Etikonomi

Jurnal Ekonomi

Etikonomi

Volume 21 (1), 2022

Etikonomi

Jurnal Ekonomi

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Investment Strategy Based on Bias Behavior and Investor Sentiment in Emerging Markets

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Abstract
This research's main objective is to select profitable investment strategies with the presence of sentiment investors in emerging markets, with behavior bias-based portfolio methods. The sample of 114 companies traded daily on IDX was conducted over three years with weekly data. This study uses pairwise comparison and OLS. The research results show that contrarian strategies are more profitable than momentum. Investors benefit when mild conditions are optimistic and more significant when the conditions are pessimistic. This research proves that investor sentiment in the market can distort investor investment decisions, even using the behavior-bias method. Therefore, forming a portfolio will be more appropriate based on biased behavior because it facilitates investment decision-making.

Keywords:
bias behavior; investment strategy; investor sentiment; emerging market

How to Cite:

INTRODUCTION

People have limitations in thinking (bounded rationality), so making decisions requires information that is considered an anchor (Tversky & Kahneman, 1974). This study will test investment decisions using methods based on behavior bias. The biased method of portfolio formation is 52 weeks high because the rating is based on the highest price ratio. 52 week high is better known as 52 weeks high momentum (Bornholt & Malin, 2011; Hao et al., 2016, 2018). Recent research has found that a 52-week high can be used as a target price (Clarkson et al., 2020).

The investor's decision to sell the stock does not have significant difficulties because the number of shares owned is limited. The difficulty of making investment decisions will be felt by investors when choosing stocks that are worth buying because the stocks that must be observed are very much. Investment decisions are difficult because investors have limited attention (J. Li & Yu, 2012; Ramos et al., 2020). The difficulty of investment decisions can be overcome by ranking based on behavior bias because the winner-loser rating does not have a different effect (Hartzmark, 2015). Rankings based on 52-week highs have salient numbers that can be used for investment decision-making (Blau et al., 2020; Bordalo et al., 2012, 2013).

The sentiment is a market condition that is difficult to measure because it is an unobservable variable (Mehrani et al., 2016). Sentiment proxies are numerous, including market surveys, indices based on trading volume, IPO volume, IPO first-day return, the market volatility index (VIX), Arms index, and many others. In this study, sentiment proxies were used by the Arms index. The Arms Index is a technical indicator and can show an optimistic and pessimistic market situation by using stock prices and trading volume indicators (Brown Cliff, 2005). Another reason for using the Arms index as a proxy for sentiment is that data is easily obtained from the market (Mehrani et al., 2016), and in general, investors use stock price indicators and trading volume as references for investment decisions (Sehgal & Vasishth, 2015).

A particular indicator in a sentiment index can indicate the sentiment in the market. The sentiment index shows market conditions and investor anxiety levels (Arik, 2011). Empirical evidence in Indonesia on sentiment based on news on the internet found that sentiment cannot be used to predict returns (Rizkiana et al., 2019). Another study in Indonesia stated that sentiment with proxy tendency business index significantly affects excess return (Widhiarti et al., 2018). Research in Indonesia on sentiment is conducted using proxies other than market information, so sentiment research with market data is necessary to enrich empirical evidence about sentiment

Empirical evidence of 52-week highs is more done in developed countries or countries with high liquidity financial markets, such as the United States, Taiwan, etc. (Chang et al., 2016; Hao et al., 2016, 2018; Montgomery et al., 2019). 52 week high in the developed market and countries with high liquidity always gives profit with momentum (George et al., 2018; Lee & Piqueira, 2019). Nevertheless, emerging markets or markets with low liquidity momentum cannot generate profit (Bornholt & Malin, 2011).

Momentum investment strategies are profitable in the medium term (Dhankar, 2019; Li et al., 2016, 2017), while contrarians in the long term (Dhankar, 2019; Shi et al., 2015). Recently, empirical research proves that momentum gains in the brief term (Antonacci, 2012; Chao et al., 2012), and contrarians can profit within the short term (Montgomery et al., 2019). In developed and emerging markets, contrarian strategy and momentum advantages are still debated. The common assumption argues that momentum strategies are more profitable than contrarian (Dhankar, 2019; Hao et al., 2018; Pan et al., 2013). However, other researchers can prove that contrarian strategies can outperform momentum (Montgomery et al., 2019; Shi et al., 2015). Some even prove that both investment strategies are profitable (Maheshwari & Dhankar, 2017).

Today's information technology advancements greatly facilitate market information search. Some investment managers advise investors to check their investment portfolios every week. The research will be very beneficial for investors by analyzing using weekly data. Investment strategy research rarely uses weekly data, even though market participants urgently need empirical evidence as a basis for investment decision-making.

The study will conduct tests with weekly data and 52 weeks high as preference price to make an investment decision as a novelty. Investors are usually believed to be speculative and short-sighted (Mei et al., 2009), and short-term sentiment has the power of predictive characteristic-sorted portfolio return (Raza et al., 2014). The contribution of this study is to provide evidence that the 52-week high is useful as a target or reference price to predict future returns, especially when the role of sentiment is taken into account.

METHODS

The statistic population consists of all IDX-listed companies in Indonesia, and samples are collected from the company's shares traded daily (N = 114) in various industries between January 5, 2015, and December 30, 2017.

First of all, the calculation of the excess return of each stock is done every week. Furthermore, the rating is descending based on proximity to the highest price ratio for 52 weeks with the formula:

$$\frac{current\ price}{52\ week\ high\ price}$$

Where: *current price*: closing price t week; **52** *week high price*: highest closing price for 52 weeks (George et al, 2018).

The top 30% (38 companies) as the winner's portfolio, and the bottom 30% (38 companies) are loser portfolios. Portfolio formation to be formed in 1 and 12 weeks and evaluated after 1 and 12 weeks in a rolling form method will be repeated. We use the Arms index as a proxy for investor sentiment. We calculate the Arms index as follows:

$$AD_t = \frac{ADV_t}{DEC_t} \qquad\qquad (1)$$

$$VOLU_t = \frac{ADVOL_t}{DECVOL_t} \qquad\qquad (2)$$

$$ARMS_t = \frac{AD_t}{VOLU_t} \qquad\qquad (3)$$

ADV_t is the number of companies that experienced an increase in the share price in the period t, and DEC_t is the number of companies that experienced a decrease in the share price in the daily period. Thus, AD_t is the ratio between ADV_t and DEC_t. In addition, $ADVOL_t$ is the trading volume of the company's shares that experienced an increase in the price in the daily period, and $DECVOL_t$ is the trading volume of the company's shares that decreased in price in the daily period. Arms investor sentiment index obtained by dividing AD_t by $VOLU_t$. To facilitate the classification of optimistic and pessimistic categories, ARMS adjusted index-obtaining 0 as the lower limit and 100 as the upper limit, with the formula presented in equation 4.

$$ARMS_t\, adj = 100 - \frac{100}{1+ARMSt} \qquad\qquad (4)$$

We categorize investor sentiment into three categories, namely optimistic (over-bought), pessimistic (over-sold), and neutral. This research defines over-sale reactions as situations where the market adjusted investor sentiment index is higher than 79. Conversely, optimistic investor sentiment is a situation where asset prices rise higher than the actual value of a transaction. In general, the market reaction is low, and asset prices become very expensive. In our research, the market-adjusted sentiment of investor indexes is lower than 57 in reactions to buying and selling opportunities.

To test the advantages of investment strategies are done with pairwise comparison. As for testing the effect of investor sentiment on investment strategies using

$$RET_i = ai_0 + \beta_1 W_{GH} + \beta_2 L_{GH} + \beta_3 OP_i + \beta_4 PES_i + \epsilon_i \qquad\qquad (5)$$

$$RET_i = ai_0 + \beta_1 W_{GH} + \beta_2 L_{GH} + \beta_4 NEUTRAL_i + \epsilon_i \qquad\qquad (6)$$

Where RET_i is the return of shares evaluation period. W_{GH} is a dummy portfolio winner (1 = winner: 0 = loser) and L_{GH} is a dummy portfolio loser (1 = loser: 0 = winner). OP_i, $PES_{i,}$ $NEUTRALi$ stand for optimistic , pessimistic, and neutral condition when forming a portfolio. The sum of optimism, pessimism, and normal states percentages during a week are 100%. In order to control for the co-linearity effects, we address the neutral state effects within a different model.

RESULT AND DISCUSSION
Descriptive Statistic

Illustration of arms adjustment index for 715 trading days is 16% optimistic, 20% pessimistic, and 64% neutral. Descriptive statistics for research variables are presented in Table 1. Mean, median and standard deviation are displayed. The average return is

-0.1427%, and the excess return is -0.00237%; it illustration if, during the research period, the return and excess return tend to be negative. Negative average return and excess return indicate that Indonesia's market condition tends to be depressed because it gives a negative average. The average Arms worth 0.79 means during the research period, the market conditions on average are well following the Arms criteria stating that the value of Arms is less than 1, then the market is in good condition. The Average Arms adjusted is 40.39, which indicates that sentiment investor conditions tend to be optimistic.

Strategy test Result

We measure the efficiency of investment strategies and evaluate them during the periods of 1 and 12 weeks. Table 2 will show the results of the calculation of pairwise comparison. The winner's portfolio delivers an average weekly loss of 0.812%. The medium portfolio earns an average weekly profit of 0.239%, and the loser portfolio delivers an average weekly loss of 1,030%. All three portfolio compositions (J/1) and (K/1) provide significant returns. Portfolio of GH methods with formation period (J) and testing (K) per 12 weeks (12/12). Testing the difference in average profits between winner-loser portfolios shows there are significant differences and a profitable strategy is a contrarian strategy. The winner's portfolio delivered an average loss per 12 weeks of 0.563%, a medium portfolio of 0.235%, and a loser portfolio resulting in a loss of 0.413%. The winner-loser portfolio pairwise comparison test results illustrate that a profitable strategy is a contrarian and effective strategy.

Tabel 1. Descriptive Statistic

Variable	Mean	Min.	Max.	Std. Dev
Arms	0.792	0.000	3.849	0.532
Arms adj.	40.387	2.519	79.377	14.318
Return	-0.001	-0.275	0.350	0.026
Excess Return	$-2.37.10^{-05}$	-0.357	0.270	0.025

The results of this study are different from research conducted in developed financial markets and high liquidity so far (Bornholt & Malin, 2011; Liu et al., 2011). Investors in emerging markets tend to choose stocks at prices far from the highest prices (Bornholt & Malin, 2011). Therefore, argument Antoniou et al. (2005) contrarian strategies are more profitable in emerging markets characterized by predictable markets, low trading, and dominated by small and less experienced investors so late in responding to information. Furthermore, Indonesia's financial markets are included in weak efficiency and low trade. Hence the contrarian is more profitable, according to the argument Antoniou et al. (2005).

Table 2. Test of Investment Strategy

	Portofolio (1/1)	Portofolio (12/12)
Winner	-0,812% (0,00)	-0,563% (0,00)
Medium	0,239% (0,00)	-0,235% (0,43)
Loser	1,030% (0,00)	0,413% (0,05)
W – L	**- 1,843% (0,00)**	**-0,976% (0,00)**

The results of this study support Lee and Piqueira (2019), who found that insider trading prefers to sell stocks that are close to the highest price level and buy stocks that are far from the highest price level. Other empirical evidence proves that the winner's portfolio is riskier, so investors prefer stocks far from the highest price ratio (Blau et al., 2020). Stocks that fall into the category far from the highest price ratio are undervalued stocks and have a high future return, so they are worth buying (Cosemans & Frehen, 2021).

Investment Strategy and Sentiment

Testing with pairwise comparison is considered still inaccurate, then conducted testing with OLS. An investment strategy in this study using bias behavior-based method, the profit testing of investment strategy is combined with the role of investor sentiment. The coefficient of the winner's portfolio with a period of formation (J/1) and evaluation (K/1) is -0.794% (0.00). Portfolio winner formation period (J/12) and evaluation (K/12) is -0.6139% (0.01). The analysis evidence shows that the winner's portfolio has a negative and significant effect on returns following pairwise comparison testing. The winner's portfolio coefficient is marked negative, meaning that the winner's portfolio does not provide profit to investors and is proven significantly. The regression coefficient of portfolio loser with formation period (J/1) and evaluation (K/1) is -0.3824% (0.15). The analysis evidence suggests that the loser portfolio has a negative and insignificant effect on returns. Portfolio losers in the period (1/1) made a profit, although not significant. The portfolio losers for the formation period (J/12) and evaluation (K/12) were 0.0988% (0.57). Portfolio loser periods (12/12) do not provide a profit sign of regression coefficient but are not significant.

Testing with formation period (J/1) and evaluation period (K/1), optimistic influence on return is positive and insignificant with $t_{statistics}$ 1.42 (0.15). Pessimists had a positive and significant effect on returns with a 3.94 (0.00). Regression results for formation periods (J/12) and evaluation period (K/12) yield no different results. Optimists had a positive and insignificant effect on returns, with a 0.34 (0.72). Pessimists had a positive and significant effect on returns, with a 1.68 percent rate (0.09).

Table 3. Result of Regression test

	Optimistic (pessimist)			
	Dummy Winner (1/1)	Dummy Loser (1/1)	Dummy Winner (12/12)	Dummy Loser (12/12)
Coefisient	-0.008 [-2.826] (0.005)***	-0.004 [0.157] (-1.414)	- 0.006 [- 2.509] (0.012)**	0.001 [0.559] (0.576)
Optimistic Coefisient	0.009 [1.419] (0.156)		0.008 [0.479] (0.6319)	
Pessimist Coefisient	0.021 [3.966] (0.000)***		0.025 [1.658] (0.098)*	
	Neutral			
Coefisient	-0.008 [-2.899] (0.004)***	-0.004 [-1.484] (0.138)	-0.006 [-2.486] (0.013)**	0.001 [0.579] (0.562)
Neutral Coefisient	-0.016 [-3.534] (0.000)***		-0.018 [-1.537] (0.125)	

Note: *** 1%, ** 5%, * 10%

The regression result indicates that neutral sentiment negatively affects the return, as evidenced by the regression coefficient values -0.016 (0.00) and -0.018 (0.12). Neutral sentiment negatively affects the return means that the more neutral sentiment increases, the return will decrease. The influence of neutral sentiment was evident during the formation period (J/1) and evaluation period (K/1). This empirical evidence provides an idea if neutral sentiment greatly affects market conditions in the short term. In other words, the longer the period of formation and evaluation will decrease the influence of neutral sentiment. This research can prove a distortion because the winner's portfolio is reversed and detrimental. For example, the portfolio of losers in the formation period (J/1) and evaluation (K/1) coefficient marked negatively, and there is a reversal but not significant. On the other hand, in the formation period (J/12) and evaluation (K/12), the coefficient of the portfolio of losers is marked positive, meaning that in the medium term, the portfolio loser is detrimental, and there is no reversal. The timing of 52-week high price is able to predict changes in cross-sectional returns (Davallou & Javadian, 2017). Zhou et al. (2022) conclude that strong 52-week high momentum in low economic policy uncertainty (EPU) period. The strategy yields significantly positive raw returns when concentrated on the more liquid stock in the market (Bettman et al., 2010).

CONCLUSION

This research can prove that an investment strategy based on behavior bias can explain investor sentiment in the market, although not all are significant. Previous research

cannot explain the failure of 52 weeks of high momentum in emerging markets. This study found that winner portfolios are riskier than loser ones, and reversals occur.

These findings have exciting implications. First, profitable investment strategies used in emerging markets, especially Indonesia, are contrarian. Contrarian gains are not only in the short term but also in the medium term. Second, optimistic and pessimistic about future returns are positive, although only pessimistic sentiment is significant. Sentiment will increase investor returns when market conditions are pessimistic and mildly optimistic. Both investor sentiments do not cause investors anxiety, so investment decisions are more rational. The evidence suggests that investors should consider the role of market sentiment in stock pricing, and regulators should consider market sentiment to prevent economic shock. An exciting direction for future research is to combine sentiment proxy with indirect measurement such as Twitter.

