

E-ISSN 2687-5942

Economics Business and Organization Research

Year: 5 Number: 2
2023

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Citation: Darweesh, R., & Abuareish, M. (2023). How does organizational structure impact the relationship between organizational agility and customer satisfaction?. *Journal of Economics, Business and Organization Research*, 5(2), 88-109.

HOW DOES ORGANIZATIONAL STRUCTURE IMPACT THE RELATIONSHIP BETWEEN ORGANIZATIONAL AGILITY AND CUSTOMER SATISFACTION?

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Received: 24.04.2023

Accepted: 07.08.2023

Published Online: 29.10.2023

Abstract

By applying organizational agility practices, organizations, especially, banks can achieve better customer satisfaction and centricity along with the ability to adapt their structure. This study investigates the direct relationship between organizational agility and customer satisfaction as well as the moderating effect of organizational structure on the organizational agility and customer satisfaction relationship. The study is cross-sectional based on using 33 Likert-scale items to design a questionnaire, which is distributed to 430 employees and managers working in the commercial banks of Jordan. By adopting SPSS, exploratory factor analysis is used to validate the study's variables; multiple linear regression and process macro tool are used to test the study's hypotheses. The findings show that organizational agility in terms of sensing, responsiveness, acting, and reconfiguration affects customer satisfaction. Moreover, all organizational agility factors affecting customer satisfaction are moderated by formalization while organic structure moderates only the relationship between two factors of organizational agility and customer satisfaction. Overall, the study found that while organizational agility may impact customer satisfaction, ultimately, its potential to achieve superior customer satisfaction is conditioned by the organizations' ability to adjust their internal structures. The contribution of this study lies in the moderation effect of organizational structure, which provides researchers and practitioners with an insight into competitively utilizing organizational structure.

Keywords: *Organizational Agility, Organizational Structure, Customer Satisfaction, Jordanian Commercial Banks, Organic Structure, Formalization*

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1. INTRODUCTION

Organizational agility includes several capabilities that enable organizations to cope with any unpredictable changing environments. In other words, organizations cannot succeed unless they are capable to sense, adapt, and respond to different sources of alterations. Due to the vital role of Jordan's banking sector in financial development and economic growth, it becomes crucial for banks to sense and respond to these challenges as quickly as possible by adopting the practices of organizational agility. Agility is defined as aligning technology, people, and management to respond to the changeable demands of customers (Majlesi and Sajjad, 2015). Gligor et al. (2020) found that agility has a direct link with customer satisfaction. This study assumes that organizational agility capabilities have a direct influence on customer satisfaction, which is an important measure of organizational success. According to Yusuf et al. (1999), customer satisfaction is one of the goals that agility can achieve by reallocating resources and utilizing knowledge. Accurately meeting fluctuating requirements in a timely manner is considered to be one of the functions of agility (Katayama and Bennett, 1999).

Based on the studies of Goldman et al. (1995) and Kettunen (2009), organizational agility affects all organizations' practices through organizational structure. Some previous studies found that organizational structure dimensions such as centralization, stratification, formalization, and participation have an impact on both organizational agility and customer satisfaction (e.g. Al-Hakim et al., 2017, Felipe et al., 2016, Rashidi et al., 2014, Ahmadi et al., 2012, Saddique et al., 2013, Auh and Menguc, 2007). On the other hand, it has been argued that organizational structure whether organic or mechanistic might change the relationship between organizational agility and some other output variables (e.g., Goldman et al., 1995; Reed and Blunsdon, 1998; Felin, 2015; Worley and Lawler, 2010) but there isn't a study conducted to find quantitative results.

Briefly, the researcher aims to fill the gap in the literature through a profound search of previous studies and quantitative results. Few studies explained the relationship between agility and customer satisfaction. For instance, Barve (2011) found that supply chain agility impacts customer satisfaction. Moreover, Zhang et al. (2005) revealed that flexible logistics capability positively affects customer satisfaction. In their study, logistic flexibility is a part of the organization's responsiveness, which is a crucial capability of an agile organization. Kish and Rojuee (2016) found that organization agility and customer satisfaction have a positive and

significant relationship. Anyway, the researcher didn't find a comprehensive study demonstrating the role of organizational structure on the direct relationship between organizational agility and customer satisfaction. Therefore, this study aims to find the conditional impact of organizational structure on the relationship between organizational agility and customer satisfaction. Precisely, the study investigates how organizational structure might moderate the influence of agility on customer satisfaction.

2. LITERATURE REVIEW

2.1. Agility and Customer Satisfaction

According to Hill et al. (2007), satisfaction briefly describes how customers feel when interacting with a firm. Hunt (1977) assumed that customers are satisfied when a company's actual performance meets at minimum the expected performance. Several factors have been studied as causes of customer satisfaction, which lead to a consensus view that expectation, service quality, price, reputation, customer value, and information technology are critical factors that influence customer satisfaction (Ho and Zheng, 2004; Hess et al., 2003; Aydin et al., 2005; Robbins et al., 2015; Wahjudi et al., 2018; Jain and Aggarwal, 2017; Hur et al., 2013; Alabar and Agema, 2014)

Organizational agility that also represents a potential effect on customer satisfaction is the firm's ability to interact with its customers and stakeholders (Sambamurthy et al., 2003). Agile organizations can react to changes and keep satisfying their customers (Yauch, 2011). Swafford et al. (2006) argue that reducing manufacturing costs, satisfying customers, and the ability to develop new product or service are some consequences of organizational agility. Lin et al. (2006) explained that increasing customer satisfaction, reducing manufacturing costs, and eliminating the non-value-added practices result from the organizational agility practices.

Agile organizations spend efforts to satisfy their customers using different mechanisms, such as, change management, communication, quick responsiveness, and reconfiguration. Researchers argue that these organizations not only look for selling their product, but also innovate the techniques that corporate information technology, people, and all organizations' parties to fulfill customers' requirements (Dalvi et al., 2013). Yusuf et al. (1999) stated that customer satisfaction is a one-goal that agility can accomplish by reconfiguring its resources and using knowledge.

Using interpretive structural modeling, Barve (2011) suggests that supply chain agility

impacts customer satisfaction. Moreover, Zhang et al. (2005) find that flexible logistics capability positively affects customer satisfaction. In their study, logistic flexibility is a part of the organization's responsiveness, which is a crucial capability of an agile organization. Kish and Rojuee (2016) found that organization agility and customer satisfaction have a positive and significant relationship. Using regression analysis, Kish and Rojuee conclude that the speed dimension of organizational agility has the most significant influence on customer satisfaction.

Mirabi et al. (2018) adopted the structural equation modeling technique with partial least squares methodology to find that the agile supply chain in terms of speed, competence, flexibility, and responsiveness influences customer satisfaction.

Moreover, Nyachanchu et al. (2017) found that dynamic capabilities such as sensing, seizing, and reconfiguration influence firm performance, including profitability, growth in sales, and market share, customer satisfaction, employee satisfaction, environmental performance, and social performance.

The director of the Center for Information Systems Research at the Massachusetts Institute of Technology (MIT), Peter Weill, argues that customer satisfaction is one of the primary profitability sources in the current competitive environment. He furthered that "If you are not agile, you cannot do it, because customer expectations are never static." (Glenn, 2009). Based on the above arguments, the following hypothesis is addressed to fill the literature gap.

H1: Organizational Agility (Sensing agility, Decision Agility, Acting Agility) has a significant effect on Customer Satisfaction.

2.2. Organizational Agility, Organizational Structure, Customer Satisfaction

Preiss et al. (1996) points out the importance of organizational structure in creating an agile enterprise. Felin (2015) argues that organizations require a new strategy and structure which enable agility in the light of a volatile environment. Reed and Blunsdon (1998) explain that organizational agility requires a conforming between organizational structure and processes to cope with environmental dynamics.

Thompson (2003) proposed that organizations need to be open in order to adapt and survive. The instability and uncertainty of the current environment urge organizations to change the old tactics of managing their business. Worley and Lawler (2010) wrote: "The complexity, unpredictability, and instability of environmental change seem to have outpaced our traditional

organization design approaches and concepts.”

Organizations realize the importance of being quick and responsive, but many do not have the right structure to do so (Ambrose and Morello, 2004). The flexible structure is the best for practicing agility. Flexible structure allows the organizations to make quick decisions and distribute authority when possible, and it activates the collaboration between the organizations’ members (Wendler, 2014).

According to “Organization Agility”, a study conducted by Harraf et al. (2015), the organizational agility framework has been developed based on ten bases, which are a culture of innovation, empowerment, tolerance or ambiguity, vision, change management, organizational communication, market analysis and response, operations management, structural fluidity, and learning organizations. This study argues that organizational structure can build communication channels that enhance flexibility and responsiveness, which, in turn, improve organizational performance.

Rashidi et al. (2014) used eight dimensions of organizational structure to investigate the effect of organizational structure on organizational agility in governmental organizations. They found that all dimensions of organizational structure influence organizational agility. Specifically, they found that formalization, centralization, hierarchy of authority, and complexity have a negative impact on agility dimensions, while professionalism, standardization, personnel ratio, and specialization have a positive effect on organizational agility. They suggest that organizations have to employ highly educated people and promote them through specialized training courses to get their jobs done well. Besides, organizations have to allow their employees to access information and databases to encourage learning and align the number of employees in various departments with each department’s needs (Rashidi et al., 2014).

Ahmadi et al. (2012) concluded that there is a significant relationship between organizational agility and formalization and centralization dimensions of organizational structure. According to previous studies, organizational agility may not affect organizational success because of the nature of organizational structure (Fateme et al., 2013). In other words, the organizational structure moderates the firm’s performance effects of organizational agility (sensing, seizing, and reconfiguring resources) (Wilden et al., 2013). Moreover, whether mechanistic or organic, the structure can influence managers' ability to make timely decisions

(Haller, 2009).

Besides the effect of organizational structure on organizational agility, it has been found that organizational structure affects customer satisfaction. Saddique et al. (2013) found a relationship between organizational structure (decentralization, formalization, and specialization) and customer satisfaction. The moderating and the direct effect of formalization and centralization are studied concerning customer orientation and firm performance by Auh and Menguc (2007), where customer orientation measures the extent to which a company satisfies its customers. They found that formalization has a positive impact on customer orientation; on the other hand, centralization has a negative impact. It has also been found that decentralization and formalization moderate customer orientation's effect on firm performance (Auh and Menguc, 2007).

In light of the above, this study claims that organizational structure moderates the influence of organizational agility on customer satisfaction by suggesting the following main hypothesis:

H2: Organizational Structure moderates the influence of Organizational Agility on Customer Satisfaction.

3. RESEARCH METHODOLOGY

This study's model is developed by reviewing existing studies (figure 1). In line with the model, the study hypotheses are developed to test the relationships between the constructs. This study depended on the multiple linear regression models to test the direct relationship between organizational agility and customer satisfaction. For testing the moderation effect of organizational structure, the process macro tool is used.

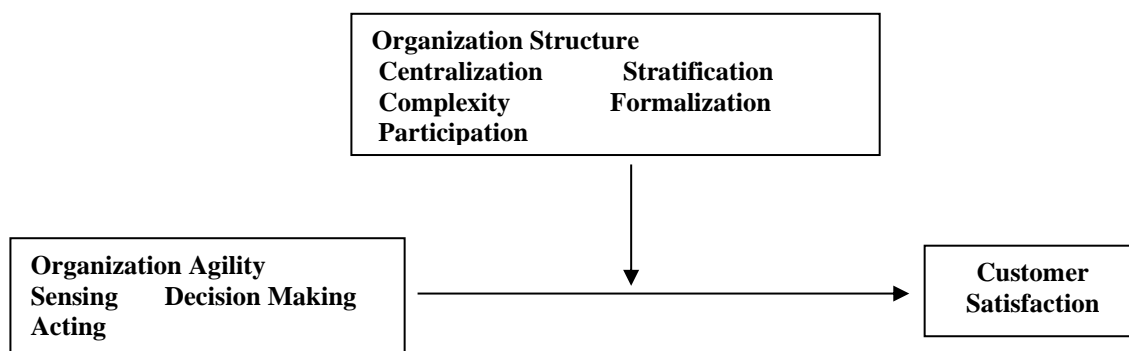
The study used a 5 Likert-scale questionnaire to collect individual-level data. Therefore, for measuring organizational agility in this study, Park's (2011) questionnaire is adopted with 15 items divided into three factors, which are sensing agility, decision agility, and acting agility. Customer satisfaction seven items are adopted from Galbreath (2010). Eleven items divided into five factors (centralization, complexity, participation, formalization, and stratification) are used from Kim's (2005) study to measure organizational structure.

3. RESEARCH METHODOLOGY

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Figure 1. The Study Model



The study population consists of employees and managers working in the commercial Banks of Jordan, which are (12,493) in total as indicated by the Association Banks of Jordan. To collect the data for the study, individualized questionnaires over a period of three months were distributed to a random sample consisting of managers and employees working at different commercial banks in Jordan. The sample size is calculated based on the random sampling method, with a 95% confidence level. Only 6 banks accepted to answer the questionnaires. 430 individualized answered questionnaires are collected over 3 months by visiting the banks physically. 30 incomplete questionnaires are excluded from the analysis. Thus, 400 questionnaires remain to represent the study population.

4. STATISTICAL ANALYSIS

4.1. Demographic Data Analysis

In order to explore the study sample, descriptive statistics are conducted including gender, age, education, experience, and job title listed in Table 1.

Table 1. Demographic Profile of Sample

| | | | Frequency | Percentage |
|-------------------|--------------------|-----|-----------|------------|
| Gender | Female | 215 | 53.8 | |
| | Male | 185 | 46.3 | |
| Age | 26 or less | 85 | 21.3 | |
| | 27 to 35 | 193 | 48.3 | |
| | 36 to 45 | 104 | 26 | |
| | 46 and more | 18 | 4.5 | |
| Education | College Degree | 29 | 7.2 | |
| | Bachelor's degree | 330 | 82.5 | |
| | Graduate degree | 41 | 10.3 | |
| Experience | 5 years and less | 100 | 25 | |
| | 6 to 10 year | 207 | 51.7 | |
| | 11 to 15 year | 82 | 20.5 | |
| | 16 years and above | 11 | 2.8 | |
| Job Title | Branch manager | 38 | 9.5 | |
| | Office manager | 54 | 13.5 | |
| | Branch Supervisor | 49 | 12.3 | |
| | Head of Department | 80 | 20.0 | |
| | Subordinate | 179 | 44.8 | |

4.2. Factor Analyses

4.2.1. Factor Analysis - Organizational Agility

Factor analysis of organizational agility returned four components instead of the three dimensions of Park (2011) questionnaire named Decision Agility, Sensing Agility, Acting Agility, and Reconfiguration Agility. The four dimensions' cumulative variance is 73.218 % (Table 2). Regarding the Reliability test, table 1 shows that alpha values ranged from 0.744 to 0.929.

Table 2. Factor Analysis and Reliability Results of Organizational Agility

| Factor / Item | Factor Loading | Variance (%) | Alpha |
|---|--------------------|--------------|-----------------|
| Decision Agility | | 23.790 | .880 |
| DA_4 | .833 | | |
| DA_3 | .814 | | |
| DA_1 | .800 | | |
| DA_2 | .799 | | |
| DA_5 | .768 | | |
| Sensing Agility | | 18.004 | .929 |
| SA_1 | .936 | | |
| SA_3 | .922 | | |
| SA_2 | .919 | | |
| Acting Agility | | 17.208 | .833 |
| AA_3 | .885 | | |
| AA_2 | .797 | | |
| AA_1 | .693 | | |
| AA_4 | .650 | | |
| Reconfiguration Agility | | 14.278 | .744 |
| RA_1 | .806 | | |
| RA_2 | .796 | | |
| RA_3 | .752 | | |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | | .819 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | | 3521.312 |
| | df | | 105 |
| | p-value | | .000 |

4.2.2. Factor Analysis- Customer Satisfaction

Factor analysis test using principal component analysis and Varimax rotation returned only one component as Galbreath's (2010) scale named Customer Satisfaction with 84.708% as a cumulative variance (Table 3). Regarding the Reliability test, the results shown in Table 3 found that the alpha coefficient is 0.970.

