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ISSN 2148-6689

PressAcademia
www.pressacademia.org/journals/rjbm
RJBM
ISSN 2148-6689
Research Journal of Business and Management YEAR 2023 VOLUME 10 ISSUE 1

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Research Journal of Business and Management (RJBM) is a scientific, academic, peer-reviewed, quarterly and open-access online journal. The journal publishes four issues a year. The issuing months are March, June, September and December. The publication language of the Journal is English. RJBM aims to provide a research source for all practitioners, policy makers, professionals and researchers working in all related areas of business, management and organizations. The editor in chief of RJBM invites all manuscripts that cover theoretical and/or applied research on topics related to the interest areas of the Journal.

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Research Journal of Business and Management YEAR 2023 VOLUME 10 ISSUE 1

EVALUATION OF NON-TYPE RATED PILOT SELECTION CRITERIA IN THE CIVIL AVIATION INDUSTRY WITH AHP AND TOPSIS METHODS

DOI: 10.17261/Pressacademia.2023.1713
RJBM- V.10-ISS.1-2023(1)-p.1-11

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Date Received: December 27, 2022 **Date Accepted:** March 3, 2023

To cite this document
Mızrak, F., (2023). Evaluation of non-type rated pilot selection criteria in the civil aviation industry with AHP and TOPSIS methods. Research journal of Business and Management (RJBM), 10(1), 1-11.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2023.1713

ABSTRACT
Purpose- The purpose of the study is to show that multi-criteria decision-making methods can be used in the recruiting process of non-type rated pilots in the civil aviation sector.
Methodology-In this scope, the criteria taken into consideration by the HR departments in the recruitment process of non-type rated pilots to work in the civil aviation sector have been identified in the study. Then, with the AHP method, importance levels of the criteria have been determined by taking experts opinion. TOPSIS method has been used to select the right candidate for the business among the five candidates who applied as non-type rated pilots.
Findings- Finding of the study has proposed the most suitable candidate for the company.
Conclusion- The effective use of AHP and TOPSIS multi-criteria decision-making techniques in an integrated manner will facilitate HR managers and decision makers in the quantitative evaluation of subjective and objective criteria. The proposed method can also be used in selection processes in other areas of HRM.

Keywords: Human resource management, civil aviation, AHP, TOPSIS, non-type rated pilots
JEL Codes: M12, Y9, C35

1. INTRODUCTION

The selection function of human resources, which is vital for businesses to produce the goods and/or services they offer to satisfy the needs and desires of consumers, is a very important human resources management function when considering the ability of businesses to make profit and maintain their lives. The successful realization of this process, which can be briefly expressed as selecting the candidates with the right qualifications for the right job, will be very beneficial for the businesses, while the selection of unsuitable candidates for the business will lead to negative results. In order not to cause these negative results, it is necessary to prepare in advance for the recruiting process. The right candidate should be determined taking the requirements of the jobs and experience, skills of the candidates. (Ren et.al, 2018).

In this process, it is vital to identify the criteria for the requirements of the position, regardless of the fact that there are several alternative methods which will enable HR departments to recruit the right candidate. These criteria can be deduced from the previous job analyzes in the enterprise and the job descriptions and job requirements prepared in line with these analyzes (Tyson, 2014). In addition to the harmony between the knowledge, skills, experience and abilities of the candidates and the job requirements, the selection of people who are suitable and/or will adapt to the cultures and values of the enterprises will also provide more positive results. Thanks to the weighted criteria, much more accurate decisions can be achieved in the recruiting process (Langan, 2000).

Businesses resort to many traditional or modern methods when selecting personnel. While some businesses conduct interviews with candidates, some businesses try to find the right candidate with the help of multiple-choice tests. Another method that will contribute to recruiting process is multi-criteria decision-making methods. Several methods and applications on this subject exist in the literature. Since the personnel selection criteria are of a qualitative nature, methods such as

Analytical Hierarchy Process method is frequently used to transform these criteria into a quantitative structure and to develop a more objective perspective (Vaidya and Kumar, 2006)

In this study, personnel selection criteria were determined to realize the right recruitment process of non-type rated pilot in civil aviation enterprises. The relevant criteria were created by taking expert opinion together with the support of the literature. In order to determine the weights of the criteria and convert the qualitative expressions into a quantitative structure, AHP method has been utilized. The qualifications of the candidates who have completed the pilot training and applied to a civil aviation enterprise have been examined. Thanks to TOPSIS method, the right candidate has been determined. In this scope, the study is expected to contribute to civil aviation companies to recruit non-type rated pilots.

In the first part of the study after the introduction, recent studies on strategic human management and recruiting process in aviation has been analyzed. In the third part of the study, the method of the study, information about interview process, AHP and TOPSIS has been given. Part 4 demonstrates findings of the study. Last but not the least, conclusion of AHP and TOPSIS method has been explained and suggestions for further studies on the topic has been stressed.

2. LITERATURE REVIEW

Recent literature on strategic human resource management and recruitment process in aviation industry has been analyzed.

2.1. Strategic Human Resource Management

The main objectives of strategic management are to be successful in strategic management understanding of enterprises, to maintain the existence of the organization in the long term, to gain competitive advantage, to use its resources effectively and efficiently. Finding a place for strategic management in human resources management is possible with the management style that does not comply with the human resources management policies of the enterprise and the strategic management policies of the enterprise. Adopting the strategic human resources management approach in the business affects the increasing business performance, problem solving, change and innovation, and reducing the absenteeism of the employees (Collins, 2021).

The emerging concept of “strategic human resources management” is another name for the role of human resources in the new era. Strategic human resources management is an approach based on the compatibility of organizational strategies with human resources and the addition of human resources to strategic management. The basic idea in strategic human resources management is to have highly motivated employees who have the basic behaviors and skills that the organization needs to achieve the goals of the business and to provide competitive advantage, and to ensure that they have a greater say in their relations with the management by making efforts to increase the performance of the employees to a high level. With this thought, a high performance is achieved by creating an integrative atmosphere (Iqbal, 2019).

One of the important features of strategic human resources management is the formation of the link between human resources strategy practices and the general strategic goals of the enterprise. Strategic human resource management is a market-oriented approach to how the business will affect its competitive advantage by using human resources more actively. According to this approach, human resources management is a conceptual approach on how to provide human resources with other resources, how to meet and manage employment (Verma et al., 2022).

There are five basic features in strategic human resource management activities. These features are (Da Silva et al., 2022);

- Long-term planning: It is necessary to make strategic long-term plans regarding the use of human resources.
- Developing new links between human resource management and strategic planning: Human resource management provides support both in determining and implementing business strategies.
- Enabling interaction between human resources and organizational performance: The important role of human resources management in passing the organization's strategic goals creates a positive effect on organizational performance.

- The development of mutual relations between human resources management and command-and-command management: The strategic importance of human resources management in the enterprise strengthens its relations with command-command management.
- Human resources management gaining a strategic quality: It ensures that the tasks undertaken by human resources management are more effective in the planning and implementation stages.

Having these features of strategic human resources management makes the system preferable by coming to the forefront in contrast to conventional human resources management. As a result, strategic human resources management is a preferred dimension in in-house management approach.

2.2. Recruitment Process in Aviation

It is seen as a necessity for the new employee to have the qualifications and abilities required by the job for the goals such as sustaining the existence of the enterprises, being efficient and effective. The fact that the recruitment processes are carried out with scientific methods is the determining factor on the success of the individuals recruited. For this reason, the recruitment process aims to harmonize the skills and qualifications required by the job with the talents and qualifications of the candidate to be recruited (Lubis and Amalia, 2021).

Employee recruitment is the process of finding candidates who are qualified to be needed by the business and the organization. Before starting to do this, job analyzes must be made and job descriptions must be specified. Jobs are analyzed one by one with job analysis and job descriptions are determined. With the help of these definitions, what the job consists of, the process of doing the job, the working environment, the number of people to do the job, job risk etc. topics are determined. Next comes the selection of the most suitable candidate among a group of qualified candidates. There are two aspects that the business must consider before deciding on the resources it can use. First, it is necessary to know well which position to recruit, what is expected of the employee for this job, and the requirements of the job. This is only possible with business analysis. After the job analysis is done, the second step is to determine the qualifications of the employee who will do this job. If this process is not followed in this way, the result will be negative for both the business and the employee (Moradi et al., 2020).

Companies operating in aviation industry carry out their operations in competition with several airlines and non-aviation enterprises as well. For this reason, civil aviation companies need to pay great attention to safety, high quality, and reliability. In this scope, human factor, namely personnel working in this sector play an essential role. In today’s word together with globalization which has resulted in new markets, international and multinational enterprises, it has become a necessity to use human resources in a strategic way. (Harvey and Turnbull, 2020).

Recruiting qualified personnel has been one of the main objectives of HR department in companies operating in civil aviation industry to survive in the competition (Van, 2013). Even though there may be differences in the steps of recruiting process depending on the structure of the enterprises and type of the work, 8 steps can be mentioned; 1- Preliminary interview, 2- Completing the application form, 3- Recruitment tests/exams, 4- Recruitment interviews, 5- Reference review, 6- Conditional job offer, 7- Health check, 8- Permanent job offer (Chapman and Mayers, 2015).

Considering the employee selection process, it can be said that the test/exam application and recruitment interviews are the most effective stages in making the selection decision.Since the interviewer and and the candidate share exchange information, recruitment interview is defined as purposeful. (Lengnick-Hall et al., 2011). Final stage of recruiting process is to decide whom to hire. The candidate with highest score can be hired if there is only one position to be filled. However, when many people need to be hired for the same position, the decision-making process can turn into clarifying the boundary of who is eligible to be hired and who doesn't (Alfes et al., 2013).

Businesses make use of various selection criteria when choosing the human resources to work within them. Among the most common criteria are education and experience, personal characteristics, skills and abilities (Swanson, 2022). The selection process consisting of selection criteria should carry some general standards such as reliability, validity, generalizability, usefulness, and legality. Human resource management specialists or business managers struggle to the information of the candidates thus, make the right decision in recruiting the right candidate (Yalım and Mızrak, 2021). In order to make the decision-making process easier, several methods have been developed. Some of the most common methods include the use of statistical analysis of the test results, matching the applications forms with requirements of the jobs, etc. (Bernardin and Russell, 2006).

Considering the fact that aviation is one of the fastest growing businesses, one cannot deny the necessity of keeping the knowledge and skills of the personnel fresh at all times. Especially, since the personnel such as pilots and technicians play an essential role in fulfilling the goals of civil aviation activities, the provision of safety, reliability and high-quality factors in aviation is directly affected by the personnel trainings (Shanker, 2020).

In recent years, the selection of non-type rated pilots in civil aviation has been made more gradually, especially with the increase in the share of the human factor in accidents. First of all, candidates are expected to prove their English level with exams such as IELTS, TOEFL, ITEP or with the English exam conducted by the institution. Candidates who pass this stage are invited to interviews called CRM, where their situational awareness levels are measured, and various psychological tests are included. Afterwards, the candidates are taken to the simulator applied exams where their flight skills are tested. Candidates who are successful in all these steps are finally taken to the board interview, which is attended by the members of the human resources department of the institution and the captains (Adanov and Macintyre, 2020).

The decisions made in the process of selecting new employees are the decisions made about people. The fact that it is not possible to determine the full potential of people and it is almost impossible to predict the performance of the people to be recruited with absolute certainty, causes the recruiting process to take the form of predicting the best results with the available information. For this reason, it is very important to determine the criteria to be used. Correctly determined and correctly weighted criteria will enable much more accurate decisions (Wang et al., 2022).

3. DATA AND METHODOLOGY

In this study, criteria have been determined for the realization of the right non- type rated pilot recruiting process in civil aviation companies. While determining the criteria, a recent literature has been reviewed and interviews have been conducted with the human resources managers of the airline companies operating in Turkey. Detailed information about the recruitment processes has been obtained from the managers, and they have been asked about the criteria they attach importance to in this process. As a result of the interviews, 5 main criteria that companies take into account in the recruiting process of non-typed rated pilots have been determined. To determine the importance levels of the criteria obtained, the relevant criteria have been scored by the three sector representatives interviewed.

The significance levels of the criteria have been obtained using the AHP method. This method was developed by Saaty in the 1970s, which allows the researcher to make a hierarchical modeling. Then, ranking among the candidates has been made with TOPSIS method by scoring over the application information of the five candidates who applied to X aviating company. Detailed information about the methods is given below.

3.1. The Analytic Hierarchy Process (AHP)

When decision maker is struggling between multiple goals, choosing between alternatives becomes challenging. The Analytic Hierarchy Process developed by Thomas Saaty in the 1970s is a tool to assist decision makers in multi-objective problems. AHP is the hierarchy of decision components used in the decision-making process. This technique is flexible for evaluating strategies under alternative environmental scenarios. It offers a modeling and measurement approach. It also provides judgment and data use procedure for resolving and evaluating disputes. AHP makes it clear that risk and uncertainty require careful judgment. It takes the advice and opinions of all concerned individuals on the subject into consideration, evaluates alternatives and gives detailed results (Rajabpour et al., 2022).

AHP is frequently used to analyze complex decisions. It helps the decision maker by using pairwise comparisons to rank and identify the most suitable alternative.

AHP is a selection process consisting of the following steps (Saaty, 1990);

1. Defining the problem and determining the information to be used in the process.

2. Establishment of decision hierarchy.

The skeleton in the AHP method is hierarchy. With the help of hierarch, the influence possessed by the function amongst elements, and their impact on the entire system can be determined. The complexity of the problem being analyzed becomes decisive on the number of the hierarchies. Too many elements in a hierarchy should be avoided. The number of hierarchies depends on the complexity of the problem analyzed: there should not be too many elements in a hierarchy.