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Emotionally Intelligent Employees' Work Outcomes:
The Mediating Role of Organizational Commitment

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Abstract
The present study examines the effect of emotional intelligence on turnover intention and organizational indifference, noting the mediating role of organizational commitment. The current model of the study is considered one of the first attempts in examining these variables in the tourism industry. The structural equation modeling has been used to analyze the sample consisting of hotel department managers who have direct contact with the customers. According to the research results, emotional intelligence and organizational commitment decrease turnover intention and organizational indifference of the hotel department managers. In addition, emotional intelligence has been positively associated with the employees' organizational commitment. Finally, it has been found that organizational commitment mediates the effect of emotional intelligence on turnover intention and organizational indifference. Managers at the hotels should have the high emotional intelligence to establish empathy and perseverance to avoid being indifferent. In order to do this, hotel managers' commitment should be increased to perceive their job as their own.

Keywords:
emotional intelligence, organizational commitment, organizational indifference, turnover intention

INTRODUCTION

The twenty-first century brings plenty of improvements and requirements that carry the organizations among the most reputable, respected, or innovative ones. In other words, to maintain competitiveness, intangible assets (Gambetti et al., 2017) like employees' motivation or eagerness to support the organization have been accepted as an excellent source for all kinds of organizations that provide products or services. Tourism, which is considered as the second largest industry in the world (United Nations World Tourism Organization, 2018), is a vital income and employment domain in terms of global economic growth and competitiveness of the countries despite the regional differences (Dogru et al., 2021). It is an essential economic indicator that the world's total workforce employment was 9.9 % in 2017 (TUROFED, 2019). This ratio was 8.7 % in Turkey in 2019 (TURSAB, 2020).

There is a high employment ratio in the tourism industry regarding the total employment in the world and Turkey. This considerable amount of employment fluctuations causes high turnover ratios. It has been stated that this high ratio is the expected result of the seasonal working system in the tourism industry (Nukhu & Singh, 2020). It is known that the turnover ratio is high in the Turkish tourism industry, which is also a valid and common situation in the hospitality industry in general (Guchait et al., 2015).

Many academicians, conducting studies in the field of tourism, have been highlighting the importance and considering the high rate of turnover in the tourism industry as a worrying problem that needs to be searched well to be able to understand the reasons and consequences for managers and organizations (Rasheed et al., 2020). It has been stated in several studies that the reasons such as job security, earnings, organizational loyalty, organizational enthusiasm, job stimulation, irregular working hours, work-family conflict, job-stress of the employees increase turnover intention (TI) directly or indirectly (Sok et al., 2013; Mohsin et al., 2015). The poor quality of the service as compared to specific standards, decrease in customer satisfaction, loss of skilled human resources, increase in costs in new recruitment processes, wasting time and effort are among the essential effects of the TI in the tourism industry (Kim et al., 2015).

Another critical problem for organizations is the indifference of the employees. Organizational indifference (OI) is defined as a lack of feelings or interests, and there is no emotional involvement in the environment (Klenosky et al., 2015). This mostly invisible and epidemic situation still maintains its importance and seems challenging to identify the reasons (Torkzadeh, 2016). Since this phenomenon has many antecedents and consequences, indifference may also be thought of as in the connections of close relationships like families or partners. There is a long-term silence among the individuals, as in estrangement (Agllias, 2013), defined as loss of affection in the other members or emotional cutoff or simply emotional distancing (Agllias, 2015). Everyone may think that everything is good. However, this silence hides all the possible problems and naturally postpones the solutions.

Another example of indifference may be given, as in the fossilized mistakes while learning a new language (Nozadze, 2012). Errors become permanent habits without the punctual and required corrections. Considering all these metaphoric expressions, the indifferent state of the employees has been considered vital for the organizations. This is the case that the employees lose their enthusiasm at work and become silent or isolated by having these non-reactive emotions (Abolfazli et al., 2016). In addition, indifference is one of the adverse outcomes of the working conditions (Nwosu & Ward, 2016) and employees' reactions (Mura et al., 2016) towards the changes in the organizations. It has also been considered among the properties of disengaged or depersonalized during the work performances in the tourism organizations (Suhartanto et al., 2018). In order to decrease OI and TI, which have been found out as the adverse organizational outcomes of the current study, emotional intelligence (EI) (Mollaabbasi et al., 2013; Ahmadi & Rafiee, 2015) and organizational commitment (OC) (Guzeller & Celiker, 2019; Meimand et al., 2012) have been stated as the strategically essential variables.

Global changes cause dramatic differences globally, making the organizations try hard to survive within the competitive business world. However, coping with these changes can be possible by evolving with innovative approaches that play an essential role in the organizations' success (Rajapathirana and Hui, 2018). Innovative perspectives of the organizations highlight the importance of organizational success, which is also supported by the employees (Paterson et al., 2014). Specifically, the desired workplace in the organizations may be obtained by having employees with commitment as they tend to devote higher efforts to work (Garg, 2018) because they feel like part of the system based on connected action (Putra et al., 2020). As this current study adopts Meyer and Allen's (1991) definition, thus with the emergence of perception of this connection, a psychological state which is called "commitment" has been characterized as the employee's relationship with the organization, and indications for the decision to continue membership in the organization.

Besides, the role of the management types in the organizations has been pointed out the importance of participative management, which increases the degree of "we" feeling while providing the individuals understand each other (Argris, 1955). However, the new century also brings practical solutions to the endless problems by using these psychological states like keeping the employees committed (Putra et al., 2020), an emotionally intelligent workforce, and establishing supportive projects in the organizations (Rezvani and Khosravi, 2019). EI (Di Fabio & Saklofske, 2014), TI (Takawira et al., 2014), OI (Raeichi, 2010), and OC (Griffin et al., 1986) are among the most essential psychological variables that neglecting these might have devastating consequences for all kinds of organizations (Salajeghe & Tanabandeh, 2016). Specifically, employees with indifference must be considered the main problem on the list since it may spread invisibly and contagiously.

People high in EI have lower absenteeism from work, better psychological health, higher commitment to the organization, clearer role boundaries, higher levels of responsibility for the activities and work performance of direct reports, generally more satisfied at work,

more regularly seek support when coping with stressful situations at work (Sardo, 2004). Among the possible factors that facilitate the TI, employee commitment to the organization also plays a critical role (Brunetto et al., 2012).

This paper is organized as follows: the following part includes the relevant literature on EI effect on TI and OI, and the role of OC, which is developed based on the Affective Events Theory developed by Weiss and Cropanzano (1996), which is one of the theories of emotion in organizations. Theory suggests that affective states at work are key personality and organizational influences. Therefore, employees should feel connected to the organization that they work. Another theory behind the current study is the Reasoned Actions Theory, which implies turnover intention's cognitive process, which emerges in time but leaves the organization. In order to keep and increase the performance of the employees and the organization, OC is a crucial source to reduce TI (Long et al., 2012). According to Social Exchange Theory (Blau, 1964), strong bonds of the employees play an essential role in feeling fully committed towards the organization. When employees experience weaker bonds or cannot establish connections with the organization, they leave. In addition, according to the Attribution Theory, individuals may experience helplessness which leads to a general decrease for these individuals.

Although the job they are currently working provides support for being motivated or having high self-esteem, individuals may lose interest in their jobs. Thus they may feel indifferent towards all the aspects of the organization in time by the familiar work environment (Jiang and Chen, 2017). In this case, the Attitude Theory suggests that the employees' low motivation can be reinforced with positive behaviors or attitudes, thus reducing negative behaviors (Olson & Zanna, 1993). Indifference is one of the negative behaviors in the organization, and this feeling can decrease when positive emotions are experienced more in the organization. Organizational Orientations Theory highlights being indifferent in the organizations (Presthus, 1958). When employees do not care much about their organizations, it is impossible to interpret their behaviors and identify their problems within the organization. In other words, it is considered challenging whether the specific type of behavior of the employee should be understood positively or negatively. In order to prevent this kind of communication problem, employees' indifference should be reduced by increasing their commitment towards all the organizational aspects.

Considering the importance of the recruitment process well, it is also one of the crucial parts of the management, which includes the perception and control of the emotions of both employees and managers as most of them may experience weak or no emotional connection because of being the temporary workers in the tourism industry (Zhang and Frenkel, 2018). However, it has been stated that the individuals with high EI also have a high level of OC, and the level of commitment has a negative relationship with the TI (Saeed et al., 2014). According to the studies conducted to reveal this effect, it has been pointed out that OC plays a mediating role in the effect of EI on TI (Da Camara et al., 2015; Akhtar et al., 2017; Bryson, 2019; Zeidan, 2020).

Besides, the literature supports a negative relationship between OI and EI (Mollaabbasi et al., 2013; Ahmadi & Rafiee, 2015). As the essential sign of loyalty towards the organization has been called "commitment," employees are expected to devote effort (Khan et al., 2014). This effort is obtained when the employees are emotionally intelligent, positively affecting OC (Asnawi et al., 2014). Consistent with previous research, individuals' commitments towards the organizations make them experience positive behaviors and emotions, which result in higher OC (Cesário and Chambel, 2017).

The study on the consequences of the EI conducted by Wen et al. (2019) is the starting point of the current study. In the study by Wen et al. (2019), it has been suggested that to comprehend better the role of EI, employees' attitudes and behaviors such as TI should be examined in hotel management. In line with this suggestion by Wen et al. (2019), it is considered and evaluated as a gap-filling part of the current study, highlighting the importance of investigating the effects of the emotional intelligence level of tourism sector managers on work outcomes. Besides, based on this gap, the purpose of the current study is to determine the effect of EI on TI and OI of the hotel managers and the mediating role of OC on this effect. This is the first holistic study to investigate the mediating role of OC in the effect of EI on TI and OI using the sample of managers in the tourism industry. Another contribution of the study lies in using the indifference term in a study conducted in a country in the influence of western culture since the term indifference is commonly used in the eastern culture (Iran). It is not primarily aimed at doing cross-cultural research; however, this may be one of the study's contributions. Regarding these contributions, it can be stated that the current study aims to examine the effect of emotional intelligence on turnover intention and organizational indifference, noting the mediating role of organizational commitment.

METHODS

The data used in the study has been collected from the five-star hotels department managers in Antalya province, which is one of the most important tourism centers in Turkey. Antalya is the tourism region in Turkey with the most five-star hotels (407 hotels). The convenience sampling method has been used in the study, and the questionnaires with a piece of brief information and the online research link have been sent to 407 hotels by e-mail. The questionnaires, which have been considered appropriate with the research variables, have been asked to be filled out by the employees who work at the recreation, food and beverage, customer relations, and security departments that have direct contact with the customers 310 department managers from 116 hotels have filled out the questionnaire. Hence, 28.5% of the hotels have been reached. 25 questionnaires were not included in the analysis.

The analyses have been conducted with the data gathered from 285 questionnaires. According to the literature, the sample size must consist of at least 150 participants (Anderson & Gerbing, 1988); thus, the sample reached is said to have the adequacy to represent the universe. 60% of the department managers who participated in the research

are women, 40% are men, and the ages differ between 25 and 60 (M=35.83 years, SD=6.93, 60.7% of the participants are married, 25.3% of them have a high school degree, 28.1% have a two-year degree, 36.8% have an undergraduate, and 9.8% have a graduate degree. The mean work experience of the participants is 11.45 (SD=7.24) years (detail see in Table 1).

EI, OI, OC, and TI scales have been used to collect the study data. Each scale's items are rated on a 5-point Likert scale (1=strongly disagree to 5=strongly agree). A questionnaire has been implemented to gather some demographic information of the participants in this study as control variables. This information has been obtained on gender, age groups, marital status, and education level. It has been stated that these variables affect employees' work outcomes (Jackson et al., 1991; Riordan et al., 2003).

Table 1. Sample characteristics (n=285)

Characteristics	Frequency	Percentage%
Gender		
Male	171	60.0
Female	114	40.0
Marital status		
Married	173	60.7
Not married	112	39.3
Age		
M= 35,76 years (SD=6,99); Min.=20, Max.=60		
Tenure		
M= 11,45 years (SD=7,24); Min.=1, Max=33		
Education		
High School	72	25.3
Vocational School	80	28.1
Bachelor's Degree	105	36.8
Graduate Degree (master or doctoral)	28	9.8

Emotional intelligence. EI was assessed using Wong and Law's scale (2002). Consisting of 16 items, the "WLEIS Emotional Intelligence Scale" was adapted into Turkish by Deniz (2011). The scale consists of four dimensions with four items each. Using this scale provided to measure four specific components of EI: (1) self-emotion appraisal (SEA) (e.g., "I can explain the emotions I feel to team members"; (2) others' emotion appraisal (OEA) (e.g., "I can read my fellow team members' true feelings, even if they try to hide them"); (3) use of emotion (UOE) (e.g., "When I am frustrated with fellow team members, I can overcome my frustration"); and (4) regulation of emotion (ROE) (e.g., "I can get my fellow team members to share my keenness for a project"). In this study, the sub-dimensions of the scales' Cronbach's alpha coefficients have been found .92, .91, .83, and .88, respectively. Cronbach's alpha of the total EI is .94.

Organizational indifference. To measure the OI levels "Organizational Indifference Scale," developed by Fard et al. (2011), is used. Erhan et al. (2021) made the Turkish scale adaptation. The scale consists of 5 dimensions and 33 items. The dimensions of the scale are as follows: indifference to manager (IM) (10 items) (e.g., "Sometimes I want to postpone the manager's wishes"), indifference to the organization (IO) (6 items) (e.g., "Some days I do on my activities at office hours.", indifference to the client (IC) (6 items) (e.g., "I may sometimes meet the clients with aggression"), indifference to colleagues (ICW) (4 items) (e.g., "I do not attend in group work eagerly"), and indifference to work (IW) (7 items)) (e.g., "In my opinion, the work of the organization is worthless and useless"). The scale has been translated into Turkish, and construct validity and reliability have been tested. Reliability estimates (coefficient alphas) for the five dimensions were .85, .64, .64, .61 and .77. The instrument had a Cronbach's Alpha of α = .92.

Organizational Commitment. Employees' perceptions of OC were measured with the affective commitment dimension of 6 items of the three-dimensional scale developed by Meyer and Allen (1993). The affective commitment dimension was used in the current study because affective commitment represents OC at a higher level (Mercurio, 2015), and OC was measured by the affective commitment dimension in the studies (Kwon et al., 2010; Park & Doo, 2020). The scale adapted into Turkish by Dağlı et al., (2018). One of the scale items is "I feel as if this organization's problems are my own ."The items are rated on a 5-Likert scale ("1: Strongly disagree" and "5: Strongly agree"). In the study of Dağlı et al., (2018), the reliability of affective commitment was .80.

Turnover intention. TI scale with three items developed by Wayne et al., (1997) and adapted into Turkish by Küçükusta (2007) has been used in the study (e.g., "I am seriously thinking about quitting my job ."The Cronbach's Alpha was α =.91.

A two-phase structural equation modeling has been established to examine the mediator effect of OC on the effect of EI on the TI and OI. In the first phase, it has been aimed to identify the direct effect of the independent variable (EI) on the mediator and dependent variables. In the second phase, the effect of the mediator variable has been aimed to test when it has been added to the model (Cheung & Lau, 2008). To analyze the descriptive statistics, SPSS 26.0 program has been used. To identify the effects and mediatory role between variables, AMOS 24.0 has been used. The maximum-likelihood and bootstrap method with 5000 samples and 95% bias-corrected confidence interval methods have been used (Preacher & Hayes, 2008).

For the reliability and validity analyses, Cronbach's coefficient alpha (α), composite reliability (CR), average variance extracted (AVE), maximum shared variance (MSV), average shared variance (ASV), and square root values of AVE were used (Hair et al., 2010). To examine the fit values of the model, chi-square divided by the degrees of freedom ($\chi 2/df$), root-mean-square error of approximation (RMSEA), comparative fit index (CFI), normalized fit index (NFI), Tucker-Lewis index (TLI), standardized root-mean-square residual (SRMR) index values were considered (Hu & Bentler, 1999; Kline, 2011). The Structural Equation Model was tested considering the two-step approach of

Anderson and Gerbing (1988). According to this method, the measurement and structural models must be tested.