Table 3. Factor Analysis and Reliability Results of Customer Satisfaction

| Factor / Item | Factor Loading | Variance (%) | Alpha |
|---|--------------------|--------------|----------|
| Customer Satisfaction | | | |
| CS_6 | .933 | | |
| CS_1 | .926 | | |
| CS_4 | .924 | 84.708 | .970 |
| CS_5 | .919 | | |
| CS_3 | .915 | | |
| CS_2 | .914 | | |
| CS_7 | .912 | | |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | | .943 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | | 3514.497 |
| | df | | 21 |
| | p-value | | .000 |

4.2.3. Factor Analysis- Organizational Structure

Factor analysis of organizational structure returned only two components instead of five components of Kim's (2005) scale named Formalization and Organic Structure. The two dimensions' cumulative variance is 72.376 % (See Table 4). Regarding the Reliability test, the alpha coefficient of organic structure and formalization are 0.938 and 0.835, respectively.

Table 4. Factor Analysis and Reliability Results of Organizational Structure

| Factor / Item | Factor Loading | Variance (%) | Alpha |
|--|----------------|--------------|------------------------------------|
| Organic structure | | 48.258 | .938 |
| OS_7 | .847 | | |
| OS_2 | .839 | | |
| OS_6 | .832 | | |
| OS_2 | .801 | | |
| OS_8 | .788 | | |
| OS_3 | .778 | | |
| OS_4 | .772 | | |
| OS_1 | .771 | | |
| Formalization | | 24.118 | .835 |
| F_2 | .862 | | |
| F_1 | .858 | | |
| F_3 | .776 | | |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | | .912 |
| Bartlett's Test of Sphericity | | | Approx. Chi-Square 3266.017 |
| | | | df 55 |
| | | | p-value .000 |

4.3. Results of Testing the First Hypothesis

For testing the first hypothesis, multiple linear regression assumptions are tested (Table 5).

Table 5. Multiple Linear Regression of Model 1

| Dependent Variable | Independent Variables | β | t-value | p-value |
|---|-------------------------|---------|---------|---------|
| Customer Satisfaction | Decision Agility | .294 | 6.307 | .000 |
| | Acting Agility | .238 | 4.583 | .000 |
| | Reconfiguration Agility | .179 | 3.581 | .000 |
| | Sensing Agility | .170 | 3.957 | .000 |
| <i>R=.556 R²=.309 Adjusted R² = .302 F:44.166 p: .000</i> | | | | |

Source: SPSS multiple linear regression outputs of analyzing Galbreath (2010) and Park's (2011) items

The results of Table 5 show that Sensing agility, Decision Agility, Reconfiguration Agility, and Acting Agility, the dimensions of the independent variable (Organizational Agility) have a statistically significant effect on the dependent variable (Customer Satisfaction) at a 95% confidence level ($\alpha \leq 0.05$). This can be concluded by the significantly calculated t values and Beta Values at ($\alpha \leq 0.05$).

4.4. Results of Testing the Second Hypothesis

In order to test this hypothesis, the process macro (Model 1) tool was employed.

Table 6. Moderation Effect of Formalization

| Effects | β | SE | t-value | P |
|--|---------|------|---------|------|
| Sensing Agility | .373 | .100 | 3.720 | .000 |
| Decision Agility | .273 | .043 | 6.247 | .000 |
| Acting Agility | .244 | .048 | 5.063 | .000 |
| Reconfiguration Agility | .150 | .045 | 3.330 | .000 |
| Formalization | .334 | .106 | 3.131 | .001 |
| Sensing agility*Formalization (INT1) | -.078 | .031 | -2.491 | .013 |
| F= 31.974 R²= .328 P=0.000 R² Change = .010 | | | | |
| Sensing Agility | .139 | .033 | 4.144 | .000 |
| Decision Agility | -.304 | .114 | -2.655 | .008 |
| Acting Agility | .229 | .046 | 4.912 | .000 |
| Reconfiguration Agility | .159 | .044 | 3.627 | .000 |
| Formalization | -.481 | .110 | -4.340 | .000 |
| Decision Agility* Formalization (INT2) | .196 | .035 | 5.459 | .000 |
| F= 37.735 R²= .365 P= .0000 R² Change = .048 | | | | |
| Sensing Agility | .133 | .034 | 3.832 | .000 |
| Decision Agility | .276 | .043 | 6.326 | .000 |
| Acting Agility | -.001 | .115 | -.007 | .993 |
| Reconfiguration Agility | .151 | .045 | 3.340 | .001 |
| Formalization | -.157 | .115 | -1.357 | .175 |
| Acting Agility* Formalization (INT3) | .077 | .034 | 2.241 | .025 |
| F= 38.503 R²= .370 P= .0000 R² Change = .011 | | | | |
| Sensing Agility | .136 | .034 | 3.950 | .000 |
| Decision Agility | .280 | .043 | 6.401 | .000 |
| Acting Agility | .230 | .048 | 4.777 | .000 |
| Reconfiguration Agility | -.080 | .113 | -.713 | .475 |
| Formalization | -.15 | .113 | -1.347 | .178 |
| Reconfiguration Agility* Formalization (INT4) | .079 | .035 | 2.251 | .024 |
| F= 31.684 R²= .326 P= .0000 R² Change = .008 | | | | |

Source: SPSS micro process outputs of analyzing Galbreath (2010), Park's (2011), and Kim's (2005) items

The results (Table 6) imply that formalization moderates the relationship between all organizational agility dimensions and customer satisfaction. That can be explained by the

significant values of betas and t values at ($\alpha \leq 0.05$) of the interaction terms (Sensing agility*Formalization (INT1), Decision Agility*Formalization (INT2), Acting Agility*Formalization (INT3), Reconfiguration Agility*Formalization (INT4).

4.4.2. Moderation Effect of Organic Structure

The results imply that organic structure moderates the relationship between decision agility and customer satisfaction and acting agility and customer satisfaction (Table 7). That can be explained by the significant values of betas and t values at ($\alpha \leq 0.05$) of the interaction terms (Decision agility*Organic Structure (INT2), Acting Agility*Organic Structure (INT3).

Table 7. Moderation Effect of Organic Structure

| Effects | B | SE | t-value | P |
|---|-------|------|---------|------|
| Sensing Agility | .171 | .103 | 1.664 | .096 |
| Decision Agility | .250 | .043 | 5.809 | .000 |
| Acting Agility | .210 | .046 | 4.525 | .000 |
| Reconfiguration Agility | .128 | .044 | 2.891 | .004 |
| Organic Structure | .254 | .102 | 2.478 | .013 |
| Sensing agility*Organic structure (INT1) | -.012 | .029 | -.418 | .675 |
| F= 40.581 R²= .382 P=0.000 R² Change = .0003 | | | | |
| Sensing Agility | .120 | .033 | 3.627 | .000 |
| Decision Agility | -.154 | .113 | -1.358 | .175 |
| Acting Agility | .234 | .046 | 5.079 | .000 |
| Reconfiguration Agility | .125 | .043 | 2.885 | .004 |
| Organic Structure | -.180 | .110 | -1.637 | .102 |
| Decision Agility* Organic Structure (INT2) | .126 | .033 | 3.817 | .000 |
| F= 37.735 R²= .365 P= .0000 R² Change = .023 | | | | |
| Sensing Agility | .124 | .033 | 3.694 | .000 |
| Decision Agility | .273 | .043 | 6.258 | .000 |
| Acting Agility | -.088 | .125 | -.703 | .482 |
| Reconfiguration Agility | .129 | .044 | 2.947 | .003 |
| Organic Structure | -.067 | .116 | -.579 | .562 |
| Acting Agility* Organic Structure (INT3) | .087 | .034 | 2.567 | .010 |
| F= 38.503 R²= .370 P= .0000 R² Change = .011 | | | | |
| Sensing Agility | .127 | .033 | 3.774 | .000 |
| Decision Agility | .253 | .043 | 5.874 | .000 |
| Acting Agility | .210 | .046 | 4.533 | .000 |
| Reconfiguration Agility | .017 | .115 | .147 | .882 |
| Organic Structure | .107 | .110 | .973 | .330 |
| Reconfiguration Agility* Organic Structure (INT4) | .033 | .032 | 1.034 | .301 |
| F= 37.067 R²= .361 P= .000 R² Change = .001 | | | | |

Source: SPSS micro process outputs of analyzing Galbreath (2010), Park's (2011), and Kim's (2005) items

5. DISCUSSION and CONCLUSION

Organizational agility has been a crucial strategy for all organizations for many decades. Regardless of its ambiguity and illusiveness, it has benefited organizations in achieving organizational objectives. In modern organizations and highly dynamic environments, organizational agility became an indispensable capability that is required to enhance customer satisfaction. Besides, organizational structure whether organic or mechanistic plays an important role in all organizational practices. Therefore, this study addressed the effect of organizational agility on customer satisfaction as well as the moderation effect of organizational structure on the relationship between organizational agility and customer satisfaction.

The first hypothesis of this study proposed that organizational agility has a significant effect on customer satisfaction. The results confirmed the proposed hypothesis using multivariate regression analysis where all calculated t values and Beta Values at ($\alpha \leq 0.05$) are significant. In general, the results confirm the theoretical implication of the existing studies (e.g., Lee et al., 2017; Kish and Rojuee, 2016; Mirabi et al., 2018). On the other hand, this study contributes to the literature by exploring elaborately the agility concept and finding a way for banks to adopt the practices of agility in order to enhance customer satisfaction.

The second hypothesis of this study states that organizational structure moderates the relationship between organizational agility and customer satisfaction. Using exploratory factor analysis, two factors of organizational structure were developed, named formalization and organic structure. The moderation analysis of formalization explains how the impact of sensing agility, decision agility, acting agility, and reconfiguration agility on customer satisfaction varies based on the degree of formalization. In other words, the results show that the effect of the interaction term between all factors of organizational agility and formalization on customer satisfaction is significant. The minus sign of beta infers that the more the formalization of the organization, the more the negative effect of sensing agility on customer satisfaction. Oppositely, the less the formalization is, the less the negative impact of sensing agility on customer satisfaction. That might explain that formalization can hinder the effect of sensing agility practices on customer satisfaction. In contrast, the positive sign of beta infers that the more the formalization of the organization, the more the positive effect of decision agility, acting agility, and reconfiguration agility on customer satisfaction. It can be inferred that

decision agility, acting agility, and reconfiguration agility practices can better influence customer satisfaction by applying the formalization structure.

Furthermore, the results show that organic structure only moderates the impact of decision agility on customer satisfaction and the impact of acting agility on customer satisfaction. That confirms a few theoretical studies that haven't been converted into practical or quantitative studies (e.g. Goldman et al., 1995; Kettunen, 2009; Preiss et al., 1996; Felin, 2015; Reed and Blunsdon, 1998).

Parts of the results of moderation effects are consistent with the study of Wilden et al. (2013) who found that the influence of sensing, seizing, and reconfiguration on organizational performance is moderated by formalization. In their study, they showed that the effect of dynamic capabilities on firm performance varies with the degree of the organization's formalization. In addition, their study analyzed the contingent effect of organic structure, which reported that organic structure also moderates the influential relationship between dynamic capabilities and firm performance. Wilden's et al. (2013) discussion supports the contention that organizations need to align their structure to achieve superior performance. Nevertheless, this study focuses only on organizational agility, which is developed using the dynamic capability view taking into account the speed issue of achievement.

However, it can be concluded by this study that rigid methods and operations can't cope with today's uncertainties while having only a flexible structure can deter some organizations to achieve high performance. The positive effect of organizational agility on customer satisfaction may require adapting or stable structure. That is a challenge for managers to adopt a structure that suits every internal and external situation of their organizations. Having a rigid structure might survive a lot of pressure, perhaps at a certain level, but when the level of pressure increases, the organizations might need to divide into several pieces to get advantage of everyone's experiences.

Agile organizations are well known for their ability to mobilize quickly. They are nimble and empowered to act by supporting the dynamic capabilities of sensing, decision-making, acting, and reconfiguration. This study revealed that by applying organizational agility practices, organizations, especially, banks can achieve better customer satisfaction.

Along with using the right organizational structure, organizational agility can positively affect customer satisfaction, which is an essential factor measuring organizational success.

Moreover, the model describes the roles of organizational structure in the effect of organizational agility on customer satisfaction.

Although few articles investigate the impact of organizational agility on customer satisfaction, this study contributes to the literature by explaining whether and how organizational agility impacts customer satisfaction through the moderation effect of one important organizational facet, which is organizational structure that is represented by formalization and organic structure.

Any study contains some limitations due to non-controlling variables. The first limitation of this study is related to measuring customer satisfaction. Customer satisfaction evaluation is limited to the employees' and managers' perceptions regardless of the customers' opinions. Therefore, the study might be subjected to biases. The second limitation is related to the study sample, which is restricted to those who work for commercial banks in Jordan. Researchers can conduct this study by evaluating the relationships in different sectors and countries.

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Declaration of Contribution Rate: The authors have contributed equally.
Declaration of Support and Appreciation: The research did not receive any support from any institution or organisation.
Declaration of Conflict: The authors declare that there is no conflict of interest.
 In this study, the rules stated in the “**Higher Education Institutions Scientific Research and Publication Ethics Directive**” were followed.
 This article has been screened with **similarity** detection software.

APPENDIX

The study’s 5 Likert- scale Questionnaire

| # | Question | Very Strongly Agree | Strongly Agree | Moderately Agree | Slightly Agree | Completely Disagree |
|-------------------------------|--|---------------------|----------------|------------------|----------------|---------------------|
| Organizational Agility | | | | | | |
| 1 | “Our Bank is slow to detect changes in our customers’ preferences on services” (R) | | | | | |
| 2 | “Our Bank is slow to detect changes in our competitors’ moves. (e.g., new promotions, products, and prices)” (R) | | | | | |
| 3 | “Our Bank is slow to detect changes in technologies” (R) | | | | | |
| 4 | “Our bank analyzes important events about customer/competitor/technology without delay” | | | | | |
| 5 | “Our bank finds out opportunities and threats from changes in customer/competitor/technology in a timely manner” | | | | | |
| 6 | “Our bank makes an action plan to meet customers’ needs without delay” | | | | | |
| 7 | “Our bank makes an action plan to react to competitors’ strategic moves without delay” | | | | | |
| 8 | “Our bank makes an action plan on how to use new technology without delay” | | | | | |
| 9 | “Our bank can reconfigure our resources in a timely manner” | | | | | |
| 10 | “Our bank can modify/restructure processes in a timely manner” | | | | | |

| | | | | | | |
|---------------------------------|--|--|--|--|--|--|
| 11 | “Our bank can adopt new technologies in a timely manner” | | | | | |
| 12 | “Our bank can introduce new services in a timely manner” | | | | | |
| 13 | “Our bank can change price quickly” | | | | | |
| 14 | “Our bank can change strategic partnerships in a timely manner” | | | | | |
| 15 | “Our bank can solve our customers’ changing needs and complaints without delay” | | | | | |
| Customer Satisfaction | | | | | | |
| 16 | “Compared to competitors, our customers find that our products/services are much better.” | | | | | |
| 17 | “Our customers are very satisfied with the products/services we offer.” | | | | | |
| 18 | “Our customers are very satisfied with the value for price of our products/services” | | | | | |
| 19 | “Our customers find that the products/services we offer exceed their expectations” | | | | | |
| 20 | “The likelihood that our customers will recommend our products/services to others is high.” | | | | | |
| 21 | “Our customers are very satisfied with the quality of our products/services.” | | | | | |
| 22 | “The ability to achieve high levels of customer satisfaction is a major strength of our bank.” | | | | | |
| Organizational Structure | | | | | | |
| 23 | “In our bank, important decisions generally are made by a few top managers alone rather than by people throughout the bank.” (R) | | | | | |
| 24 | “Employees have a great deal of freedom in making decisions about our work without clearing those decisions with people at higher levels of the company.” | | | | | |
| 25 | “In our bank, there are clear and recognized differences between superiors and subordinates. These differences can be seen in larger offices, quality of office furniture, close-in parking spaces, or frequency of superiors and subordinates having lunch together.” (R) | | | | | |
| 26 | “It is difficult for a person who begins in the lower ranks of our bank to move up to an important supervisory position within about 10 years.” (R) | | | | | |

| | | | | | | |
|----|--|--|--|--|--|--|
| 27 | “Our bank has a printed company chart.” (R) | | | | | |
| 28 | “Everyone in our bank follows the company chart closely.” (R) | | | | | |
| 29 | “Employees’ actual work deviates from a written job description for our position.” | | | | | |
| 30 | “Employees must keep reading, learning, and studying almost every day to do our job adequately.” | | | | | |
| 31 | “In our bank, employee education is needed to do our job adequately.” | | | | | |
| 32 | “Employees do not have personal influence on decisions and policies of our bank” (R). | | | | | |
| 33 | “Employees have a say in decisions that affect our jobs.” | | | | | |

Article Type: *Research*

Citation: Cavus, B., Kazanci, O., & Esen, M. (2023). Investigating the reliability of ChatGPT in assessing job satisfaction. *Journal of Economics, Business and Organization Research*, 5(2), 110-133.