3.Construction of the pairwise comparisons matrix (square matrix).

When there are n criteria, a matrix of nxn size is formed. In order to create this matrix, decision makers make n(n-1)/2 pairwise comparisons with the help of a questionnaire. The values in Table 1 are used in these comparisons.

Table 1: Pair-Wise Comparison Scale for AHP Preferences

Numerical Rating	Verbal Judgements of Preferences
9	Extremely preferred
8	Very strongly to extremely
7	Very strongly preferred
6	Strongly to very strongly
5	Strongly preferred
4	Moderately to strongly
3	Moderately preferred
2	Equally to moderately
1	Equally preferred

Source: Saaty, T. L. (1990). An exposition of the AHP in reply to the paper “remarks on the analytic hierarchy process”. Management science, 36(3), 259-268.

According to the table above (Table 1), a pairwise comparison matrix is created by comparing the importance levels of all criteria with each other. With these values, the relative importance matrices of the criteria are created. In other words, the process of dividing each criterion by the total criterion value takes place. However, an important process in this process is consistency rates. The consistency ratio suggested by Saaty is used to measure the consistency ratio. The randomness indicator is used when calculating the consistency ratios.

Table 2: Average Random Consistency

Size of Matrix	1	2	3	4	5	6	7	8	9	10
Random consistency	0	0	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.49

Source: Saaty, T. L. (1990). An exposition of the AHP in reply to the paper “remarks on the analytic hierarchy process”. Management science, 36(3), 259-268.

In order to validate the results of the AHP, the consistency ratio (CR) is calculated using the formula, CR = CI/RI in which the consistency index (CI) is, in turn, measured through the following formula:

$$CI = \frac{\lambda_{\max} - n}{n-1} \tag{1}$$

CI : consistency index; N: number of variables; λ_{max}: maximum eigen value of matrix A

The value of RI is related to the dimension of the matrix and will be extracted from Table 2. It should be noted that consistency ratio lower than 0.10 verifies that the results of comparison are acceptable.

3.2. TOPSIS Method

TOPSIS method, which is one of the multi-criteria decision-making methods, was developed by Hwang and Yoon in 1981. The main purpose of the method is to determine the relative closeness values of the candidates to the ideal solution. In this process, first of all, the decision matrix is being created. In the Aij matrix, m gives the number of decisions, n the number of criteria (Pavić and Novoselac, 2013).

$$A_{ij} = \begin{bmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ . & & & . \\ . & & & . \\ . & & & . \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{bmatrix} \tag{2}$$

If all weights w is mutually equal, in which case w = 1 / n, the numbers r can be applied in the matrix j j i_j

A as the numbers a_{ij}.

Step 1: Construction of the Normalized Decision Matrix

With this process, various attribute dimensions are transformed into non-dimensional attributes. It allows comparison across the attributes. One way is to take the outcome of each criterion divided by the norm of the total outcome vector of the criterion at hand (Hwang et al., 1981). An element of r_{ij} of the normalized decision matrix R can be calculated as in the below equation;

$$r_{ij} = \frac{a_{ij}}{\sqrt{\sum_{k=1}^{m} a_{kj}^2}} \tag{3}$$

Thus, the normalized decision matrix R is shown in below matrix (Hwang et al., 1981);

$$R = \begin{bmatrix} r_{11} & r_{12} & . & . & . & r_{1n} \\ r_{21} & r_{22} & . & . & . & r_{2n} \\ . & . & . & . & . & . \\ . & . & . & . & . & . \\ . & . & . & . & . & . \\ r_{m1} & r_{m2} & . & . & . & r_{mn} \end{bmatrix} \tag{4}$$

m represents the number of alternatives whereas n is the number of criteria. R_{ij} symbolizes normalized preference measure of the i^{th} alternatives in terms of the j_{tj} criterion (Hwang et al., 1981).

Step 2: Weighted Normalized Decision Matrix

S_e if weights from the decision maker is applied in the matrix. This matrix is calculated by multiplying each column of the matrix r with the weights of w_j. For this reason, the weighted normalized matrix V is equal to;

$$V = \begin{bmatrix} v_{11} & v_{12} & . & . & . & v_{1n} \\ v_{21} & v_{22} & . & . & . & v_{2n} \\ . & . & . & . & . & . \\ . & . & . & . & . & . \\ . & . & . & . & . & . \\ v_{m1} & v_{m2} & . & . & . & v_{mn} \end{bmatrix} = RW = \begin{bmatrix} w_1.r_{11} & w_2.r_{12} & . & . & . & w_n.r_{1n} \\ w_1.r_{21} & w_2.r_{22} & . & . & . & w_n.r_{2n} \\ . & . & . & . & . & . \\ . & . & . & . & . & . \\ . & . & . & . & . & . \\ w_1.r_{m1} & w_2.r_{m2} & . & . & . & w_n.r_{mn} \end{bmatrix}$$

where W is;

$$W = \begin{bmatrix} w_1 & 0 & 0 & . & . & . & 0 \\ 0 & w_2 & 0 & . & . & . & 0 \\ 0 & 0 & w_3 & . & . & . & 0 \\ . & . & . & . & . & . & . \\ . & . & . & . & . & . & . \\ . & . & . & . & . & . & . \\ 0 & 0 & 0 & . & . & . & w_n \end{bmatrix}, \text{ and } \sum_{j=1}^{n} w_j = 1. \quad (5)$$

Step 3: Ideal and Negative Ideal Solutions

To create the ideal solution set, the largest of the weighted evaluation factors, that is, column values, in the V matrix (the smallest if the relevant evaluation factor is minimization-oriented) is selected. Finding the ideal solution set is shown in the formula below (Hwang et al., 1981);

$$A^* = \left\{ (\max_i v_{ij} \middle| j \in J), (\min_i v_{ij} \middle| j \in J' \right\} \quad (6)$$

Then, the following formula is used to create ideal and negative ideal solution sets.

$$A^- = \left\{ (\min_i v_{ij} \middle| j \in J), (\max_i v_{ij} \middle| j \in J' \right\} \quad (7)$$

The value expressed with J indicates the benefit (maximization), and the value expressed with J' indicates the loss (minimization) value (Hwang et al., 1981).

Step 4: Calculation of Separation Measure

With the n-dimensional Euclidean distance method, separation distances each alternative from the ideal solution and negative ideal one can be obtained. Equation 7 suggests the ideal and negative ideal separation formula (Hwang et al., 1981).

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

$$S_i^- = \sqrt{\sum_{j=1}^{n} (v_{ij} - v_j^-)^2} \quad (8)$$

Step 5: Relative Closeness to Ideal Solution

In the last step of the method, the relative closeness (C_i*) of each decision point to the ideal solution is calculated. By using the ideal and negative ideal separation measures, the relative closeness to the ideal solution is obtained. The formula for this process is given below (Hwang et al., 1981).

$$C_i^* = \frac{S_i^-}{S_i^- + S_i^*} \quad (9)$$

If the value of C_i* is close to 1, it indicates its absolute closeness to the ideal solution, and if it is close to 0, it indicates its absolute closeness to the negative ideal solution (Pavić amd Novoselac, 2013).

Step 6: Ranking of the Preference Order

A preference of order can be done based on the order of C_i*. The best alternative is the one which has shortest distance to ideal solution and the worst is the one with the longest distance to ideal solution (Hwang et al., 1981).

4. FINDINGS AND DISCUSSIONS

4.1. Determination of Criteria

As a result of the literature research and interviews, 5 criteria on the requirement of non-rated type pilot have been obtained. Criteria set has been given in Table 3.

Table 3: Criteria Set on the Recruitment of Non-Rated Type Pilots

Criteria no#	Criteria
1	Knowledge of English Language
2	Education
3	Age
4	Flight Competence
5	Crew Resource Management

4.2. Evaluation of Logistics Personnel Selection Criteria with AHP Method

After the 5 criteria have been determined, a pairwise comparison matrix has been created to apply the AHP method. While creating the matrix, the criteria have been scored with expert opinion by using Saaty's importance scale (1-9). After the importance levels of the criteria and sub-criteria have been obtained, the consistency levels have been measured by using randomness indicators. The table containing the importance levels, consistency levels of the criteria of the study and the final ranking of the criteria is given below.

Table 4: Significance, Consistency, and Final Ranking of Criteria

Criteria	Weights
Knowledge of English Language	0,4795
Education	0,1551

Age	0,1027
Flight Competence	0,1314
Crew Resource Management	0,1314

4.3. Personnel Selection with TOPSIS Method

After the personnel selection criteria have been evaluated with the AHP method, the information of the five candidates who applied for the relevant position has been evaluated and analyzed with the TOPSIS method. The scores of the candidates regarding the criteria are given below.

Table 4: Decision Matrix

	Knowledge of English Language	Education	Age	Flight Competence	Crew Resource Management
Candidate 1	2	2	26	5	3
Candidate 2	5	4	29	4	2
Candidate 3	3	4	34	4	3
Candidate 4	4	5	35	4	4
Candidate 5	3	3	42	5	4

After the decision matrix is created, each value in the column is divided by their sums and the values are normalized. The normalized matrix is obtained by multiplying the normalized criteria values with the criteria weights. The values for the matrix are given below.

Table 6: Weight Normalized Matrix

	Knowledge of English Language	Education	Age	Flight Competence	Crew Resource Management
Candidate 1	0,11842887	0,03585686	0,03455321	0,06565992	0,05307228
Candidate 2	0,29607217	0,07171372	0,03854012	0,05252793	0,03538152
Candidate 3	0,1776433	0,07171372	0,04518497	0,05252793	0,05307228
Candidate 4	0,23685774	0,08964215	0,04651394	0,05252793	0,07076304
Candidate 5	0,1776433	0,05378529	0,05581673	0,06565992	0,07076304

A positive and negative ideal solution set was obtained, the relevant information is given in the table below.

Table 7: Positive and Negative Ideal Solution Set

V+	0,29607217	0,08964215	0,03455321	0,06565992	0,07076304
V-	0,11842887	0,03585686	0,05581673	0,05252793	0,03538152

6. By using the values in the table above, the relative closeness of the criteria values of the candidates to the ideal solution has been found and the final ranking among the candidates has been done. Relevant values are given in the table below.

Table 8: Distance to Positive-Negative Solution, Relative Closeness to Ideal Solution, and Final Ranking

	Si+	Si-	P score	Rank
Candidate 1	0,18644828	0,03061942	0,14105931	5
Candidate 2	0,04197171	0,18204763	0,81264245	1
Candidate 3	0,12225086	0,0700364	0,364228	4
Candidate 4	0,06182117	0,13511716	0,68608869	2
Candidate 5	0,12555177	0,07247123	0,36597378	3

As seen in the table, among the 5 pilot candidates, candidate 2 has the highest value in terms of its closeness to ideal solution. Then, candidate 4, candidate 5, candidate 3 and candidate 1 come respectively.

5. CONCLUSION AND IMPLICATIONS

Employee procurement and selection is an important decision for businesses. There may be many different and conflicting criteria regarding the characteristics of candidates. While the candidates are better than others in some criteria, they may be behind others in some criteria. This makes it difficult for decision makers. Quantifying all relevant quantitative and qualitative criteria is an objective method for evaluating candidates. In this study, it is shown on an experimental example that AHP and TOPSIS multi-criteria decision-making techniques can be used together effectively in the selection of non-type rated first officers in the civil aviation sector.

In the study, as a result of the AHP analysis, the most important criterion in the “selection of non-type rated pilots in the civil aviation sector” has been determined as “English language knowledge” (0.4795), followed by “Education” (0.1551), “Age” (0.1027), ''Flight Competence'' (0.1314), ''Crew Resource Management'' (0.1314). After determining the importance of non-type rated pilot characteristics in the civil aviation sector in line with the opinions of the participants, the analytical hierarchy model and TOPSIS methods have been used together, and 5 experimental candidates have been ranked according to the criteria. These 5 experimental candidates have also been ranked with equal emphasis on all criteria. The rankings resulting from these two different applications also differed from each other. From this point of view, it can be said that in the recruiting process of the enterprises, selection path in line with the criteria determined by their importance and weight can lead to more positive results for the enterprises.

The effective use of AHP and TOPSIS multi-criteria decision-making techniques in an integrated manner will facilitate HR managers and decision makers in the quantitative evaluation of subjective and objective criteria. The proposed method can also be used in selection processes in other areas of HRM. In future studies, the relations between criteria can be analyzed in a more complex way with the Analytical Network Process (AAP) method or the results can be compared using different multi-criteria techniques.