By examining the histogram graphics, extreme value analysis was done. Based on the Z-scores obtained by taking the standardized values of all items, the answers out of the range of ±3 were deleted, and the series averages were assigned to replace the missing values in the whole data set. While doing this, if there are more than 5% missing values in a form, the forms are excluded from the analysis (Tabachnick & Fidell, 2013). Harman's Single Factor method is used for common method variance error (Podsakoff et al., 2003). All items are associated with a single latent variable. Fit values of the single factor model are not within acceptable range (χ^2/df:3,754; p<.001; CFI:.69; NFI:.62; TLI:.67; SRMR:.159; RMSEA:.098). Single-factor explanatory was calculated as 23.96%. When the explained variance is below 50%, it is evaluated as there is no common method variance error. For the normality assumption, each item's Skewness and Kurtosis values were examined. It was observed that the Skewness values ranged from -.878 to +1,462, while the Kurtosis values varied between -1,186 and +1,334. These values are between ± 1.5, indicating that the data are normally distributed (Tabachnick & Fidell, 2013).

Figure 1 shows the theoretical model that indicates the effect of emotional intelligence, the independent variable, on the dependent variables, turnover intention, and organizational indifference through organizational commitment.

Figure 1. Theoretical Model
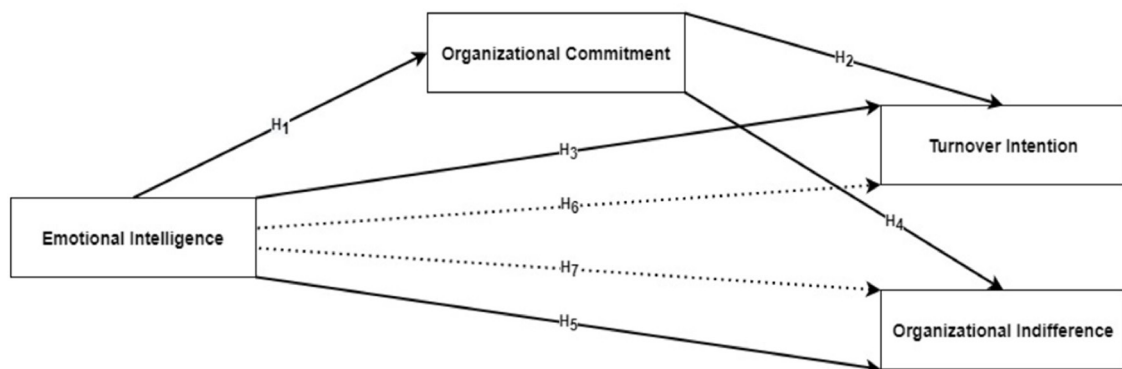
RESULT AND DISCUSSIONS
Measurement Model

EI was included in the analysis in the second order. The whole of the indifference to the customer dimension of the OI scale with a factor load of less than .32, four items from the indifference dimension to the manager, 1 item from the indifference dimension to the organization, four items from the indifference dimension to work, 1 item from the indifference dimension to colleagues, two items from the emotional commitment dimension were excluded. The comparison of the goodness of fit values

of alternative models related to the measurement model was given in Table 2. As a result of the test, the goodness of fit values of the 7-factor measurement model ($\chi 2/$ df: 1.536; p<.001; CFI: .94; NFI: .92; TLI: .94; SRMR: .056; RMSEA: .043) These values (Table 2) showed that the measurement model provided excellent goodness of fit values (Jöreskog & Sörbom, 1993).

Table 2. Comparison of measurement models

Model	χ^2	df	χ^2/df	$\Delta\chi^2$	CFI	NFI	TLI	SRMR	RMSEA
7-factor (EI, OC, IM, IO, ICW, IW, TI)	1093,620	712	1,536	---	.94	.92	.94	.056	.043
6- factor (EI, OC, IM, IO, ICW, IW+TI)	1379,122	718	1,921	285,502***	.90	.89	.89	.094	.057
5-factor (EI, OC, IM, IO, ICW+IW+TI)	1697,785	723	2,348	604,165***	.85	.76	.84	.077	.069
4-factor (EI, OC, IM, IO+ICW+IW+TI)	1732,161	727	2,383	638,541***	.85	.76	.83	.081	.070
3-factor (EI, OC, IM+IO+ICW+IW+TI)	1925,284	730	2,637	831,664***	.82	.74	.81	.083	.076
2-factor (EI, OC+IM+IO+ICW+IW+TI)	2349,942	732	3,210	1256,322***	.75	.68	.74	.091	.088
1-factor (EI+OC+IM+IO+ICW+IW+TI)	2751,810	733	3,754	1658,190***	.69	.62	.67	.159	.098

Notes: ***p<,001; EI, emotional intelligence; OC, organizational commitment; IM, indifference to manager; IO, indifference to the organization; ICW, indifference to a co-worker; IW, indifference to work; TI, turnover intention.

Convergent and divergent validity analyses of the measurement tool were performed by calculating CR, AVE, MSV, and ASV values. Table 3 shows the values regarding the structure validity and reliability of the scales used in the research. In addition, skewness and kurtosis values were included in the normality test results for variables. Two of the scales used were multidimensional structures (EI and OI). Since Wong and Law (2002) stated that the second level of the EI scale had better goodness of fit results, the second-level structure of the scale was used in this study. However, the first-level scale structure was used since the researchers did not suggest the OI scale.

As seen in Table 3, it was found that CR values were more significant than .70, AVE values were more outstanding than .50, MSV values were smaller than AVE values, and ASV values were smaller than MSV values. However, it was understood that the square roots of the AVE values were smaller than the correlation coefficient of each variable. According to these results, it can be said that the scales had convergent and divergent validity (Hair et al., 2010; Fornell & Larcker, 1981). In addition, the internal consistency coefficients (α) of the scales showed that the scales were reliable (Cronbach, 1951).

Table 3. Reliability, validity, and normality analysis of study scales

Variable	Item	Factor Loading	α	CR	AVE	MSV	ASV	Skewness	Kurtosis
EI	SEA	.77	.94	.91	.73	.05	.04	-.630	.337
	OEA	.88							
	UOE	.92							
	ROE	.84							
OC	OC2	.45	.81	.83	.57	.26	.03	-.334	-.446
	OC3	.75							
	OC4	.91							
	OC5	.82							
IM	IM1	.65	.85	.86	.59	.33	.18	.960	.418
	IM2	.81							
	IM3	.83							
	IM4	.88							
	IM5	.60							
	IM9	.50							
IO	IO2	.78	.69	.86	.55	.38	.14	.402	-.507
	IO3	.71							
	IO4	.69							
	IO5	,78							
	IO6	.73							
ICW	ICW2	.81	.64	.83	.61	.35	.13	.538	-.420
	ICW3	.78							
	ICW4	.76							
IW	IW2	.88	.64	.82	.60	.38	.19	.276	-.723
	IW3	.75							
	IW5	.69							
TI	TI1	.87	.91	.91	.78	.26	.08	.578	-.564
	TI2	.83							
	TI3	.94							

It was found that there was a relationship between all study variables. In Table 4, the average values of the responses given to the scales used to measure the research variables vary between 1.80 and 3.63, and the standard deviations were between .66 and 1.19. Coefficients of relationships between variables ranged from -.191 to .616. If the coefficients were less than .85, it showed no multicollinearity problem (Fox, 1984).

Table 4. Descriptives, correlations, and the square root of AVE

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender	1.40	.49												
2. Age	35.76	6.99	0.09											
3. Marital Status	1.47	.65	0.029	-0.093										
4. Tenure	11.44	7.24	0.019	.819**	-.121*									
5. Education	2.31	.96	.130*	-0.056	-0.008	0.028								
6. EI	3.63	.81	-0.094	-.184**	-0.044	-.189**	0.012	.854						
7. OC	3.42	.90	-0.012	0.003	-0.062	-0.032	-0.001	.200**	.755					
8. IM	2.04	.88	.173**	-0.065	0.114	-0.092	.130*	-.210**	-.238**	.768				
9. IO	1.86	.66	.219**	-0.044	.206**	-0.046	0.084	-.205**	-.191**	.572**	.741			
10. ICW	1.80	.72	.258**	0.011	0.111	-0.081	0.003	-.226**	-.199**	.558**	.574**	.781		
11. IW	1.89	.74	.148*	0.031	.222**	-0.046	0.029	-.200**	-.189**	.570**	.616**	.591**	.774	
12. TI	2.40	1.19	0.069	-0.016	0.054	0.042	0.113	-.208**	-.511**	.266**	.198**	.248**	.203**	.883

Notes: Values in bold are squared root average variance; *p<.05, **p < .01; SD, standard deviation

Structural Model Analyses

This model was tested in two phases. In the first phase, the effects of EI on OC, IM, IO, ICW, IW, and TI were tested to follow the indirect change effects. In the second phase, a path was added to result in variables from OC to test OC's effect and mediation effect on outcome variables (IM, IO, ICW, IW, and TI). Since it was understood that the path coefficients of all direct and indirect effects in the model were statistically different from zero at 95% bootstrap confidence interval, it can be said that all paths are statistically significant. Results regarding the two phases of the structural model are given in Table 5.

As shown in Table 5, all of the direct effects tested in phase 1 were statistically significant. Consistent with our hypotheses, the effect of EI on OC (Phase 1: β=.19, p<.05; Phase 2: β=.17, p<.05) was positive and statistically significant. However, EI's effects on TI (β=-.20, p<.05), IM (β=-.25, p<.05), IO (β=-.25, p=.001), ICW (β=-.30, p<.001), IW (β=-.31, p<.001) were negative and statistically significant. In phase 2, the effect of the mediator variable on the dependent variables and indirect effects were examined. The mediator variable OC's effects on TI (β=-.55, p<.001), IM (β=-.21, p<.05), IO (β=-.18, p<.05), ICW (β=-.30, p<.05), IW (β=-.22, p<.05) were negative and statistically significant. In this case, all of the direct effects' hypotheses (H1, H2, H3, H4, H5) were supported.

The research model included indirect effects as well as direct effects. Accordingly, it was seen that OC played a mediating role in the effect of EI on TI (β=-.10, p<.05). Also, when OC was added to the model as a mediator variable, it was seen that the direct effect of EI on TI became statistically insignificant (β=-.09, p=.16). However, OC's mediating effects were significant in the effect of EI and IM (β=-.04, p<.05), IO (β=-.03, p<.05), ICW (β=-.03, p<.05), IC (β=-.04, p<.05). Thus, H6 and H7 hypotheses regarding the

mediating effect were also supported. After the statistically insignificant ways were excluded from the model, the goodness of fit of the outcome model was calculated as χ_2/df:1,541; p<.001; CFI:.94; NFI:.92; TLI:.94; SRMR:.062; RMSEA:.044.

Discussion

This study aims to determine the effect of EI on OI and TI and the role of OC in this effect. The findings of this study show that, in general, the fact that tourism industry managers' EI and their commitment to their organizations affects their TI and OI, which are among the challenging issues that should be coped with in terms of tourism businesses. The first result of the current study is that EI affects reducing TI and OI. These results support the results of previous studies on the effect of EI on TI (Mohammad et al., 2014; Wong & Law, 2002; Ahmadi and Rafiee, 2015; Mustapha et al., 2012; Yaseen, 2020) and OI. Affective Events Theory assumes that emotions affect organizational outcomes (Weiss & Cropanzano, 1996). The theory's assumptions also support the current study's results. It can be said that the EI of the managers and employees in the service industry, especially in the tourism industry, hurts TI and OI (Mollaabbasi et al., 2013; Ahmadi & Rafiee, 2015), which provides a significant strategic advantage for organizations. Besides, employees with a high level of EI tend to find new strategies in the work environment (Kafetsios & Zampetakis, 2008).

Depression, burnout, or pessimism may result from dissatisfaction with the available sources of the people. Most people are in the pursuit of having more and more. Thus, minor changes which add happiness to their lives become unimportant. With the help of EI, a lot more values and meanings can be found in understanding the self and others (Ogunola, 2019). EI increases participative, active, and successful employees (Aghdasi et al., 2011). TI has been a significant problem in both the product and service industries (Long et al., 2012). For this reason, it is essential to focus on the individual and organizational reasons which prevent the employees' turnover. Among these factors, the skill to understand the attitudes and behaviors of the individuals, recognize and comprehend the emotions play an essential role. This skill has been stated as EI (Hanib & Abdullah, 2020).

TI results from experiencing burnout in the workplace (Leung & Lee, 2006). Many researchers' studies have supported the same results that EI decreases TI (Trivellas et al., 2013; Mohammad et al., 2014; Lee & Woo, 2015; Park & Lee, 2015; Giao et al., 2020). According to the Affective Events Theory, the emotional events of the employees that they experience in the organization now or in the past affect the relationships, behaviors, and work outcomes (Weiss & Cropanzano, 1996). It is indicated that adverse events affect the employee's psychology more than positive events, and the negative effect is reflected in the employee behavior (Shin and Hur, 2020). In this context, the emergence of OI can be attributed to the Affective Events Theory.

EI of the individuals affects individual and organizational success. Individuals should be able to recognize their own emotions predict what kind of reactions they will show

towards the events or, in other words, what strategies they will set (Genç et al., 2016). The individuals equipped with these skills have high EI. Higher EI has been positively associated with higher job satisfaction (Wolfe & Kim, 2013; Nayak et al., 2020), higher job performance (Kim & Lee, 2017; Prentice, 2019), higher work engagement (Liu & Cho, 2018). Besides, EI has been negatively associated with individual and organizational work outcomes such as counterproductive behavior (Jung & Yoon, 2012), estrangement (Kaur & Singh, 2015), burnout, and job stress (Choi et al., 2019). The limited number of research results show that EI harms OI which is considered among the adverse work outcomes (Mollaabbasi et al., 2013; Ahmadi & Rafiee, 2015).

The second result is the negative effect of OC on TI. In the meta-analysis study conducted by Guzeller and Celiker (2019) regarding the effect of OC on TI, 13 papers published between 1997-2019 in which tourism industry employees were taken as a sample were examined and confirmed the negative relationship between OC and TI. The studies conducted after 2019, as in the current study results, revealed similar results: OC of tourism employees harms their TI (Bedi & Chamoli, 2020; DiPietro et al., 2020; Yan et al., 2021). However, according to the Reasoned Actions Theory, TI, which is a cognitive and planned process, is often the result of job dissatisfaction and negatively affects the performance of the employees and organizations (Long et al., 2012). It has been claimed that the contribution of the OC has been found essential to reduce the TI (Tett & Meyer, 1993). The studies conducted on OC and TI revealed a negative relationship between these two variables (Back et al., 2010).

Employees whom their managers especially appreciate have a high level of commitment. As a result, their level of innovation is high, and their TI is low (Eisenberger et al., 1990). Kim et al. (2005) also state that TI is an undesired employee behavior by the organizations, and the low level of OC of the employees will cause TI to emerge. The Social Exchange Theory has explained this relationship. According to the Social Exchange Theory, if values and norms are shared between the organization and employees, they establish relationships and develop mutual attitudes and behaviors (Wang & Hwang, 2012). Employees can continue to stay in the organization by establishing solid bonds, and they feel connected to the organization and work in line with the goals and objectives of the organization. When this connection becomes weaker, employees may think to leave the organization. In other words, when the employees' commitment is high, absenteeism and TI will be low (Blau & Boal, 1987). As in many industries, research results in the tourism industry reveal this relationship consistently (Guzeller & Celiker, 2019).

