |
| processes | | |
| Personnel's knowledge and Training, | Personnel expertise | Factors related to |
| Problem-Solving Skills, Personnel | 1 croomier expertise | employee |
| should have a deep understanding of the | | chipioyee |
| company's products or services, Expert | | |
| personnel should be open to continuous | | |
| learning and staying updated with | | |
| industry trends, A large number of | | |
| engineering specialties, but average staff | | |
| have more knowledge, Incompetence of | | |
| laboratory workers, Lack of training of | | |
| workers and development of their | | |
| petroleum skills | | |
| Frequent holidays for employees | Increase the | _ |
| working in the laboratory, Not | motivation of | |
| appreciating the outstanding work of the | personnel | |
| person in charge, Provide opportunities | personner | |
| for personnel to enhance their skills and | | |
| knowledge, Grant personnel a certain | | |
| level of autonomy and decision-making | | |
| _ | | |
| authority, The work environment is not suitable for | Suitable work | + |
| oil works, The presence of noise and | environment | |
| sounds close to the laboratory that affect | CHVIIOIIIICIIL | |
| a job in the workplace, The presence of | | |
| 1 7 | | |
| carbon dioxide is a poisonous and | | |
| harmful gas, Health workers were | | |
| affected by their prolonged presence in | | |
| the laboratory | Tashniasl susliku su 1 | Footoms malate d.t. |
| Implement robust quality control | Technical quality and | Factors related to |
| processes, Ensure that products adhere to | product standard | product |
| applicable regulations, industry | | |

| standards, and legal requirement, Provide | | |
|--|-------------------------|--------------------|
| training and development opportunities | | |
| to personnel involved in product | | |
| manufacturing and quality control, | | |
| Conduct regular internal audits to assess | | |
| adherence to product quality standards | | |
| and identify areas for improvement | | |
| Efficient Supply Chain Management, | Timely delivery of | |
| Production Planning and Scheduling, | the product | |
| Utilize technology and real-time tracking | the product | |
| systems to monitor the progress of | | |
| product shipment, Foster strong | | |
| relationships and effective | | |
| | | |
| communication with suppliers, Develop | | |
| contingency plans to mitigate potential | | |
| delays or disruptions in the supply chain, | | |
| Establish key performance indicators | | |
| (KPIs) related to product delivery, such | | |
| as on-time delivery rate, lead time, and | | |
| order fulfillment cycle time | | |
| Using Renewable Energy, Solar Energy, | Attention to | |
| ontinued research and development in | alternative energy | |
| alternative energy technologies, | sources | |
| Promoting public awareness and | | |
| education about alternative energy | | |
| sources, Incorporate environmentally | | |
| friendly practices | | |
| Value-Based Pricing, Assess the prices | Product pricing | |
| of similar products offered by your | | |
| competitors, Define your pricing | | |
| objectives based on your business goals, | | |
| Segment your customer base and | | |
| consider different pricing approaches for | | |
| different customer segments | | |
| Expanding and improving transport | Solving process | Factors related to |
| infrastructure, Develop Cycling and | infrastructure | process |
| Pedestrian Infrastructure, Improve | problems | • |
| customer-oriented facilities, Lack of | • | |
| technical and logistic capacity in product | | |
| production, Technical problems that the | | |
| product is exposed to during export | | |
| Streamline Processes, Leverage | Agility and integration | |
| technology solutions to automate and | of processes | |
| integrate processes, Collaborate closely | r | |
| with suppliers, vendors, and partners to | | |
| create an agile and integrated supply | | |
| chain, increase flexibility and | | |
| responsiveness in your processes, Failure | | |
| to accelerate the completion of technical | | |
| operations of petroleum products | | |
| i operations of penoteum products | | |
| | Using new | |
| Employing advanced data analytics | Using new | |
| | Using new technologies | |

| from reservoirs, using block chain | | |
|---|-----------------------|--------------------|
| technology for supply chain management | | |
| Implement real-time monitoring and | Reliability of | |
| control systems to continuously assess | operation | |
| the performance and condition of | | |
| equipment and processes, Establish | | |
| strong relationships with reliable | | |
| suppliers, Lack of neutrality in test and | | |
| examination samples, The presence of | | |
| old samples affected the examination | | |
| results and their accuracy, The place | | |
| designated for the exam is not clean and | | |
| tidy and is not suitable for the exam | | |
| Cultivate relationships with potential | Attracting investment | Factors related to |
| investors, Explore government programs, | and solving financial | management |
| grants, and incentives available for | problems | |
| companies in the oil industry, Diversify | - | |
| Funding Sources, Mitigate Financial | | |
| Risks, Analyze your company's capital | | |
| structure and explore options for | | |
| optimizing it | | |
| Identify and review existing | Reducing | |
| administrative procedures within the | unnecessary | |
| company, Enhance Compliance and | administrative | |
| Ethics Programs, Proactively engage | procedures and | |
| with stakeholders, including government | political pressure in | |
| officials, regulatory bodies, and local | the company's | |
| communities, Participate in Industry | decisions. | |
| Associations | | |

4.2. Quantitative part

4.2.1. Evaluation steps using AHP technique

4.2.2. Pairwise comparisons

Geometric mean: In the process of hierarchical analysis, the options of each level are compared in pairs with respect to their corresponding element at a higher level. Competing options in level three should be compared pairwise by each of the criteria in level two. Pair by pair comparison is done using a scale that is designed from the same preference to the most preferred and by choosing the numbers 1 to 9.