INVESTIGATING THE RELIABILITY OF CHATGPT IN ASSESSING JOB SATISFACTION

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Received: 29.05.2023

Accepted: 17.08.2023

Published Online: 29.10.2023

Abstract

Today, there is increasing controversy surrounding the use of artificial intelligence software and programs. Although many organizations are attempting to boost their performance by utilizing the potential of artificial intelligence, controversy about the technology's reliability prevails. This study investigates the reliability of ChatGPT in measuring job satisfaction. The Minnesota Job Satisfaction Questionnaire (MSQ), a reliable scale, and ChatGPT results were compared using the Pearson correlation coefficient Correlation technique. The SPSS 25 analysis findings revealed a strong connection between the two questionnaires. This proves that ChatGPT is a reliable tool for assessing job satisfaction. The ability of the questionnaire to correctly predict the MSQ results provided more evidence of the questionnaire validity. However, the study was limited in its sampling in terms of variety. Additionally, the sample size of the study was relatively small and restricted to almost one organization. The results of this study point to ChatGPT as a potential technology for gaging employee engagement and job satisfaction in businesses. These findings may have consequences for further research on these topics.

Keywords: *ChatGPT, Job Satisfaction, MSQ, Organizational Behaviour, Artificial Intelligence*

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1. INTRODUCTION

Since the inception of work itself, there has been a notion of job satisfaction. Because of its importance in influencing employee motivation and productivity, job satisfaction has been extensively researched. The concept of job satisfaction and motivation in the workplace was first mentioned by pioneers in the late 19th century, including Weber (1947), Taylor (1911), and Mayo (1933). Since then, many academics have worked to determine the main elements that affect job satisfaction and to clarify the connection between job performance and job satisfaction.

Depending on the individual and the particular job, the significance of these dimensions can vary, but they are widely regarded as some of the major variables that can impact job satisfaction.

In recent years, a growing number of people have been interested in using artificial intelligence (AI) to evaluate job satisfaction. Our study topic focused on whether ChatGPT might be used to quantify job satisfaction through natural language processing. By contrasting its findings with those of the Minnesota Job Satisfaction Questionnaire (MSQ), this study will assess the validity of the ChatGPT questionnaire. The correlation between the two surveys will be examined using the Pearson correlation method, and the data will then be analysed using SPSS 25. This will enable us to evaluate the validity of the ChatGPT survey in gaging job satisfaction.

2. LITERATURE REVIEW

2.1. Job Satisfaction

The field of organizational behaviour and economic theory employs the concept of job satisfaction to elucidate the intricate correlation between employee well-being and production. This phenomenon encompasses a multifaceted combination of affective, cognitive, and behavioural elements that reflect an employee's level of contentment with their job and associated duties. For example, in classical economic theory, individuals strive to optimize their utility, encompassing both material prosperity and personal contentment. Moreover, within the framework of institutional economics, the presence of regulations and adherence to social norms create a conducive atmosphere that ensures equitable treatment of workers, their active involvement in decision-making processes, and safeguards them against any form of exploitation. Furthermore, behavioural economics acknowledges that individuals' decision-

making processes are subject to the influence of psychological factors. In most of the theories, job satisfaction finds a vital seat for organizational efficiency.

The level of job satisfaction has a significant impact on employee turnover, absence rates, and the development of skills. The concept of job satisfaction is analysed through economic frameworks such as utility maximization and hedonic well-being, which contribute to our comprehension of individuals' preferences and behaviours in the labour market.

In the field of organizational behaviour research, job satisfaction is a crucial subject. It is commonly known that employee performance, productivity, and morale impact job satisfaction directly (Harter et al., 2002). The elements that affect job satisfaction have been examined by numerous academics, including job autonomy (Hackman and Oldham, 1975a: 165), job security, and job role (Ostroff, 1992: 965). Additionally, research has shown that factors like age, gender, and occupation have an impact on job satisfaction (Harter et al., 2002).

Research has indicated that organizational factors such as pay and benefits (Aamodt, 2014: 337), the work environment (Hackman and Oldham, 1976b: 255), and job security (Ostroff, 1992: 970) affect job satisfaction in addition to personal characteristics. Additionally, it was hypothesized that psychological factors such as job-related stress and job burnout (Demerouti et al., 2005: 139) could have an impact on job satisfaction. Finally, some research has shown that organizational culture, including teamwork and communication, has an impact on job satisfaction (Chatman and Barsade, 1995: 335).

According to Locke (1976), "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" is what is meant by job satisfaction. Job satisfaction, in Locke's view, is a result of the gap between what an individual expects from a job and what they believe they are receiving in return.

The Hawthorne Studies were studied by Elton Mayo and his colleagues in the 1900s, are among the most frequently recognized studies on job satisfaction (Mayo, 1933). According to this study, worker productivity increased because they were being monitored and paid attention, not because of changes in working circumstances. The human relations approach to management, which placed a strong emphasis on treating employees more like people than just tools in a machine, was developed as a result of this study.

The bidirectional causality between job satisfaction and productivity has been empirically demonstrated employing rigorous econometric approaches (Oswald et al., 2015: 807).

Therefore, the integration of job satisfaction into economic theory enriches the examination of the labour market and underscores its significance in cultivating a robust and efficient workforce.

In their study, Hakanen and Schaufeli (2012) investigated the link between burnout, work engagement, depressive symptoms, and life satisfaction over a span of seven years. According to this study, there is a positive correlation between increased work engagement and decreased burnout, which in turn relates to a reduction in depressive symptoms and an increase in overall life satisfaction (Hakanen and Schaufeli, 2012: 422).

A recent study in higher education institutions in Vietnam investigated the correlation between internal communication, employee engagement, job satisfaction, and employee loyalty. The enhancement of internal communication has been found to positively impact employee engagement, job satisfaction, and loyalty (Nguyen et al., 2023: 11).

Below are a few prominent recent studies on job satisfaction;

1. Income comparisons can influence job satisfaction and well-being (Clark and Senik, 2016).
2. Perceptions of organizational politics impact job satisfaction and job performance (Rosen et al., 2016).
3. The Job Demands-Resources (JD-R) theory links job characteristics, resources, and job satisfaction (Bakker and Demerouti, 2017).
4. Saks (2017) explored the relationship between employee engagement, job satisfaction, and performance outcomes (Saks, 2017).
5. The role of psychological capital (PsyCap) in enhancing employee well-being and performance (Luthans and Youssef-Morgan, 2017).
6. Employees' proactive adjustments to their job tasks (job crafting) influence job satisfaction and well-being (Tims et al., 2019).
7. The mediating role of work engagement in the relationship between job characteristics and employee behaviours (Sulea et al., 2015).

Based on the collective findings of several research, factors such as pay, political decisions by administration, job characteristics and resources, engagement, and performance outcomes, PsyCap, and job crafting have a direct or indirect impact on employees' job satisfaction. Expanding upon these observations, the measurement of job satisfaction emerges

as a pivotal undertaking in comprehending the complex interaction of different variables within the organizational setting.

To adequately assess job satisfaction, it is essential to adopt an approach. In this regard, quantitative methods encompass the use of standardized surveys to evaluate numerous components of job satisfaction, including salaries, benefits, working conditions, opportunities for advancement, and interpersonal dynamics.

2.2. Most Used Job Satisfaction Scales

To our knowledge, the main job satisfaction scales commonly used in research and practice are listed below;

Job Satisfaction Questionnaire (JSS): The JSS is developed by Paul Spector and is a very commonly used scale to assess job satisfaction across multiple facets, including pay, promotion opportunities, supervision, co-workers, and the work itself. It consists of 36 items and has been validated in various work settings and populations (Spector, 1985). JSS has demonstrated good reliability and validity in numerous studies and has been used in various research on job satisfaction.

Minnesota Satisfaction Questionnaire (MSQ): The MSQ, developed by David J. Weiss, is another popular scale that assesses job satisfaction across dimensions such as work itself, supervision, colleagues, pay, and chances for advancement. It has two versions - the long form with 100 items and a shorter version called the MSQ-Short Form (MSQ-SF) with 20 items (Weiss et al., 1967). The MSQ has been widely used in research and has good psychometric properties in various populations.

Job Descriptive Index (JDI): Smith, Kendall, and Hulin developed the JDI. It is a widely used scale that measures job satisfaction based on five facets: work itself, pay, promotion chances, supervision, and colleagues. It consists of 72 items and is frequently used in research and organizational contexts (Smith et al., 1969). Because it is valid and reliable, JDI has been used in numerous studies to gauge job satisfaction.

Scale for Jobs in General (JIG): The JIG Scale is a global indicator of job satisfaction that measures overall job satisfaction. Ironson, Smith, Brannick, Gibson, and Paul developed it (Ironson et al., 1989). Participants must rate their degree of job satisfaction on a scale of 1 to 7. The higher scores prove a better level of job satisfaction. It is quick and simple to determine

job satisfaction using the JIG Scale. It is routinely incorporated into longer surveys and has been used in various studies.

The Faces Scale: The faces scale is a visual scale that shows respondents a series of faces that, from very joyful to very unhappy, represent various levels of job satisfaction. Selecting the face that most accurately reflects a respondent's degree of job satisfaction is required. This scale is straightforward and simple to use, and it is frequently used in studies or questionnaires with few possibilities for responses (Kunin, 1955).

Brief Index of Affective Job Satisfaction (BIAJS): The Weiss, Dawis, England, and Lofquist team created the Brief Index of Affective Job Satisfaction (BIAJS), a short and straightforward scale that gauges affective (emotional) job satisfaction based on six items that evaluate positive and negative effect related to a person's job (Weiss et al., 1967). It has been proved to have valid psychometric qualities and has been used in many studies to evaluate emotional responses to one's job.

Researchers should carefully choose the scale that best suits their needs based on their specific aims, demographics, and research design in order to consider the possibility that alternative scales may be more appropriate for various research or organizational situations. In-depth descriptions of these scales' psychometric characteristics and further information are available in the original references listed. In this study, we chose MSQ due to the volume of questions being appropriate for study.

2.3. The development of Artificial Intelligence

Artificial intelligence (AI) refers to a machine's capacity to perform operations that are ordinarily specific to human intelligence, such as understanding natural language, recognizing and identifying objects, and making judgment calls. The earliest attempts to create robots that could think and reason as if they were real people were achieved in the 1950s, which is when the history of AI really began to take shape.

With their seminal paper "A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence" (McCarthy et al., 1955), pioneers like John McCarthy and Marvin Minsky laid the groundwork for the field in the first development of AI studies.

The years that followed saw the development of numerous AI methodologies, such as symbolic logic, rule-based systems, and neural networks. One of the most significant early AI

systems was the General Problem Solver (GPS), developed by Allen Newell and Herbert Simon (Newell and Simon, 1961). This system showed how computers might handle various problems by following a set of rules.

Despite these early developments, the initial creation of AI systems did not perform well enough, and funding problems caused a slowdown in AI research in the 1970s. This phase is known as the "AI winter," and marked uncertainty and a loss of belief in the sector.

However, AI technologies started to emerge again in the 1990s because of developments in machine learning and the availability of more powerful computers. One of the most important key developments was the development of artificial neural networks, which allowed computers to learn from data and improve their performance. The backpropagation algorithm developed by Rumelhart, Hinton, and Williams in 1986 had a major influence on the development of neural networks and the emergence of the deep learning concept (Rumelhart et al., 1986).

Another crucial development in the 1990s was the development of statistical natural language processing (NLP). This development allowed computers to understand and produce a human language. This was proved by the invention of the Hidden Markov Model for speech recognition and the probabilistic context-free grammar for natural language parsing (Rabiner, 1989; Pereira and Schabes, 1992).

Due to advancements in machine learning, computer vision, robotics, and natural language processing, research and development in artificial intelligence (AI) have accelerated significantly in the twenty-first century. One of the most significant recent breakthroughs has been the development of deep learning, which has led to improvements in speech recognition, image identification, and natural language understanding.

One of the most well-known deep learning models, the Generative Pre-trained Transformer (GPT) developed by OpenAI, has been used for many NLP tasks, including language translation, question answering, and text generation (OpenAI, 2023a). The most recent version of this model, GPT-4, which is currently in development, is reported to be significantly more powerful and versatile than its predecessors in terms of the number of data it is predicted to process. According to reports, GPT-4 can store 45 gigabytes of training data as opposed to 17 gigabytes of gigabytes.

Below is the timeline for developing AI technologies until GPT-4;

Early AI research started in the 1950s, leading to the creation of tools such as the Logic Theorist and the General Problem Solver. John McCarthy named the phrase "artificial intelligence" in 1956 at the Dartmouth Conference. In the 1960s, the ELISA chatbot and the SHRDLU natural language processing program were two examples of rule-based AI systems that were created. Between 1970s–1980s, an era dubbed the "AI winter" resulted from a slowdown in AI research progress. Afterwards, expert systems and machine learning methods such as neural networks and decision trees were developed in the 1980s and 1990s. The development of probabilistic context-free grammar and the Hidden Markov Model are examples of statistical natural language processing approaches that were seen until 2000, and the idea of big data and developments in machine learning in the 2000s paved the way for innovations in computer vision and speech recognition. During 2010s, deep learning techniques such as convolutional neural networks and recurrent neural networks have transformed AI research and led to ground-breaking improvements in image and natural language processing. As we approach the 2020s, AI is still evolving and progressing with new developments in fields including robotics, reinforcement learning, and explainable AI. The most recent advancements were the processing of enormous amounts of data as a language model in GPT-3 and GPT-4. AI can disrupt numerous industries, affect how people live and work, as well as how organizations and businesses run as it continues to develop and advance.

2.4. AI Technologies in Use Today

In the contemporary era characterized by swift advancements in technology, AI has emerged as a catalyst for profound change, fundamentally altering various industries and the daily encounters of individuals. AI technology have been seamlessly incorporated into different facets of our daily lives, ranging from personalized recommendations on streaming platforms to the navigation of autonomous vehicles on our roadways. By utilizing sophisticated algorithms, machine learning techniques, and data processing skills, it empowers organizations to enhance their operational efficiency, enables academics to delve into intricate challenges, and allows individuals to engage with technologies in manners that were previously futuristic. Below we examined many prominent artificial intelligence (AI) technologies presently employed, demonstrating their wide-ranging uses and significant influence on moulding both our current circumstances and future prospects.

Natural Language Processing (NLP): This is a technology that uses machine learning methods to help computers understand and interpret the human language. It is used in chatbots and voice assistants among other applications.

Computer Vision: This technology, which is being used in applications such as facial recognition and self-driving cars, uses algorithms to provide computers with the ability to comprehend and evaluate visual data from photographs and videos.

Robotics: This technology uses intelligent machines that can complete activities on their own or with little assistance from a human being. It is employed in industries including manufacturing and healthcare.

Expert Systems: These are computer programs that apply artificial intelligence methods to address issues in certain fields, including financial analysis or medical diagnostics.

Recommender Systems: These are algorithms used in applications such as e-commerce and streaming services that use information about a user's previous activity to propose goods or services they might be interested in.

Machine Learning: This area of artificial intelligence uses algorithms to teach computers how to learn from data and improve over time.

Deep Learning: Artificial neural networks are used in this area of machine learning to help computers learn from massive amounts of data and make predictions or judgments based on that data.

Reinforcement Learning: In this field of machine learning, algorithms that learn via trial and error are employed, among other things, in robots and video games.

Generative Models: These algorithms are used in applications such as text and image production because they may create new data similar to current data.

These are only a handful of the numerous AI technologies that are now being created and employed, and as new methods and uses are discovered, the area of AI continues to expand quickly.

2.5. Use of AI Technologies in Business

The strategic incorporation of AI technologies has emerged as a crucial tool for innovation and productivity in the contemporary business environment. It has significantly transformed organizational operations, decision-making processes, and stakeholder engagement. This revolution encompasses various aspects, such as the optimization of supply chain operations via the utilization of predictive analytics and the enhancement of consumer experiences through the implementation of chatbots and recommendation systems. Through the utilization of machine learning, natural language processing, and automation, enterprises have the ability to extract valuable insights from extensive datasets, optimize workflows, and attain a competitive advantage within a progressively data-centric global landscape.