The third result of the study reveals that the existence of a negative relationship between OC and OI is similar to the findings of the previous studies. In Fard et al. (2011) study, a negative relationship was found between these two variables. In addition, although there is no study in tourism providing results that OC reduces turnover intention, there are other research findings, especially in the service industry (Mollaabbasi et al., 2013; Nasabi & Bastani, 2018; Andam & Taheri, 2020). This relationship also follows the Social Exchange Theory, which assumes that the relationship between the organization

and the employees is based on shared values and norms and will lead to the development of mutual behavior (Wang & Hwang, 2012). When evaluated in the context of Affective Events Theory and Attitude Theory, these results support the assumption that OC as a positive emotion reduces adverse work outcomes (Olson & Zanna, 1993).

The most crucial symptom of OI is the limited level of commitment to the organization. According to the OC approach of Meyer and Allen (1991), the increase or decrease in the level of commitment causes an increase or decrease in the level of performance (Alshammari et al., 2015). In the context of Attitude Theory, the emergence of positive feelings of employees in the organizational field causes an increase in positive behaviors and attitudes individually and organizationally and a decrease in negative behaviors (Olson & Zanna, 1993). High OC is considered among the positive emotions. Thus, it can be said that employees with a high level of commitment will have a low level of OI. The results of the studies provide evidence to this relationship that there has been found a negative effect between the OC and OI (Meimand et al., 2012; Mollaabbasi et al., 2013).

The fourth and essential result of the current study is that OC plays a mediating role. According to the social psychological perspective, it is stated that OC has an essential effect in guiding individuals' work behaviors through EI (Altman & Wohlwill, 2012; Akram et al., 2017). A high level of EI improves the work-related skills of employees, causing an increase in positive work behaviors and attitudes and a decrease in negatives (Salovey et al., 2009). The mediating role of OC shows that EI has a reinforcing effect on adverse work outcomes (TI and OI). Although there is no study addressing this effect in the tourism industry, the current study is similar to the results of a limited number of studies that the effect of EI with OC on employees' work outcomes in the service industry (Akram et al., 2017; Azim et al., 2020).

In this respect, the result of the current study, especially regarding its intermediary role, expands the existing theoretical background regarding the tourism industry. OC, an essential variable for organizations, has been affected by several individual and organizational factors. One of these factors is EI. EI affected innovation and product quality (Zhang et al., 2015; EI affected work outcomes such as job satisfaction and OC (Khalid et al., 2018). Having EI has been considered among the essential skills, especially for managers, and it has been stated that managers with this skill experience are in a positive mood (Bono et al., 2007). EI helps the emergence of positive emotions, which allow individuals to control and regulate the emotions of others and themselves. This skill increases positive work behaviors such as OC (Salovey & Mayer, 1990). It has been empirically indicated that EI positively affects OC (Batool et al., 2017; Khan et al., 2014; Güleryüz et al., 2008; Navas & Vijayakumar, 2018; Mahanta & Goswami, 2020).

According to the Organizational Orientations Theory, being indifferent, which was defined as "not caring much about the organizations (Presthus, 1958), has been determined as one of the dimensions of organizational orientation (Stephen et al., 2019). It is difficult to interpret the positive or negative situations when the employees

are inactive and unwilling to communicate. In the study conducted by Zhang and Frenkel (2018), the overreactions of the employers have not created any change in their responses; besides, they have declared that they are not influenced, and they think these are routine of their work. Fard and Eslami (2010) have found a theoretical model that helps managers identify the elements and reduce OI using the Grounded Theory. Some of the indifference consequences of the model include reluctance, organizational disgust, avoidance of responsibility, readiness to leave the organization (Fard & Eslami, 2010).

Specifically, the managers must take indifferent employees seriously (Salahshouri & Tavakol, 2014), leading to mental departure and OC reduction (Salajeghe & Tanabandeh, 2016). Lack of mental and emotional involvement employees' ability to understand others and work with them effectively will be hindered (Basheer et al., 2019). Prior research has shown that EI is closely related to TI (Jeswani & Dave, 2012). The concept and theory of OC have gained considerable attention in the management discipline since it can be a powerful source of employee qualifications and performance (Razzaq et al., 2019). Based on the Affective Events Theory Weiss and Cropanzano (1996), which enhances the understanding of the employees' perceptions, OC mediates EI effect on TI and OI (Craig et al., 2013). Specifically, when the importance of the recruitment process is considered, it is also one of the crucial parts of the management, which includes the perception and control of the emotions of both employees and managers as most of them may experience weak or no emotional connection because of being the temporary workers in the tourism industry (Zhang & Frenkel, 2018).

However, it has been stated that the individuals with high EI also have a high level of OC, and the level of commitment has a negative relationship with the TI (Saeed et al., 2014). According to the studies conducted to reveal this effect, it has been pointed out that OC plays a mediating role in the effect of EI on TI (Da Camara et al., 2015; Akhtar et al., 2017; Bryson, 2019; Zeidan, 2020). Besides, the literature supports a negative relationship between OI and EI (Mollaabbasi et al., 2013; Ahmadi & Rafiee, 2015). As the basic sign of loyalty towards the organization has been called "commitment," employees are expected to devote effort (Khan et al., 2014).

This effort is obtained when the employees are emotionally intelligent, positively affecting OC (Asnawi et al., 2014). Consistent with previous research, individuals' commitments towards the organizations make them experience positive behaviors and emotions, resulting in higher OC (Cesário & Chambel, 2017). The current study also provides essential contributions to the field of hospitality industry theoretically by highlighting one of the most invisible problems, called "indifference." Besides, this study examines the commitment's mediator role and reveals the EI's relationship that enables employees to establish "empathy" towards other people (Humphrey, 2013).

Seven research hypotheses based on the principles of the theories mentioned previously were developed. According to the findings, seven of these hypotheses have been supported. Therefore, the study results confirm that employees with high EI experience low TI. Finally, the current study introduces a newly researched term, "indifference,"

mainly seen in all organizations, specifically the hospitality industry. In addition, this study is one of the first attempts that investigates the effects and relations using a scale which is primarily used in the Eastern culture, thus implementing the same scale in a country which is in the effect of the Western culture can be considered as the cultural contribution in the context of indifference.

The current study's findings also enable practical applications for the hospitality industry. Managers at the hotels should have high EI to establish empathy and perseverance to avoid being indifferent. In order to do this, hotel managers' commitment should be increased to perceive their job as their own. When the hotel managers approach their job with a highly committed perception, they can find this inspiring and try to perform better at their work. Thus, it is recommended that hotel managers have high EI to understand their clients, top managers, and colleagues with more profound empathy. By showing empathy to others, they will be focusing on the solutions to the existing problems instead of creating new ones related to their judgments towards the organization. However, highly committed managers should be noticed and rewarded appropriately. When the hotel managers fully understand what the clients want, they will do their best to meet their essential needs: feel at home. Based on the study's findings, emotionally intelligent employees experience less indifference. Thus, the hotel management should notice this estrangement before it is too small to infect the employees thoroughly. Thus, the critical point is to possess entirely motivated, devoted, and highly empathetic employees and managers in the organizations.

Depending on the level of EI, managers show less TI. When the managers do not intend to leave their jobs, the organizations do not need to look for other qualified, well-educated, and management experts for more extended periods of its sustainability. Besides, when organizations have managers with a high level of TI, it does not seem stable to establish an environment in which employees work with enthusiasm and care. Turnover is considered one of the challenges that organizations cope with, but this fast-changing workforce can be harmful to the organizations in the long run.

Qualified employees prefer to work in an organization appreciated, trusted, or respected by society; however, when turnover is high, the organization is on the top of the most appreciated list. Significantly, the high turnover ratio can be more dangerous in the tourism industry than the other industries regarding the income gained from tourism into the country. The nature of the tourism industry includes seasonal employment type, and this type of employment causes a lack of commitment because of a short period of work time. Due to the lack of commitment, employees experience the TI more often. Turnover should be lessened or prevented by finding constructive solutions to the employees' problems.

As unexpected global crises arise spontaneously, organizations are encountered with the risks of sustainable success more than in the past centuries. Understanding and finding solutions to the indifferent employees in the organizations have still been considered one of the major factors that trigger adverse work outcomes such as indifference or being

less committed. By understanding how OI factors are related to adverse work outcomes or feeling no commitment to the organization, employees' approach to perceive the workplace is one of the places which provides deeper connections rather than artificial and lack of meaning can cause OI. Establishing solid and meaningful bonds with the work is thought to increase commitment and reduce turnover intention. OI can be hindered by increasing the level of OC.

Finally, being a part of the organization and feel ownership towards the job may depend on how a person approaches the job. Since perceiving a job as a calling (Duffy et al., 2012) is one of the ways that result in positive work outcomes such as reduction of TI (Cardador et al., 2011), increase in commitment, or high life satisfaction, this should be bear in mind that employees somehow for some reasons will not be satisfied with the salary or bonus they earn (Dik & Duffy, 2009). This rapidly increased research on how people perceive their jobs may provide solutions to reduce being indifferent in the organizations.

CONCLUSION

Tourism is an industry that has a high ratio of the turnover workforce. This situation is similar in Turkey as well as the world. Reducing this ratio is vital for organizations in controlling the labor cost and not being deprived of the contributions of qualified employees to the organization. OI, which has started to be studied recently, is a situation that affects organizations as much as the turnover ratio. Especially the indifference of managers to their jobs and thinking of leaving their jobs is an undesirable problem for organizations and needs to be dealt with. The study conducted on a sample of the hotel department managers focused on the role of OC's effects on the relationships between EI and TI/OI. Indifferent employees are regarded as the primary and increasing problem in most organizations. Eliminating the indifference problem among the employees in the organizations leads to motivation, high-quality cooperation, sympathy, and empathy. The OI, which is considered a destructive and obstacle factor in organizations, hinders to fulfill the organizational goals. Considering the emergence of indifference in the organizations, it has been found that employees involved with repetitive and boring jobs may be indifferent in time.

This study has several limitations. First, the data were collected from the managers of the five-star hotels, so for future research, data can be collected from the other employees rather than managers at the hotels. As mentioned earlier, all clients have the expectancy to feel at home, so most of the time to meet this particular kind of need includes all the staff effort at the hotel industry regardless of their level of responsibility. Another limitation can be considered about the scale used in the study. The scale to measure the indifference with its dimensions is implemented mainly in Iran. However, the scale can be used in different cultures and with different samples. Data collection, which is cross-sectional, can be considered the study's final limitation. Although the findings obtained from the current study are consistent with the theoretical arguments underlying the hypotheses, the study design cannot establish causality.

The current study focuses on the effects of emotional intelligence and organizational commitment on adverse work outcomes such as organizational indifference and turnover intention. The relationship between positive work outcomes, emotional intelligence, and organizational commitment can be investigated with a holistic model in the tourism sector. Another suggestion for future studies is related to the organizational indifference variable. It has been determined that there are not adequate quantitative studies conducted on the antecedents and consequences of organizational indifference. Thus, to understand the effects of indifference on the individual, work, and organization, it is recommended that qualitative studies be conducted in-depth.

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Bibliometric Literature Review on Exchange Rate: A Future Research Agenda

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Abstract

This study aims to conduct a bibliometric citation and content analysis of the scholarly literature on the behavior and dynamics of the exchange rate (5,295 articles) over the past 85 years between 1935-2020. This research identifies five different research streams such as (i) Dynamics of the exchange rate; (ii) Exchange rate volatility using the autoregressive model; (iii) Relationship between exchange rate and interest rate; (iv) Impact of exchange rate volatility on growth, trade, and investment; (v) Effects of exchange rate fluctuation on firms earning management. In addition to these research streams, the influential articles, authors, journals, organizations, and countries have been evaluated through network diagrams. Finally, sixteen future research questions have been developed through content analysis.

Keywords:
Exchange rate; volatility; behavior; content analysis; bibliometric citation analysis

INTRODUCTION

Many researchers highlighted international trade imbalances as the more significant reason for the current account deficit that needs an exchange rate adjustment (Bouakez & Kano, 2008; Freund & Warnock, 2007; Huntington, 2015). The hindrance of determining the floating exchange rate in post-1973 with monetary policy, purchasing power parity, and the portfolio model rose plausibly (Meese & Rogoff, 1983). Similarly, the empirical finding of Kesriyeli et al. (2005) suggested that flexibility and economic openness generate current account equilibrium. In this vein, Winkler et al. (2004) analyzed the European Central Bank, stating that most dollarized countries have difficulty maintaining the sustainability of trade balance. In addition, Calvo & Reinhart (2002) investigated inconsistency between the classification of exchange rate regimes used by the IMF and exchange rate regimes applied in certain countries.

Investors, banks, and brokerage houses are more interested in generating huge profits as they invest enormous amounts in international foreign exchange markets that need forecasting of the exchange rate. A huge amount of scattered literature is available on the behavior and dynamics of the exchange rate. Different authors are working on the same pitch to identify the exact white-noise in the exchange rate volatility. This study undertakes a bibliometric citation analysis and content analysis of 5,295 articles from 1935 to 2020 to grab the literature's richness on behavior and exchange rate dynamics (Zupic & Čater, 2015; Sommer & Wohlrabe, 2016; Bahoo et al., 2020).

This study contributes to the literature on behavior and dynamics of the exchange rate by answering three different questions. First, what are the top research streams on the behavior and dynamics of the exchange rate? Second, what are the most influential articles, journals, authors, countries, organizations, and relationships? Thir, what are future research inquiries on the behavior and dynamics of the exchange rate?

METHODS

The techniques adopted in the study are bibliometric and content analysis. In bibliometric analysis, this research will use two techniques. First, this research will use citation analysis. Second, this study will also use co-citation and co-occurrence analyses (Bahoo et al., 2019). In addition, traditional content analysis is used to understand the content of articles (Carter et al., 2017; French & Vigne, 2019).

The explanation of the bibliometric analysis key terms and techniques adopted in the study shows in Table 1, following other studies (Agramunt et al., 2020; Terán-Yépez et al., 2020). The first step is the delimitation of the field of study, which is the analysis of the behavior and dynamics of the exchange rate. Secondly, the ISI Web of Knowledge (WOS) database is selected as it contains high-quality journals. In the search engine, 19 different keywords of the exchange rate with fluctuation, monetary policy, interest rate were used to cover the whole literature on the topic. This search gave 6,448 articles on economics and finance, whose titles and abstracts were reviewed to withdraw irrelevant articles. The final sample was made up of 5,295 articles on the

behavior and dynamics of the exchange rate between August 1935 to November 2020. Finally, productivity analysis and scientific mapping were undertaken to offer the leading indicators of bibliometric analysis. In particular, Vosviewer software was used to show the scientific mapping of citation and co-occurrence analysis.

Table 1. Key Methodological Concepts and Sample Selection Process

Terms	Details
Co-Citation Analysis	When two articles are cited in a pair by a third one. They are thought to have something in common
Co-occurrence Analysis	This term defines the keyword analysis which is depend on repeatition of words
Literature	
Pexc	Total number of articles published on Behaviour and Dynamics of Exchange
TLC	It represents the Total Local Citations which denotes total number of times an article is cited by others in the similar sample
TLC/t	It shows total local citation per year which is calculated by TLC divided by time (See. Mauro 1995).
Sample Selection Process for bibliometric analysis	
Definition of the field of study	Behavior and Dynamics of Exchange Rate
Database	ISI Web of Knowledge
Search formula	(i) Content analysis of different papers on exchange rate in international finance in used to identify the keywords
	(ii) Create synonyms for exchange rate
	(iii) 19 Keywords are used on exchange rate "Exchange rate, foreign exchange, currency exchange, conversion rate, exchange value, rate of change, gear box, rate appreciation, national currency, trade places, speed change, currency fluctuation, fixed exchange rate, commodity exchange, spot rate, pledge rate, floating rate, managed rate, variation rate"
Key Filter Used	(i) Search filters: Topics (Search keywords of exchange rate in Author's, Title and Abstract).
	(ii) Articles Category: Economics
	(iii) Type of papers and language: Articles and English
	(iv) Period of Search :1935 to 2020
Initial Sample	6,448
Final Sample	5,295

RESULT AND DISCUSSION

Figure 1 shows the statistics of articles published each year in the literature on the behavior and dynamics of the exchange rate. The more remarkable improvement in the publication is seen in the year 1990, indicating that investors are more interested in the international market, which forces the scholars to conduct more research on the behavior and dynamics of the exchange rate.