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PressAcademia
www.pressacademia.org/journals/rjbm
RJBM
ISSN 2148-6689
Research Journal of Business and Management YEAR 2023 VOLUME 10 ISSUE 1

BIG DATA AND TRANSPARENCY: THE MEDIATION EFFECT OF PROFESSIONAL JUDGMENT

DOI: 10.17261/Pressacademia.2023.1714
RJBM- V.10-ISS.1-2023(2)-p.12-18

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Date Received: December 10, 2022 **Date Accepted:** March 12, 2023

To cite this document
Salehi, N., (2023). Big data and transparency: the mediation effect of professional judgment. Research Journal of Business and Management (RJBM), 10(1), 12-18.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2023.1714

ABSTRACT

Purpose- The purpose of this article is to present a model of transparency in economic, social, and cultural fields in order to create social justice and use the expert judgment of researchers, lawyers, and journalists to prevent corruption when the relevant institutions do not have effective supervision due to systematic corruption. One of the detrimental and irrefutable aspects of the growth and advancement of societies is corruption. A nation or group with the desire to end corruption needs to have a lot of fighting potential. In this regard, the professional judgment of academics, attorneys, and journalists can be based on open data in the form of a data ecosystem, which includes rules and regulations, the identities of decision makers, and data from numerous economic and social domains online. Professional judgment is a supervision tool that can be highly effective in thwarting and exposing the emergence and spread of systematic corruption in a variety of contexts. This procedure raises the likelihood that corruption will be found, prevents managers from ignoring their duties, and broadens the scope of their responsibilities.
Methodology- In this article, the conceptual model, assumptions, and measurement indicators of the research variables are presented.
Findings- Corruption flourish in countries where there is a lack of accountability, openness, and consistency, as well as institutional deficiencies in the legislative and judicial systems.
Conclusion- Corruption increases the costs of the administrative, economic, and judicial systems and makes it impossible to achieve social justice. Access to open data and big data in various fields, as well as publishing them in the data life cycle with the judgment of researchers, lawyers, and journalists, is a practical and important method for discovering, preventing, and combating corruption. In fact, omissions and systematic corruption happen in areas where there is no supervisory presence.

Keywords: Big data, open data, transparency, professional judgment, corruption, transparency
JEL Codes: D73, H83, C55

1. INTRODUCTION

Effectively combating corruption manifestations is a very difficult, socially significant, and complex problem whose relevance only grows over time (Xie and Zhang, 2020; Ferris et al., 2021; Kul'ba et al., 2022). Systemic corruption has a pernicious impact on the pace of progressive socio-economic development of the state and society (Jeppesen, 2018; Ferris et al., 2021). The effectiveness of social resources is compromised, the investment climate is distorted, economic progress is stifled, and political stability is put at risk due to systemic corruption (Jeppesen, 2018; Xie and Zhang, 2020; Ferris et al., 2021; Chiara and Manna, 2022). Corruption threatens public institutions, transfers money and power to the undeserving, encourages resource theft and illegal resource exports, and breeds distrust in society (Jeppesen, 2018). When corruption is rampant, it weakens marginalized and vulnerable populations, makes social contracts shaky, which breeds conflict, instability, and widening class disparities. Additionally, Ferris Et al (2021) believed that systemic corruption causes people to have less faith in the government and even the legal system. The characteristics of a nation's shadow, subterranean, or parallel economies are likewise impacted by systemic corruption (Ferris et al., 2021). Social justice can be achieved through inclusive growth, expenditures on people's health and education, as well as protection from illness and unemployment. However, there are practical ways to stop corruption from spreading, make wrongdoing more challenging, penalize offenses, make public officials more answerable, and alter attitudes about it, particularly in the public sector and the areas that have an impact on it. It is occasionally impossible because systematic corruption has infiltrated all government bodies. This means that simply notifying people of proposed rules and regulations as well as draft legislation cannot increase access to social justice, healthcare, or education for all segments of society at all levels. Therefore, alternative levers should be applied in order to eliminate the vulnerability at various management levels so that the management levels regain their coherence.

According to Ferris et al. (2021), corruption needs a channel to operate through the government. That is, a method for a company to redirect funds to unethical or corrupt activities must exist (Xie and Zhang, 2020; Ferris et al., 2021). Each system's corruption has distinct, occasionally contemporary aspects that impact society at various levels. In a method that makes it difficult to identify the decision-makers and conceals money laundering or corruption in some of its layers. As a result, independent legal, regulatory systems or executive institutions cannot prevent such corruption, and even the judicial system finds it difficult to prosecute such crimes (Xie and Zhang, 2020; Ferris Et al., 2021). Therefore, corruption might start in a particular industry, the private sector, or the worldwide arena.

A firm or organization may have the desire to eradicate corruption from its ranks and bring about transparency in its societal, political, and economic institutions. It is not sufficient at this moment to just approve the law and issue a circular. Only the corrupt body communicates and enacts laws; no changes are made. The system's structure forbids modifications, and even corruption's elements adapt and alter in accordance with the relevant laws and corruption in a legally structured manner. In organizational hierarchies and ranks, there are persons who are the origin of corruption, rent-seeking, and money laundering. Any legislative action taken at this moment by top executives of organizations or national leaders is doomed to failure.

The root of corruption should now be removed by top managers and leaders using an external organizational strategy. For the purpose of transparency, now is the time to issue the directive to reveal all economic, social, and financial data and judgments. This information enables layers not implicated in corruption to make judgments. This information can be used against corruption by researchers, attorneys, and journalists. This method of data re-release can promote transparency within a company or a nation. The same approach is used to prevent variations in how managers perform at various levels within an organization or a nation.

Big data is defined as information and data provided by departments and organizations in a codified, current, integrated system that is made available to the general public. The whole public has access to this information. Organizations, governments, and public servants are hence accountable. Through the identification of the country's strengths and weaknesses, this information enables the formulation of growth and development strategies, the interpretation and prevention of deviations, and ideas and innovations. Transparency is introduced in the management and oversight of public resources in this way. It fosters social fairness and lessens corruption.

The public won't be able to generate reasoned judgements, the foundation of which may be required to contest public policy decisions, if it is not informed about the state's aims or resources (McCarthy and Fluk, 2016). According to Ferris et al. (2021), a corrupt economy distorts economic data, leading to erroneous assessments and frequently unsuccessful policy decisions.

The purpose of this article is to present a model of transparency in economic, social, and cultural fields in order to create social justice and use the expert judgment of researchers, lawyers, and journalists to prevent corruption when the relevant institutions do not have effective supervision due to systematic corruption. This naturally requires providing all the big data in the country. Some of these data and their publication, for example, such as the growth trend of sectors, the list of salary earners, the list of unsettled and uncollected loans and facilities, the list of unsafe buildings, and other data, harm the economy, society, and public security in some way. It can stop more corruption and enhance managers' performance, or it can spark a crisis. Professionalism and curiosity, along with the investigation of problems utilizing cutting-edge research methods and monitoring changes in organizations' internal and external environments with the innate workings of open organizations, limit the actions leading to corruption. The model of this research is suggested when there is no presence of regulatory institutions or transparency due to the lack of supervision and control.

2. LITERATURE REVIEW

2.1 Corruption

The term corruption refers to a phenomenon that involves a broad variety of actions with very divergent economic, social, and political outcomes (Xie and Zhang, 2020). In other terms, corruption refers to management behavior that deviates from accepted standards or legal requirements controlling business and social affairs. The misuse of official authority, resources, or positions for personal gain constitutes corruption (Jeppesen, 2018). However, the proof may or may not be conclusive, and to make matters worse, the public official may be able to hide the details of what she has learned, creating potential for corruption (Chiara and Manna, 2022). According to Lee et al. (2018), corruption is a societal phenomena that has existed ever since the beginning of time. When considered in an academic setting, corruption is a broad concept that goes beyond unlawful behavior or criminal activity. According to Jeppesen (2018), corruption in the public sector is the misuse of public power or trust for personal gain. whereas in the private sector, a person using their position to their personal advantage at the expense of the organization they serve is considered to be engaging in corruption (Jeppesen, 2018).

The definition of corruption is the use of public office for personal gain, or, to put it another way, the use of an office holder's position, rank, or status for his or her own advantage (Myint, 2000). According to this description, Myint (2000) state that corrupt behavior would consist of the following: (1) embezzlement, (2) influence peddling, (3) fraud, (4) bribery, (5) cronyism, (6) nepotism, (7) appropriation of public assets and property for private use, and (8) extortion. Activities like fraud and embezzlement can be carried out by an official alone, without the assistance of a third party, and are included in this list of corrupt behavior. Others, like extortion, influence peddling, and bribery include both the provider and the taker in a corrupt transaction (Myint, 2000).

Every phenomenon, in general, has both good and bad sides. According to Melki and Pickering (2020), democracy does not end corruption. According to international research, it is a somewhat ineffective restraint, and corruption still exists in some degree in advanced democracies. A nation's growth and success can have both positive and bad effects, including complexities and drawbacks related to corruption, bribery, rent-seeking, embezzlement, abuse of power, and money laundering. Corruption generally hinders economic growth and promotes the expansion of unofficial economies (Xie and Zhang, 2020; Ferris et al., 2021). It is noteworthy that the processes leading to corruption stem from the omission of the verb and cannot predict the future. This means that open data published by organizations may be judged whenever possible. Because corruption has different and hidden layers, the judgment of these data may even provide a different interpretation than the perception and judgment of an observer, because even supervisory bodies cannot go beyond the scope of their legal supervision and investigate other layers of corruption. Therefore, people prone to giving up to hide their mistakes will make more mistakes, and these mistakes will not be hidden from the view and professional judgment of researchers, lawyers, and journalists. Because of the professional nature of these people, from the perspective of the external environment, they freely and independently examine the data and phenomena that have arisen that have the theme of corruption.

According to Kulba et al. (2022), the most significant effects of corruption on the economy include inefficient public resource allocation and expenditure, high time and material costs associated with conducting business and economic activities, an increase in financial and commercial risks, the pursuit of rent at the expense of material production, a negative impact on pricing procedures and, as a result, price increases, and a decrease in the level of competition at the expense of economic growth.

2.2. Open Organizations and Countries

The link and interaction of the organization with its external environment are referred to as closed and open systems. This occurrence demonstrates how a nation or organization may adapt to change. When organizations are viewed as closed systems, their environment has no impact on them, and internal structures and behaviors are the focus of study. Organizations are open systems that interact with their surroundings; the key is how this relationship is handled. A system is considered to be open if it regularly shares feedback with its surrounding environment. Inputs, processes, outputs, goals, assessment and evaluation, and learning are all crucial components of open systems because they are systems by nature. Puts, goals, assessment and evaluation, as well as learning, are all crucial components of open systems. Boundaries, the outside world, and equifinality are factors that are crucially vital to open systems. Transparency is defined as a discourse with an open organization as a precondition (McCarthy and Fluk, 2016). A substantial body of literature highlights the significance of ensuring public access to information in order to promote government accountability and, consequently, highlights the importance of transparency as a factor of government performance (Hollyer et al., 2014).

As a result of their lack of outside interaction, closed systems' behavior is heavily influenced by the internal dynamics of the individual components. While engaging in goal-directed actions, they attempt to maintain a constant state, or equilibrium, among their constituent parts. Because the environment has no bearing on the attainment of the goals, system behavior is very specific and tightly controlled. Work groups regularly create and publish summaries of the work they accomplish, as well as the knowledge they learn from that work, in organizations and nations with an open system. As a result, others can see what you are doing and see how individuals and groups are interdependent. Even in the planning stages, people have the ability to recognize the implications of a group's or organization's work and hold them responsible. To comprehend how the activity of other groups and organizations relates to what we are doing, we also need to be aware of what those groups and organizations are up to. It could be important for one group to get involved in another group's decision-making procedures in order to establish responsibility. To accomplish this effectively, it must first be aware of the work that has already been done, the discussions that are now being held, as well as any pertinent lessons that have been learned from prior problems. For these reasons, accountability requires transparency.

Government information has been made public in part due to improved information availability and rising public demand for transparency. The government has worked to involve individuals and increase the transparency of state activities as part of its open information policy (Lee et al., 2018).

2.3. Transparency

Transparency and anti-corruption are sometimes used interchangeably, and some consider it as a tool for establishing good governance or for controlling the government's internal affairs (Lee et al., 2018). It acts as a testament to the reliability of sources and content and serves as a gauge of the information on government activities' accessibility, openness, and usefulness. It equated transparency with openness and disclosure, defining it as the public's acquisition of knowledge about the workings and makeup of a particular institution (Hollyer et al., 2014; McCarthy and Fluk, 2016).

Kul'ba et al. (2022) explain corruption as a negative phenomenon with these conditions: non-transparency of state management structures and decision-making mechanisms; non-transparency of financial mechanisms of economic entities; information asymmetry (the existence of "untouchable" individuals and agencies for criticism); the practice of using offshore zones; low performance; and a dearth of thorough research on the problem of corruption. According to Lee et al. (2018), transparency is the dissemination of information to the public about the duties and commitments of the government.

However, transparency as disclosure has a long history in world politics (McCarthy and Fluk, 2016). In a broad sense, transparency refers to the free flow of information inside a political system (Hollyer et al., 2014). Because they concentrate on observable characteristics rather than unobservables like preferences or beliefs, their conception of transparency is objective (McCarthy and Fluk, 2016). In open organizations, transparency reigns. Open organizations strive to make their data and other resources widely accessible to both internal and external players; they are open for any member to review them as needed, to the extent permitted by applicable regulations. Decisions are transparent to the extent that everyone who may be impacted by them is aware of the reasoning and deliberations that went into them; they are also subject to review. The work is available to observation and possible change if necessary; anybody can track and evaluate a project's progress at any point in its development.

McCarthy and Fluk (2016) noted that the promotion of openness is essential to a wide range of policy issues and that it is a political condition appreciated and pursued by many participants in international politics. The promotion of democracy, the proliferation of nuclear weapons, the politics of financial regulation, internet governance and surveillance, international institution accountability all of these are defined by the significant positive value placed on openness (McCarthy and Fluk, 2016).

2.4. Big Data

Open data is data that anyone can freely access and use for any purpose. Of course, the existence of such conditions for data access is subject to requirements in the information technology infrastructure (Lee et al., 2018). Big data is also a term used to refer to large, complex, and dynamic sets of data that usually grow and change at a very high rate (Ghasemaghaei and Calic, 2020). This database is used with a set of programs and tools to organize and analyze it. The condition of using this data, apart from creating access, is to pay attention to the life cycle of the data so that it can be made available at the right time by implementing the information technology system in an open data ecosystem. For this purpose, the data ecosystem can be defined. The open data ecosystem defines data, information technology infrastructure, the ability to publish, and users. In the data bank of this ecosystem, open data from the number of students, teaching staff, and buildings in the educational field to all economic, social, and government data are collected and classified in an open form with year and degree characteristics. Throughout the data's life cycle, all users, including researchers, lawyers, journalists, and other stakeholders, will have free access to it. This data can be measured with performance indicators and will be the basis for judging and preventing corruption. A check against corruption or poor management, disclosure enables the public to observe how the government conducts itself (McCarthy and Fluk, 2016).