Finance: AI technologies can be utilized in the financial sector to automate procedures, spot fraud and offer investment advice. For instance, Bridgewater Associates employs AI algorithms to decide which investments to make based on a large amount of data.

Retail: By offering products, customizing marketing messaging, and forecasting demand, AI technology in retail can enhance the customer experience. For instance, Amazon uses machine learning to offer products to users based on their browsing and purchase histories.

Production: AI technologies can be utilized to enhance quality control, monitor equipment performance, and optimize production processes. To forecast maintenance requirements and minimize downtime, General Electric, for instance, uses AI algorithms to evaluate data from sensors in its aircraft engines.

Healthcare: By evaluating medical data to diagnose diseases, identify risk factors, and offer treatment choices, healthcare AI technology can be used to enhance patient outcomes. As an example, IBM Watson used machine learning for Oncology to analyse medical data and offer individualised cancer treatments.

Transportation: By evaluating traffic patterns, streamlining routes, and anticipating maintenance requirements, transportation AI technology can be used to increase safety and efficiency in the industry. Uber, for example, uses machine learning algorithms to forecast demand and enhance driver routes.

Marketing: By evaluating customer data to tailor messaging, predict customer behavior, and optimize campaigns, marketing AI technology can be used to increase the effectiveness of

marketing activities. For instance, Persado, a marketing platform, employs AI to create marketing messages that are tailored for particular consumers.

These are but a few instances of how AI technologies might be applied in various industries. As the technology develops, so do the potential applications of AI, which are numerous and only set to increase.

2.6. ChatGPT (GPT-3)

A cutting-edge new technology called ChatGPT has the power to transform how companies communicate with their clients and staff. Generalized Pre-trained Transformer (GPT3) is the name of the platform on which this technology was developed by a business called OpenAI. It is an innovative artificial intelligence (AI) system that can produce conversations that sound like human speech from a small quantity of data. The system can produce insightful responses to customer inquiries because it has been trained on various discussions.

It is frequently used in natural language processing (NLP) tasks such as question-answering, language synthesis, and summarization. GPT-3 is a potent language model. It boasts amazing powers in language recognition and generation because it is the largest language model ever created and has been trained on an enormous quantity of data (Dale, 2021). It can function well in a range of languages thanks to its demonstrated outstanding multilingual capacities (Armengol-Estap'e et al., 2021). This gives GPT-3 significant advantage because it makes wide variety of applications possible. Additionally, it has been demonstrated that GPT-3 is capable of producing text that is both engaging and natural (Miotto et al., 2022).

ChatGPT has been around for a couple of years, but only recently has it started to gain popularity. This system can produce conversations with sincere clients and human. Since then, several companies have been using ChatGPT to automate customer communications, customer support processes, and internal processes such as employee satisfaction.

ChatGPT has several possible commercial uses (Hernandez, 2020). It can be used to automate customer service tasks such as answering inquiries, resolving issues, and providing product information. It can also be used to automate customer surveys and improve the client experience. Businesses can make customized recommendations to customers using ChatGPT based on their past behavior. Businesses could strengthen customer loyalty and increase revenue by doing this.

Two new products from the company were made available today: ChatGPT Plus, which provides internet access, and GPT-4, which is a more successful version of GPT-3.

2.7. GPT 4

On March 14th, 2023, OpenAI launched its newest version of GPT, known as GPT-4, which is claimed to be a better version of GPT-3. However, for the time being, there is still a waitlist and it is unavailable for everyone to test it. According to OpenAI, GPT-4 has made significant improvements in three areas compared to GPT-3.5. First, GPT-4 can read images and can provide logical answers to questions based on the content of the image. Secondly, GPT-4 is more accurate than its predecessor due to its larger transformer architecture, more complex neural network, and bigger training data set, which enable it to handle various tasks with better information processing. For example, in a mock American Bar Examination, GPT-4 outperformed GPT-3.5 by a significant margin. Lastly, GPT-4 supports longer inputs, which allows it to accept up to 32,768 tokens or about 25,000 words at a time. This helps it generate more coherent and natural text (Cheng et al., 2023).

OpenAI announced an extension of their partnership with Microsoft, which will allow them to continue their independent research and development of more safe, useful, and powerful AI (OpenAI, 2023b). According to the OpenAI website, a multi-billion dollar investment from Microsoft was made into OpenAI's research and development of AI. OpenAI is a capped-profit company that is governed by a non-profit organization to ensure that its core beliefs about sharing benefits and prioritizing safety are not sacrificed while raising the capital necessary to fulfill its mission. Microsoft's investment will help OpenAI continue its independent research and develop AI that is increasingly safe, useful and powerful. Microsoft has been instrumental in OpenAI's progress, providing supercomputing systems powered by Azure that have been crucial in delivering best-in-class performance and scale for AI training and inference workloads. OpenAI and Microsoft collaborate to review and synthesize shared lessons to build and deploy safe AI systems, and they have deployed OpenAI technology through their API and the Azure OpenAI Service (OpenAI, 2023a).

3. PURPOSE OF THE STUDY

The aim of this study was to assess the reliability of ChatGPT in measuring job satisfaction. Job satisfaction is an important factor in maintaining the performance and productivity of an employee. Therefore, it is essential to have reliable measurement tools to

evaluate job satisfaction. We used parallel forms reliability test with the Pearson correlation coefficient method in SPSS to measure the correlation between the ChatGPT questionnaire and the Minnesota Job Satisfaction Questionnaire (MSQ). We also checked internal consistency reliability with Cronbach's Alpha score. Cronbach's Alpha is a method used to test the internal consistency reliability of a test or scale. It is based on the average correlation among all possible pairs of items within the test. Cronbach's Alpha measures the degree to which items in the test are correlated with each other and provides a reliable measure of the underlying construct being measured. It ranges from 0 to 1, with higher values indicating greater internal consistency reliability (Streiner, 2003).

Cronbach's Alpha is a more general and sophisticated method for estimating internal consistency reliability than split-half reliability. Unlike split-half reliability, which divides the test into two halves, Cronbach's Alpha can handle tests with items that are not necessarily equivalent or homogeneous. Therefore, Cronbach's Alpha is a widely used method to evaluate the internal consistency of psychological tests and scales (Streiner, 2003).

To calculate Cronbach's Alpha, the scores of individuals on all items in the test are first summed to obtain a total score. Then, the correlation between each item and the total score is calculated. Finally, the average of all these correlations is computed to obtain the Alpha coefficient.

4. METHOD

4.1. Research Model

It was tried to test the reliability of ChatGPT's job satisfaction questionnaire with the help of internal consistency (Nunnally and Bernstein, 1994) and parallel form reliability tests (Hilger and Beauducel, 2017) and the Pearson coefficient correlation method (Judge et al., 2001). This model is suitable for examining the correlation between the questionnaire prepared by the ChatGPT and the Minnesota Job Satisfaction Questionnaire (MSQ). It allows us to measure the strength and direction of the relationship between the two questionnaires and the ChatGPT questionnaire within itself.

4.2. Participants

The convenience sampling method was used in this study because it is a cost-effective and time-efficient way to collect data. Furthermore, convenience sampling is well suited for

quick studies that have limited resources and time (Babbie, 2016). In this study, convenience sampling allowed us to quickly and easily collect the data that we needed to assess the reliability of ChatGPT in assessing job satisfaction. The sample size was determined according to the study objectives and requirements. 91 participants joined the research. 75 of them from the same organization and 16 from other organizations. All participants were asked to solve MSQ first and then the ChatGPT questionnaire. Detailed information about demographic variables related to work experience is given in Table 1.

Table 1. Demographics (Work experience in years)

| Years | 1 – 5 | 6 – 10 | 11 – 20 | More than 20 |
|-------------------|-------|--------|---------|--------------|
| N of Participants | 23 | 11 | 53 | 4 |

4.3. Data Collection Tool

The data collection tool used in this research was the Minnesota Job Satisfaction Questionnaire (MSQ) and the questionnaire prepared by ChatGPT. These two questionnaires were designed to measure job satisfaction among participants. The MSQ is a widely used questionnaire tool to assess job satisfaction. Developed in the 1970s by researchers at the University of Minnesota, the MSQ comprises 20 items that measure job satisfaction along dimensions such as education and career, compensation and reward, location and commute, workload and work convenience, work environment, and work climate. The questionnaire also includes an overall job satisfaction score, which is used to assess the overall satisfaction of an employee with their job. Organizations use the MSQ to assess employee job satisfaction and identify areas of concern that can be addressed to improve employee morale and productivity. In both questionnaires, the Likert scale is used out of five options.

To have a valid questionnaire similar to MSQ, a standard procedure was applied. In each step, results were sent to 2 expert lecturers in the field of organizational behaviour, and they analysed the reliability of the questions to measure job satisfaction. For the first attempt, ChatGPT was asked to create a set of questions to measure job satisfaction. The result questions were sent to expert lecturers but not found valid enough to measure job satisfaction. For the second attempt, ChatGPT was asked to create a set of questions concerning job satisfaction dimensions such as education and career, compensation and reward, location and commute, workload and work convenience, work environment, and work climate. The results were sent to expert lecturers. However, most of the questions were not found to be reliable and related to

our purpose. Then, we tried to create a set of questions that expert lecturers elected for the latest questionnaire. For the last attempt, we extended our prompt to ChatGPT, and the following statement was prompted into the system; *“I am a researcher trying to measure job satisfaction in an institution. I would like to ask questions about dimensions such as education and career, compensation and reward, location and commute, workload and work convenience, work environment, and work climate. Prepare a set of questions to determine their effect on job satisfaction.”*

The result questions were taken from ChatGPT and sent to expert lecturers. They applied various elections for these questions. Repeated questions, non-related questions, and questions that are not valid enough to measure job satisfaction were omitted and 20 questions were selected for our experiment (ChatGPT, 2020).

4.4. Data Analysis

The data were then analysed using SPSS 25 to measure the Pearson correlation coefficient. To apply the parallel form reliability test, we had the same number of questions in both questionnaires. These questions were analysed with a Varimax Rotated Component Matrix to determine the main dimensions in the questionnaire created by ChatGPT. These dimensions are then correlated with the human-made questionnaire MSQ.

4.5. Questionnaire Statistics

Table 2. Descriptive Statistics

| Mean | Variance | Std. Deviation | N of items |
|-------|----------|----------------|------------|
| 69,80 | 209,072 | 14,459 | 20 |

According to the results from SPSS22, the mean was 69.80. This refers to the average score of the scale. In this study, the mean score is 69.80, indicating that the respondents' scores are centred around this value.

Our variance is 209.072. This refers to the measure of how spread out the data is around the mean. The data points are more dispersed as indicated by a bigger variance, while a lower variance indicates that the data points are closer together. In this study, the variance is 209.072, indicating that there is some variability in the scores of the respondents. This proves that some respondents may have scored significantly higher or lower than the mean.

Our survey standard deviation is 14.459. This refers to the amount of variability or

dispersion of the data around the mean. When the standard deviation is low, the data points are concentrated around the mean, whereas when the standard deviation is high, the data points are dispersed more widely. The standard deviation in this instance was 14.459, indicating some variations in the respondents' scores.

We had 20 questions in the ChatGPT survey indicating that the scale covers a broad range of topics or concepts.

Overall, the results proves that the respondents' scores on the scale exhibit some variability, indicating that there may be differences in their responses to the items in the scale. However, the mean score of 69.80 proves that on average, the respondents scored close to this value. The standard deviation indicates that there is some variability in the scores, but not an extreme amount. The number of questions in the survey proves that the scale covers a broad range of topics or concepts.

4.5. Validity and Reliability

The results from SPSS 25 showed that there was a considerable correlation between two questionnaires, which indicates that ChatGPT can be reliable. The correlation was significant at almost all categories, which can be seen in the findings. The internal consistency reliability score from SPSS result can be seen in Table 3. It can be seen that the ChatGPT questionnaire had a positive internal consistency reliability score, which means that the questions in it can be regarded as internally correlated and meaningful for the participants.

Table 3. Reliability Statistics (Cronbach's Alpha)

| Cronbach's Alpha | N of Items |
|------------------|------------|
| ,940 | 20 |

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy: 0.831. The KMO test measures the adequacy of the sample size for factor analysis. It ranges from 0 to 1 with values closer to 1 indicating a better sample size for factor analysis (Field, 2018). In this case, the KMO measure of 0.831 indicates that the sample size is considered to be "meritorious" for factor analysis, proving that there is a sufficient amount of correlation between the variables.

Bartlett's Test of Sphericity assesses whether the correlation matrix of the variables is significantly different from the identity matrix. A significant result ($p < 0.05$) proves that the data are appropriate for factor analysis (Field, 2018). In this case, the approximate chi-square value is 1580.124 with 190 degrees of freedom and a p-value of 0.000, indicating that the

correlation matrix of the variables is significantly different from the identity matrix. Therefore, the result is considered significant, proving that the data are appropriate for factor analysis.

Overall, the results shown in Table 4 prove that the survey has acceptable construct validity, and that the data are appropriate for factor analysis. The KMO value of 0.831 indicates that there is sufficient correlation between the variables, while the significant Bartlett's test result indicates that the correlation matrix of the variables is significantly different from the identity matrix. These results provide some confidence that the survey has sufficient construct validity and can be used to examine underlying factors or dimensions.

Table 4. Construct the Validity of ChatGPT Questionnaire

| KMO and Bartlett's Test | |
|---|---------------------------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | ,831 |
| Bartlett Test of Sphericity | Approx. Chi-Square |
| | df |
| | Sig. |
| | 1580,124 |
| | 190 |
| | ,000 |

4.6. Dimension of the questions

According to Varimax Rotated Component Matrix data driven from SPSS, we detected 4 dimensions in the questionnaire. These dimensions can be seen in Tables 5 and 6. It should be noted here that MSQ has 20 dimensions in its wider form and the dimensions listed here can be found within MSQ dimensions.

Table 5. Main Dimensions and Questions

| Questions | Dimension |
|--|------------------------|
| 1. Are you generally satisfied with the location of your work? | General Satisfaction |
| 6. How satisfied are you with the overall job? | General Satisfaction |
| 20. Do you generally feel satisfied with the job overall? | General Satisfaction |
| 1. Are you generally satisfied with your salary for the job you do? | Payment and Incentives |
| 8. Are you happy with the benefits offered by the company? | Payment and Incentives |
| 17. Do you feel adequately compensated/paid for the amount of work you do? | Payment and Incentives |
| 18. Are you generally satisfied with the rewards and recognition for your efforts? | Payment and Incentives |
| 19. How satisfied are you with the incentives provided by the company/institution? | Payment and Incentives |
| 3. Are you happy with the amount of work you must do? | Work Environment |
| 4. Do you feel respected and appreciated by senior management? | Work Environment |
| 9. How would you rate the working environment at the company? | Work Environment |
| 12. How would you rate the communication and feedback provided by senior management? | Work Environment |
| 13. Are you happy with the social interaction you have in the workplace? | Work Environment |

| | |
|--|---------------------|
| 14. How do you rate the recognition you receive from your peers? | Work Environment |
| 15. Are you satisfied with the level of autonomy you have on the job? | Work Environment |
| 16. Does the company/institution provide sufficient support for you to succeed? | Work Environment |
| 5. Are you satisfied with the job duties assigned to you? | Workload and Career |
| 7. Are you satisfied with the training and development opportunities offered by the company? | Workload and Career |
| 10. Do you feel as if your skills are being optimally utilized in your current job? | Workload and Career |
| 11. Are you satisfied with the career prospects offered by the company? | Workload and Career |

Table 6. Rotated Component Matrix^a

| | Component | | | |
|-----|----------------------------------|----------------------------|--------------------------------|-------------------------------|
| | 1. Payment and Incentives | 2. Work Environment | 3. General Satisfaction | 4. Workload and Career |
| Q18 | 0,762 | | | |
| Q8 | 0,763 | | | |
| Q19 | 0,782 | | | |
| Q17 | 0,829 | | | |
| Q1 | 0,830 | | | |
| Q3 | | 0,480 | | |
| Q15 | | 0,541 | | |
| Q13 | | 0,615 | | |
| Q12 | | 0,631 | | |
| Q16 | | 0,666 | | |
| Q4 | | 0,677 | | |
| Q14 | | 0,819 | | |
| Q9 | | 0,837 | | |
| Q2 | | | 0,656 | |
| Q6 | | | 0,792 | |
| Q20 | | | 0,832 | |
| Q11 | | | | 0,480 |
| Q10 | | | | 0,491 |
| Q5 | | | | 0,588 |
| Q7 | | | | 0,718 |

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

a. Rotation converged in 15 iterations.