When comparing two by two, at the beginning, the equivalent of the importance of two by two should be specified through a rank. Then, the numerical value corresponding to it should be given in the comparison table.

Pairwise comparison was done using the opinion of 20 experts, and geometric mean was used to check the composition of the comparative tables completed by the experts.

Axel and Saati have shown that the geometric mean is the best method for combining judgments in the process of group hierarchical analysis. This method has helped the researcher to reach the judgment of the group about each pairwise comparison in addition

to considering the judgment of each member. In order to calculate the geometric mean of the corresponding components, due to the importance of the opinions of the group members, the following formula has been used.

$$A_{ij} = [a_{ij}^1 \times a_{ij}^2 \times a_{ij}^3 \times a_{ij}^N]^{\frac{1}{N}}$$

Table 4. Calculating the relative weight of the role of customer in managing customer complaints.

| Factors | Amount of importance | | | | | | | | | | | | | Factors | | | | |
|-------------|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---------|---|---|---|-----------|
| | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| Interaction | | | | | | | | | | | | | | | | | | Pursuing |
| with | | | | | | | | | | | | | | | | | | the voice |
| customers | | | | | | | | | | | | | | | | | | of |
| | | | | | | | | | | | | | | | | | | customers |
| | | | | | | | | | | | | | | | | | | and |
| | | | | | | | | | | | | | | | | | | remedial |
| | | | | | | | | | | | | | | | | | | actions |

Chart 1-Prioritizing the effect of customer factors in managing customer complaints



Table 5- Prioritizing the effect of customer factors in managing customer complaints

| Row | factor | Weight | Priority |
|-----|--|--------|----------|
| 1 | Pursuing the voice of customers and remedial actions | 0.639 | 1 |
| 2 | Interaction with customers | 0.361 | 2 |

According to the above table and the obtained weights, it can be seen that respectively: "Pursuing the voice of customers and remedial actions", is more important than "Interaction with customers", also considering that the inconsistency rate obtained is 0.00 which is smaller than the standard limit of 0.1, hence the above questionnaire was completed with high accuracy by the respondents.

Table 6- Prioritizing the role of personnel in managing customer complaints

| Row | factor | Weight | Priority |
|-----|--------------------------------------|--------|----------|
| 1 | Personnel expertise | 0.405 | 1 |
| 2 | Suitable work environment | 0.364 | 2 |
| 3 | Increase the motivation of personnel | 0.231 | 3 |

According to the above table and the obtained weights, it can be seen that Personnel expertise, Suitable work environment, Increase the motivation of personnel are from the most to the least important, also considering that the inconsistency rate obtained is 0.02 which is smaller than the standard limit of 0.1, hence the above questionnaire was completed with high accuracy by the respondents.

Table 7- Prioritizing the role of Product performance in managing customer complaints

| Row | factor | Weight | Priority |
|-----|---|--------|----------|
| 1 | Technical quality and product standard | 0.320 | 1 |
| 2 | Product pricing | 0.272 | 2 |
| 3 | Attention to alternative energy sources | 0.241 | 3 |
| 4 | Timely delivery of the product | 0.168 | 4 |

According to the above table and the obtained weights, it can be seen that respectively: Technical quality and product standard, Product pricing, Attention to alternative energy sources, Timely delivery of the product are from the most to the least important, also considering that the inconsistency rate obtained is 0.03 which is smaller than the standard limit of 0.1, hence the above questionnaire was completed with high accuracy by the respondents.

Table 8- Prioritizing the role of Process in managing customer complaints

| Row | factor | Weight | Priority |
|-----|---|--------|----------|
| 1 | Solving process infrastructure problems | 0.330 | 1 |
| 2 | Using new technologies | 0.310 | 2 |
| 3 | Reliability of operation | 0.188 | 3 |
| 4 | Agility and integration of processes | 0.173 | 4 |

According to the above table and the obtained weights, it can be seen that respectively: Solving process infrastructure problems, Using new technologies, Reliability of operation, Agility and integration of processes are from the most to the least important, also considering that the inconsistency rate obtained is 0.03 which is smaller than the standard limit of 0.1, hence the above questionnaire was completed with high accuracy by the respondents.

Table 9- Prioritizing the role of Management factors in managing customer complaints

| Row | factor | Weight | Priority |
|-----|--|--------|----------|
| 1 | Reducing unnecessary administrative procedures and political pressure in the company's decisions | 0.748 | 1 |
| 2 | Attracting investment and solving financial problems | 0.252 | 2 |

According to the above table and the obtained weights, it can be seen that "Reducing unnecessary administrative procedures and political pressure in the company's decisions" is more important than "Attracting investment and solving financial problems". Also

considering that the inconsistency rate obtained is 0.00 which is smaller than the standard limit of 0.1, hence the above questionnaire was completed with high accuracy by the respondents.