Open data can become the most important method of transparency. Technology has a suitable platform for the dissemination of data with quality, breadth, and diversity, and transparency in payments and the publication of non-confidential decisions that affect the public interests of society and social justice provides access to fighting corruption. This systematic release of data makes it impossible to act, promotes motivation and competition to improve performance, and disrupts the perception of corrupt activities. With the quick advancement of information technology, enormous volumes of data have been created and amassed, and consumers may quickly access such material via the Internet and social network services (Lee et al., 2018). When a government or other institution makes more information about their operations, goals, and decision-making procedures public, they are acting transparently (McCarthy and Fluk, 2016). The likelihood of corruption in the execution of budgets and the implementation of policies appears to be reduced as government transparency is increased through information disclosure in the public sector (Lee et al., 2018). Official macroeconomic data, which often only cover the formal sector of an economy, become unreliable when trying to gauge economic performance or serve as a foundation for policy development and research (Myint, 2000).

Today's big data in different forms, with organization and quality indicators and health indicators, can guarantee the interpretation of the process and the prevention of corruption. Researchers and journalists can find their evidence. In fact, managers who act in the limited space of data access create the conditions for corruption and increase the costs of the economic, administrative, and judicial systems. While the legal scope for regulatory bodies is being closed, professional judgment can reduce the process of identification, investigation, and handling of corruption cases. Because receiving information and data through official channels may even continue for many years if the corruption is international, until finally, after completing the data of the case, it will be dealt with by the judicial system.

The data and interpretative reports of researchers and journalists can even defeat the innovative methods of corruption that are still hidden in the layers. In the long term, this process affects the public's attitude and creates trust in the judicial system and the system itself. For example, governments, banks, and financial institutions generally rely on open data information when making decisions about granting loans, entering into business transactions, or accepting monetary transactions. With professional judgment and correct data interpretation, they can help to reveal financial irregularities or illegality and prevent payment facilities from being uncollected and rent-seekers from spending the received facilities on other transactions. As a result, the followings are hypothesized:

H1: The higher level of usage big data has significant effect on transparency.

H2: The higher level of usage big data has significant effect on professional judgment.

2.5. Professional Judgment

Professional evaluation of the data they have collected is based on their training and expertise. This experience can also be obtained outside of the classroom. Professional judgment requires timely and accurate information to be available for research. On the other hand, judgment relies heavily on an objective mind and spirit. There is little prospect for economic growth, modernisation, or the emergence of a well-functioning market economy in the absence of trustworthy data, clear policies, and efficient macroeconomic management (Myint, 2000). In most cases, people's thoughts hinder them from becoming aware of and acknowledging the reality of novel phenomena that influence judgment. People emphasize their initial beliefs when presented with new knowledge, relying on their initial beliefs. As a result, the ideology of unbiased data judgment enables the researcher to digest the data with the required tools and get ready to make a choice that is at odds with prior beliefs using his knowledge and experience. At the individual level, professional judgment is a personality attribute, and it is exhibited by professionals at the organizational level. These groups and committees are used to segment these organizations into various expertise.

All data domains are related to its area of knowledge when open data is envisaged. People can now easily perceive the borders of problems as a result of this communication. According to Dottin (2009), professionals are expected to use sound, unbiased judgment when interpreting and analyzing information, determining the nature of problems, identifying and evaluating alternative courses of action, and making decisions. They are also expected to monitor the process and impact of their problem-solving activity throughout in order to adjust, revise, correct, or change their decisions, or any factor that contributed to them, as deemed necessary.

When the public has access to information, it understands it and decision-making processes become clearer as a result (McCarthy and Fluk, 2016). According to Dottin (2009), good professional judgment is a reflective, self-corrective, deliberate thought process that calls for the professional to consider context, evidence, techniques, conceptualizations, a range of criteria, and standards of appropriateness. Professional judgment involves critical thinking as defined by educators, but it is used in a real-world professional situation (Dottin, 2009).

Letzring (2008) mentions that when people accurately judge the evidence, they will come to better decisions, and understanding the steps involved in accurate judgment may lead to more accurate decisions. According to theories regarding good judges, they should be knowledgeable, highly cognitively capable, and intelligent overall. As a result, the followings are hypothesized:

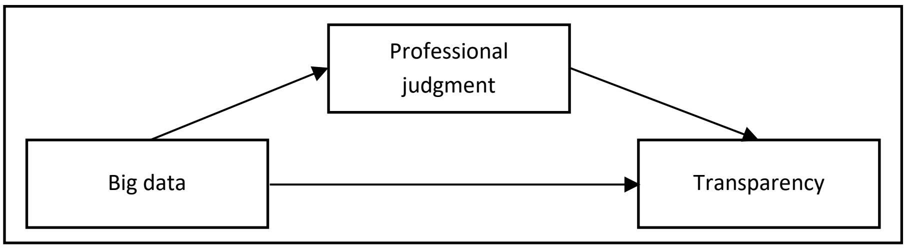
H3: The higher level of professional judgment has significant effect on transparency.

H5: Professional judgment mediates the effect of big data on transparency.

3. METHODOLOGY

The conceptual model shown in Figure 1 is based on a previous study and this research is cited.

Figure 1: Research Model



Big data is defined by Ghasemaghaei and Calic (2020) as a collection of different forms of data (variety), data that is significantly growing in size (volume), and data that is processed and integrated quickly and frequently (velocity). Big data is described by Gupta et al. (2021) as dynamic, enormous, and dispersed volumes of data being produced by individuals, tools, and machines both inside and outside of an organization. Big data has the ability to enhance business performance, according to Ghasemaghaei and Calic (2020). The measurement indicators of big data, which are promoted by Ghasemaghaei and Calic (2020), are briefed in Table 1.

Table 1: Measurement Indicators of Big Data

Variable		Measurement
Big data		
	Volume	Analyzing large amounts of data
		Exploring a substantial amount of data
		Using a great deal of data
		Scrutinizing copious volumes of data
	Velocity	Analyzing data as soon as we receive it
		Analyzing data in short time
		Fasting in exploring our data
		Analyzes data speedily
	Variety	Using several different sources of data to gain insights
		Analyzing many types of data
		Examining data from a multitude of sources

The measurement indicators of transparency are briefed in Table 2.

Table 2: Measurement Indicators of Transparency

Variable	Measurement
Transparency	Recommend and usage some kind of data
	Preference to use some kind of data for explanation and inference
	Understanding the characteristics of data for recommendations
	Understand why the data is recommended
	Understanding why this data was deemed appropriate
	Understanding recommended and preferred data matching
	Understand the rationale for the recommended information
	Understanding the determination of the quality of the information provided
	Inferring the preference of the presented information
	Match the data provided with the preferences
	Determining the quality of information items by the system
	Understanding take actions for better recommendations
	Understanding change to get better recommendations

The measurement indicators of professional judgment which adapted for this research are briefed in Table 3.

Table 3: Measurement Indicators of Professional Judgment

Variable	Measurement
Professional judgment	Level of Knowledge
	Position level
	Level of experience
	Organization size
	Ability to data processing
	Belief and ideology impartiality

4. CONCLUSION AND IMPLICATIONS

A country's economy can be negatively impacted by corruption in a number of ways. The character of a nation's shadow, subterranean, or parallel economies is also impacted by corruption. The uneven allocation of benefits and resources in society is a result of corruption. A society where riches is primarily the result of hard effort, industry, and trade will be very different from one where money is largely the result of deception and political intrigue (Ferris et al., 2021). Corruption increases the costs of the administrative, economic, and judicial systems and makes it impossible to achieve social justice. Access to open data and big data in various fields, as well as publishing them in the data life cycle with the judgment of researchers, lawyers, and journalists, is a practical and important method for discovering, preventing, and combating corruption. In fact, omissions and systematic corruption happen in areas where there is no supervisory presence.

Making big data from social and economic sources readily available and increasing transparency lowers the possibility of corruption while enforcing accountability. As a result, in cases of systematic corruption, where regulatory entities are unable to perform their duties due to the limitations of their profession, professional judgment may have a direct impact on decreasing government corruption. That is, by engaging citizens, researchers, lawyers, and journalists in state affairs and providing them with the opportunity to monitor the government, the government and public officials operate with greater accountability.

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PressAcademia
www.pressacademia.org/journals/rjbm
RJBM
ISSN 2148-6689
Research Journal of Business and Management YEAR 2023 VOLUME 10 ISSUE 1

REWARD SYSTEM AND JOB SATISFACTION AMONG EMPLOYEES IN THE HOTEL INDUSTRY IN THE SULTANATE OF OMAN

DOI: 10.17261/Pressacademia.2023.1715
RJBM- V.10-ISS.1-2023(3)-p.19-28

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Date Received: January 2, 2023 **Date Accepted:** March 15, 2023

To cite this document
Tumati, R., Yousfi, M.D.A., (2023). Reward system and job satisfaction among employees in the hotel industry in the Sultanate of Oman. Research Journal of Business and Management (RJBM), 10(1), 19-28.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2023.1715

ABSTRACT

Purpose- The study's aim is to determine the intrinsic rewards that Omani hotels use to inspire their employees and to analyse the extrinsic rewards that Omani hotels use to motivate their employees. The study also intends to investigate the association between incentive types and job satisfaction among hotel employees in Oman.

Methodology- The study employed a descriptive research design. The study's population was comprised of employees from five different four-star hotels in Oman. A systematic questionnaire was created and distributed to all participants. Rewards (both intrinsic and extrinsic) served as the study's independent variable, and job satisfaction served as the study's dependent variable. The data was gathered on a five-point scale and interpreted using averages, percentages, and correction analyses.

Findings- The study noticed that the intrinsic rewards employed by hotels in Oman included recognition and appreciation, an excellent working partnership with the manager, management trust and belief, training and professional development, and work freedom and autonomy. On the other hand, extrinsic rewards are used by hotels in Oman, such as praise and appreciation for a job well done, excellent working environments, attractive salaries, annual bonuses, and insurance for me and my family. Spearman's coefficient of 0.885 indicated a positive and significant relationship between intrinsic rewards and work satisfaction among Oman hotel employees. Similarly, a Spearman's coefficient of 0.899 demonstrated a very strong positive and significant association between extrinsic rewards and work satisfaction among Oman hotel employees.

Conclusion- The findings suggest that the level of employee job satisfaction in the organisation is reliant on rewards.

Keywords: Extrinsic rewards, intrinsic rewards, hotel employees, job satisfaction.
JEL Codes: M12, M52, N35

1. INTRODUCTION

Employee satisfaction is an important factor that may offer perspective into employees' overarching emotions, thoughts, and feelings about their workplace and their job. Knowing employee satisfaction and the aspects that contribute to it is critical for businesses. This is since it has the potential to affect the loyalty and appeal of high-quality employees, which leads to higher earnings, an improved company's reputation, and other intangible advantages. Staff will react better and more proficiently when they are not dominated by managers, assigned to stringently defined jobs, and regarded as unwanted prerequisites, but rather when they are offered a wider scope, additional responsibilities, encouraged to share, and assisted in achieving job satisfaction. When Elton Mayo worked on the Hawthorne studies, he began to investigate employees' positive and negative work relationships (Armstrong & Stephens, 2005). According to Dobre (2013), job satisfaction is a significant area of research that is still growing. Staff members have a positive attitude toward their work when they are completely satisfied with it and a negative attitude toward their profession when they are dissatisfied with it (Rue & Byars, 1992).

Job satisfaction, on the other hand, is an employee's reaction to various aspects of the job; job satisfaction encompasses interactions with colleagues, wage, supervisory authority, and position; extrinsic rewards also include the surroundings in which work is performed, career advancement, and the organisational hierarchy (Spector, 1997). In contrast, intrinsic rewards include feeling proud of what you do, acquiring a sense of expertise, and having completed meaningful work. Rewards are a significant aspect of job satisfaction and staff well-being. Many findings on job satisfaction have been undertaken, including work values (Mottaz, 1985); work incentives (Mottaz, 1985); workplace conditions (Kolluru, 2021); and hours worked (Malhotra et al., 2007). Job satisfaction is influenced by factors such as earnings, promotional offers, benefits and perks, managerial actions, and the workplace culture (Gruenberg, 1979). These elements are critical for job satisfaction.

Asian countries have been using rewards to improve employee performance for many decades (Al-Hinai et al., 2020). Before multinational corporations even began to operate in their markets, some Asian nations, like Singapore, Malaysia, and Japan, adopted incentive schemes to raise employee productivity. Ali & Ahmad (2009) found a link between rewards, motivation, job satisfaction, and achievement in a study looking at how rewards affect employee performance in the Malaysian hospitality industry. The research reveals that monetary rewards are significantly linked to employee performance. Moreover, they clarified that hoteliers should create reward packages that can reveal employees' strengths and weaknesses in a particular job, as well as reward factors that encourage employees to perform better. Because of the fierce competition in the hotel industry, hotels in Oman should devise rewards that are captivating to both prospective and current employees. The following objectives are specifically addressed by this study:

- To determine the intrinsic rewards that Omani hotels use to motivate their staff.
- To investigate the extrinsic rewards that Omani hotels use to motivate their staff.
- To examine the relationship between types of rewards and job satisfaction among hotel employees in Oman.