Figure 1 shows the statistics of articles published each year in the literature on the behavior and dynamics of the exchange rate. As can be seen, the trend is increasing during the period, showing the research community's interest in the research field. The greater improvement in the number of publications is seen in 2002, when the number of articles exceeds a hundred, which indicates that investors are more interested in the international market, forcing scholars to conduct more research on the behavior and dynamics of the exchange rate.

Figure 1. Publication Trend on Behavior and Dynamics of Exchange Rate (1935 – 2020)
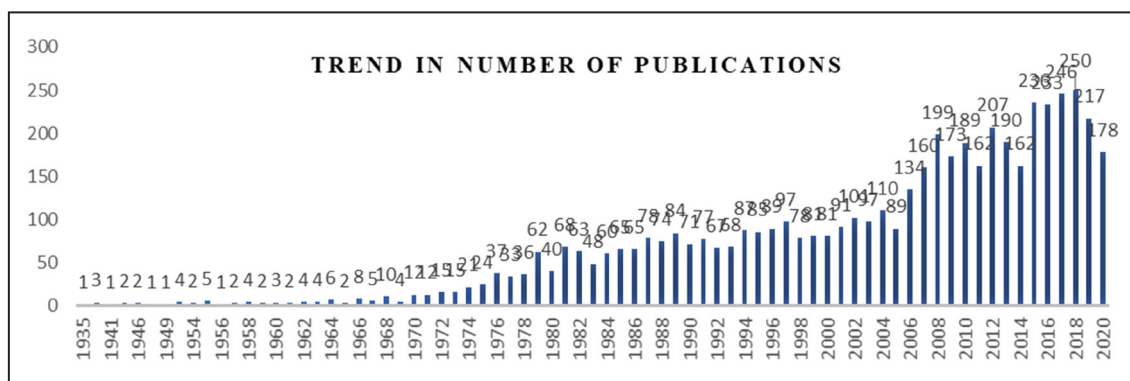
Source: Web of Knowledge

Regarding scientific production, 1,545 journals have published 5,295 articles on the field. In Table 2, the top twenty journals with a greater number of citations and articles published on the topic. In both rankings, the Journal of International Economics offers a greater number of publications and citations that indicate prominent and quality research on the exchange rate because it has a direct or indirect impact on the world's overall economy. On the other hand, the Journal of Policy Modelling has fewer publications on exchange rate behavior and dynamics.

Table 2. Most Influential Journals on Behaviour and Dynamics of Exchange Rate

Rank	Name of Journal	Pexr	Name of Journal	TLCR
1	Journal of International Economics	229	Journal of International Economics	10456
2	Applied Economics	224	American Economic Review	4483
3	Economics Letters	174	Journal of Monetary Economics	3254
4	Applied Economics Letters	142	Economic Journal	2038
5	Economic Modelling	115	European Economic Review	1941
6	Open Economies Review	109	International Monetary Fund Staff Papers	1833
7	European Economic Review	91	Journal of Banking & Finance	1832
8	International Monetary Fund Staff Papers	87	Applied economics	1650
9	International Review of Economics & Finance	86	Economics letters	1638
10	Journal of Banking & Finance	85	Journal of Development Economics	1596
11	Journal of Macroeconomics	81	Journal of Money Credit and Banking	1405

Rank	Name of Journal	Pexr	Name of Journal	TLCR
12	World Economy	80	Economic Modelling	1222
13	Economic Journal	70	International Review of Economics & Finance	818
14	Journal of Development Economics	70	Journal of Macroeconomics	796
15	Review of World Economics	70	Journal of Policy Modelling	717
16	American Economic Review	67	Canadian Journal of Economics	646
17	Journal of Monetary Economics	67	Applied Economics Letters	619
18	Journal of Money Credit and Banking	65	World Economy	604
19	Emerging Markets Finance and Trade	65	Open Economies Review	592
20	Journal of Policy Modelling	62	Review of World Economics	472

This research uses VOS-Viewer software to identify the most influential authors, countries, organizations, and networks among them. This software took WOS data as input and generated output of the most influential authors, countries, and organizations through which the top twenty are selected. The results are in Tables 3 and 4 and the network among them in Figures 2, 3, and 4. Table 3 shows the 20 most influential authors based on leading publications and citations during the last 85 years from 1935- to 2020. Six thousand five hundred seventy-four authors wrote the 5,295 articles that made up the total sample of articles. Figure 2 exhibits the citation network of authors.

Table 3. Most Influential Authors on Behaviour and Dynamics of Exchange Rate

Articles	TLC/t
(Dornbusch 1976)	33.69
(Meese & Rogoff 1983)	31.35
(Phillips 1958)	22.69
(Patton 2006)	18.29
(Bates 1996)	17.73
(Longstaff 1995)	15.13
(Reinhart 2004)	14.52
(Obstfeld & Rogoff 1995)	12.94
(Gali & Monacelli 2005)	12.00
(Andersen et al, 2003)	9.98
(Frenkel 1976)	9.13
(Engle 1990)	8.75
(Flood 1984)	8.65
(Evans & Lyons 2002)	8.19
(Andersen & Chiriaeva 2007)	8.13
(Lothian & Taylor 1996)	7.96
(Krugman 1991)	7.69
(Campa 2005)	7.46
(Frankel & Froot 1987)	7.38
(Calvo 1993)	7.35

Figure 2. Citation Networks between Authors
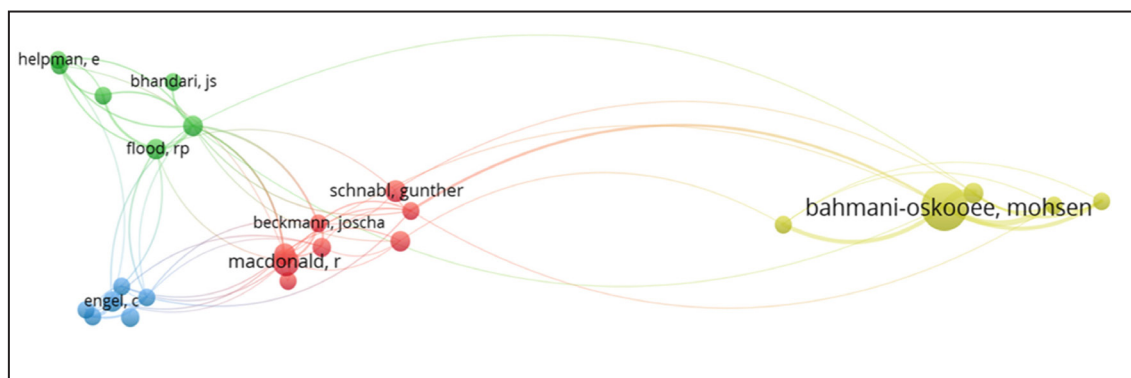
The citation analysis also reveals 121 countries publishing with 5,295 articles on the behavior and dynamics of the exchange rate in which the top 20 are ranked (Table 4). Based on a greater number of citations and publications, developed countries have more interest in investment in international markets, creating greater research on the exchange rate as it has a direct or indirect impact on the firm, investors, and economy of the country. In the position of the top 20 countries, the USA provides a greater contribution in evaluating the volatilities in the exchange rate to get maximum benefit in the foreign exchange market. Although there is little contribution to developing countries in the exchange rate literature due to insufficient resources, Figure 3. International Monetary funds and different organizations had played a crucial role in the exchange rate research as figure 4 indicates the citation network between the author's organizational affiliations.

In order to identify the research direction on the exchange rate, keyword network analysis is conducted to identify the most repeated words related to the exchange rate. Figure 5 gives the keyword networks that depend on word repetition, showing the associated research areas. Our findings indicate that the most influential and repeated keywords are Exchange Rate, Prices, Models, Volatility, Monetary Policy, Exchange Rate Regimes, Trade, Time Series, Cointegration. On the other side, the keyword with a minor appearance cost,s fit, devaluation, volume, and real.

Co-citation analysis (Cainelli et al., 2012; Rath & Wohlrabe, 2016; Aria & Cuccurullo, 2017; Paltrinieri et al., 2019) and content analysis (Bahoo et al., 2020; Gaur & Kumar, 2018) are undertaken to evaluate the research streams in the past literature on the behavior and dynamics of the exchange rate. Firstly, the top thirty-five cited papers are extracted, which are listed under each research stream in Table 5. Secondly, traditional content analysis on these articles is conducted to understand the content of the articles (Bahoo et al., 2020). This qualitative and quantitative process explain the five different research streams on behavior and dynamics of exchange rate (i) Dynamics of the exchange rate (ii) Exchange rate volatility using autoregressive model (iii) Relationship between exchange rate and interest rate (iv) Impact of exchange rate volatility on growth, trade, and investment (v) Effects of exchange rate fluctuation on firms earning management.

Table 4. Most Influential Countries and Institutions Publishing on Behaviour and Dynamics of Exchange Rate

Country	Pexr	Institutions	Pexr
Usa	1508	International Monetary Fund	190
England	465	University of Wisconsin	99
Germany	270	NBER	77
People r china	266	National Bureau of Economic Research	74
France	209	CEPR	59
Canada	207	Harvard University	49
Australia	204	Centre for Economic Policy Research	34
Japan	156	World Bank	34
Turkey	147	European Central Bank	32
Spain	126	Australian National University	31
Taiwan	125	University of Nottingham	31
South korea	106	University of British Columbia	28
Italy	105	University of California, Berkeley	28
Czech republic	84	Monash University	27
Belgium	81	University of Warwick	27
Brazil	78	Columbia University	26
Switzerland	77	University of Chicago	24
Malaysia	73	Complutense University of Madrid	24
Scotland	71	University of Pennsylvania	24
Netherlands	70	Deakin University	23

Figure 3. Citation Networks Between Countries
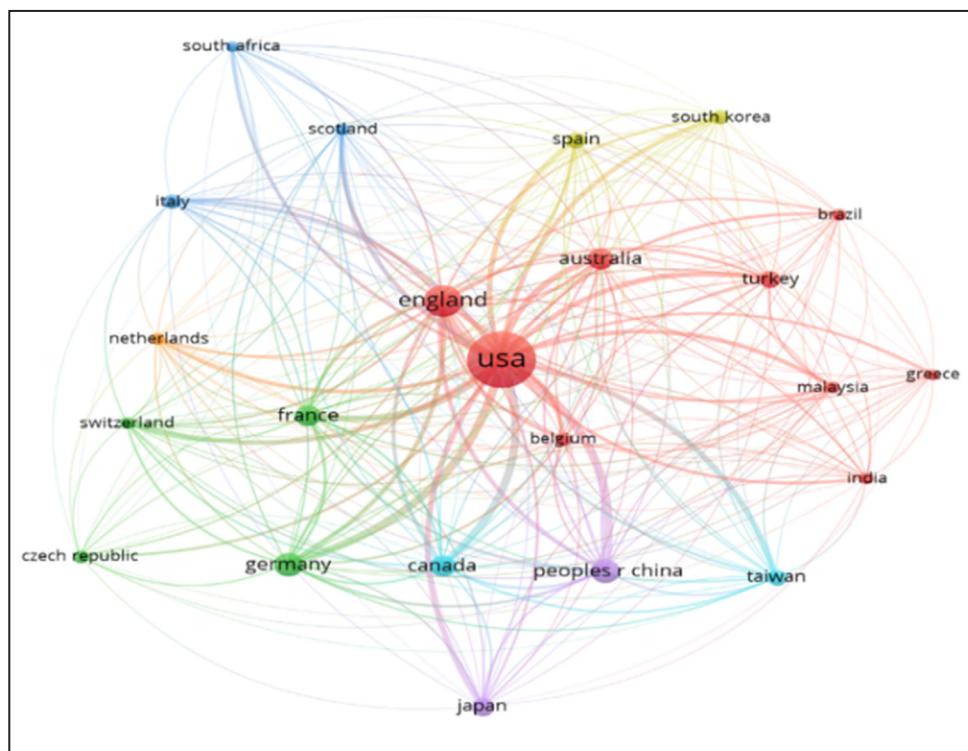
Figure 4. Citation Network Between Author's Organizational Affiliations
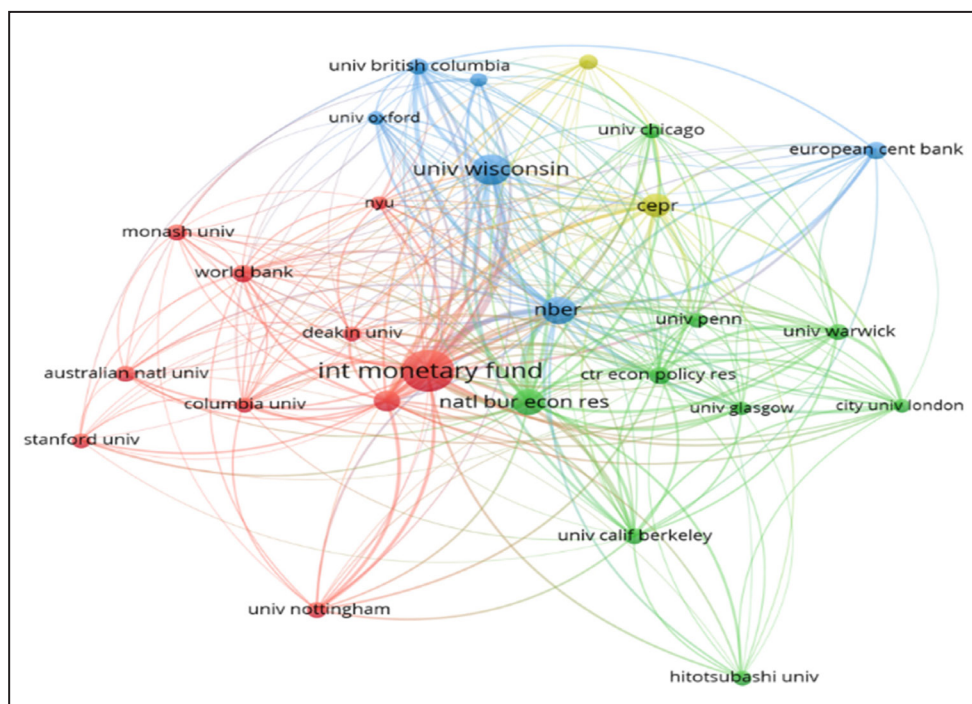
Figure 5. Network of Co-occurrence of Keywords
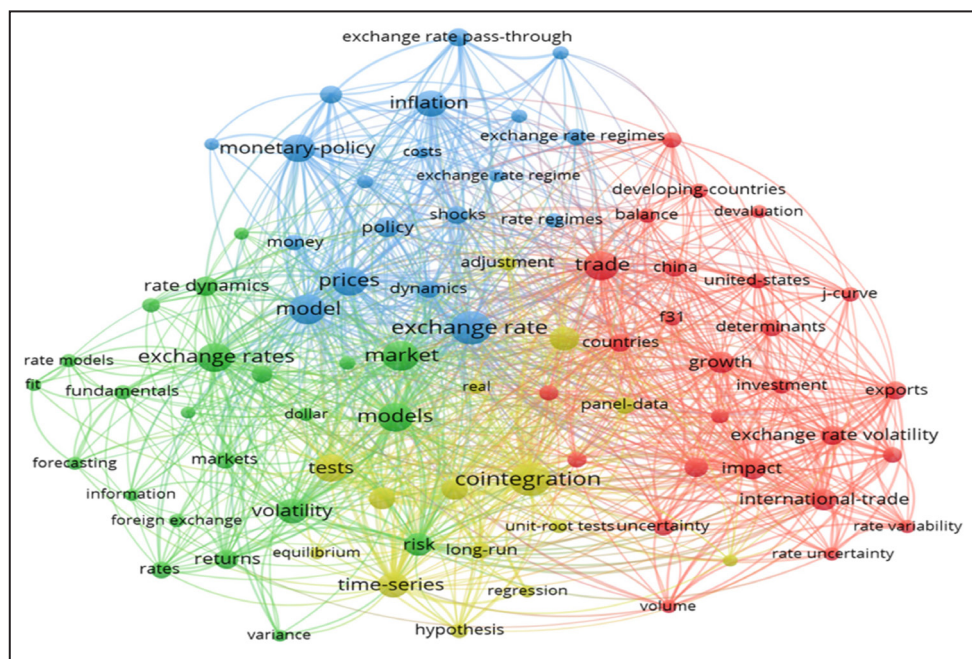
These five research streams are associated with each other. The first dynamics of the exchange rate (Andersen et al., 2003; Bekaert, 1994; Betts, 2000; Dumas, 1992; Diebold, 1989; Evans & Lyons, 2002; Jorion, 1990; Jorion, 1995; Lothian & Taylor, 1996; Müller et al., 1990) help to detail the volatility in the exchange rate. Secondly, the research stream on exchange rate volatility using autoregressive models (Bates, 1996; Diebold, 1990; Domowitz, 1985; Engle, 1990; Froot, 1990; Hsieh, 1989; Meese &

Rogoff, 1983; Patton, 2006) predicts the random walk-in behavior of exchange rate. The third provides the relationship between the exchange rate and interest rate (Devereux, 2003; Frenkel, 1976; Gali & Monacelli, 2005; Kim & Roubini, 2000; Meese & Rogofp, 1988; Zhou & Mahdavi, 1996).