Table 10- Prioritizing the role of different factors in managing customer complaints

| Row | factor | Weight | Priority |
|-----|---------------------|--------|----------|
| 1 | Customer | 0.245 | 1 |
| 2 | Product performance | 0.233 | 2 |
| 3 | Personnel | 0.218 | 3 |
| 4 | Process | 0.153 | 4 |
| 5 | Management factors | 0.151 | 5 |

According to the above table and the obtained weights, it can be concluded that respectively: Customer, Product performance, Personnel, Process, Management factors are from the most to the least important, also considering that the inconsistency rate obtained is 0.01 which is smaller than the standard limit of 0.1, the above questionnaire was completed with high accuracy by the respondents.

5. Discussion and conclusion

The research conducted a comprehensive analysis of factors affecting B2B customer complaint management in the Iraqi oil industry using a mixed method approach. Through in-depth interviews, literature review, and the application of the Analytic Hierarchy Process (AHP), the study identified and ranked the significance of various factors. The obtained weights provide valuable insights into the relative importance of these factors in managing customer complaints.

According to the findings, the most important factor affecting B2B customer complaint management in the Iraqi oil industry is "Customer." This result highlights the significance of understanding and prioritizing customer needs, expectations, and feedback. The research findings indicate that among the factors related to customer complaint management in the Iraqi oil industry, "Pursuing the voice of customers and remedial actions" is identified as more important than "Interaction with customers." This result underscores the significance of actively listening to customers, addressing their concerns, and taking appropriate remedial actions to resolve complaints effectively. This result is consistent with the results of Moon et al.,(2019) study. In their study, they have reached the conclusion that listening and recording the protest of customers and Following up on these objections until providing an appropriate response to these protesting voices of customers will strengthen the management of customer complaints. Pursuing the voice of customers is a concept that describes the process of receiving customer comments, requests and complaints in the company.

The second most important factor is "Product performance." Within this dimension, the factors are ranked as follows based on the obtained weights: "Technical quality and product standard", "Product pricing", "Attention to alternative energy sources", "Timely delivery of the product". According to the above table and the weights assigned to these factors, it can be concluded that technical quality and product standard are the most important considerations in managing customer complaints related to the product. This highlights the significance of ensuring that the products meet high technical standards and are of superior quality. By focusing on technical quality and product standard, companies can reduce the occurrence of product-related complaints and enhance customer satisfaction. Baumgarth & Binckebanck, (2011); Samudro et al.,(2020) also concluded in their research that product

quality has a positive impact on industrial buyers who are satisfied with the product's performance.

The research also identifies "Personnel" as a significant factor in B2B customer complaint management. According to the results obtained, it can be told that personnel expertise is the most important factor in managing customer complaints within the personnel dimension. Skilled and knowledgeable staff members who possess the expertise to address customer concerns effectively contribute to successful complaint resolution. Investing in employee training and development can enhance personnel capabilities and positively impact customer satisfaction. This result is consistent with the results of Bayiley and Zeleke (2022) study. Their findings suggest that frontline employee expertise plays a significant role in mediating the relationship between market orientation and customer satisfaction. They state that competent frontline employees are in a favorable position to meet customer needs and achieve better performance in a developing market environment.

"Process" is another important factor identified by the study. Within this dimension, solving process infrastructure problems, Using new technologies, Reliability of operation, Agility and integration of processes are from the most to the least important. Although Iraq possesses significant natural resource potential in its oil fields, the progress of the oil industry is impeded by inadequate infrastructure (AL-Saadi et al., 2022). Enhancing the transportation infrastructure through investments has been shown to improve service quality (Lakshmanan, 2011), which is an important factor in achieving customer satisfaction (De Oña & De Oña, 2015).

Lastly, "Management factors" are identified as important contributors to B2B customer complaint management. According to the findings in this dimension, "Reducing unnecessary administrative procedures and political pressure in the company's decisions" is more important than "Attracting investment and solving financial problems". Unnecessary bureaucratic procedures within state-owned oil companies can result in sluggish work processes and decision-making, ultimately leading to customer discontent. Moreover, political considerations and pressures often influence company decisions.

In conclusion, this research highlights the factors that significantly influence B2B customer complaint management in the Iraqi oil industry. The findings emphasize the importance of customer focus, product performance, personnel capabilities, efficient processes, and effective management support. By understanding and prioritizing these factors, companies in the Iraqi oil industry can enhance their complaint management practices, improve customer satisfaction, and strengthen their competitive advantage. It is important to note that the results of this study are specific to the context of the Iraqi oil industry and may not be directly generalizable to other industries or regions. Future research can explore these factors in different contexts to further validate and expand our understanding of effective B2B customer complaint management strategies. Furthermore, carrying out a longitudinal investigation to oversee the execution and efficiency of the suggested customer complaint management framework would offer significant perspectives into its enduring consequences. This approach would allow scholars to recognize any developing patterns or adjustments required to tailor the model to evolving industry dynamics as time progresses.

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