2. LITERATURE REVIEW

2.1 Intrinsic Rewards that Omani Hotels Use to Motivate their Staff

According to Farooqui & Nagendra (2014), intrinsic rewards refer to those created by an employee or the place of work itself. Intrinsic rewards encompass employees' potential, recognition, conviction, and achievement. Furthermore, in a hotel industry study undertaken in the UK mostly on the effects of rewards on job satisfaction, Possenried & Plantenga (2011) found an important connection between employees' qualities and their performance. The study also discovered that attainment had risen dramatically in hotels where managers had implemented strategies to enhance employees' skills. When their leaders have little or no trust in their capacity to perform, most employees' performance deteriorates substantially (Tippet & Kluvers, 2010). As a consequence, managers have the authority to raise or lower employees' output. Companies that have implemented coaching as well as other performance programmes, on the other hand, exhibit a higher rate of employee performance, which has a beneficial effect on the overall performance of the organisation (Rukhmani et al., 2010).

Trust is characterized by Salamon & Robinson (2008) as a supervisor's or company's ability and willingness to place successful aspirations on a performance of the employee, something that results in positive intentions to accomplish and improve the organizational performance. According to Zhou et al. (2011), collaborative trust is more crucial to staff efficiency than personal trust. They also contend that possessing a comparable view ensures that workers collaborate for a collective purpose, which also results in higher performance. Workers who believe their company believes in their abilities are more inclined to be accountable and then go beyond what is required to achieve corporate performance targets (Tippet & Kluvers, 2010).

Recognition, according to Wang (2014), ranks among the most important rewards that encourage staff to feel valuable. Besides that, in research published in the Singapore hospitality industry, Hafiza et al. (2011) noticed a strong link between recognition and job performance. When asked how their performance had improved, most staff said it was due to recognition from their bosses. The proportion of participants (72%) who said their managers recognised them and also thought their job was significant. According to Hafiza et al. (2011), managers in the hospitality sector should value and acknowledge their employees' contributions in order to get better. Furthermore, Piya et al. (2020) initiated a study on the factors influencing motivation in the workplace: a case study in the oil and natural gas industry in the Sultanate of Oman revealed that task attainment and collaboration issues are the main intrinsic motivation factors affecting job performance. Likewise, research by Tumati (2022) on the motivational aspects and employee engagement among Omani staff in Muscat hotels discovered that the hotels' greatest pervasive intrinsic motivators were pleasant work circumstances, an excellent workplace relationship with the manager, and a sense of affiliation to the hotel.

The desire to succeed is one of the strongest incentives for employees' performance. Accomplishment, according to Zhou et al. (2011), is the capacity to accomplish outcomes in accordance with predetermined objectives or goals. Staff members who plan ahead and work hard to ensure that their needs are met have much more intrinsic desire to succeed compared to those who don't. One possible explanation for all of this, according to Rukhmani (2010), is that accomplishment is an insentient personal desire that is not compelled onto a staff; instead, it may be supplemented, particularly for people who are already self-motivated. As a consequence, supervisors who desire employee motivation and productivity should implement internal organisational paradigms that allow individuals to plan effectively and meet performance goals. Furthermore, Al Mamari et al. (2019) found that when employees accomplish their formal objectives and are appropriately rewarded, they are happier, more content and more joyful. When their company appreciates their job, recognises them, and perceives them as valued members of the organization, they are more likely to create company dedication and stay with the company for a longer period of time.

2.2. Extrinsic Rewards that Omani Hotels Use to Motivate their Staff

Extrinsic rewards include compensation packages, rewards in the form of benefits and perks, cash, and other material benefits obtained from an organization to fulfil predetermined goals or just to be a part of the company. Most hospitality businesses offer wages and salaries, yearly leave pay-outs, vacation pay-outs, and incentive pay as extrinsic rewards (Farooqui & Nagendra, 2014). Extrinsic rewards, according to Burton (2012), are crucial since they help employees feel empowered to succeed. Burton continued by saying that management should decide on employee compensation in a fair and open manner. When workers feel that their employer treats everyone fairly when it comes to extrinsic rewards, they are more willing to support the company's success and long-term growth.

Even though wages and salaries are used by businesses in the hospitality industry to increase equity and fairness in compensation packages, Corby et al. (2015) claim that they are inadequate as performance-enhancing incentives. According to Pratheepkanth (2011), wages and compensation can only go so far in improving an employee's performance. Once an employee reaches this level, salary and compensation are no longer seen as inspiring or worthy of improving quality. Similar arguments about the inadequacy of wages and salaries are made by Dobre (2013), who points out that pay only contributes to better performance when they still need stability and economic security.

Conversely, when a staff member feels comfortable and economically stable, earnings or salary are no longer an incentive as to how committed or productive someone is. Salary, on the other hand, has a favourable effect on productivity in the hotel business (Zare & Beheshtifar, 2012; Rukhmani, 2010). They continue by arguing that weak remuneration for hotel personnel will demoralise them, which will probably lead to mediocre performance as well as significant turnover. Additionally, Piya et al. (2020) found that extrinsic factors have the greatest impact on employee motivation at work. Pay is determined to be the most effective extrinsic motivator for the majority of employees. In a similar spirit, Tumati (2022) discovered that solid promotion plans and guidelines, opportunities for training and development, and insurance coverage are the most frequently employed extrinsic motivators by hotels. Furthermore, Al Mamari et al. (2019) stated that if employees are suitably paid for their hard work with salary, bonuses, and increments, they will be highly satisfied and ready to achieve their representative objectives.

The physical elements of a workplace are just as important as its emotional qualities. Because employees spend so much time at work, they frequently develop relationships with it (Hafiza et al., 2011). Staff members who reported a positive work environment were more motivated to come to work than those who reported a negative work environment (Ozcelik & Ferman, 2016). Respondents who stated that they worked in a pleasant environment reported high levels of job satisfaction. This was attributed to a positive work environment that encouraged employees to arrive early and leave late. They therefore exert more effort than workers who despise their workplace and frequently arrive late or depart early. According to Soderquist et al. (2010), a hostile workplace and unpleasant work relationships can harm an employee's feelings and satisfaction.

2.3. Relationship between Types of Rewards and Job Satisfaction among Hotel Employees in Oman

Job satisfaction, according to Spector (1997, p. 7), is "*the extent to which individuals like their occupations.*" Job satisfaction is defined as "a function of the range of specific satisfaction and dissatisfaction that he/she perceives with the various characteristics of work" by Locke (1976), as stated in Bartol and Locke (2000). It encompasses both the benefits and expectations people have from their employment. Maurer (2001), referenced in Bartol & Locke (2000), claims that one of the most important elements influencing employees' contentment is the reward and the growth of the company should be tied to rewards, as happy employees make for successful businesses. Rewards are typically thought to affect job satisfaction. Moreover, Malhotra et al. (2007) indicated that the extrinsic reward for someone's work is the key element because rules and regulations largely call for managers to give "inspirational awards" in recognition of a task well done. On the other hand, an absence of a sufficient reward system undermines staff morale and decreases job satisfaction.

Employees' intrinsic and extrinsic benefits from their employment are regarded as "job rewards" and "job values." However, according to Janet et al. (1987), both aspects influence job satisfaction, but the financial portion of job rewards is more significantly linked to employee satisfaction than job values, which are connected to the intrinsic portion of job rewards. Further, task significance and interest in the work are the major predictors of engineers' job satisfaction. On the other hand, Spector (1997) discovered that making employees deeply engaged in their job positions is not explicitly linked to job satisfaction. However, it has the potential to boost task involvement and task significance. In addition, the nature of the work, gender, age, education level, work environment, location (urban vs. rural), colleagues, compensation, and hours worked are some of the elements connected to job satisfaction (Malhotra et al., 2007).

According to Mottaz (1985), intrinsic rewards like job independence, task importance, and job commitment can lead to higher levels of job fulfilment and employee loyalty to organizations. Similarly, extrinsic rewards like higher salaries, regular bonuses, and performance-related cash rewards, will, according to Kumari et al. (2015), improve employees' work and job satisfaction. Extrinsic rewards, according to Zhou et al. (2011) inspire and encourage employees to remain with the company for years. Moreover, Maurer (2001) added that recognising excellence for related efforts by employees should be rewarded to support a specific performance level. Organizational performance metrics may need to be changed to take quality efforts into account in order to boost employee satisfaction.

Physical job conditions for employees include a pleasant work environment, aeration, brightness, comfortable temperatures, and larger, better, and cleaner workspaces, all of which will increase employee job satisfaction because employees prefer a more physically comfortable work environment. Employee satisfaction increases when the company provides all or most of these benefits. Low job satisfaction, on the other hand, is primarily due to physical working conditions (Janet et al., 1987). Additionally, according to a study by Kolluru (2021) on the relationship among and the performance of employees in Omani banks, intrinsic rewards like an extra day off, recognition, freedom from restrictions at work, challenging situations, career progression, and recognition have the biggest effects on workers' productivity and job satisfaction.

Furthermore, Bartol & Locke (2000) reviewed several studies on employee satisfaction and outlined the primary rewards that can improve their job satisfaction, such as wage and salary, job promotion, employee motivation, performance-related pay, personal relationships with management, opportunities for advancement and development, other welfare facilities, and employee commitment. Added to that, extrinsic benefits are motivating and will encourage workers to work harder and score higher, according to Kolluru (2021). An annual bonus is a significant extrinsic benefit that can boost job satisfaction. The findings indicate a direct link between employee performance and the annual bonus.

3. METHODOLOGY

This research employed a quantitative approach to resolve the inquiries and problems being posited. Creswell (2012) stated that the quantitative approach employed mathematical methods like statistics to measure and describe the degree or level of a certain variable used in the study. Besides, Kothari (1984) described that the quantitative research approach is a method to gather data from or about an individual or group of individuals to give a description, comparison, and explanation regarding their feelings, behaviour, knowledge, values, attitudes, and perceptions. Survey research, like that employed in this study, operates using a quantitative framework wherein certain phenomena are viewed and observed. The descriptive-correlational study design was used in this research. According to John (2014), descriptive studies have a significant impact on the information that can be used to support informed decisions. Descriptive research enables the investigation of data and helps generate a full understanding of the research topic. Additionally, it allows for the prediction of behaviour in actual life circumstances. However, correlational research design, according to Ghosh (2015), includes data collection to determine the extent of relationships between two or more quantifiable variables.

In Muscat, five hotels with four-star ratings were chosen for the study. In this investigation, stratified random sampling was employed. This approach is suitable because the study's chosen subgroups and substratum, including the front desk, food and beverage, housekeeping, reservations, and marketing, make up the niche population. According to Kothari (1984), stratified sampling is the method that enables the stratification of the sample into subgroups. In addition, Creswell (2012) outlines the technique that permits population diversification into substrates or subgroups. However, the instruments were dispersed using a method of random sampling to prevent bias in the results. The sample size was 163 staff from four-star hotels in Muscat, Oman,

The study included primary and secondary data. A survey, i.e., questionnaire, was used to gather the primary data. Ghosh (2015) mentioned that the characteristics of a huge population can be described through surveys. No other study design can offer such a wide range of capabilities, ensuring a more precise representation to collect focused results from which to derive inferences and make significant decisions. The survey questionnaire has four parts: Part 1: the profile of the respondents; Part 2: intrinsic rewards that Omani organisations use to motivate their staff; Part 3: extrinsic rewards that Omani organisations use to motivate their staff; and finally, Part 4: intrinsic and extrinsic rewards and their impact on job satisfaction. After collecting the data, it was tabulated and subjected to data analysis procedures. To analyse the data, descriptive statistical tools were used by using the Software Package for Social Sciences (SPSS) as follows: Frequency Distribution, Percentage, Mean, Standard Deviation, and Pearson's r. Pearson's r. was used to determine the significant relationship between the types of rewards and job satisfaction among hotel employees in Oman.

4. FINDINGS AND DISCUSSIONS

4.1. Demographic Profile of Respondents

The respondents' demographic profile is shown in Table 1. Gender: 74.8 per cent of respondents are male, while 25.2 per cent are female. It reveals that 17.2% are under the age of 22, 27% are between the ages of 23 and 30, 29.4% are between the ages of 31 and 45, and the remaining 26.4% are 46 or older. Marital status: 62.6 per cent are single, while 37.4 per cent are married. Nationality: The majority, 56%, are non-Omanis, meaning they are from outside of Oman, while the remaining 44% are Omanis. According to the survey, 52.8% have a high school diploma, 35% have diplomas, 8% have bachelor's degrees, and the remaining 4.2% are post-graduates. The department: The majority of respondents (44.2%) work in the food and beverage department, followed by 29.4% in the front office, 18.4% in housekeeping, and 8% in reservations. The vast majority of those polled—39.3%—worked from 0 to 3 years and had extensive experience. The next-highest percentage, 36.8%, worked for 7 to 10 years, while the remaining 22.1% worked for 4 to 6 years. However, only 1.8% have worked for 11 years or more.