Fourth, the research stream assesses the impact of exchange rate volatility on growth, trade, and investment (Aghion et al., 2009; Kouri, 1976; Levy-yeyati & Sturzenegger, 2003; Levy-yeyati & Sturzenegger, 2005; Mussa, 1979), help to determine the better investment plans in future. According to our results, the fifth research stream based on the effects of exchange rate fluctuations on firms earning management (Bartov & Bodnar, 1994) needs more attention from different researchers.

We use bibliometric citation and content analysis to identify future research questions (Bahoo et al., 2020). Firstly, we develop a citation map using the top 35 papers. Secondly, we used concepts, development, and elements methodology to create future research questions in the most influential articles that were published in 2018, 2019, and 2020 to escape citation bias. Finally, we put ideas into future research studies that can evaluate the exchange rate volatility in the future presented in Table 6.

Table 5. Key Papers (Citation Map of Literature)

Stream	Stream Title	Key Articles in Each Stream
1	Dynamics of exchange rate	Andersen et al, (2003), Bekaert (1992), Betts (2000), Dumas (1992), Diebold (1989), Evans & Lyons (2002), Jorion (1990), Jorion (1995), Lothian & Taylor (1996), Muller (1990)
2	Exchange rate volatility using autoregressive model	Bates (1996), Diebold (1990), Domowitz (1985), Engle (1990), Froot (1990), Hsieh (1989), Meese (1983), Patton (2006)
3	Relationship between exchange rate and interest rate	Devereux (2003), Frenkel (1976), Gali & Monacelli (2005), Kim & Roubini, (2000), Meese & Rogofp (1988), Zhou (1996)
4	Impact of exchange rate volatility on growth, trade and investment	Aghion et al. (2009), Kouri (1976), Levy-yeyati (2003), Levy-yeyati (2005), Mussa (1979)
5	Effects of exchange rate fluctuation on firms earning management	Bartov & Bodnar (1994)

Table 6. Future Research Questions

Reference	Research Questions
Casarin et al. (2018)	Does Markov-switching vector autoregressive (VAR) model for contagion analysis on financial markets with stochastic correlation efficient?
Gil-Alana and Carcel (2020)	Is fractional cointegration vector autoregressive (FCVAR) technique statistically efficient for dealing exchange rates or other financial series?
Njindan Iyke (2020)	What is the impact of permanent exchange rate uncertainty on real consumption on the short run?
Usman and Elsalih (2018); Ahmed et al., (2018)	What is the impact of exchange rate pass through on macroeconomic indicators using threshold model?
Wen et al. (2018)	Does reserve of crude oil has any impact on the exchange rate?
Guzman et al. (2018)	What is the best competitive and effective multiple real exchange policy to promote economic development?

Reference	Research Questions
Aloui et al. (2018)	How to reduce the lag of the interactive effects between exchange rate volatility and inflation in oil producing countries to enhance the effectiveness of monetary policy in managing inflation
Byrne et al. (2018)	What are the possible ways to account for the time-variation in the coefficients of exchange rate forecasting regressions?
Bahmani-oskooee & Gelan (2018)	What is the impact of the real exchange-rate volatility on disaggregated trade flows in the short and long run?
Fratzscher et al. (2019)	Do foreign exchange interventions impact more permanently on exchange rates?
Bulut (2018)	How can we investigate the predictive power of the information using Google Trends-Based Forecast for exchange rates after the Great recession?
Tang and Yao (2018)	What is the relationship between stock prices and exchange rate in different financial markets to prevent systematic financial risks?
Kumar (2019)	What is the possible avenue to import crude oil and pay in local currency to minimize the effect on the trade balance?
Piccotti (2018)	What are the alternative information structures and their nature that provide guidance in forecasting/determining exchange rate puzzle?
Sharma and Pal (2018)	What are the effects of exchange rate on bilateral trade using disaggregated higher frequency data?
Boubakri et a. (2019)	What is the impact of volatility spread on real exchange rate in financialized commodity markets?

CONCLUSION

Forecasting exchange rate volatility is one of the crucial aspects of international trade and finance. This paper aims to outline the literature on behavior and dynamics of the exchange rate and has a significant impact on economic growth and development. The exchange rate has been studied in various forms (Conversion Rate, Exchange Value, Rate of Change, Gearbox, Speed Change, Fixed Exchange Rate, spot Rate, managed Rate, pledge Rate, Floating Rate). The exchange rate has been specifically associated with exchange rate movements/ fluctuations, intervention and pass-through have been associated with by-literal trade flows, importing and exporting of crude oil, stock prices, real consumption, unemployment, information structure, financialized commodity markets, and monetary policy/regimes under inflation targeting. Hence, it makes it relevant to understand the behavior and dynamics of the exchange rate in the literature from the web of knowledge database using bibliometric citation and content analysis. Based on the findings, the authors recommend working on a similar scholarly contribution by extracting the data from other renowned and authentic databases such as Scopus.

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Measuring and Decomposing Productivity of Co-operatives in Aceh, Indonesia

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Abstract
This study empirically assesses the co-operatives' productivity across 23 districts/cities in Aceh province, Indonesia, over 2014-2018 using the Malmquist Total Factor of Productivity Index (MTFPI) based on Data Envelopment Analysis (DEA). Unlike previous studies that focused only on selected sectors and industries, this study examines the co-operative productivity of all industries and sectors within one province. Overall, this study recorded a low productivity level of co-operatives. Only co-operatives in Subulussalam City consistently experienced a fully productive using both Constant Return to Scale (CRS) and Variable Return to Scale (VRS) estimations. Meanwhile, based on the VRS estimation, the study found that the co-operatives in Aceh Besar and Aceh Utara's districts had experienced the full total productivity. Overall, the co-operatives' productivity level has slightly declined, contributed mainly by a decline in technical efficiency. However, the co-operatives' efficiency level has increased, mainly due to their scale efficiency improvement. The findings suggested the importance of implementing sound co-operative governance principles and enhancing technical efficiency by adopting e-marketing and the internet of things in their business activities.

Keywords:
total factor productivity, co-operatives, DEA, Malmquist index

How to Cite:

INTRODUCTION

Co-operatives are pertinent to global social, cultural, and economic development, including Indonesia. Article 33 of the 1945 Constitution of Indonesia has positioned co-operative as a pillar and backbone of the national economy. Since its first establishment in 1896 in Purwokerto, Central Java (Nasution, 1990), co-operative has been able to increase its members' welfare and free them from moneylenders. In the last few decades, co-operatives have been showing tremendous progress. In 2016, they had offered 574,451 job opportunities and contributed about 2% to Indonesia's economy (Azhari et al., 2017). At the end of 2019, 22.46 million Indonesians registered as members of the 204,734 co-operatives nationwide (Ministry of Co-operatives and SMEs, 2019).

The promising progress of co-operatives and their contribution to the national economy is not isolated from the government support through the issuance of legal basis to oversee the Co-operative, such as the 1945 Constitution and the 1992 Co-operative Act, No. 25. However, of the total number of co-operatives, 39.90% of them have been inactive nationwide. Lacking capital, unskilled staff, mismanagement, and low level of productivity have contributed to their inactivity (Majid et al., 2020). Many co-operatives in Indonesia are also facing a similar problem, including in Aceh province.

The co-operatives in Indonesia have promoted the national economy, but their contribution is still beyond expectation due to a larger number of inactive and unproductive co-operatives. Their contribution to promoting the development of Indonesia's economy has been smaller compared to the contribution of co-operatives to the economies of Sweden (13%), Switzerland (16.4%), Finland (21%), New Zealand (22%), and Kenya (45%) (Hasan et al., 2018). The failure of co-operatives in Indonesia to play its crucial role as the national economy's backbone is also mainly caused by their lower productivity (Hasan et al., 2018).

Many previous studies have explored the productivity of co-operative worldwide. For example, in the developed countries, Ludena (2010) has explored the co-operatives' productivity in America, Pasiouras (2013) and Akinsoyinu (2015) in European countries. On the other hand, studies for developing economies have been investigated by Dong & Featherstone (2004) in China and Khan et al. (2010) in Pakistan. Most of these studies documented a low-level productivity of the co-operatives.

Previous studies investigating the co-operatives' productivity have commonly used two approaches, namely parametric and non-parametric. In this case, Stochastic Frontier Approach (SFA) and Data Envelopment Analysis (DEA) are the most frequently used parametric and non-parametric approaches, respectively (Berger and Humphrey, 1997). Of these approaches, the DEA is the most commonly adopted approach measuring cooperatives' productivity globally due to its prediction superiorities and accuracy.

Using the DEA method, Fandel (2003) measured the efficiency of 1,147 co-operatives in the agricultural sector in Slovakia and documented that the farms with the size group of below 100 ha and above 1.000 ha had shown a higher technical efficiency, while those with the size of 500 to 1.000 ha had recorded higher scale efficiency.

Examining the productivity of the horticultural co-operatives in Andalusia, Galdeano-Gomez et al. (2006) found a considerable increase in the co-operatives' productivity during 1995-2004.

In other studies, using the DEA approach, Ariyaratne et al. (2006) found an increase in the productivity of co-operatives in the United States was primarily caused by the changes in their technical and pure efficiencies change over the period from 1990 to 1998. Ludena (2010) also documented a similar finding, where an improved productivity level of the agricultural co-operatives in Latin America during the 1961-2007 period was due to efficiency and technical improvement. However, co-operatives recorded slight declines in their productivity during 2004-2008 (Candemir et al., 2011). Focusing on European countries, using the DEA approach, Doumpos and Zopounidis (2012) documented that Austria and Italy's co-operatives are recorded as the best and worst efficient co-operatives during the 2005-2010 period, respectively. The co-operatives in European countries are also found to be efficient and stable over the 2008–2013 period (Akinsoyinu, 2015).

Previous studies have also investigated the productivity of co-operatives in Asian countries using DEA approaches. For example, Dong and Featherstone (2006) found that the rural co-operatives in China over the period 1991-1995 recorded almost similar level of productivity across the provinces as they utilized almost similar technology and co-operatives' scales. In Sri Lanka, Jayamaha and Mula (2010) found a low productivity level of savings and credit co-operatives during the 2003-2005 period. Meanwhile, in India, the co-operatives experienced a declining trend in their productivity during the 1992-1997 period (Singh et al., 2010).

In Indonesia's context, there have also been several studies that measured and analyzed the productivity of the co-operatives in specific economic sectors and cities. For instances, Sulikah (2010) measured efficiency of the co-operatives in Klaten, Yogyakarta, Wirnoto (2011) in Pekalongan, Central Java, and Syamni and (Majid, 2016) in Lhokseumawe, Aceh. These studies recorded that the co-operatives in these selected Indonesian provinces had a lower level of productivity. Since these studies focused their analysis on the co-operatives in the specific sectors and districts, they failed to offer ample empirical evidence province-wide.

Besides, previous studies have not provided detailed sources of productivity of the co-operatives; thus, they failed to offer a holistic recommendation to enhance their performances and contribution to the national economy. Therefore, this present study intends to fill the existing studies' gaps by assessing the productivity of co-operatives across 23 districts/cities in Aceh provinces, Indonesia using the Malmquist Total Factor of Productivity Index (MTFPI) based on the Data Envelopment Analysis (DEA). The TFPI comprises efficiency change (EFch) and technical efficiency change (TEch). EFch is further decomposed into two sub-components [i.e., pure technical efficiency change (TEch) and scale efficiency change (SEch)].

This study's results are expected to offer references for the co-operatives and regulators in designing policies to promote their productivity and contribution to the provincial economy.

Besides, this study was conducted in Aceh Province, one Indonesian Province that received a significant number of transfer funds from the central government. Thus, the contribution of the fund to the performance of co-operatives in Aceh Province is anticipated.

The remaining parts of the research are structured in the following manner. Section 2 highlights the data and empirical model of TFPI-DEA, followed by the presentation and discussion of the findings and their implications in Section 3. Finally, Section 4 concludes the study.

METHODS

Previous studies have adopted three major approaches to measuring productivity and efficiency: traditional, parametric, and non-parametric approaches (Majid and Maulana, 2012). Of these approaches, a non-parametric, namely Data Envelopment Analysis (DEA), has been the most widely utilized to measure productivity in various scientific disciplines and operational activities due to its superiorities. Apart from its ability to discover the sources of inefficiency (Omar et al., 2006; Majid and Maulana, 2012; Ismail et al., 2013), DEA is also able to take into account a wide range of inputs or outputs, technology, capacity, competition, and demographics to measure efficiency. Thus, this study measures the generalized output-oriented Malmquist Total Factor of Productivity Index (MTFPI) using the DEA program (Coelli, 1996).

Following the studies by Omar et al. (2007), Saad et al. (2006), Majid and Maulana (2010), and Majid et al. (2017), this study measures MTFPI using the following equations:

$$M_o\left(x^t, y^t, x^{t+1}, y^{t+1}\right) = (a)x(b) \tag{1}$$

where: $a = \dfrac{D_o^t(x^{t+1}, y^{t+1})}{D_o^t(x^t, y^t)}$; and $b = \left[\left(\dfrac{D_o^t(x^{t+1}, y^{t+1})}{D_o^{t+1}(x^{t+1}, y^{t+1})}\right)\left(\dfrac{D_o^t(x^t, y^t)}{D_o^{t+1}(x^t, y^t)}\right)\right]^{1/2}$

where M_o is the MTFPI; D_o is the distance function, x and y are the input and output for t and $t+1$ periods, respectively; a is the technical change, and b is the efficiency change.

The MTFPI comprises two components, namely: efficiency change (EFch) and technical efficiency change (TEch). EFch is further decomposed into two sub-components, namely: pure technical efficiency changes (PEch) and scale efficiency change (SEch). The decomposition of MTFPI into its components and sub-components represented by the following equations:

$$M_o\left(x^t, y^t, x^{t+1}, y^{t+1}\right) = (a)x(b)$$
$$= (a)x(cxd) \tag{2}$$

where:

$$a = \left[\left(\frac{D_o^{t+1}(x^t, y^t)}{D_o^t(x^t, y^t)}\right)\left(\frac{D_o^{t+1}(x^{t+1}, y^{t+1})}{D_o^t(x^{t+1}, y^{t+1})}\right)\right]^{1/2} \quad ; c = \left(\frac{D_o^t(x^t, y^t)}{D_o^{t+1}(x^{t+1}, y^{t+1})}\right); \text{and}$$

$$d = \left(\frac{D_{oc}^{t+1}(x^t, y^t)}{D_o^{t+1}(x^t, y^t)} \frac{D_o^{t+1}(x^{t+1}, y^{t+1})}{D_{oc}^{t+1}(x^{t+1}, y^{t+1})} \frac{D_{oc}^t(x^t, y^t)}{D_o^t(x^t, y^t)} \frac{D_o^t(x^{t+1}, y^{t+1})}{D_{oc}^t(x^{t+1}, y^{t+1})}\right)^{1/2}$$

a is the technical change (TEch), *b* is the efficiency change, *c* is the pure efficiency change (PEch), and *d* is the scale efficiency change (SEch).