5. FINDINGS

This research investigates the reliability of ChatGPT by correlating it with the Minnesota Job Satisfaction Questionnaire (MSQ). Pearson coefficient correlation method was used to analyse the data. The results of the analysis showed that there was a significant correlation between the two questionnaires at the levels mentioned in Tables 6 and 7.

Table 7. The Correlation of Two Questionnaires

| | | Correlations | |
|-----------------|---------------------|-----------------|-------------|
| | | ChatGPT General | MSQ General |
| ChatGPT General | Pearson Correlation | 1 | ,818** |
| | Sig. (2-tailed) | | ,000 |
| | N | 91 | 91 |
| MSQ General | Pearson Correlation | ,818** | 1 |
| | Sig. (2-tailed) | ,000 | |
| | N | 91 | 91 |

** . Correlation is significant at the 0.01 level (2-tailed).

The correlation between the ChatGPT questionnaire and MSQ was $P < 0,01$, which proves that there is a strong correlation between them. This indicates that the questions in the ChatGPT questionnaire might be highly reliable in measuring job satisfaction.

6. RESULTS AND SUGGESTIONS

The correlation between the ChatGPT questionnaire and MSQ in general is ($P < 0.01$), which proves that there is a strong relationship between them. This also indicates that the questions in this questionnaire might be highly reliable in measuring job satisfaction. The results from each individual dimension and KMO analysis shows that the questions are also valid in measuring job satisfaction.

One of the most difficult problems of conveying research in organizations is to find accurate and flexible questionnaires to assess and gather accurate information about the human resources of the organizations. If used with caution, ChatGPT might offer a practical solution for researchers and HR managers in the field. Moreover, with recent developments in artificial intelligence technology, these applications might be used automatically with little effort by HR managers. This will reduce their costs and save time in terms of research and analysis.

7. LIMITATIONS AND FURTHER RESEARCH SUGGESTIONS

Highlighting the novelty of our research underlines a crucial milestone that has the potential to bring about substantial transformations in the scholarly domain. Artificial intelligence technologies, such as ChatGPT, have the potential to enhance the accessibility and efficiency of scale development procedures, hence facilitating researchers' innovation. This

study exemplifies noteworthy advancements in the area, with the potential to catalyse significant changes in academic discourse as this methodology gains broader adoption.

Significantly, based on our current knowledge, there is a lack of prior research in this field that shares similarities with our particular approach and technique. The originality of this work is emphasized by the lack of similar studies, which highlights its innovative character and ability to stimulate new areas of investigation.

Although we had statistically good results from the ChatGPT questionnaire, the findings of this study should be interpreted with caution. The correlation between the ChatGPT questionnaire and the MSQ does not necessarily imply causation. Further research is needed to investigate the causal relationship between the two measures. Furthermore, it is crucial to remember that the study sample size was modest and constrained to a modestly sized universe. Further studies and experiments are required to confirm the results.

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Declaration of Contribution Rate: The first author contributed 60%, and the other authors contributed 20% each.

Declaration of Support and Appreciation: The research did not receive any support from any institution or organisation.

Declaration of Conflict: The authors declare that there is no conflict of interest.

In this study, the rules stated in the “**Higher Education Institutions Scientific Research and Publication Ethics Directive**” were followed.

This article has been screened with **similarity** detection software.

Article Type: *Research*

Citation: Bicer, C. (2023). The role of “RINGI” approach to gain consensus in strategic decision-making process: An overview. *Journal of Economics, Business and Organization Research*, 5(2), 134-148.

THE ROLE OF “RINGI” APPROACH TO GAIN CONSENSUS IN STRATEGIC DECISION-MAKING PROCESS: AN OVERVIEW

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Received: 11.04.2023

Accepted: 11.08.2023

Published Online: 29.10.2023

Abstract

The objective of this conceptual research study is to provide a framework on the importance of Japanese Ringi system on building consensus in strategic decision-making process. The effects of post COVID-19 period, and vast technological developments have been dramatically changing the today’s business world recently. Due to continuous promises of new scientific breakthroughs and their reflections on business models, organizations must rethink, reshape, and reinvent themselves in order to keep up with the latest transformations taking place in the business world. Thus, these dynamics are forcing leaders to rethink about the importance of strategic decision-making in daily organizational operations. Because it’s obvious that strategic decision-making is a crucial tool to enhance business growth and key to raise awareness of external threats while preventing from global risks and unforeseen events in business world. In sum, in this study strategic-decision making process is outlined within the concept of the Japanese management system “Ringi”, and recommendations will be made in terms of building consensus in strategic decision- making process.

Keywords: *Consensus, Strategic Decision-Making Process, The Ringi System*

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1. INTRODUCTION

This study highlights the importance of building consensus in strategic management decision-making process within the context of Japanese system Ringi. The framework will be provided through previous academic studies and by outlining a literature overview. Besides, the Ringi system will be defined and explained first and then, the adaptation of the Ringi to the strategic decision-making process will be discussed within the scope of gaining consensus in the process. To start with, according to Sagi (2015), the origins of Japanese management systems reflect the Japanese traditions, culture and history and from a historical point of view, Japanese management thought has been under the influence of first, Confucian philosophy involving respect for elders, loyalty, harmony, and second, Buddhism including humility, work ethic, working for collective good, and third, Bushido involving obligation, duty, honor. Thus, the “Ringi” system is regarded as one of the traditional decision-making processes in Japanese management style.

Consensus is mainly associated with generally accepted opinion by all the people in a group or the judgment arrived at by most of the people concerned, dealing with any idea or topic. Consensus, the general agreement, is very important in order to address all concerns and to establish effective decision-making process because discussion is essential to identify issues, clarify questions in a meeting about special purposes. Hence, the goal of the discussion must be to share the perspectives of all participants and ultimately, to come to an agreement to form an understanding of the issues debated. However, involving individuals into decision-making process is very important because as everyone is finally affected by the decision made, then they can share their ideas and work together to find solutions through decision-making process. Thus, building consensus provides the basis for crafting workable and acceptable alternatives in decision making process. Additionally, the term Ringi indicates the bottom-up decision-making process in the Japanese management system. "Ringi system" of Japanese management process is an approach which depends on to overcome the disadvantages of traditional autocratic decision-making process. Especially, it is dealt with getting approval for different perspectives from multiple related groups of people and departments within the organizations. Likewise, Senot et al. (2016) underlined that bottom-up shared decision-making process, which is associated with the Ringi system, can allow organizations to focus on multiple dimensions while the top-down processes provide hierarchical control and guidance within the organization. Besides the bottom-up processes augment flexibility by letting practical issues

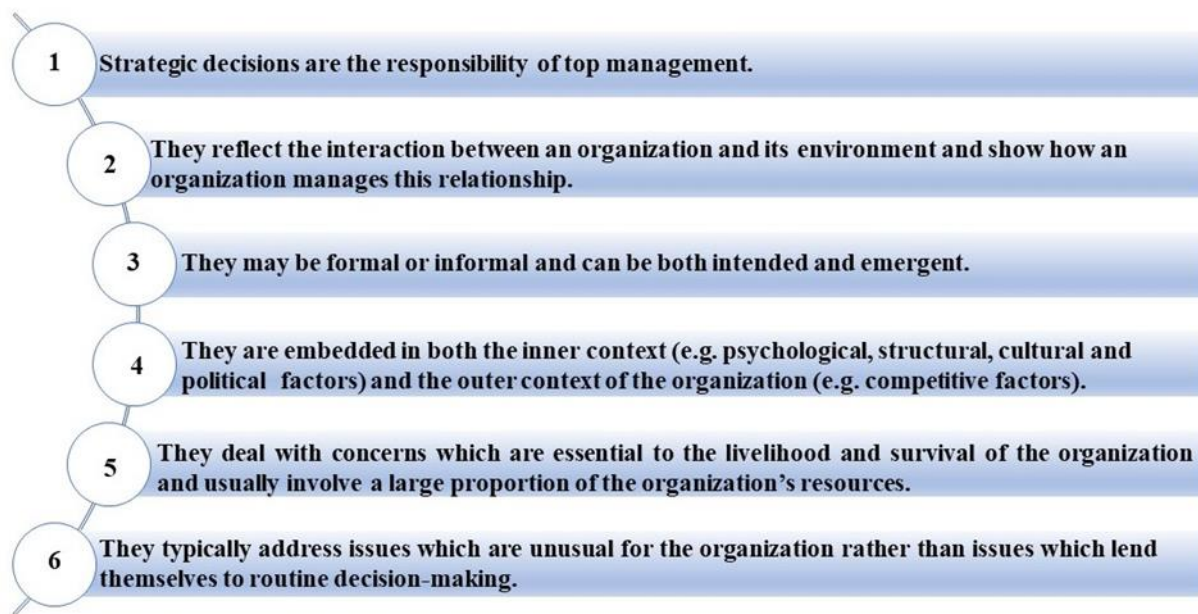
and solutions to the problems that may occur in organizations. Moreover, Takagi (1969) maintained in his study titled “A social psychological approach to the Ringi system” that Ringi system is an authentic decision-making system of Japan and had been applied by 81.7% of big Japanese companies in those years.

Finally, it's certain that decision-making is a fundamental activity for managers. Again, unforeseen events such as, COVID 19 pandemic, disasters, conflicts and wars between countries or economic fluctuations make it hard for the organizations to maintain their activities or even to survive, so they should realize the importance of strategic decision-making to carry on in a competitive business world. Therefore, as strategic decisions are associated with harmonizing organizational resource capabilities with the unprecedented events, threats, or opportunities, it's vital for organizations to implement consensus building techniques in their strategic decision-making process. To sum up, in this study, gaining consensus in strategic decision-making process will be discussed from the point of Ringi approach.

2. CONSENSUS BUILDING IN STRATEGIC DECISION-MAKING PROCESS

To start with, strategic decision-making is mainly about choosing the best way to organizational achievement considering the factors like cost, time, and the target market. Lampel (2018) defined strategic decision-making as the process of improving and bringing into force selections that will affect the long-term prosperity of the organizations. The selections usually deal with primary organizational changes and larger source commitments which are hard to turn back once they are applied. Strategic decision-making is also reflected by decision makers' own experience, their positions in the organization and their surrounding organizational environment. Figure 1 shows the main the characteristics of strategic decisions:

Figure 1. The main the characteristics of strategic decisions



Source: Elbanna, 2006

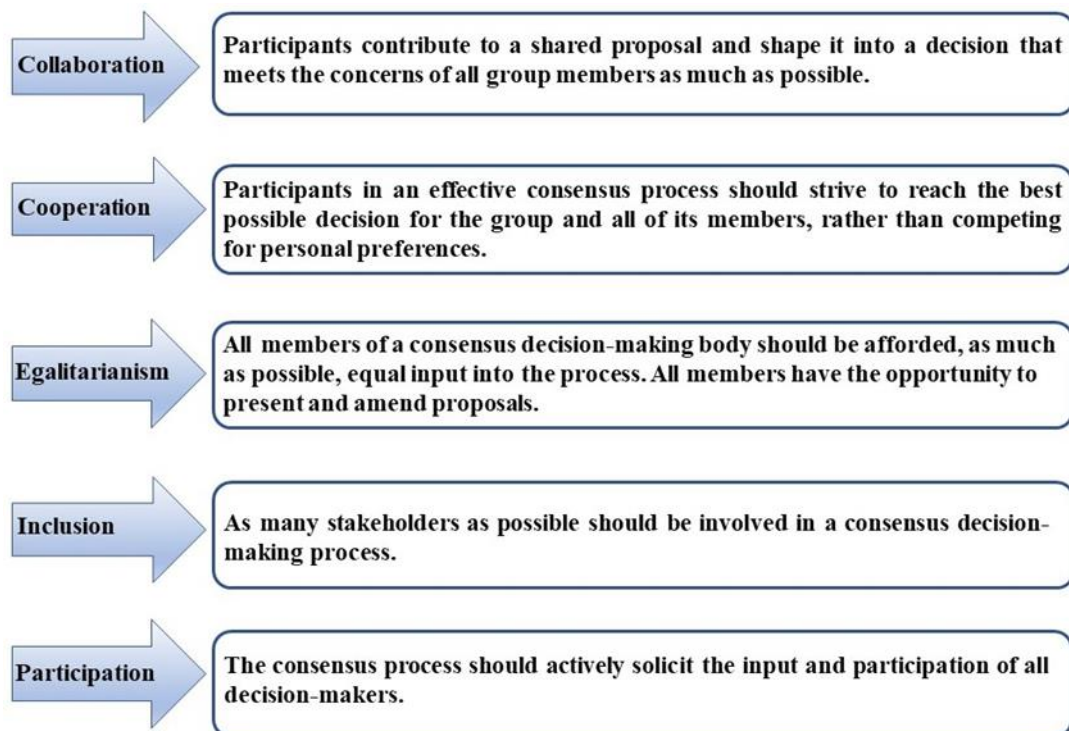
Since it's a matter of loss or gain, making the right decision is not only imperative in all life situations but also in organizations as well. It's so clear that the decisions have been made by the management team wholly impact an organization. For instance, making effective decisions have positive organizational outcomes such as, right decisions save time and resources, maximize profit, increase productivity, help prevent from mistakes and risks and encourage and increase motivation and confidence in the employees. On the other hand, bad decisions will result in business disasters and even lead to bankruptcy, and it is just like "Jumping into the water without knowing how deep it is". That's why leaders are very cautious on how to make decisions effectively and successfully. Accordingly, Blenko et al. (2010) emphasized the findings of the study conducted to 760 big companies worldwide to understand how effective those companies were at making and executing their critical decisions and it was concluded that 71% of the companies have huge scope to improve their performance by increasing their decision effectiveness.

However, in a fast digitalized, interconnected world and operating in a time of unprecedented change and stiff competition, sustainability is becoming increasingly important for organizations. Therefore, if a company invests in sustainability without a strategic decision-making process, it will risk all its sources, jeopardize its operations and business ties, and might lose its reputation in the end. Because strategic decisions are related to whole environment in

which the organization operates, the entire sources and the individuals in the organization. Moreover, strategic decision-making is simply focuses on basing organizational shorter-term decisions on the longer-term vision for the direction of the organization. Literally, Hauser et al. (2020) underlined that an organization's performance is related to the presence or absence of a prominent strategy and a series of bad decisions originated from a bad strategy will finally lead to failure. Accordingly, Smith (2014) underlined that from the point of top management, making-strategic decisions and managing strategic paradoxes are very challenging as the leaders both face continuous pressure to clarify the environmental and social factors and ongoing decisions to be made between alternative strategies to allocate resources and to provide guidance for the rest of the organization.

According to the Online Etymology Dictionary (Online Etymology Dictionary, www.etymonline.com, 2023), the term consensus is Latin and means "agreement, accord", derived from "consentire" meaning "feel together". In a broader sense, consensus is associated with a generally accepted opinion, but it can also be inferred that it is the process and the outcome of consensus decision-making (e.g., "to decide by consensus" and "a consensus was reached"). According to Zhang et al. (2019) consensus does not always mean that the best solution will be obtained in decision making process. However, it's maintained that collective solution should be obtained when consensus is achieved and efficiency involving optimal use of organizational resources must be the key criterion in consensus based decision-making process. In addition, Wibowo and Deng (2013) highlighted that consensus building in a decision-making process is searching for a rational agreement from all the decision makers in a given situation considering all the alternatives for choosing the best alternative from all the criteria. Besides, it has also been argued that consensus-based decision-making process might be complex and challenging owing to the involvement of other decision makers, the presence of multiple, and often conflicting criteria, and the existence of subjectiveness and imprecision in the decision-making process. Figure 2 displays the major characteristics of consensus decision-making:

Figure 2. The major characteristics of consensus decision-making



Source: Hartnett, 2011: 10

Last but not least, it must be noted that to gain consensus in strategic decision-making process, no decision can be made against the will of an individual or a minority and all participants must make decisions by agreement rather than by majority vote. In addition to these, in a consensus based strategic decision-making process, affected parties try to agree on a specific issue to find a rational, mutually acceptable solution and effective implementation methods to carry out the decisions. In other words, everyone must support the decisions have been made and implement them eminently. However, as Nickerson and Argyres (2018) stated that strategic decision-making processes will be more effective through sifting alternatives using logic and data, and eventually reaching at a broad agreement, consensus. On the other hand, the success of the consensus based strategic decision-making processes might be hindered by politics, polarization between participants, ego satisfaction, unbalanced burdens of proof, and group biases of a variety of reasons. Specifically, Roberto (2004) maintained that leaders must build consensus, which involves common understanding and commitment, to implement strategic decisions successfully in organizations and it is also contended that effective organizational performance requires efficiency and consensus in strategic decision-making process since consensus plays an important role in promoting the cooperation and coordination

which are necessary to implement these decisions successfully.