Table 1: Demographic Profile of Respondents

Description	Frequency	Percentage
Entire Group	163	100
Gender		
Male	**122**	**74.8**
Female	41	25.2
Age		
Below 22	28	17.2
23-30	44	27.0
31- 45	**48**	**29.4**
46- Above	43	26.4
Marital Status		
Single	**102**	**62.6**
Married	61	37.4
Nationality		
Omani	72	44%
Non-Omani	**91**	**56%**
Education		
High School	**86**	**52.8**
Diploma	57	35.0
Graduate	13	8.0
Postgraduate	7	4.2
Department		
Front Office	48	29.4
Food and Beverage	**72**	**44.2**
Housekeeping	30	18.4
Reservation and Marketing	13	8.0
Duration of Service		
0-3 years	**64**	**39.3**
4-6 years	36	22.1
7-10 years	60	36.8
11 and above	3	1.8

Table 2 summarises the intrinsic rewards that Omani hotels use to motivate their staff. The highest mean score for intrinsic rewards that Omani hotels use to motivate their staff is recorded as "Your performance at work is improved by the manager's confidence in your skills" (4.48). It implies that if the manager believes in an employee's abilities, their work performance can be significantly improved. The second and third highest mean scores recorded were: "Your manager is aware of your needs and satisfies them to your satisfaction" (4.38); "You believe that your hotel cares about your career development" (4.31). Similarly, the lowest mean scores recorded are “Your managers provide constructive feedback to help you grow and perform better” (3.38). At work, you are always clear about your goals and objectives (3.29), and you are rewarded for your hard work and efforts (3.12). It implies that those employees are not always clear about their work goals and objectives and do not believe they are rewarded for their hard work and efforts.

Table 2: Intrinsic Rewards that Omani Hotels Use to Motivate their Staff

Intrinsic factors	Mean	SD	Rank
Your performance at work is improved by the manager's confidence in your skills.	**4.48**	**0.882**	**1**
Your manager is aware of your needs & satisfies them to your satisfaction.	4.38	1.026	2
You believe that your hotel cares about your career development.	4.31	0.837	3
At your hotel, there are numerous options for training and growth.	4.25	1.203	4
You will feel a great sense of satisfaction when you accomplish your goals and objectives.	4.17	0.833	5

You have the knowledge and skills required to carry out your job.	3.72	1.209	6
Your manager has faith in your abilities.	3.51	0.882	7
Your managers provide you with constructive feedback that helps you grow and perform better.	3.38	1.243	8
You are always clear about your goals and targets at work.	3.29	1.067	9
You get rewarded for your hard work and efforts.	3.12	0.960	10

Table 3 describes the extrinsic rewards that Omani hotels use to motivate their staff. The highest mean score recorded for extrinsic rewards used by hotels to motivate their employees is "*Your performance is enhanced when managers praise you*" (4.61). It signifies that if hotel managers regularly praise their employees' work and accomplishments, their performance can be elevated to new heights. The other highest mean scores recorded are as follows: The prospect of a bonus improves your performance (4.53); your company provides an excellent health insurance plan (4.42); your performance would improve if your salary were raised (4.25). Because they are all directly related to monetary benefits, hotels should provide them as often as possible and as affordably as possible. On the other hand, the mean score for "The salary you received is reasonable for the work you performed" was the lowest (3.27). This means that employees believe the pay they received is not fair for the work they did. Other lowest mean scores recorded were: "You are responsible for achieving quantifiable results" (3.55); "When you perform well, there are benefits," and "When you perform poorly, there are penalties" (3.42). It suggests employees are not accountable for achieving measurable outcomes and do not see the link between their work and outcomes.

Table 3: Extrinsic Rewards that Hotels Use to Motivate their Staff

Extrinsic factors	Mean	SD	Rank
Your performance is enhanced when managers praise you.	**4.61**	**0.839**	**1**
Your performance is improved by the prospect of the bonus.	4.53	1.025	2
Your organisation has an excellent health insurance plan.	4.42	0.988	3
If your salary were raised, your performance would improve.	4.25	1.116	4
Your office environment and facilities make it comfortable for your work.	4.19	0.798	5
Your hotel offers its employees a substantial retirement package.	3.72	0.919	6
Incentives, bonuses, and other benefits are frequently offered by your hotel.	3.68	0.816	7
You are responsible for achieving, quantifiable results.	3.55	1.091	8
When you perform well, there are benefits, and when you perform poorly, there are penalties.	3.42	1.136	9
The salary you received is reasonable for the work you performed.	3.27	1.165	10

The intrinsic rewards and their impact on job satisfaction are highlighted in Table 4. Recognition for hard work has the highest mean score for intrinsic rewards and their impact on job satisfaction (4.53). Employees are most satisfied with their jobs when managers recognise and appreciate them. As a result, if managers properly recognise and appreciate their employees' efforts, they will be able to go above and beyond in serving customers. Excellent working relationships with your manager or supervisor (4.41), management trust and belief (4.33), policies and guidelines for effective promotion (4.20), and work freedom and autonomy (4.11) are other intrinsic rewards that lead to employee satisfaction. On the contrary, the lowest mean scores recorded were for training and professional development (3.29), a sense of belonging to the hotel (3.23), and a sense of pleasure from completing tasks (3.07). It denotes that the employees do not feel a sense of belonging to a hotel and do not enjoy completing tasks or challenging work.

Table 4: Intrinsic Rewards and their Impact on Job Satisfaction

Intrinsic Rewards	Mean	SD	Rank
Recognition for hard work	**4.53**	**1.131**	**1**
An excellent working partnership with your manager or supervisor	4.41	1.040	2
Trust and belief by the management	4.33	1.148	3
Policies and guidelines for effective promotion	4.20	0.924	4
Work freedom and autonomy	4.11	1.310	5
Constructive feedback offered by managers	3.84	0.891	6
Opportunities for growth and advancement possibilities	3.51	1.248	7
Training and professional development	3.29	0.857	8
The sense of belonging to the hotel	3.23	1.113	9
Feeling pleasure from completing tasks	3.07	1.322	10

The extrinsic rewards and their impact on job satisfaction are highlighted in Table 5. Praise and appreciation for a job well done have the highest mean score for extrinsic rewards and their impact on job satisfaction (4.57). It implies that the best extrinsic rewards for employees are when their managers applaud and recognise a job well done. Other extrinsic rewards that contribute to employee satisfaction include a competitive salary (4.44); annual bonuses and other benefits (4.38); insurance for me and my family (4.26); and **promotion and salary increase benefits** (4.19). Because they are all monetary benefits, hotels must provide them wherever they are required, as these benefits directly lead to employee satisfaction and, thus, employee retention. Conversely, a substantial retirement package has the lowest mean score (3.10). This is to say that employees are less concerned about retirement benefits because the majority of them are young and have had a long working career. Other low mean scores were paid leave for professional development and a yearly vacation (3.28), and performance-based pay (3.16).

Table 5: Extrinsic Rewards and their Impact on Job Satisfaction

Extrinsic Rewards	Mean	SD	Rank
Praise and appreciation for a job well done	**4.57**	**1.065**	**1**
Attractive Salary	4.44	1.136	2
Annual bonuses and other benefits	4.38	1.008	3
Insurance for me and family	4.26	0.903	4
Promotion and Salary Increase benefits	4.19	1.298	5
Desirable incentives and commission	3.75	0.887	6
Excellent working environments	3.51	1.126	7
Paid leave for career development and a yearly vacation	3.28	0.849	8
Performance related pay	3.16	1.101	9
A Substantial Retirement Package	3.10	1.241	10

Table 6 shows Spearman’s correlation between intrinsic rewards and job satisfaction among hotel employees. According to the findings in Table 6, there is a very positive and significant relationship between intrinsic rewards and job satisfaction among hotel employees in Oman. The obtained Spearman's coefficient of 0.885 and p-value of 0.000 < 0.05 support this. The results implied that the intrinsic rewards used by hotels strongly affect job satisfaction among hotel employees in Oman. For instance, employee satisfaction is influenced by manager recognition and appreciation, a collaborative working relationship between employees and managers, and management trust and belief in employees.

Table 6: Spearman’s Correlation between Intrinsic Rewards & Job Satisfaction among Hotel Employees

Variables		Intrinsic Rewards	Job Satisfaction of employees
	Spearman’s Correlation	1	.885*
Intrinsic Rewards	Sig. (2-tailed)		0.000
	N	163	163
	Spearman’s Correlation	.885 *	1
Job Satisfaction of employees	Sig. (2-tailed)	0.000	
		163	163

*Correlation is significant at the 0.05 level (2-tailed).

Table 7 shows Spearman’s correlation between extrinsic rewards and job satisfaction among hotel employees. A very high, positive, and significant relationship between extrinsic rewards and job satisfaction among hotel employees in Oman was revealed in Table 5.2. This was indicated in the obtained Spearman's coefficient of 0.899 and p-value of 0.000 <0.05. This also implies that the extrinsic rewards used by hotels greatly influence job satisfaction among hotel employees in Oman. For instance, employee satisfaction is boosted by praise and appreciation for a job well done, an attractive salary, annual bonuses, and insurance for me and my family.

Table 7: Spearman’s Correlation between Extrinsic Rewards and Job Satisfaction among Hotel Employees

Variables		Extrinsic Rewards	Job Satisfaction of employees
	Spearman’s Correlation	1	.899*
Extrinsic Rewards	Sig. (2-tailed)		0.000
	N	163	163
	Spearman’s Correlation	.899*	1
Job Satisfaction of employees	Sig. (2-tailed)	0.000	
		163	163

*Correlation is significant at the 0.05 level (2-tailed).

4.2. DISCUSSION

Objective 1: To determine the intrinsic rewards that Omani hotels use to motivate their staff.

Table 2 shows that the manager's confidence in employees' abilities, which improves their work performance (4.48), and managers' awareness of employee needs and satisfaction with them (4.38), have the highest and second-highest mean scores, respectively. It indicates that employees perform better at work when their manager has faith in their talents. In addition, they think that their managers are attentive to their requirements and meet them satisfactorily. The results aligned with Farooqui & Nagendra's (2014) findings that employees' ability, appreciation, belief, and accomplishments are the most influential intrinsic rewards. Wang (2014) adds that acknowledgment is among the most significant intrinsic benefits that encourage workers to feel valuable. Other intrinsic rewards are that the hotel in Oman cares about employee career development (4.31) and offers training and growth opportunities at the hotel (4.25). It intends that Oman's hotels are concerned about the professional advancement of their staff members and offer a wide range of opportunities for learning and advancement. The results are consistent with those of Rukhmani et al. (2010), who observed that organisations that implement training and other capability-developing programmes demonstrate a greater level of employee performance, which has a positive effect on overall organisational performance.

Objective 2: To investigate the extrinsic rewards that Omani hotels use to motivate their staff.

According to Table 3, "congratulating employees for their performance" (4.61) and the promise of a bonus if employees go “above and beyond expectations" (4.53) receive the highest mean ratings for extrinsic rewards that hotels use to motivate their workforce. It signifies that the two most successful extrinsic rewards utilised by hotels are praising employees for their accomplishments and awarding bonuses for employees' performance. The results support those of Al Mamari et al. (2019), who asserted that paying employees a salary, bonus, and increments will result in tremendously satisfied workers who complete their tasks. Additionally, Pratheepkanth (2011) said that once an employee reaches the threshold, salary is no longer considered to be a motivator or a way to improve achievement.

Other extrinsic rewards that hotels use to motivate their staff are excellent health insurance plans (4.42), and the promise of higher salaries for higher performance (4.25). The provision of a health insurance programme and salary increases are two additional extrinsic rewards used by hotels in Oman to encourage and enhance the performance of their workforce. The results are in conjunction with those of Tumati (2022), who discovered that insurance benefits, training, and growth, as well as sound promotion plans, are the most frequently used extrinsic motivators by hotels. However, Dobre (2013) points out that wages only increase worker performance when they continue to seek protection and monetary stability. However, once a staff considers itself secure and financially assured, higher earnings are no longer an incentive or factor in how committed or productive they are.

Objective 3: To analyse the relationship between types of rewards and job satisfaction among hotel employees in Oman.

According to the findings, some of the intrinsic factors that affect employees' job satisfaction include recognition (ranked no. 1), a great working relationship with their manager (ranked no. 2), management's trust and belief in them (ranked no. 3), policies and guidelines for successful promotion (ranked no. 4), and work freedom and autonomy (ranked no. 5). The findings are supported by subsequent research (Recognition: Wang, 2014; Kolluru, 2021). Trust: Zhou, et al., 2011; Tippet & Kluvers, 2010; Farooqui and Nagendra, 2014; Al Mamari et al., 2019. Work freedom: Kolluru, 2021; a great working relationship with their manager: Tumati, 2022).

Among hotel employees in Oman, there is a pretty big and robust correlation between intrinsic rewards and job satisfaction. This is supported by the obtained p-value of 0.000 > 0.05 and Spearman's coefficient of 0.885. The results revealed that the intrinsic rewards utilised by hotels had a substantial impact on the job satisfaction of hotel employees in Oman. For jobs involving higher cognitive capabilities and complexity, intrinsic incentives perform substantially better. For easy, straightforward tasks that do not call for a high level of cognitive talent, like those in the hotel service business, extrinsic motivation works best (Al-Hinai, 2020; Al Mamari et al., 2019; Kumari et al., 2015; Janet et al., 1987).

Results showed that praise and appreciation for a job well done (ranked #1), an attractive salary (ranked #2), annual bonuses and other benefits (ranked #3), insurance for themselves and their families (ranked #4), and benefits of advancement and salary increases (ranked #5) are some of the extrinsic factors that influence their job satisfaction. The findings are supported by subsequent research (Salary: Pratheepkanth, 2011; Rukhmani, 2010; Zare & Beheshtifar, 2012; Al Mamari et al., 2019; Kazemzadeh and Bashiri, 2005; Piya et al., 2020). Appreciation: Farooqui and Nagendra, 2014; Hafiza et al., 2011; Kolluru, 2021. Bonus: Farooqui and Nagendra, 2014; Al Mamari et al., 2019; Mottaz, 1985; Kolluru, 2021. Insurance: Tumati, 2022; Salary Increase: Al Mamari et al., 2019; Rukhmani, 2010; Zare & Beheshtifar, 2012).