Finally, the study summarizes the findings of productivity sources of the co-operatives across 23 districts/cities using Constant Return to Scale (CRS) and Variable Return to Scale (VRS). Unlike CRS, the VRS assumes the ratio between additional input and output is dissimilar. This implies that the auxiliary inputs by x times do not necessarily increase the output by x times. It can be smaller or larger than x times (Banker et al., 1984).

This study uses three inputs and one output to measure the sources of productivity of the co-operatives across 23 districts/cities in Aceh, Indonesia, over the period from 2014-2018. Of 4,410 units of active co-operatives province-wide, 345 of them were selected as the sample of the study using a stratified random sampling technique. These co-operatives comprise three co-operatives in every five economic sectors (i.e., trade, fishery, agriculture, plantation, creative economy, and services) across 23 districts/cities. Since the study covers five years; thus, in totality, the data investigated in this study comprises 1,725 observations. In this study, the inputs consist of own capital, external capital, and managerial board, while the output is the co-operative surplus. The inputs and output are selected based on the Indonesian Co-operative Act, No. 25 (1992), which states that the co-operative is operated using its own and external capital, supported by its managerial committee to produce a co-operative surplus. The data are gathered from the annual reports of the selected co-operatives in five economic sectors across 23 districts/cities in Aceh Province. The description of the input-output specification and their definitions are reported in Table 1.

Table 1. Inputs-Output Definitions and their Measurements

Variable	Definition	Remark
Own capital	The number of co-operative-owned capital comprises principal savings, mandatory savings, reserves, and grants.	Input
External capital	The capital from external sources in the form of loans from members, other co-operatives, banks, financial institutions, and issuances of bonds and securities.	Input
Managerial boards	A person who is given trust by co-operatives can manage the organization through the Annual Member Meetings.	Input
Co-operative surplus	Total revenue minus total cost within a fiscal year period.	Output

RESULT AND DISCUSSIONS

This study measures and analyzes the sources of productivity of co-operatives across 23 districts/cities in Aceh, Indonesia, over the 2014-2018 period. Table 2 illustrated the Return to Constant Return to Scale (CSR) and Variable Return to Scale (VRS) - productivity level of co-operatives in 23 districts/cities in Aceh, Indonesia. The value of 1.000 signified that the co-operative is productive (on the frontier line), while the value of smaller than 1.000 indicated non-productive (below the frontier line).

As illustrated in Table 2, the study found that only the co-operatives from the city of Subulussalam have been operated consistently productive during the study period, indicated

by both CRS and VRS values of 1.000. The ability of co-operative management in the Subulussalam City to maintain minimal inputs to produce optimal outputs supported by sufficient capital provided by the relevant government authorities has contributed to the steady level of the co-operative productivity in the district. On the other hand, the co-operatives from Pidie District were found to be the least productive both from the perspectives of CRS and VRS. On average, co-operatives in this district have operated by only about 20% productivity level. This could be done, inter alia, by implementing good co-operative governance, supported by the professional human resources and adequate funds. Overall, the rest of the 22 districts/cities co-operatives have recorded a low productivity level (66.4%). These findings indicate a huge room for the co-operatives to improve their productivity level by 33.6%. In so doing, the co-operatives need to maintain and improve their management continuously by implementing good co-operative governance, supported by well-trained human resources and sufficient adequacy co-operative capital.

Table 2. CRS and VRS – Productivity Level of Co-operatives in Aceh, Indonesia

No.	District/City	2014		2015		2016		2017		2018	
		CRS	VRS	CRS	VRS	CRS	VRS	CRS	VRS	CRS	VRS
1.	Banda Aceh	0.302	1.000	0.273	0.998	0.145	0.435	1.000	1.000	0.293	0.517
2.	Aceh Besar	0.209	1.000	0.210	1.000	0.331	1.000	0.292	1.000	1.000	1.000
3.	Pidie	0.042	0.142	0.043	0.146	0.318	0.355	0.211	0.239	0.155	0.165
4.	Pidie Jaya	0.687	0.814	0.943	1.000	0.333	0.378	0.954	1.000	0.324	0.337
5.	Bireuen	0.712	1.000	0.488	0.961	0.787	1.000	1.000	1.000	0.413	0.482
6.	Lhokseumawe	0.301	0.351	0.206	0.251	0.288	0.291	0.687	0.705	0.454	1.000
7.	Aceh Utara	0.431	1.000	0.303	1.000	0.425	1.000	0.409	1.000	0.460	1.000
8.	Aceh Timur	0.234	0.246	0.292	0.486	0.329	0.411	0.644	1.000	0.534	0.784
9.	Langsa	0.071	0.093	0.155	0.261	0.140	0.430	0.915	1.000	0.690	0.705
10.	Aceh Tamiang	0.206	0.565	0.138	0.469	0.653	0.844	0.148	0.495	0.260	0.565
11.	Aceh Tenggara	0.236	0.236	0.183	0.185	0.341	0.387	0.281	0.281	0.211	0.241
12.	Gayo Lues	0.222	0.289	0.337	0.363	0.322	1.000	0.404	0.440	0.697	1.000
13.	Aceh Tengah	0.267	1.000	0.348	0.496	0.189	0.199	0.179	0.188	0.330	0.528
14.	Bener Meriah	0.941	1.000	0.764	1.000	1.000	1.000	0.662	0.992	0.571	1.000
15.	Aceh Singkil	0.429	0.946	0.608	1.000	1.000	1.000	0.601	1.000	1.000	1.000
16.	Sabang	0.299	0.403	0.155	0.157	0.188	0.207	0.669	0.677	0.133	0.133
17.	Aceh Barat	0.295	0.426	0.310	0.439	0.588	0.584	0.330	0.422	0.323	0.370
18.	Nagan Raya	0.704	1.000	1.000	1.000	1.000	1.000	0.735	0.879	1.000	1.000
19.	Abdya	0.487	1.000	0.329	0.885	0.291	0.671	0.298	0.653	1.000	1.000
20.	Aceh Selatan	1.000	1.000	0.392	0.460	0.465	0.438	0.541	0.757	0.231	0.245
21.	Subulussalam	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
22.	Simeulue	0.223	1.000	0.309	1.000	0.275	0.448	0.188	0.369	0.137	0.199
23.	Aceh Jaya	0.225	0.670	0.105	0.402	0.350	0.496	0.136	0.337	0.985	1.000
	Mean	**0.414**	**0.703**	**0.387**	**0.650**	**0.468**	**0.634**	**0.534**	**0.715**	**0.530**	**0.664**

Based on the VRS-productivity level, only the co-operatives from Aceh Besar and Aceh Utara were found to experience consistently productive during the 2014-2018 period, as indicated by the VRS value of 1.000. The presences of well-managed co-

operatives owned by large-scale companies in those two districts, such as PT. Pupuk Iskandar Muda, PT. Kertas Kraft Aceh, PT. Arun NGL in Aceh Utara district and PT. Semen Andalas Indonesia in Aceh Besar could partially be contributed to the steady productivity growth of the co-operatives in the said districts. Meanwhile, the rest of the co-operatives in 21 districts/cities have recorded productivity by about 65%. Compared to the CRS-productivity level, the co-operatives' VRS-productivity level was higher as the estimation has a flexibility assumption decreasing the increasing return to scale. Overall, the lowest CRS-productivity level (38.7%) was recorded in 2015, while the highest value (53.4%) was documented in 2017. On the other hand, in view of the VRS estimation, the lowest productivity level (63.4%) was recorded in 2016, while the highest value (71.5%) was documented in 2017. The co-operatives showed a volatile level of productivity and failed to maintain and continuously improve their productivity level. Their small scale, lacking capital, and mismanagement are the main contributors to the low productivity level of the co-operatives in Aceh, Indonesia.

Table 3. Malmquist Total Factor of Productivity Index of Co-Operatives

No.	District/City	2014-2018				
		EFch	TEch	PEch	SEch	MTFPIch
1.	Banda Aceh	0.993	1.083	0.848	1.171	1.075
2.	Aceh Besar	1.479	0.669	1.000	1.479	0.990
3.	Pidie	1.389	0.935	1.039	1.337	1.299
4.	Pidie Jaya	0.829	0.870	0.802	1.033	0.721
5.	Bireuen	0.873	0.983	0.833	1.047	0.858
6.	Lhokseumawe	1.108	1.042	1.299	0.853	1.154
7.	Aceh Utara	1.016	1.044	1.000	1.016	1.061
8.	Aceh Timur	1.230	0.827	1.336	0.920	1.017
9.	Langsa	1.765	0.772	1.660	1.064	1.362
10.	Aceh Tamiang	1.059	0.815	1.000	1.059	0.863
11.	Aceh Tenggara	0.973	1.021	1.005	0.968	0.993
12.	Gayo Lues	1.331	0.813	1.364	0.975	1.081
13.	Aceh Tengah	1.054	0.952	0.853	1.236	1.004
14.	Bener Meriah	0.883	1.058	1.000	0.883	0.933
15.	Aceh Singkil	1.236	0.874	1.014	1.219	1.080
16.	Sabang	0.816	1.214	0.758	1.076	0.990
17.	Aceh Barat	1.023	0.930	0.965	1.060	0.951
18.	Nagan Raya	1.092	0.950	1.000	1.092	1.037
19.	Abdya	1.197	0.629	1.000	1.197	0.753
20.	Aceh Selatan	0.693	0.982	0.703	0.986	0.681
21.	Subulussalam	1.000	0.921	1.000	1.000	0.921
22.	Simeulue	0.885	0.986	0.668	1.324	0.872
23.	Aceh Jaya	1.446	0.738	1.105	1.308	1.068
	Mean	**1.077**	**0.907**	**0.988**	**1.090**	**0.977**

Our findings are in harmony with previous studies conducted by Sulikah (2010), Wirnoto (2011), and Syamni and Majid (2016). They found low levels of productivity

of the co-operatives in specific regions of Indonesia. However, our findings of different productivity level of co-operatives across 23 districts/cities in Aceh contradicted the finding by Dong & Featherstone (2006). They found a relatively similar productivity level of the rural credit co-operatives across 29 provinces/regions in mainland China during the 1991-1995 period. Thus, it is enormously essential for the government through the Office of Co-operatives and SMEs of Aceh province in particular, and the Ministry of Co-operatives and SMEs of the Republic of Indonesia in general, to formulate suitable policies to advance all co-operatives to have a relative similar productivity level that, consequently, contribute to the just regional economy. The co-operatives that were non-productive should benchmark the highest productive co-operatives to improve their productivity level.

Furthermore, Table 3 reported the findings of Malmquist Total Factor Productivity Index change (MTFPIch) the co-operatives in 23 districts/cities in Aceh, Indonesia over the 2014-2018 period and its components of Technical Efficiency Change (TEch) and Efficiency Change (EFch). The findings from EFch are further decomposed into tow sub-component, namely: Pure Efficiency Change (PEch) and Scale Efficiency (SEch). The MTFPIch of less than 1.000 shows a decline in the productivity level, the indices of 1.000 indicate no productivity level changes. In contrast, the index value of greater than 1.000 implies a rise in the co-operatives' productivity level.

As reported in Table 3, the mean of the MTFPIch of the co-operatives across the districts/cities in Aceh over the 2014-2018 period was 0.977, indicating that the overall productivity of the co-operatives has experienced a declining trend by -2.3%. The co-operatives in the Aceh Selatan District recorded the highest productivity reduction by -31.9%, while the co-operatives in the Langsa City documented the highest productivity improvement by 36.2%. To further identify each MTFPI components' contribution to the changes in the entire co-operatives' productivity, the efficiency change (EFch) and technical change (TEch) are now reported. In terms of EFch, the co-operatives from Aceh Selatan District were recorded to experience the worst productivity decline (-30.7%). In comparison, the co-operatives in Langsa City recorded the highest productivity improvement (76.5%). Across the districts/cities, the co-operatives showed an improvement in their productivity by 7.7%. These results indicate that the EFch has positively contributed to the MTFPIch of the co-operatives' industry in Aceh. The co-operative management ability to utilize and properly mix inputs to produce the highest output has contributed to a slight improvement of the co-operatives' productivity level during the study period.

Table 3 further reported the findings of the two sub-components of EFch, namely pure efficiency change (PEch) or scale efficiency change (SEch). The study found that PEch contributed negatively to the EFch of the co-operatives by –1.2%, while the SEch contributed 9.0% to the improvement of the EFch. These findings indicate that co-operatives' management has failed to combine the inputs to produce an optimal co-operative surplus properly. On the other hand, the co-operatives have experienced economies of scale as the SEch showed a positive value. Specifically, the study documented that the Simeuleu District co-operatives recorded the largest decline in their PEch by -33.2%. Our findings provide some evidences of different level of productivity of co-

operatives across demographical areas in Aceh Province. Co-operatives located in the urban and sub-urban areas were documented to have higher level of productivity growth as compared to the co-operatives located in the rural areas in the provinces. These findings showed the importance for relevant government authorities of focusing their co-operatives' empowerment programs on the co-operatives in the rural areas.

In comparison, the co-operatives in Langsa City documented the largest increase in their PEch by 66.0%. Finally, SEch, as the last sub-component of EFch (i.e., SEch), is found to positively contribute to the changes in the EFch with an average of 9.0%. Co-operatives from the district of Bener Meriah recorded the largest decline in their SEch (-11.7%), while the co-operatives from the Aceh Besar documented the most remarkable improvement in their SEch (47.9%). Finally, Table 3 also reported the technical efficiency changes (TEch) as the second and the last component of MTFPI changes. As observed from Table 4, on average, the co-operatives have recorded technical progress by -9.3% over the period 2014-2018. This finding shows that technological progress was found to be the main contribution to the reduction in MTFPIch of the co-operatives province-wide. The low utilization of advanced technology, such as e-marketing, e-planning, e-budgeting, and the internet of things, has contributed to the decline in the co-operatives' technical regress.

Furthermore, the study found that the co-operatives in the district of Abdya gained the highest technical regress (-37.1%). The lack of technological facilities to support co-operative business entity is believed to be the main contributor to the finding. Most co-operatives in the district still adopted traditional management system and managed by the part-time workers. In comparison, the co-operatives in Sabang City recorded the highest technical progress (21.4%). Sabang is a well-known tourism city in the province; their co-operatives have been growing technically faster due to their services provided to domestic and foreign tourists (Goodwin, 2002). Our study's empirical results are contradictory to the findings of the previous studies by Syamni and Majid (2016). They found the TEch was the main contributor to productivity as opposed to the EFch. The findings of different level of co-operatives' MTFPI across the districts/cities are in line with the previous studies (Akinsoyinu, 2015; Asawaruangpipop & Suwunnamek, 2014; Pasiouras, 2013; and Khan et al., 2010. These previous studies found that the co-operatives' productivity level was different from one to another.