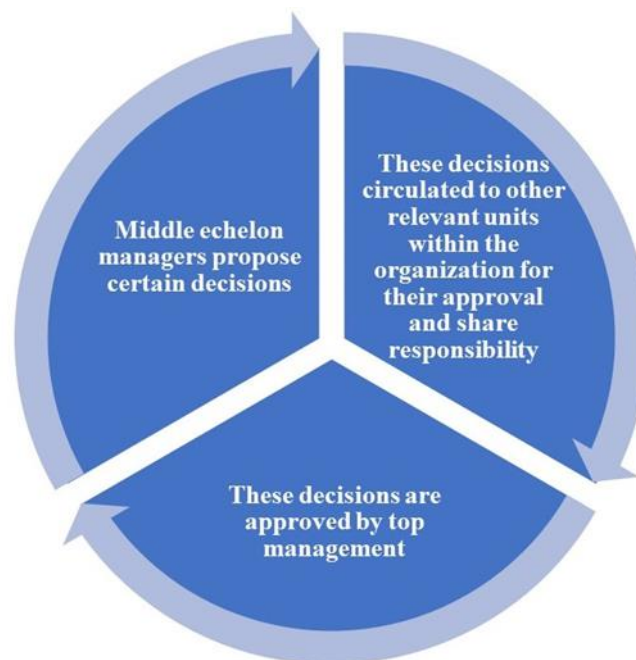
3. THE EFFECT OF “RINGI” ON CONSENSUS BUILDING IN STRATEGIC DECISION-MAKING PROCESS

One can never deny that the paralyzed, devastated Japanese economy rose dramatically from the ashes of World War II and caught up the world's most advanced industrial economies in 1960s by implementing newer management techniques such as total quality management and a lean production system. Moreover, Japan has also showed an unexpected economic breakthrough through both cost management and sincere work ethic combined with ingenuity. Plus, in Japanese management style, authority is usually expected to make decisions based on a consensus. Likewise, Shiohara (2023) underlined that known as the “Japanese Economic Miracle”, Japan’s economic breakthrough mainly depends on certain, main factors such as adopting latest technological advances, fast stable accumulation of capital, increased quantity and quality of labor, harmonious management labor relationship and increased international trade. Besides, it has been emphasized that Japan’s vast economic growth relied heavily on strategic planning, management and cooperation by companies, labor, and the government as well.

In relation to that, the word Ringi refers to the bottom-up decision-making process in the Japanese management system and the Ringi system is a well-known, traditional way of managerial decision-making in Japan. The term Ringi comprises of two major parts and the first part “Rin” means submitting a proposal to the administrators and obtaining their approval, the second part means “Gi” ideas and decisions. Through the Ringi decision-making process, the proposals and plannings are debated, developed, and sifted in an informal meeting, which refers to a pre-meeting step among employees and called as “Nemawashi” (Sagi, 2015: 10). Incidentally, in contrast with hierarchical organizations, in which most major decisions are either made or approved by formal leadership at top management, in the Ringi process which refers to decision making by consensus, lower-rank employees are also participated in the decision process by having a chance to talk about their ideas and ultimately, they may influence the final decisions before they are made (Isac, 2003: 124). Additionally, in the Japanese business environment Ringi, which is a consensus-based bottom-up approach to decision-making, is also a common process in strategic decision-making process. Indeed, within the context of Ringi process, all disagreements or arguments are debated in a cooperative way

discussion and a shared agreement is reached between all parties considering organization's objectives and decisions. However, it must be stated that the discussions are edited in intelligent, analytical and discreet process by all parties to reach to a collective logical agreement for the desired decision. Hence, in this process, long-term perspectives of needed decisions are more important than having a short-term visionary decision (Jyoti and Sarthak, 2019: 49). Meanwhile, Ala and Cordeiro (1999) underlined that Ringi system is directly associated with decision-making by consensus and it enables members of the group to participate in decision-making while not violating their hierarchical relationships in organization. On the other hand, it is also emphasized that the Ringi based decision-making process might be time consuming since it requires group participation, reconciliation and finally, consensus, especially compared to autocratic decision-making style. In sum, through Ringi process, a consensus and complement, paternalistic leadership is created in organization and so, most conflicts are resolved more easily as Ringi based decision-making process create a participative management style in which the middle, lower levels of decision makers or even employees are involved in the decision-making process. Figure 3 monitors the main cycle of the Ringi system in an organization:

Figure 3. The main cycle of the Ringi system

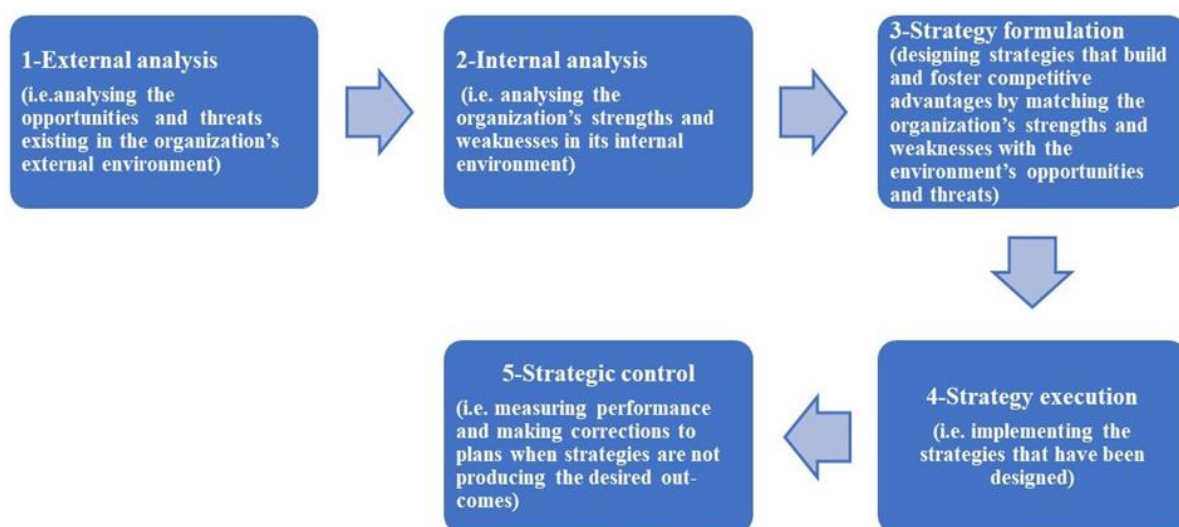


Source: Hayashi, 1978: 217

In various cases, rapid changes in technology and the highly stiff competitive business

environment not only offer an opportunity for a competitive edge, but they also bring a risk of strategic vulnerability to organizations too. Vast technological advancements and everchanging customers' preferences create opportunities for organizations to redeploy their assets and rethink about their strategies. Besides, it's the top managers' responsibility to run the business smoothly relying on strategic way of thinking in order to avoid the negative effects of the unexpected economic, social and political events because strategic decisions, which are mainly goal-oriented based on long-term achievements, provide a farsighted perspective which helps organizations mitigate future risks. In fact, especially the leaders in high technology intensive companies must develop a better understanding of the strategy to keep pace with the latest improvements and changes in the business world. Therefore, they should scrutinize their implications of strategic management practices and methods by increasing the effectiveness of their strategic decision-making process. According to Warren (2008) strategic management is simply about building and sustaining performance into the future and it is fundamentally related to making various sets of decisions on utilizing of an organization's resources effectively to reach its organizational goals and objectives. It is also maintained that strategic management focuses on organizational growth by growing economic profit. Furthermore, Cosenz and Noto (2016) underlined that strategic management is a consistent process that involves top management's appraisal of the environment in which the organization operates primarily formulating a strategy, and a plan for application and assessment of the strategy defined. Figure 4 shows the five major steps in making-decisions in strategic management process:

Figure 4. Major five steps in making-decisions in strategic management process



Source: Cosenz and Noto, 2016: 704

In sum, within perspective of the information given above, it is obvious that strategic decision making is the essence job of the top management because it is all about establishing policies, guidelines and strategic objectives and ensuring them whether they are compatible with the context and strategic direction of the organization or not. After all, we live in an era in which the developments in technology, and eventually in business and society, have been fast, vast, and profound recently. Meanwhile, as the 2020s will be a decade of relentless change, stereotypical, full of cliché way of thinking and strategies are irrelevant to our day-to-day business environment and will not serve goal-oriented objectives anymore. Therefore, the winning organizations will be the ones who can keep up to date with the latest changes in response, for compliance or survival, but also the ones who will lead the change, for profitable growth and purposeful impact by making the decision-making process at most effective. It only seems possible by combining a consensus-based decision making in strategic management process, and so it will make the organizations stronger against unexpected threats, plus, without missing the opportunities, they will be invincible over the next decades.

In addition, Martinsons and Davison (2007) mentioned that Japanese business leaders involves in decision-making processes comparatively more people and more subjective factors than their counterparts in the U.S. Though it took more time to reach a consensus to make-decisions comparing to fast, top management based strategic management decision-making style, it enabled Japanese leaders fast and smooth implementation of the decisions made. In contrast, it was emphasized that the American business leaders acknowledged that many of the decisions they had made over the last 6 months faced resistance and could not be implemented as easily as they expected. Also, MacColl (1995) argued that when it comes to make a quick decision, the western decision-making style, which is strategic decision-making first developed in the U.S., is more effective than the Japanese style Ringi. But within the concept of rapid and smooth implementation of the decisions made, it can only be achieved by the Ringi system, which is predominantly dealt with agreement, reconciliation, solidarity and consensus even it takes more time to decide.

4. CONCLUSION

Specifically, this conceptual research paper focuses on the attachment of “Ringi” approach to gain consensus in strategic decision-making process. It seems that developing technologies will have dramatic effects on business world by changing and influencing most

core processes and operations in the coming decades. AR technology, augmented reality (AR) strategy has been employed in marketing by providing consumers with an interactive product-based, experience based on three-dimensional holograms, interactive models, graphics and sound (Berman and Pollack, 2021: 622). Besides, Artificial intelligence (AI) made a vast progress that was finally confirmed since the 2000s with the emergence of “Machine Learning” and it has already affected the nature of the organizations and the interactions with their customers and their environment operating by using of technological facilities to reproduce the cognitive abilities of individuals to obtain goals autonomously (Wamba-Taguimdje et al., 2020: 1895). Incidentally, deep learning algorithms, smart devices and the Internet of Things (IoT) are especially functional for businesses operating globally as they promote more productive coordination and cooperation and computer-aided 3D printing designs, superapps, Big Data Analytics, blockchain technology and latest manufacturing and process planning are automating lots of tasks and increasing effectiveness and speed (Vrontis et al., 2022: 2). On the other hand, the COVID-19 pandemic, which was a human crisis and lasted for three years, paralyzed all business projections throughout the world. Also, the COVID-19 pandemic has reshaped how, where and when individuals work, and high technology has played an important role in enhancing remote and flexible hybrid work recently. In addition, the effects of climate change, global political conflicts and wars continue to destabilize economies and the organizations as well. For example, Schippers and Rus (2021) argued in their study that information-processing failures may have an impact on decisions made before because unprecedented crises just like the COVID-19 pandemic demand unprecedented actions. Also, decision-makers will be under too much stress because of the incomplete information, under time constraints, and in the face of immense uncertainty and public pressure. Therefore, it has been emphasized that lessons from crises in the past unveil that leaders are more likely to make strategic decisions beforehand. Indeed, a strategic decision comes with a higher degree of uncertainty, possibly result in difficulty in assessing costs and benefits, and a result of several simultaneous outcomes.

Moreover, these key factors mentioned above require a newer scope of strategy which will reshape business further into the 2020s. However, these factors also bring new business opportunities and to capture these opportunities, it requires a strategy reset for many industries and a newer understanding of management styles for the decision makers as well. Today, decision makers are under pressure from customers, investors, regulators, and employees to

raise awareness on environmental sustainability, and it is considered that a sustainable business will be an opportunity to drive both organizational efficiency and revenue growth. Then, it can be inferred that organizational success barely requires effective decision-making, allocation of the resources eminently and investment in organizational growth with decisive actions by every function in the organization.

It's obvious that organizations will face various challenges and are often constrained by limited resources such as time, required information and budget that hamper the fronting the adoption of latest technologies or getting ready to react unexpected events or threats. To address these challenges, effective strategic-decision-making seems to be the best tool for overcoming barriers to reach organizational goals. Not only these challenges will potentially disrupt existing strategic techniques, organizational operations, processes, but also unstable and turbulent operating conditions may curtail pre-defined organizational policies and practices. Therefore, strategic decision-making combined with the Japanese Ringi management system will be a dynamic combination of strategic-decision-making process for taking pre-emptive actions against these challenges. This requires the foundation of the strategic management adopting the perspectives of technology and innovation depending on consensus based Ringi system which reduce complexity and uncertainty and produce fresh insights before making the decisions.

In conclusion, it's essential to realize that some of the team members in organizations may not be comfortable with the decisions that have been made or may push back against fast changes (Leone, 2021: 1). Therefore, as members of the group can participate in decision-making through Ring process, it will build trust around the decisions, and they think that the decisions have been made are necessary and available. Besides, with the help of Ringi process, leaders will communicate more with the team members, easily remind them of the strategic perspective of the organization and keep everything faithful when making strategic decisions. Last but not least, executing the strategy is a matter of organizational success or failure and formulating strategic decision-making process and aligning the total organizational resources for effective execution of the strategy is the path to success and strategy will not be executed if it cannot be understood by the team members well. Consequently, within the light of the information mentioned above, it can be inferred that the Ringi system combined with the strategic decision-making process will be best tactic to overcome the barriers that are originated from uncertain, stiff competitive markets and an accelerating pace of changes and demands in

2020s. Once again, as Sun Tzu emphasized, "Strategy without tactics is the slowest route to victory; tactics without strategy is the noise before defeat".

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Declaration of Contribution Rate: The author has completed the article on his own.

Declaration of Support and Appreciation: The research did not receive any support from any institution or organisation.

Declaration of Conflict: The authors declare that there is no conflict of interest.

In this study, the rules stated in the “**Higher Education Institutions Scientific Research and Publication Ethics Directive**” were followed.

This article has been screened with **similarity** detection software.

Article Type: *Research*

Citation: Hodak, D. F., Braje, I. N., & Jaković, B. (2023). Implementing total reward strategies to improve employee retention in hospitality. *Journal of Economics, Business and Organization Research*, 5(2), 149-160.

IMPLEMENTING TOTAL REWARD STRATEGIES TO IMPROVE EMPLOYEE RETENTION IN HOSPITALITY

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Received: 20.07.2023

Accepted: 27.08.2023

Published Online: 29.10.2023

Abstract

Hospitality industry faces many difficulties with retention of the labour force which creates numerous challenges for human resource (HR) departments in these companies. At the beginning of every tourist season, employers in hospitality in Croatia have a challenging task to attract sufficient seasonal workers. In many cases, hospitality companies are forced to employ non-skilled workers and train them for the job which leads to additional costs and decreases productivity. However, this paper argues that by implementing appropriate reward management practices the level of employee turnover could be decreased. Specifically, this paper develops total reward strategy that could be used by employers in hospitality industry to decrease employee turnover and increase employee retention.

Keywords: *Labour Force, Hospitality Industry, Motivation, Acknowledgment, Croatia*

* This paper was presented at the 3rd CIBES Conference on 17.03.2023.