Extrinsic rewards and job satisfaction were highly significant and favourably correlated, according to Table 4.7, among hotel staff in Oman. This was demonstrated by the observed Spearman's coefficient of 0.899 and p-value of 0.000 > 0.05. This implies that receiving extrinsic rewards from business owners increases job satisfaction for hotel staff members in Oman. According to Al Mamari et al. (2019), combined intrinsic and extrinsic rewards significantly improve employees’ perception, which in turn significantly boosts motivation and satisfaction among employees. According to the findings, employee satisfaction depends on both intrinsic and extrinsic rewards.

5. CONCLUSION AND IMPLICATIONS

5.1. Conclusion

Extrinsic rewards are typically financial, including a pay increase, a bonus payment for going above and beyond the call of duty, or a gift card for exceptional performance. Since the majority of individuals value money or comparable benefits, these rewards inspire and drive workers. Even if someone lacked intrinsic motivation, they would still work to find external incentives. Most intrinsic rewards are qualitative and cannot be measured, such as increased self-esteem and recognition. Extrinsic rewards, however, can be measured and are more quantitative, such as wage increases, bonuses, paid time off, annual vacation plans, and other benefits. According to the findings of this study, both intrinsic and extrinsic motivation have a major impact on employee satisfaction. The findings further indicated that both extrinsic and intrinsic rewards spur employees' vigour, commitment, and assimilation, inferring that those employees with increased motivation engaged in their jobs more. The results indicated that when extrinsic (such as financial reward) and intrinsic (useful work) rewards are employed synchronously at work, intrinsic rewards have a stronger impact on workers' job involvement, while extrinsic rewards help workers feel more satisfied with their jobs. The main findings of this research are that "recognition for hard effort (intrinsic reward)" leads to the highest levels of job satisfaction among employees. However, gaining praise and appreciation for a job well done leads to the greatest level of job satisfaction (extrinsic rewards). Both are non-financial incentives, so managers at every hotel should use them to always keep their staff happy. Additionally, since there is no cash involved, they are simple to implement.

The study recommends that in order to retain top performers at their establishments, hotels in Oman should put in place an effective extrinsic compensation scheme that links rewards to productivity. Extrinsic rewards satisfy an employee's needs and desires, which lowers the likelihood that they will leave the organisation. The authors advise hotel management to give its employees full support, which is an intrinsic reward that is beneficial in motivating them to work more, given that the hospitality sector has one of the highest rates of employee turnover. Additionally, managers need to recognise and thank the efforts made by their staff members to raise engagement and satisfaction levels. Hotels must make their employees' jobs more exciting and meaningful in order to increase their intrinsic motivation and job fulfilment. Finally, one method to provide each employee with a more interesting and happier career is to make them feel valued and empowered to lead their teams.

5.2. Implications

It is critical to recognise the study's limitations, which may lead to future research. Future researchers should examine the relationship between employee satisfaction and rewards in other industries such as education, health, banking, and tourism. In future studies, the comprehensiveness of employee job satisfaction may be judged by taking a larger sample of employees, as this research collected information from a relatively homogeneous sample of hotels in Muscat, Oman's capital city. As a result, the sample may not be fully representative of hotel employees. Furthermore, in the future, it would be interesting to examine the relationship between job performance and rewards. Finally, future researchers should take a mixed approach rather than a quantitative approach, as this study did.

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PressAcademia
www.pressacademia.org/journals/rjbm
RJBM
ISSN 2148-6689
Research Journal of Business and Management YEAR 2023 VOLUME 10 ISSUE 1

GREEN TICKETING: A BENEFICIAL FRAMEWORK FOR AIR CARRIERS

DOI: 10.17261/Pressacademia.2023.1716
RJBM- V.10-ISS.1-2023(4)-p.29-37

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Date Received: November 30, 2022 **Date Accepted:** March 17, 2023

To cite this document
Olcen, O., (2023). Green ticketing: a beneficial framework for air carriers. Research Journal of Business and Management (RJBM), 10(1), 29-37.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2023.1716

ABSTRACT

Purpose- Developing a concept, utilization of it, classification and comparison of it within and between other concepts need an intensive theoretical background in every scientifical branch. The main purposes of this paper are to present why and how a useful scientifical tool will develop via conceptualization and to show this process by developing a "green ticketing" concept. Essentially, it will be investigated some answers to the question of if or not the concept of the green ticketing is really important and necessary for the airline industry climate.
Methodology- With all of its dimensions, causal relationships, and with help of a base theory and some methodologies, whether or not the concept of green ticketing may be suggested as a suitable concept for airline companies and scientists is the subject of this paper. The main contribution of this paper and it is made in this research distinct that utilization of a new concept may not be an easy process, especially in specific and critical fields like aviation because of the limitations on the age (time), place (space) and extension. For these reasons, this research can be accepted as the development of a new concept via specific methodologies articulation and typological methodologies exampled from literature. Also, beneficial concepts such as bricolage and problematic are utilized to reach the purpose.
Findings – The suitability of the ticketing concept to greenization is clearly founded in light of arguments in ticketing and fares management branches of airlines and sustainability and ticketing literature of civil aviation and also developments in practical and social lives relate to civil aviation in this research.
Conclusion- "Green Ticketing" concept will be suitable for researching deeply. Nevertheless, It should not forget that as a new concept, it can suffer from complex ethical problems in terms of economical and financial context like every industry.

Keywords: Green ticketing, greenization, postmodernity, sustainability, concept development.
JEL Codes: B26, O18, R11

1. INTRODUCTION

Ticketing is always a reason for a problematic situation for civil aviation. If it is concentrated on the development of the ticketing concept in the civil aviation context, it will be confronted with broad, systematic, and sometimes rational, sometimes psychological designs, so bricolage is a suitable concept for defining it. Here, bricolage is so suitable metaphor, because ticketing is not only inferred from intensive mathematical concepts and operations, computerized processes such as artificial intelligence or fuzzy logic, and simple or complex economic demand/supply analysis, but also it is a product of heuristic and intuitive reasoning and deciding processes depend hugely on ticketing' own and complex nature includes timing, dating, scheduling, and human errors again and again. And also, it should be an unforgettable detail that the -only- and direct financial resource of air carriers is tickets, for this reason, ticketing.

However, the greenization of a product or a service is a very different process and conceptualization on the other side. And it needs also a conscious trend with all of its roots. Greenization of an end product in terms of industrial language includes a lot of collaborative and cooperative business-making styles and creates a union within different functions of an enterprise.

According to Hegel's (1812) contribution in "Science of Logic", the classification of ambiguity is a centre and descriptive step to understanding and conceptualizing it. In famous natural scientist Darwin's (1859) and Physicist Newton's (1833) works, similarities gain importance in the classification stage. Similarities are important results of a mixing methodology of definition and measuring with numbers or formulas. These processes were utilized by almost all modern thinkers such as Marx (2018) and Durkheim (1897) and scientists such as Bertalanffy (1968). On the other side, modern scientifical disciplines, their motivations, and reasonings always accept classification as a suitable way of theorizing modernity or modern reality. Assumptions of modern scientific theories such as the ceteris paribus principle in economics always paved the way to explain a modern but ideal manageable world, because it seems so normal and concrete. Especially, a mystic, abstract, dark, and unexplained unnormal began to appear even after two world wars, a cold war period, and some financial crises. Lyotard named this situation a Postmodern Condition (1985), on the other side, Derrida (2016) tried to explain this new reality with the explanation of deconstruction, and according to his works, writing and especially definition was a semi-hidden and semi-open gun of authors with sound and strict impacts on the object and object-related things (objectivity) in this era. For Foucault, re-reading an opus magnum concept by concept was essential to understand a full history of humankind and its managerial functions, and archetypes (archaeology of knowledge) and it is also so important to define unnormal or postmodernity such as madness, sexual differences, and of course potency (2000, 2007). Through these contributions, it can be understood old concepts able to gain new ends with different means. For example, it can be confronted with utilizing a mathematical reasoning mean for sociological end or purposes such as articulation -in reality, a modern system science mean- or bricolage -a modern anthropological mean- can take place in managerial science. For these reasons, it should be unnecessary to bind a discipline in developing the new concept in postmodernity. “Green ticketing” is a suitable concept to develop in this way.

The main research questions of this research are here how and why can be created or developed a wider and more comprehensive "green ticketing" concept? It is not a simple concept but it has got a very big potential in the next ten years considering the attitudes of aircraft producers and suppliers, the consciousness of international, national, and regional regulators, the awareness of passengers, and the total behaviours of an aviation community under high degree competition pressures. Green ticketing can be described here shortly as an articulation of “greenization” and “ticketing” like Foucault’s articulation between “knowledge” and “power”. According to Foucault’s articulation, knowledge has got considerable philosophical impacts on power depending on age (time), place (space), and extension. In this sustainability age, it is an expected result and a hard-definable reality that greenization processes have got great and sophisticated impacts on ticketing in the civil aviation context.

In light of these arguments, theorizing and conceptualization are argued in the methodology section. In the first section of literature in this research, there is a conceptual and scientific analysis of the “ticketing” concept with all reachable dimensions in civil aviation literature. The realization of all managerial functions, processes, systems, products, and services are detailed and argued in the second section of this research. it is paved a way for the construction of a new concept "Green Ticketing" in the third section of this research. Assumptions and constraints on the "Green Ticketing" concept are put forward and conclusions are made.

2. LITERATURE REVIEW

2.1. Problems of a Century for Air Carriers: Ticketing and Airfares

Airfares, tickets, and ticketing are important concepts in terms of air carriers' revenue management, so air carriers. Airfares are the total worth of an air carrier's services and serviceable products or the overall charge of a ticket for a flight. It is unforgettable information that flights are imperfect substitutes, it's the main feature of a flight (van den Bogaard and Lijesen, 2019). Even if it is still questionable whether or not airfare is an economical or financial burden of a passenger or group or reciprocity of air carrier’s services and products, airfares can include a lot of knowledge such as air carrier’s business making style (Brueckner et al.,1992). They are a reflection of air carriers ' inside management effectiveness (Hofer et al., 2005; Hofer et al.2009(b)), and also they are a measure of air carriers' external political affluence. Beside, it is important for policymakers through its crucial importance for the mobility of the public (Wozny, 2022). On the other side, tickets and ticketing is a process between air passengers and air carriers, they are the seeable face of airfares, therefore the premier focus point should be airfares in the analysis of the ticketing concept.

It is asserted in Gorin and Belobaba (2004) that fares are sources of unfair competition with revenues and traffic due to their impacts on air carrier’s performance. The relationships between revenue and seasonality of the aviation industry also corrected by Cohen et al. (2023). Gorin and Belobaba (2008), and Bachwich and Wittman (2017) also stated that airfare structures independently are a reason of new competition types such as low-cost air carriers or ultra-low-cost Carriers, also competition in the crisis time of Covid-19 (Zhang, et al, 2022) and determination of the airline strategies (Kim et al, 2023). The fares and the amount of the fares are competition elements in the Japanese transportation system between high-speed rails, low-cost carriers, and high-cost Carriers (Mizutani and Sakai, 2021). According to the reverse logic of Brueckner et al. (2013), business styles such as low-cost carriers are the main reason for airfare fluctuations in the air carrier industry. For Tsoukalas et al. (2008) airfares definitively show air carriers' cost structure. It is proved in Belobaba and Wilson (1996), Belobaba (2001), Eguchi and Belobaba (2004), Belobaba (2011), d’Huart and Belobaba (2012), Belobaba (2016), Fry and Belobaba (2016) that air carriers breathe in and out with airfares financially and economically. If air carriers want to possess an efficient, effective, and fluid revenue and yield management policy, the same air carriers have to be focused on airfares and the mechanisms that produce yields and revenues. Also, airfares are the most vivid and active variables, their volatilities follow a shift depending on a sudden, unexpected, or expected fluctuation in an international legal and political variable (Graham et al.,1983, Keeler,1972; Cosmas et al.,2010), a catastrophe, a pandemic, a natural disaster, a war, an air carrier alliance and code-sharing activity (Brueckner and Whalen, 2000; Brueckner, 2001; Alderighi, Gaggero and Piga, 2015;

Brueckner and Singer, 2019), oil prices (Kaufman, 2017; Scotti and Volta, 2018; Atems et al., 2019;) or slot restriction policies (Fukui, 2019). Therefore, beyond being an object of strict and sound economical demand and supply analysis, the determination of true and correct airfare is the conceptual equivalent of chaos in terms of air carriers, their environment, and also airports (Cohas et al.,1995; Bockelie and Belobaba, 2017; Guo et al.,2018). Some other variables, which count as more insider variables in civil aviation, have got also had great important impacts on airfares. For example, the airport's place and hub situation dramatically affect airfares (Borenstein, 1989; Tan and Samuel, 2016; Ren, 2020).

Alternative transportation means also have got so great impacts on airfares that their effects feel very strongly the short distance, especially in big countries and continents such as China, Japan, Europe, and the United States due to nature of economic, social and managerial nature of competition (Capozza, 2016; Tsunoda, 2018; Su et al., 2019; Zhang et al., 2019; Ma et al.,2019; Ma et al., 2020; Mizutani and Sakai, 2021)

For Pels and Rietveld (2004) intensive, destructive, sharp airfare fluctuations in airline markets are signs of market saturation. On the other side, airfares are not only a big part of air carriers' revenue and yield management, they are also an expression of passengers' wills; wishes, and expectations (Botimer and Belobaba, 1999) and also their strategies such as utilization of hidden city strategies (Oh and Huh, 2022) . If it is considered that tickets are sold and bought in "bins" or "buckets" where a bucket is defined by a series of ticket characteristics including the class of travel, refundability, advance purchase requirements, and travel and stay restrictions such as minimum and maximum stays and/or Saturday stayover (Sengupta and Wiggins, 2014), the personal preferences or group choices of passengers can change under the assumptions of hedonistic behaviour (Howell and Tatje, 2022) , rational behaviour and pragmatical behaviour due to market segmentation. Passenger characteristics are an important part of the tickets and ticketing process, besides how and what they want in ticketing and tickets are, also an object of main descriptive and classifying types in the tourism industry. Airlines are in strict, sound, and comprehensive relationships with the tourism industry.

Tickets began to be an object to other special issues with a cumulative increase in internet use. Most of the critical timing features such as innovative ticket promotions and booking time continue to be added in new conceptual online ticketing designs due to de-structural and definitive impacts of the internet on the cost structure of different business segments such as low-cost air carriers. The adding of the internet networks into the European aviation understanding, the information transition also gain speeds (2021). According to Huang et al. (2019), internet research engines are so for to serve the optimal Choice. Wen and Chen (2017) examined this situation in China example, and Cho and Min (2018) worked on these issues in the U.S example. Today, the total passenger number is so outnumbered that it is almost impossible to service these passengers by classical air carriers' service types. In addition to this, this complexity is mirrored to also tickets and the ticketing process. For this reason, dynamic pricing, which is born as an innovative tool in the face of classical airfares detection methods, is a new approach, and framework by IATA and it is nothing more than a real-time, passenger and competition-oriented, pricing mechanism (Wittman and Belobaba, 2016; Wittman and Belobaba, 2016(b)).

Therefore, it can be understood that an air carrier that wishes to design a ticket, should be aware of a lot of external and internal variables due to the nature of the civil aviation industry. So, for Baker, Miner, and Eesley (2003) referring to great anthropologist Levi's-Strauss (1966), bricolage is -making- due with means or resources at hand. In the light of the arguments above, designing a ticket is not a simple and basic process, it needs to see designed in process more systematic way and the person or institution, who realizes and encounters with bricolage, calls a bricoleur.

A bricoleur is neither only a manager nor only an engineer. According to Louridas (1999), i) An engineer creates the means for completion of his work, the bricoleur redefines the means that already has; ii) A bricoleur uses semi-defined elements as inventory, they are abstract and concrete, iii) These elements carry a meaning depending on their past uses, iv) Experience, knowledge and skill of bricoleur can modify these elements toward requirements of the project and the bricoleur' intention. Nonetheless, Witell et al. (2017) proposed four critical bricolage capabilities. These are i) Addressing resource scarcity actively; ii) Making do with what is available; iii) Improvising when recombining resources, and iv) reaching the purpose.

Problematic situations are situations that enforce the limits between different sides of a social context constantly and continuously. They have validity almost in every science. To analyze problematic situations, i) their organization style, and ii) definition of their limits are important (Callon, 1980).

There are two important templates above that are bricolage and problematic, and both of them are going to be used to describe airfares in a civil aviation context. The nature of airfares pushes all of its dimensions such as marketing, financial, accounting, or legal and political and industry-specific down to a problematic situation with great power, on the other side a bricolage or approximation of a bricoleur arises as a problem-solving technique that pulls almost all matters of airfares up with complex, unidentified and maybe-innovative ways to balance.

2.2. Greenization

Sustainability is so important part of today's world ecologist movement, particularly after the UN Declaration of Sustainable Goals, sustainability has been subjected to a large amount of literature. Especially, vision, mission, and focus points of sustainability in management are being developed in a very conscious manner so that almost every sub-scientifical branch developed its methodology with different approaches and subjects. Stegall (2006) examines sustainability philosophy into a template consisting of 4 important items: i) main impetuses and reflexes of humans, societies, and cultures, maybe subcultures toward more liveable environmental and ecology issues, ii) sculpted intentions that shape ecological literacy, iii) developing of new behavioural forms such as new technologies to solve problems arising from ecological literacy, iv) respect to mother nature (cradle to cradle design) in resource allocation. These four important groups pave the way for a suitable sustainable science. According to Thompson (2010, 1997), if it is focused on sustainability science more closely, it is confronted with three important frames, i) ecological sustainability includes the integration of human beings, social life, and production life into ecosystem processes, ii) economic sustainability is a power of recovering costs, iii) social sustainability is intended to call attention to issues of equity, fairness or social justice. For Rupprecht et al. (2020), it is so normal that the duty of sustainability is redefined to comply with the human needs and resources of humanity considering the needs and expectations of future generations in this era. Thompson and Cavaleri (2010) maintain that real-life sustainability matters are so complex that they do not explain classical ways of classical problem-solving methodologies, therefore a sustainability science should have got different research methodologies.

Greenization is a comprehensive development concept based on several factors, such as the ecology, environment, and economy and includes every aspect of production and life. Besides, urbanization is the main thrust of big countries like China, economic and social development, and greenization is the essential pursuit of economic and social development (Liu et al, 2019). According to Callicott (1984), ecology is not a thing more than soils, waters, plants, and animals, therefore a biotic community.

The Greenization of energy politics that the essence of everything is energy has great importance in complex sustainable politics and problems (Dincer and Zamfirescu, 2012). In this context, Dincer (2016) defines greenization in two ways, i) as a process of converting traditional/conventional systems with higher environmental damage, less efficiency, more cost, etc. into more efficient, more cost-effective, and more environmentally friend ones as greenized systems, ii) as a process of developing new energy solutions under 3S (Source, System and Service) criteria which are greener than the traditional/conventional ones.

It is pointed out in Eckersley (1990), that green thought complies with critical theory. In his philosophical articles referring to Habermas, Bruelle (2002) draws two mathematical sets as critical theory and ecological ethics and determines their intersection set as Green Political Thought. From these points of view, to reach expected or hoped results in green thought or green political thought, the creation of public space with help of money and administrative power is an absolute obligation. This public space should include, i) ecological politics, ii) meaningful disagreements and debates about our society, and necessary actions to foster ecological sustainability would be carried out. Whether or not the priority of human needs can be over the needs of other living organisms and ecosystems is another ethical argument, for Bourdeau's (2004) framework, a balanced picture has a priority. Nasibulina (2015), Singh et al. (2019) emphasized the impacts of environmental training on environmental ethics. Hoffman (2003) forms a new business world that includes also a comprehensive expansion of environmental ethics.

3. METHODOLOGY

For Feldman and Orlikowski (2011), there are three important features of theorizing, i) a theory must be a part of daily social life (modernity or postmodernity) ii) In creating a theory, dualism is rejected strictly and soundly, on the other side, dualities are accepted, iii) Another important feature of a theory is that phenomena of a theory are in a mutual–relationships with other phenomena constitutionally. On the other side, this research can be accepted as theorizing of "green ticketing". To realize this, it benefited from Cornelissen's (2017) and it is another derivative of Kelleci and Yıldız's (2021) taxonomies and classifications of Branch and Rocchi's (2015) on concept development. First of all, it is purposed to analyze two recent corpora of ticketing and greenization separately. Here, true and real hardship is not an analytical analysis of these two important concepts, it is hard to construct a logical and causal relationship between them. As is stated by Cornelissen (2017) and Schlüter et al. (2019), this research is typology-based theorizing research an it can be classified also in describing Socio-ecological reality for this reason, inductive research is dominant.

This research is a simpler and leaner example of conceptualizing with theorizing means. At the end of this conceptualizing, firstly it is aimed to create a new, essential and beneficial concept not only for researchers but also for practitioners. Secondly, to create a new concept under the rules of articulation and typological research type, conformity of age(time), place (space), and extension are at a saturated level. For example, as it is thought that economic and natural resources are being restricted under exaggerated and unreasonable use of the community, it is true and certain -period- for science that wishes and desires to develop a true concept, to method with comparisons, classification, synthesizing and analyzing, to obtain and to retain advantageous results.

The aviation industry has been in rapid development since the 1950s. Although the main concerns of aviation management stakeholders are safety and security, last years have been witnesses of seeking solutions to noise problems and especially environmental problems.

If it is looked at the root causes of this change in the aircraft industry, firstly, it should take into account that suppliers of aircraft are also other stakeholders of other industries affected by sustainable and ecological changes, their business making style reforms again and again. Secondly, public awareness, perceptions, attitudes, and then behaviours toward sustainability are on an increasing trend. Ecologic health aimed movements, social movements can seem in the world, for example, Flysgkam (flight shame) movement in European countries, and intensive literature in China. Thirdly, International and national institutions like International Civil Aviation Organization (ICAO), International Air Transport Association (IATA), European Union Aviation Safety Agency (EASA), and Airport Council International (ACI) focused on sustainability and environmental matters with serious and high sanction power, they began to change industry nature. And main civil aircraft manufacturers began to add their development plans to environmental health related-sustainability and ecological issues. Taxonomies and classifications of Kim and Son (2021) give a lot of explanations about sustainability and scientific development in air carriers.

The behaviour of passengers/consumers generally is under changes depending on market conditions. And this tendency also can be observed in markets governed by green, ecological, and sustainable rules voluntarily. According to Cerri, Testa, and Rizzi (2018), there is a negative correlative relationship between environmental concerns of consumers and green purchasing behaviours of consumers, on the other side, there is a positive correlation between previous knowledge or information and green purchasing behaviour of consumers. The cumulative accumulation of information and knowledge is also pointed out by Kumar et al. (2017) with subjective norms. As it is stated in Paço et al. (2019) empirically and Kelleci and Yıldız (2021) theoretically, green and sustainable values are the main and revolutionary determinants of marketing politics of enterprises like air carriers and green purchasing behaviour of societies via psychological and sociological variables. Panda et al. (2020) emphasize the impacts of sustainability awareness on purchasing intention, green brand loyalty, and green brand evangelism and also can bridge the value-action gap for green brands. Michal et al. (2017) also correct the relationships between environmental consciousness and purchasing behaviour. Van Ewijk et al. (2023) describes a framework, in that the contributions of the passengers in airlines activities toward sustainability can be described through taxes.

In this context, the relationships between environmental responsibility of society and person and purchasing behaviours are possible correlation, even so, it seems some research on how these relationships can be increased. For example, Bedard and Tolmie (2018) and Zahid et al. (2018) underline the roles of social media, For Arli et al. (2018) state of readiness, according to Ghazali et al. (2018) religious values also have got important impacts, Sheng et al. (2019) determines the significance of cultural values on these relationships.

Therefore, there is no problem between environmental, ecological, green, and sustainable product and service purchasing behaviours concepts under the conditions of suitable pricing and purchasing behaviour, and also consciousness toward these concepts affects purchasing behaviours positively but cultural changes and their deep and definitive impacts in world context are indispensable. (Zhichang, 2010).

4. FINDINGS AND DISCUSSIONS

It is investigated and sought true answers to the question of whether or not there can be a scientifical reality calls as green ticketing in this research. At first sight, the green ticketing concept is a little bit ambiguous, it's a social reality and it is open to discussion, at the same time, it needs severe classifications and taxonomies, it is only inferred from systematizing of current research because it is impossible to create a model to hypothesize it. For these reasons, it is suitable for Cornelissen's typology-based research design.

Beyond everything, greenization is a deep and comprehensive philosophical and ethical movement with all of its origins and roots. It is an umbrella concept that includes many other things about nature and ecology. It is a more convenient concept to explain greener aviation development. If it is read more in detail, it can seem main philosophical impact of greenization on the aviation industry. In the first step, ecological literacy is necessary, aviation stakeholders completed this step, and this step can be accepted as setting causal relationship if it is looked at a lot of research about detrimental and destructive impacts of aviation liquids such as de-icing and anti-icing fluids (Cao et al. 2018; Rumak et al. 2020; Dinu et al. 2019; Lin et al, 2018; Kozuba and Pil'a, 2019), aviation emissions, airports' and air carriers' negative environmental externalities (Koščák, 2020) even in developing countries. The second and third steps, it is confronted with conceptualization, behavioural norms towards greenization and resource allocation in the greenization process all of which are very complex matters. This analysis serves these steps, and for this reason, it is important. On the other side, it can be concluded that producing new concepts is always a problem and methodological and philosophical research methodologies always gain importance in this production process. This research only serves one specific methodology for researchers.

5. CONCLUSION AND IMPLICATIONS

The first concept is "ticketing" which could be explained with two important concepts. "Bricolage" and "problematic" are two knife-edges, higher degree-explanative, and so chaotic concepts not only because of their mechanical and organic meanings but also their dependence on psychological meanings. Ticketing is problematic due to its time depend- nature, and human depend-nature. However, ticketing problems can only be solved by a bricoleur approach, especially in strategic and ambiguous ticketing stages (including spill and spoil times). Articulation, which is another methodology, vitalizes or differentiates new concepts. Foucault's articulation of power and knowledge not only implies that the means of power reaches the peak with the means of knowledge but also includes a deep transformation of power with impacts of knowledge depending on time, space, and extension. If it is looked at the green ticketing concept, the same impacts are also expected again, the greenization process should deliberately transform the ticketing concept depending on time, space and extension, and in this work according to the literature, this transformation should create purchasing consent among passengers. Besides, it gives shape to competition and industrial order through its sensitivity, vulnerability, and fragility of external variables such as airport slots, demands, and expectations of passengers and oil prices as was stated in the first section.

At the end of the research, it can also be suggested that there is still an important gap between what is really green and what is not in also aviation management depending on the definition of greenization. There is an ethical paradox on who will really be loaded the burdens of greener products and services, despite the demands and purchasing will; wishes and desires of the public toward greener products and services. This is a red line in the field, also in this research.

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