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1. INTRODUCTION

Specific features of hospitality industry labour market such as seasonality, “safe port” role, lower wages, night shifts, overtime work in peak season etc. lead to low retention of labour force in hospitality industry. Although certain level of employee turnover is accepted and necessary, excessive turnover is usually considered as a negative occurrence for an employer. For example, research estimated that a one standard deviation increase in collective turnover shrinks yearly profit by 8.9% (Hom et al., 2017). In hospitality sector, employee turnover is often at much higher levels compared to other industries (Simons and Hinkin, 2001). Loss of skilled workers, in addition to several direct or indirect costs, has the potential to impact service quality, which could cause additional loss of performance for the organization (Holston-Okae and Mush, 2018). Therefore, for the hospitality sector it is especially important to foster employee loyalty. Managers have at disposal several tools to decrease attrition and turnover, including employee rewards (De Gieter and Hofmans, 2015). Employee compensation is a part of human resource management (HRM), a field of great managerial concern. Previous findings indicate that employee compensation can be utilized by firms in the hospitality sector as a management tool to enhance short-term performance (revenue growth) and long-term profitability gains (Kim and Jang, 2020).

The purpose of this paper was specifically to emphasize the role of reward systems in supporting employee motivation and labor force retention in hospitality industry. The objective of the paper is to examine whether compensation system can be used to increase employee retention. Although a general compensation-motivation and performance relationship is well understood and examined, this paper provides a focus on specific industry – hospitality.

2. FEATURES OF LABOR MARKET IN HOSPITALITY INDUSTRY

2.1. Employment in Hospitality Industry

The majority of features of the labor market in hospitality industry are a consequence of the specificities of the tourist market. The main characteristics of employment in the hospitality industry include seasonal employment, a high proportion of employees with an average lower level of education and qualifications, a high level of female workforce and a higher average age of employees (Pirjevec and Kesar, 2002:139). For a better understanding, mentioned characteristics are explained in more detail.

One of the main features of the hospitality labor market, as stated by Riley (in Baum, ed., 1993), is seasonal employment as a consequence of the seasonality of tourism. In the period from June to September, Croatia achieves 91% of overnight stays (DZS, 2022a:44). Due to that, the demand for labor force increases significantly in the summer months, which leads to seasonal employment. Most of the company's employees usually work only during the season and do not receive additional education or undergo the necessary training for the work they do, because the employer considers that it is not worth investing in employees who will not stay in the company for more than one season. This can ultimately have a negative impact on the company, given that the human factor plays an important, and often crucial, role in the provision of services in tourism.

The domination of the female workforce can be attributed to the fact that a large part of the jobs in hospitality correspond to the female workforce by their basic characteristics (e.g. the female workforce predominates in the housekeeping department, food and beverage department, and administration in hotels). The higher average age of employees and the high proportion of employees with an average lower level of education and qualifications are the result of a large number of jobs that are quite easy to learn and do not require special qualifications, which enables the employment of those employees who, due to their age, are unable to perform jobs in other economic branches and activities. Due to the described characteristics, hospitality industry, in the context of employment is often mentioned as a "safe harbor" (e.g. Szivas, Riley, Airey, 2003), which, on the one hand, has a positive effect on the entire economy, while, on the other hand, it can negatively reflect on the quality of services provided in hospitality industry. Riley (in Baum, ed., 1993) mentions several additional features that can be attributed to the labor market in the hospitality industry, such as: transferability of skills from organization to organization, rigidity within organizations (employees do not change jobs within the organization, except in case of promotion) and a large share of jobs that are very easy to learn and do not require special qualifications. In addition to the described specifics, it is also necessary to mention the working hours in tourism, which are very different from other labor markets, as they include weekend and night work. Also, people employed in tourism are usually not able to use their annual vacation in the summer months, considering that tourist traffic is the highest at that time, which is why tourism employers need all their employees then.

2.2. Overview of Employees in Hospitality Industry in Croatia

In order to provide an insight into the general characteristics of employees in the hospitality industry in Croatia, as well as the difference compared to the total number of employees in Croatia, authors provided the data from the Croatian National Bureau of Statistics. In March 2022, the share of employees in the activities of providing accommodation, preparing and serving food in the total number of employees in Croatia was 4.9%, while in August this share increased to 7.2% (DZS, 2022b). Jobs in tourism, and thus also in the hospitality industry, "are closely related to man and the quality of his work, and there are very few jobs that have been successfully replaced by technical substitutes on the development path of tourism so far" (Čavlek et al., 2011:274). Within the hospitality industry, there are numerous occupations; some of them are specific for hospitality industry, while others are also found within other industries. In order to understand the complexity of the hospitality industry, key occupations are presented below in accordance with the National Classification of Occupations (NKZ).

Table 1. Key Occupations in the Hospitality Industry

| Occupation |
|--|
| Chief and executive directors/chief and executive directors |
| Directors of business and administrative units |
| Financial directors |
| Directors of human resources |
| Directors of program policy and planning |
| Business and administrative directors |
| Directors of sales and marketing |
| Director of publicity and public relations |
| Directors of research and development |
| Directors in tourism, catering, retail trade and other service occupations |
| Directors of hotels and camps |
| Directors of restaurants and related catering establishments |
| Administrative officers |
| Clerks for doing business with customers |
| Officers for providing information to clients |
| Hotel receptionists |
| Service and trade occupations |
| Cooks |
| Waiters |
| Bartenders |
| Domestic occupations/housekeepers/housekeepers |
| Employees for cleaning and maintenance in offices, hotels and other facilities |
| Hosts/hostesses |
| Cleaners, laundresses, housekeepers and related occupations |
| Domestic occupations in offices, hotels and other facilities |
| Hand washers/hand washers of cars, windows, laundry and related occupations |
| Washers and ironers |

| |
|--------------------------------------|
| Helpers in food preparation |
| Kitchen assistant/kitchen assistants |

Source: Adapted according to the Classification of the Agency for Vocational and Adult Education (2012: 88,89)

Each occupation listed in the table requires specific knowledge and skills which should be improved throughout the entire period of employment, due to the fact that “hospitality industry requires service employees to deliver superior service that is customized to satisfy various customers’ needs” (Cheng, J.-C., and O-Yang, Y., 2018:79). However, several characteristics of employees in the hospitality industry in Croatia are not in favour of employees’ intention to stay in the industry. The average annual number of working hours in the hospitality industry is higher than the average for the Republic of Croatia, while the number of overtime hours is lower. In reality, a large number of overtime hours in the hospitality industry is not listed because of legal restrictions. Due to that, overtime is not paid additionally, or is not recorded in order to avoid paying contributions. The average monthly net salary paid per employee for legal entities in Croatia in 2020 was 875 euros, while in the hospitality industry was 686 euros (DZS, 2022b), which is even 21% lower than the average.

Despite the fact that the working conditions in the hospitality industry are often difficult and unfavorable, primarily due to the seasonal nature of the business, a large number of working hours per week during the season and work on weekends, it is clear that this activity employs an increasing number of people from year to year, and due to its characteristics it provides an opportunity for the part of the workforce that is unable to find employment in other workplaces. The growing trend of share of employees in hospitality industry has already led to a shortage of labor force in the hospitality industry during the season, which has led to the importation of labor force. Although foreign labour force can cover seasonal shortage, this should not be a long-term solution for several reasons: ignorance of the language and culture, ignorance of the destination's offer, outflow of earned funds... Accordingly, it should be in the interest of employers to hire as much domestic labor force as possible and retain them in the company not only for one season, but for as long as possible. In order to achieve this goal, employers should tend to have satisfied workers. Turnover intention largely depends on job satisfaction which can be improved by managerial style and reward strategies which represent both challenges and opportunities to industry stakeholders” (Zopiatis, Constanti, and Theocharous, 2014). Key role in this process can be attributed to motivation and reward system of the company.

3. TOTAL REWARD MODEL AND ITS POSSIBLE EFFECTS ON HOSPITALITY INDUSTRY

3.1. Motivation in Hospitality Industry

The correlation between HRM practices and firm performance is mediated by employee motivation (Jiang et al., 2012), thus one of key decisions made by hospitality firms is the design of its compensation strategy intended to attract, retain and motivate employees (Torres and Adler, 2012). However, motivating employees in the hospitality sector can be a challenging task for HR managers as the sector employs personnel of different status, educational background and job complexity thus a tailored approach might be necessary to increase employee motivation and performance (Namasivayam et al., 2007; Lundberg et al., 2009; Maroudas et al., 2013). Yet, although high employee motivation is important, Holston-Okae and Mush (2018) found that employee motivation was not predictor of turnover intention, indicating that different set of factors might be responsible for employee motivation and turnover.

Although some of earlier researches argued that for simple jobs performed by low skilled workers extrinsic motivation might be more effective, more recent research has found intrinsic motivation even more relevant in the context of motivation of hotel employees and managers (Zopiatis and Constanti, 2007; Putra et al., 2017). Furthermore, the research done by Babakus, Yavas, and Karatepe (2017) showed that some reward system is negatively related to turnover intention, meaning that when reward system adequate employees have a lower turnover intention. In such circumstances when both extrinsic and intrinsic motivation could be relevant for overall employee motivation, it would be advisable to exploit the benefits of the total rewards approach for employee motivation.

3.2. Overview of Total Rewards Model

Total rewards approach offers a unique reward strategy as it includes both traditional elements like salary, variable pay and benefits, but also intangible non-cash elements such as career opportunities, learning and development, the intrinsic motivation provided by the work itself, and the quality of working life provided by the organisation (Armstrong and Murlis, 2004: 11). This model consists of five components, each of which includes programs and practices that collectively define an organization's strategy to build a productive, inspired and committed workforce (WorldatWork, 2020). Financial rewards include remuneration, benefits,

performance and recognition and non-financial rewards consist of work-life balance and development and career opportunities. Previous research of these elements revealed that financial rewards (benefits, performance and recognition, remuneration, career, in that order) would lead to employee retention, but that non-financial rewards (career advancement, learning and work-life balance) were also important and should not be neglected (Bussin et al., 2017).

Figure 1. Elements of the Total Rewards Model



Source: WorldatWork (2020)

Developing a comprehensive model of employee compensation in the hospitality industry should take into consideration previous research findings indicating that, in addition to financial incentives, improved workplace conditions or possibilities for personal development led to employee satisfaction and attracting and retaining employees (Maroudas et al., 2013; Holston-Okae and Mush, 2018). For example, Maroudas et al. (2013) research showed that hotel employees especially appreciate education and training possibilities through different seminars organized by the employer. Research on seasonal workers motivation showed that factors with the greatest impact on work motivation include growth factors such as feedback, information, responsibility and training/knowledge, while typical hygiene (extrinsic factors) were not found as important (Lundberg et al., 2009). Namasivayam et al. (2007) revealed that direct compensation (i.e. base pay or merit pay) fully mediates the relationship between indirect compensation (benefits) and performance in the hotel industry. Recent meta-analysis of relevant retention strategies in hospitality industry revealed that employee satisfaction is crucial for retention, where four factors led to satisfaction: sustainable positive work environment; sustainable growth opportunities; sustainable & effective communication; and sustainable & effective recruitment and selection practices (Ghani et al., 2022). Similar intrinsic sources of

employee retention in hospitality industry were reported by Dogonyaro (2021), for example training and career development, but this research in low-income country revealed that work conditions and employee welfare, remuneration and compensation and reward and recognition also act as relevant sources of employee retention. Additionally, as new generations will be entering the hospitality industry workforce, it might be necessary to additionally examine generation-related sources of retention and motivation (Frye et al., 2020).

4. CONCLUSIONS

4.1. Theoretical Implications

High employee turnover has been a continuing concern for managers in the hospitality industry. Low retention rates lead to problems with customers, decreasing service quality and increasing overall labour costs (Frye et al., 2020). This paper reviewed total rewards model as a tool to decrease employee turnover in the context of the hospitality industry. Previous research indicates that when it comes to motivating employees in the hospitality industry, employees' sources of motivation diverge (Zopiatis and Constanti, 2007; Putra et al., 2017; Frye et al. 2020). Although extrinsic rewards were of importance for the general satisfaction of the workers at their place of work, in order to motivate employees, and especially to retain them, the results suggest that the growth needs needed to be fulfilled as well (Ghani et al., 2022). This shows that traditional material compensation alone is insufficient for long-term employee retention. Additionally, employers in hospitality industry should tailor their compensation strategies to specific employee groups, both in terms of occupations and generations, which was also confirmed by previous research. For example, findings of the previous research done by Gursoy et al. (2008) showed that Baby Boomers are willing to wait their turn for promotions and rewards, and are very loyal. On the other hand, Gen X-ers expect immediate recognition through title, praise, promotion, and pay, which leads to conclusion that total reward strategy will become necessity, not an option for all new generations. Likewise, Hausknecht et al. (2009) developed a content model of 12 retention factors in the leisure and hospitality industry, in the context of previous theory and research. The most frequently mentioned reasons for staying with employer included job satisfaction, extrinsic rewards, constituent attachments, organizational commitment, and organizational prestige. These findings thus also highlight the importance of differentiating human resource management practices in order to retain valued employees.

4.2. Practical Implications

According to findings presented in this paper, hospitality managers should be aware that for attracting and motivating low-skilled workers with seasonal employment, securing adequate base pay and/or possibility of variable compensation is not sufficient. In addition to tangible compensation, employers should pay close attention to intrinsic motivation and provide employees with supportive leadership, feedback, adequate organizational culture and allowing them to show their potentials even within simpler jobs they perform. For expert positions, it is advisable that employers pursue with the general compensation trends on the market, and whenever possible, offering above market levels of intangible motivation to employees.

Ultimately, managers should be aware that rewards can take both tangible and intangible forms, and that the appropriate mix of the two is a necessary requirement to increase employee motivation and decrease turnover especially in the tight labour markets. Adopting the total reward model to compensation would be an operational response to this requirement.

4.3. Research Limitations and Future Research Directions

The main limitation of the research is the absence of the primary research which should include both employers and employees. All findings in this paper should be tested with valid empirical research. This would provide valid information on the topic and empirical research is desirable to enable new findings and recommendations for the future. However, it would be advisable that the type of the hospitality job is taken into account, as jobs in hospitality range from simple low-skilled jobs to expert positions and generalizations are not possible. Special attention should be given to low-skilled jobs as these create the highest percentage of jobs in hospitality and employers have most problems with retaining this employee profile.

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Declaration of Contribution Rate: The authors have contributed equally.

Declaration of Support and Appreciation: The research did not receive any support from any institution or organisation.

Declaration of Conflict: The authors declare that there is no conflict of interest.

In this study, the rules stated in the “**Higher Education Institutions Scientific Research and Publication Ethics Directive**” were followed.

This article has been screened with **similarity** detection software.

Article Type: *Conceptual*

Citation: Sarp, S. (2023). Artificial Intelligence in advertisements: A conceptual framework based on the technology acceptance model. *Journal of Economics, Business and Organization Research*, 5(2), 161-174.

ARTIFICIAL INTELLIGENCE IN ADVERTISEMENTS: A CONCEPTUAL FRAMEWORK BASED ON THE TECHNOLOGY ACCEPTANCE MODEL

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Received: 16.10.2023

Accepted: 26.10.2023

Published Online: 29.10.2023

Abstract

Advertising plays a vital role in presenting a company's products or services to prospective customers with the aim of influencing their purchase intention. The impact of advertising is important for generating product recognition and sales. With the technological advancement in AI usage in businesses, the integration of Artificial Intelligence in contemporary advertising strategies is impactful. This study aims to explain how Artificial Intelligence (AI) can be used in advertising, underpinned by Technology Acceptance Model (TAM). Using the TAM model, the paper explains how people come to accept and use AI in ads. It is proposed that if people find AI in ads useful and easy to understand, they're more likely to respond positively. Besides, social impact is also considered when explaining consumer attitude and purchase intention. This research helps advertisers understand how to use AI better in their campaigns to engage consumers and get better results.

Keywords: *AI, Advertisement, TAM Model, Consumer Attitude*

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1. INTRODUCTION

Over the past few decades, the advertising industry has undergone radical transformation, as highlighted by Donthu et al. (2022). This evolution has been driven by modern technological advancements, particularly the integration of artificial intelligence (AI) and machine learning, which are fundamentally reshaping the traditional concept of advertising and its content (Campbell et al. 2022; Li 2019; Qin and Jiang 2019). AI, characterized as a set of disruptive technologies that enable solving problems, facilitating decision-making, and performing tasks akin to human intelligence (Qin and Jiang, 2019), has played a pivotal role in enhancing advertising's competence, personalization, targeting, and intelligence. This transformation has been achieved by automating and streamlining essential advertising functions, including consumer insight discovery, media planning, ad procurement, ad creation, and impact evaluation, as elucidated by Chen et al. (2019), Deng et al. (2019), and Li (2019). Simultaneously, spurred by new technologies and the proliferation of digital media, advertising has transitioned from its traditional forms to embrace a multitude of innovative media platforms. These advanced advertising mediums leverage artificial intelligence (AI) to bolster advertisement effectiveness.

AI plays a pivotal role in assisting advertisers across a spectrum of advertising functions. Its contemporary application in advertising has surged, primarily driven by its ability to facilitate the development of highly targeted promotions through automated ad scheduling, placement, and media planning and purchasing, as emphasized by Huh and Malthouse (2020). The domain of AI advertising is experiencing rapid growth, showcasing substantial industry potential and promising research opportunities.

This study delves beyond the realm of AI and advertising in isolation. It encompasses the convergence of technology, psychology, and business. Its focus lies in understanding how today's consumers think and help businesses figure out how to succeed in this changing landscape. As the exploration of this topic progresses, the goal is making things clear, and offer a map and a guide to advertiser to use AI in their advertisement campaigns. This will help them not only reach their audience but also connect with them, leading to successful and fruitful interactions.

However, with every technological leap, there are questions and concerns. How do everyday people – the consumers, the target audience of these advertisements – feel about this

AI-driven approach? Do they appreciate the personalized touch? Or does it feel too invasive? Is there trust in the algorithms that decide what ads they see, or is there skepticism? And perhaps most importantly, do they even understand the role AI plays in the ads they come across daily? Technology Acceptance Model, TAM, originally developed in the 1980s, TAM is a handy tool in understanding how users come to accept and use a particular technology. It looks at factors like how useful someone believes the technology is and how easy they think it is to use. For our study, it provides a lens to examine the acceptance of AI in advertising. After all, if people find AI-driven ads beneficial and straightforward, they're more likely to react positively. If not, the reception could be lukewarm or even negative.

There have been limited empirical studies employing the Technology Acceptance Model (TAM) to investigate consumers' acceptance to AI in ads. This research concentrates on understanding the role of perceived ease of use, perceived usefulness, and social influence on consumers' attitudes towards embracing AI in advertisements, and further examines the connection between these attitudes and their subsequent intention to engage.

The structure of this paper is organized as follows: first, in the subsequent sections on the conceptual framework and theoretical model, we will delve into the topic of AI in marketing and employ the Technology Acceptance Model to gain insights into how consumers perceive and accept new technology. This discussion will lead to the introduction of novel propositions that form the basis of our theoretical model. Towards the end, in the conclusion section, we will provide a summary of the paper, delineate its limitations, and suggest potential avenues for further research.

2. CONCEPTUAL FRAMEWORK AND THEORETICAL MODEL

2.1. AI in Marketing

In today's rapidly evolving advertising landscape, Artificial Intelligence (AI) has emerged as a central pillar. Defined by Panchiwala and Shah (2020) as the capability of algorithm-driven computers, or robots, to perform tasks that traditionally required human intelligence, AI aims to imbue systems with cognitive abilities mirroring those of humans. Such capacities encompass reasoning, understanding, extracting relevance, distinguishing, generalizing, and crucially, learning from past encounters.

A notable subset of AI that is gaining prominence in the realm of advertising is Machine Learning. Addressing the constraints posed by other advertising technologies, Machine

Learning capitalizes on the wealth of consumer data to make instantaneous, informed advertising decisions, as highlighted by Perlich et al. (2023). In the advertising context, Machine Learning is not just about data processing; it goes beyond to enhance specific operations, such as pinpointed media buying or astute audience segmentation. With every new data it processes, it hones its understanding and decision-making capacity, drawing parallels with the human ability to learn and improve, a perspective echoed by Shah et al. (2020).

Yet, for Machine Learning to function effectively, it requires a robust dataset. Big Data equips digital advertisers and marketers with invaluable insights into their target demographics. Utilizing state-of-the-art Big Data analytics tools, companies are empowered to sift through, manage, and derive insights from a vast array of structured and unstructured data. As pinpointed by Jin et al. (2015), this data becomes the backbone for both online and offline advertising strategies, with tailored analytics suggesting optimal advertising tactics rooted in nuanced mobile user behaviors, profiles, and even locomotive patterns.

As we delve deeper into the technological intricacies of modern advertising, the Internet of Things (IoT) emerges as a key player. By linking devices to the internet, IoT provides advertisers a golden opportunity to transcend traditional, broad-brush marketing strategies, pivoting towards more bespoke, personalized approaches, as outlined by Aksu et al. (2018).

Furthermore, Cloud computing, with its promise of on-demand access to a reservoir of shared computing assets, augments advertising mechanisms. It paves the way for instantaneous reactions and a collaborative digital framework, ensuring efficient dissemination of information. Notably, it also plays a pivotal role in assuaging privacy qualms, a perspective shared by Yin et al. (2015).

However, the path of integrating these technologies into advertising is not without its set of hurdles. Despite the advancements, there linger pertinent concerns, particularly centered around Big Data. Shah et al. (2020) highlighted several challenges, including rising privacy anxieties, the chaos of disorganized data, the lack of user-tailored results, hurdles in data accessibility, and the looming threat of data manipulation. As the industry forges ahead, addressing these concerns will be paramount to ensure a seamless and trust-driven relationship between advertisers and consumers.

2.2. Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), established by Davis in 1989, specifically addresses user behavior in adopting new technologies, differing from its predecessor, the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975), with a concentrated emphasis on information systems. TAM hinges on two primary constructs: 'perceived usefulness' and 'perceived ease of use' (Davis, 1989), serving as predictors for an individual's willingness to accept a specific technology (Tarhini et al., 2015). TAM model has been broadly applied in diverse areas such as internet usage (Porter and Donthu, 2006), social media (Rauniar et al., 2014), mobile marketing (Kim et al., 2008), online banking (Yiu et al., 2007), education (Tarhini et al., 2013), and e-government (Alenezi et al., 2015).

Davis (1989) posited that 'perceived usefulness' (PU) and 'perceived ease of use' (PEU) directly affect potential users' attitudes, subsequently shaping their intentions to adopt new technology. The core aim of TAM is forecasting a person's behavioural intention regarding technology use. TAM also posits that external factors can influence PU and PEU. Beyond the foundational elements of TAM, 'social influence' (SI) was introduced (Bagozzi et al., 2000) into the model to analyse the impact of external opinions on individual attitudes towards certain technology acceptance.

2.3. Research Propositions

In this research, 'perceived usefulness' refers to the user's belief level that utilizing an AI in ads can improve their performance, as per Davis (1989). Typically, 'perceived usefulness' is seen as a more immediate and potent influence on the decision to embrace technology compared to 'perceived ease of use' (Cha, 2010). Davis (1989) determined that 'perceived usefulness' primarily drives an individual's intention to adopt novel technology, with 'perceived ease of use' being a less influential factor. Numerous studies have identified positive relations between perceived usefulness, attitudes, and the behavioral intention to adopt technology (Cheung and Vogel, 2013; Farahat, 2012; Suki and Suki, 2011). Park (2009) found that users' perceived usefulness positively impacts their attitude and intention to accept e-learning systems. In a similar vein, Bhattacharjee and Hikmet (2008) demonstrated that the perceived usefulness of information technology had a positive effect on users' intentions to utilize such technology. Rauniar et al. (2014) also discovered a positive connection between individuals' perceived usefulness of social media platforms, like Facebook, and their intention to engage with them.

In the context of AI tools in marketing, professionals would assess whether the AI solutions at their disposal would lead to better marketing outcomes, be it in segmentation, targeting, ad delivery, or any other domain. Consequently, this current study proposes that individuals' perceived usefulness of an AI in ads will not only result in positive attitudes towards acceptance of AI ads but also positively influence behavioural intentions to adopt the technology.

P1: Perceived usefulness of AI-ads will be positively related to attitudes toward AI in ads.

P2: Perceived usefulness of AI-ads will be positively related to behavioural intention to purchase intention.

In the context of this research, 'perceived ease of use' is characterized as the extent to which a user believes that engaging with AI in ads would require minimal effort, following Davis's 1989 definition. Perceived ease of use refers to the extent to which an individual feels that using a specific system will require minimal effort (Davis, 1989). Users generally show a preference for technology that they perceive as less complicated to use relative to other options (Davis, 1989). The ease of novel technology's use can enhance performance, potentially increasing immediate perceived usefulness, while its absence can lead to frustration, hindering the adoption of new technologies (Taylor and Todd, 1995; Venkatesh and Davis, 2000). Fang et al. (2005) determined that an innovation's characteristics, or the specific tasks or services it entails, can shape its perceived ease of use. For instance, the impact of perceived ease of use on the intention to utilize an innovation is prominent only in cases where the innovation stimulates intrinsic motivation, as opposed to offering external rewards (Gefen and Straub, 2000). Many research efforts have highlighted the direct and indirect impacts of users' perceived ease on attitudes toward specific products or services (Ramayah and Ignatius, 2005). As global mobile phone usage rises, there's a growing propensity for online shopping (Tandon et al., 2016). This trend is attributed to the convenience people find in making purchases from the comfort of their homes, as opposed to the effort required to visit physical stores (Chao, 2019). Consequently, the subsequent propositions are presented.

P3: Perceived ease of use will be positively related to perceived usefulness of AI in ads.

P4: Perceived ease of use will be positively related to attitudes toward AI in ads.

Social influence pertains to the perceptions stemming from peers and acquaintances (Mathieson, 1991). When peers perceive the incorporation of AI in advertisements as beneficial

and valuable, individuals tend to align with these peer opinions, fostering a favorable disposition towards AI in ads. Previous studies have indicated a positive correlation between social influence (SI) and the intention to utilize new technologies such as mobile services (Nysveen et al., 2005; Zhang and Mao, 2008). Within the theoretical framework, it is postulated that social influence has a positive correlation with attitudes towards AI in ads, as delineated in Proposition 5.

P5: Social Influence will be positively related to attitudes toward AI in ads.

In the domain of technology adoption and utilization, attitudes play a central role in shaping behavioural intentions. Rooted in the Technology Acceptance Model (TAM) postulated by Davis (1989), attitude emerges as a critical determinant that drives the intention to embrace technology, further influencing its actual adoption (Lunney et al., 2016). Indeed, the sentiment or perspective towards a specific technology can be perceived as a harbinger of behavioural intention (Ramos-de Luna et al., 2016). This sentiment has been empirically supported by a plethora of studies across diverse technological contexts. For instance, attitudes toward online learning platforms have been found to significantly steer the inclination to employ such technologies (Cheung and Vogel, 2013; Farahat, 2012). Similarly, attitudes have been underscored as pivotal in determining behavioural intentions related to the adoption of 3G mobile services (Suki and Suki, 2011) and even in the context of purchasing from online marketplaces (Ahn et al., 2004). In a similar vein, Park and Kim (2014) posited that the propensity to adopt mobile cloud services is positively influenced by the users' attitudes toward them.

Delving deeper into the psychological interplay of attitudes and behaviours, a clear, intimate link emerges. Cao et al. (2021) elucidate that attitudes and behaviours are inherently intertwined. This is further complemented by Trip et al. (2019) who suggest that while attitudes delve into the intricate depths of human psychology, behaviours act as their tangible manifestations. As such, behaviours predominantly mirror the underlying attitudes.

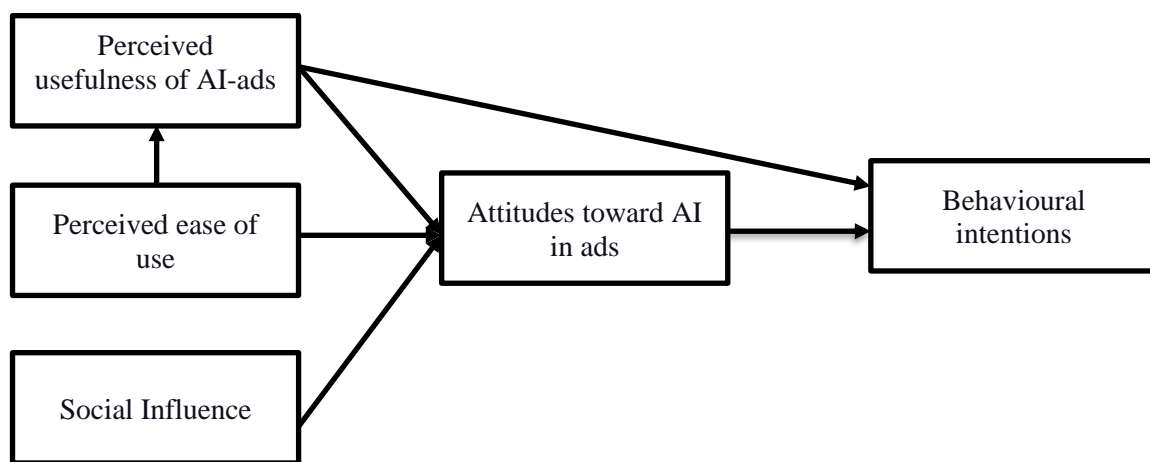
Building on the evidence and insights, it is reasonable to propose that attitudes toward AI in ads will exhibit a positive relation with behavioural intentions. In essence, as individuals cultivate a favourable attitude towards AI in advertisements, they are likely to demonstrate heightened intentions to engage with or accept such AI-driven ads. This proposition is underpinned by the consistent findings across various technological contexts, emphasizing the

pivotal role of attitudes in shaping behavioural outcomes. Consequently, the subsequent proposition is presented.

P6: Attitudes toward AI in ads will be positively related to behavioural intentions.

In summary, Figure 1 illustrates the conceptual framework for the adoption of AI in advertising, encapsulating the interplay of attitudes and behavioural intentions. Following this proposition, we will explore the managerial implications stemming from the constructs of this model in the following section.

Figure 1. Proposed Model for the Acceptance of AI in Advertising



3. CONCLUSION

This study is pioneering in its application of TAM to comprehend consumer reactions to AI in advertising. Historically, the TAM has been employed to understand the acceptance of many technologies; however, its application to AI in advertising remains limited. By integrating the TAM with the distinct context of AI advertising, this study illuminates two critical dimensions: It underscores how consumers' perceptions of AI advertising, driven by ongoing technological advancements, can directly shape their attitudes and consequent behavioural tendencies. Besides, the research emphasizes the profound role of external variables, especially social influences, in modulating consumer attitudes toward AI-powered advertisements. This study not only broadens the applicability of TAM but also provides a nuanced understanding of the factors influencing consumer responses to AI generated advertising campaigns.

AI's ever-evolving capabilities mean that its acceptance is an ongoing journey. The implications of AI adoption in advertising are vast and varied. Content creators, marketers, developers, policymakers, and researchers must consider these implications to measure the

likely success and impact of incorporating AI into advertisement strategies and policies. Using TAM, it's vital to regularly assess and adapt to the perceived usefulness and ease of use of AI tools, guaranteeing they remain relevant and are used to their full potential. AI instruments, given their extensive features, can seem intricate to some. Through the TAM framework, we can assess how the perceptions of marketing experts regarding the usefulness and user-friendliness of AI can greatly influence its adoption. For example, if AI platforms can quickly evaluate customer data to predict patterns and offer an intuitive interface, their adoption rate is expected to rise. The conceptual model posits that both perceived usefulness and ease of use directly shape a user's attitude towards the technology, which then impacts their behavioural intention to adopt it. When behavioural intention is strong, it frequently leads to actual system utilization. Thus, if marketing experts perceive AI tools to be valuable and simple to navigate, they are more inclined to adopt them in their regular operations. Using TAM's insights, companies can plan ways to increase acceptance of AI in advertising. This could involve training sessions to highlight the ease of using AI in ad campaigns or by presenting actual ad success stories driven by AI to underscore its value.

The present paper acknowledges certain limitations. Specifically, the model has yet to be validated through data collection. For future research, empirical studies gathering data from consumers can be undertaken to assess the proposed relationships in the framework.

In conclusion, the Technology Acceptance Model (TAM) serves as a foundational framework to discern the factors influencing the adoption of AI tools in marketing. By highlighting the journey from perception to intention and actual use, TAM provides stakeholders the knowledge to effectively integrate AI into marketing.

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Declaration of Contribution Rate: The author has completed the article on his own.

Declaration of Support and Appreciation: The research did not receive any support from any institution or organisation.

Declaration of Conflict: The authors declare that there is no conflict of interest.

In this study, the rules stated in the “**Higher Education Institutions Scientific Research and Publication Ethics Directive**” were followed.

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