The low productivity level of the co-operatives across 23 districts/cities in Aceh is not surprising. Due to their small scale, the co-operatives tend to be more vulnerable to economic turbulences. Besides, traditional business culture and low managerial and entrepreneurial skills have been detrimental for the co-operatives to become productive business entity (Ropke, 2000). Thus, continuous efforts should be taken to promote co-operative productivity further. The compensation scheme for the co-operatives' managers should be implemented to a performance-based reward and attractive promotion packages (Othman et al., 2014). Improving the administrative and entrepreneurial skills of the co-operatives personnel through ongoing certified training should be recurrently provided. The co-operatives should be encouraged to adopt relevant and updated technology into their day-by-day business activities. The government need to review its policy to promote

co-operatives in all districts/cities. The co-operative act's enforcement to warrant co-operative conformity to the existing co-operative principles and rules should be executed to enhance co-operative productivity, ensure their sustainability, and amplify their chance of success. Finally, the private economic sector should be encouraged to support co-operative business activities.

CONCLUSIONS

This study empirically measured the total factor productivity level of the co-operatives across 23 districts/cities in Aceh, Indonesia, using Data Envelopment Analysis (DEA) with Malmquist Index over the 2014-2018 period. The study recorded the low productivity level of co-operatives. Only co-operatives in Subulussalam City consistently experienced fully productive based on both CRS and VRS estimations. Meanwhile, based on the VRS estimation, the co-operatives in Aceh Besar and Aceh Utara were found to experience fully productive over the study period. Overall, the co-operatives' productivity level has slightly declined, contributed mainly by a decline in technical efficiency. However, the efficiency level of co-operatives has shown a slight increase, contributed mainly by the rise in their scale efficiency.

The findings suggest that pure and technical efficiencies need to be continuously improved to promote the co-operatives' productivity level further. The co-operatives should implement sound governance principles and adopt e-marketing and the internet of things in their business activities. The remunerative scheme for the co-operatives' managers should be more attractive based on performance-based reward and punishment systems. The government needs to review its policy to promote co-operatives in all districts/cities, focusing more on rural areas. The government should warrant all co-operatives to conform to the existing principles, rules, and regulations to ensure their sustainability through continuous product improvement programs. The private economic sector should be given financial incentives to support cooperative business activities, such as tax reduction. Finally, the co-operatives ought to regularly conduct training for their staff to improve their professional managerial skills.

Future studies might explore the performance of the various sectors of co-operatives in Indonesia to offer a better portrait of their performance nationwide. Ultimately, combining both parametric and non-parametric approaches to measure their productivity levels could enrich existing empirical findings, thus offering references for designing policy to realize the co-operatives as the pillar of Indonesia's as mandated by Article 33 of the 1945 Indonesia's Constitution.

ACKNOWLEDGMENTS

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Causation Between Consumption, Export, Import, and Economic Growth of Oman

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Abstract
To examine the causation between consumption, export, import, and economic growth for the Sultanate of Oman using yearly time series data collected from the World Bank for 2000-2018. Further, it was tested by basic statistics, the Bound test with the ARDL model, and the Granger-causality tests. The findings of the Bound test analysis indicate the presence of both long-run and short-run associations among competing variables. The ARDL Model result reflects that imports have both short-run and long-run effects, supported by the Granger Causality tests by indicating the presence of unidirectional causality import to economic growth and import to consumption. The outcome of the study revealed that import is essential for economic growth as imports can absorb foreign technology in the domestic economy that can boost the export and further act as an engine of growth.

Keywords:
Consumption, export, import, economic growth, ARDL model

INTRODUCTION

In the 80s and 90s, the theory of economic growth found a new landmark known as "new growth theories" or "endogenous growth theories." These theories advocated human capital and technological progress as the primary factor for economic growth; they also took technological progress as an endogenous factor, i.e., generated by the internal causes of the economy (Romer, 1989; 1990). Paul Romer, Robert Lucas, J. Grossman, E. Helpman, P. Aghion, and P. Howitt are the main contributors to these theories.

In the light of the above background, economic growth is regarded as one of the primary long-term apprehensions of policymakers and macroeconomists (Chokri & Bouchrika 2018). The nexus between consumption, export, import, and economic growth measured in the gross domestic product (GDP) takes a central place in the literature on economic development and becomes a question of significant concern for policymakers, government planners, and some extent, academicians and economist. Gross domestic product is a chief aspect that regulates the import for a country, and GDP growth is solidly linked with import growth, mainly machinery, fuel, oil, and food items (Islam et al., 2012). Similarly, vigorous economic growth is a vital goal for developing nations to enhance happiness and well-being. Attaining firm and continued economic growth is a significant challenge in developing nations (Pradhan et al., 2015). The relevance of economic growth arises from the fact that the nation's populace is snowballing, and consequently, a convinced GDP growth must attain to guarantee an acceptable way of life. The theoretical and empirical investigation provides conflict views like the relationship between these entire variables or, particularly, export and GDP or between Import and GDP Ample literature suggests that the relationship between export, import, and economic growth as GDP can be categorized into two broad types of approaches viz. 1) Cross-country studies explore the nexus between export, Import, and GDP on a single country 2) Cross-sectional studies investigate the nexus among export, Import, and GDP on various countries simultaneously (Alaoui 2015).

A plethora of studies conducted on macroeconomic factors that determine economic growth prove to be viable (Fischer, 1993; Barro, 1997; Alper, 2018; Antwi et al., 2013; Mbulawa, 2015; Altaee et al., 2016; Kryeziu, 2016; Okunnu et al., 2017; Oshodi, 2018; Sharma et al., 2018; Chowdhury et al. 2019; Abalon, & Fredrick, 2020). Based on up-to-date works, three favorable factors have been chosen for further research in Oman to discover the connections between the dependent variable GDP and independent variables, i.e., final consumption expenditure, export, and import. Although many research works explore the relationships among these variables and economic growth individually, this study has taken three essential variables to evaluate its impact on Oman's economy. Moreover, even with the large share of literature, a tiny amount or no specific study is available exclusively for Oman (Al-Mawali et al., 2016). The present research will be an initial step to look into Oman's economy.

Hence, enormous theoretical and empirical literature shows the relationship between Export, Import, and Economic growth. Ramos (2001) examined the Granger-causality

and could not identify any causation among Portugal's export, import, and economic development. Din, M. (2004) examined the export-led-growth hypothesis for the five most prominent South Asian economies using a multivariate time-series framework. They indicated dual causation among export and output growth in Bangladesh, India, and Sri Lanka for the short-run, and the existence of a long-run association between export, import, and output for Bangladesh and Pakistan, further depicts no long-run association among the variables for India, Nepal, and Sri Lanka. Afzal (2006) investigated the causation among economic growth, export, and its various categories, import, and world income. He found a stable and robust connection between GDP and export and dual causation running from manufactured export and GDP. Awokuse (2007) studied the impact of export and import on economic growth in three transition economies. They discovered dual causation among export and growth in Bulgaria and from import and export to economic growth in the Czech Republic and one-way causation among import and growth in Poland.

Elbeydi et al. (2010) indicated that income, exports, relative prices are co-integrated, and the long-run dual causation exists among export and income growth. Zambe & Constant (2010) examined the connection between export, import, exchange rate, and economic growth for Cote d'Ivoire and suggested a dual connection between export and economic growth. Hye and Siddiqui (2011) used the ARDL and rolling regression method to investigate the association between export, trade terms, and economic growth. They suggested that export enhance economic growth and, on the other hand, trade impede economic growth. It is necessary to promote export to improve the terms of trade. Sato and Fukushige (2011) constructed a short-run vector auto-regression model to investigate the causation among variables like economic growth, export, and import and disclosed that export-led growth is not viable for the economy of North Korea. Hye and Boubaker (2011) examined export-led growth, import-led growth, and foreign deficit sustainability assumptions and disclosed the one-way causality running from export to economic growth and the dual affiliation between import and economic growth. Hence, their findings validate export-led growths, import-led growth, and the foreign deficit are weakly sustainable for Tunisia.

Jirankul (2012) used bound test co-integration to investigate the link between manufacturing export and importing capital goods in Thailand. His result showed a robust long-run association between importing capital goods and the growth rate of manufacturing export. Thus, a decline in the import of capital goods will reduce manufacturing exports and impede economic growth. Hye (2012) used the ARDL approach to investigate the export-led growth, growth-led export, import-led growth, growth-led import, and foreign deficit sustainability assumption for China. His outcomes confirmed the dual long-run affiliation between economic growth and export, economic growth and Import, and export and Import. He concluded that the export-led growth, growth-led export, import-led growth, and growth-led import hypothesis are valid and foreign deficit is sustainable for China.

Abugamea (2015) discovered both long-run and short-run connections between economic growth, export, and import. His findings confirmed the presence of long-run

connections between imports and economic growth. Also, disclose that both export and import are the main determinants of economic growth for Palestine. Causality tests confirm VECM outcomes that import granger causes economic growth in the long run, but not in the short run. Alaoui (2015) performed the co-integration test on Export, Import, and economic growth developed a long-run and short-run bond among the variables. The Granger causality test confirmed the existence of the long-run bond among these variables. The short-run causality indicates dual causation among economic growth and import, one-way causation running from export to import, and no causality among economic growth and export. Saaed and Hussain (2015) disclosed one-way causation among export and import, similarly among export and economic growth. Kalaitzi and Cleeve (2017) revealed a long-run relationship between exports and economic growth. He also discovered the dual causation between export and economic growth in the short-run and long-run. Further, he disclosed that economic growth causes export. Bakari and Krit (2017) discovered one-way causation among imports and economic growth and could not have any causal relation between export and GDP.

Fannoun and Islam (2019) exposed the long-run dual causality among export, import, and economic growth in Palestine. The short-run outcomes supported export-led import and import-led export hypotheses. Impulse response functions suggested that a positive shock to one variable in the system generates responses in the other variables in the same direction. Rani and Kumar (2019) investigated the long-run association and direction of causation among economic growth, trade openness, and gross capital formation in BRICS nations. The ARDL bound test outcomes indicated the presence of a long-run association among variables. Granger causality results revealed a one-way causal effect flowing from trade openness to economic growth in India, and that for Brazil supports the trade-led growth hypothesis. At the same time, dual causation was found between trade openness and economic growth in China, supporting the feedback hypothesis. They found a unidirectional causality in South Africa moving from economic growth to trade openness, thus validating the growth-led trade hypothesis.

This study aims to produce reliable outcomes that enrich our understanding of the causal affiliation among variables and its impression on the economic growth of the Sultanate of Oman through an econometric analysis based on a general macroeconomic model outline with both long-term and short-term influence. Specifically, we adopt the ARDL Bound Test to scrutinize our foremost objective: to dynamically interact for the short-run and long-run associations among the competing variables. The second objective is to examine the direction of causation among the competing variables.

METHODS

This study applied the autoregressive distributed lag (ARDL) model and vector error correction model (VECM) to investigate long-run and short-run causal associations among competing variables like consumption, export, import, and economic growth Sultanate of Oman using yearly data from 2000-2018. The data set consists of samples

for GDP (constant 2010 US$) as a proxy to economic growth indicator, consumption (constant 2010 US$), exports of goods and services (BOP, current US$), and imports of goods and services (BOP, current US$). All data set are taken from World Development Indicators 2019.

Figure 1. Depicts the Data Set *Source; Authors own calculation*
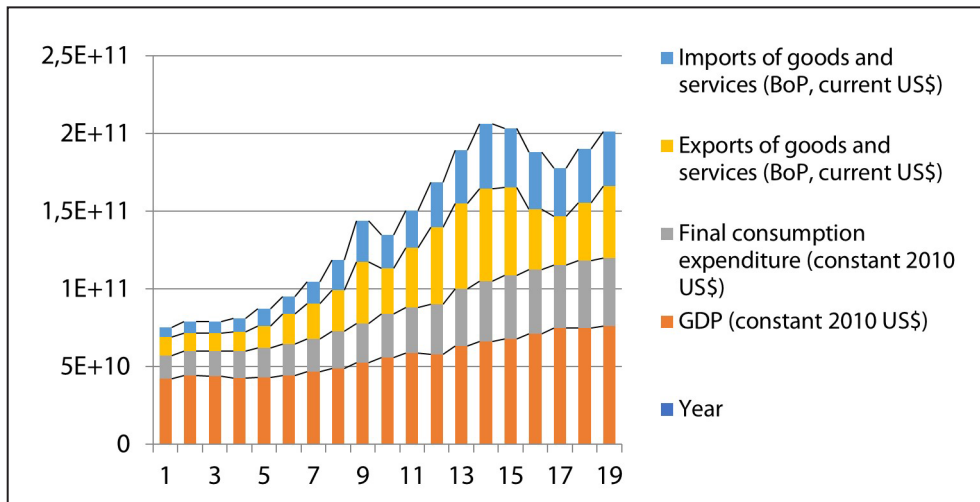
Early empirical formulations tried to capture the causal link between economic growths, export, and import (Balassa 1988, Din 2004, Afzal 2006, Saad 2012, Güngör and Bernard 2014 and Bakari and Krit 2017. However, our model will go beyond these approaches by adding variable consumption along with export and import, and the model can be expressed along with an assumption of ceteris paribus:

$$GDP_t = f \ (Consumption, \ Export, \ Import) \tag{1}$$

All the variables are used in a real term and transformed into a logarithmic function:

$$LY_t = \log \ (Y_t).$$

The log-linear econometric format can be express as:

$$\log \ (GDP)_t = \beta_0 + \beta_1 \log \ (Consumption)_t + \beta_2 \log \ (Export)_t + \beta_3 \log \ (Import)_t + \varepsilon_t \tag{2}$$

Where, β_0: constant term, β_1: coefficient of a variable (consumption), β_2: coefficient of variables (export), $\beta_{3:}$ coefficient of a variable (Import), t: The time trend and ε_t: The random error term assumed to be normal, identically and independently distributed.

The ARDL model with (p, q) can be express as:

$$LNM_t = \gamma_{0i} + \sum_{i=1}^{p} \delta \ LNM_{t-1} + \sum_{i=0}^{q} a_1 LNC_{t-1} + \sum_{i=0}^{q} a_2 LNE_{t-1} + \sum_{i=0}^{q} a_3 LNG_{t-1} + \varepsilon_{it} \tag{3}$$

Where LNM_t is a vector, and the independent variables are allowed to be purely I (0) or I(1) or co-integrated; a and γ are coefficients; γ is constant; $i =1,...k$; p, q are optimal lag orders; ε_{it} is a vector of the error terms- unobservable zero-mean white noise vector process. P lags used for the dependent variable, and q lags used for independent variables.

RESULT AND DISCUSSION

Table 1 depicts the descriptive statistic of the data where economic growth has the mean value of 24.74 and the maximum and minimum are 25.06 and 24.47; similarly, the value for the consumption is 24.5 as maximum and 23.42 as a minimum value having a mean value of 24.02. Likewise, the export had a maximum value of 24.81 and 23.18 as the minimum value having a mean value of 24.05. Moreover, the import had a maximum of 24.46 and 22.57 as minimum value having a mean value of 23.69. Most importantly, the data is normally distributed as Jarque-bera, and its Probability is above the significance level.

Table 1. Descriptive statistic & Correlation

	Mean	Median	Maximum	Minimum	Std. Dev.	Jarque-Bera	Probability
LNG	24.74	24.75	25.06	24.47	0.22	1.85	0.4
LNC	24.02	24.05	24.5	23.42	0.38	1.74	0.42
LNE	24.05	24.16	24.81	23.18	0.58	1.73	0.42
LNM	23.69	23.91	24.46	22.57	0.65	2.08	0.35
Pairwise Correlation							
LNG	1						
LNC	0.98	1					
LNE	0.83	0.91	1				
LNM	0.91	0.97	0.97	1			

The correlation test predicts the association among the two variables, and correlation outcomes show that the entire variable is positive and strongly correlated. As our dependent variable gross domestic product and the independent variable consumption have a correlation coefficient equal to (0.98), we can predict that if 1% increases in consumption increase the 0.98% of Oman's gross domestic product. Likewise, export is also an independent variable to a gross domestic product whose correlation coefficient is (0.83) suggest that if 1% increases in export will increase by 0.83% of Oman's gross domestic product. Another independent variable is Import; whose correlation coefficient is (0.91) suggest that if 1% increases in import will increase 0.91% of Oman's gross domestic product.

Figure 2. Calculation of Correlation
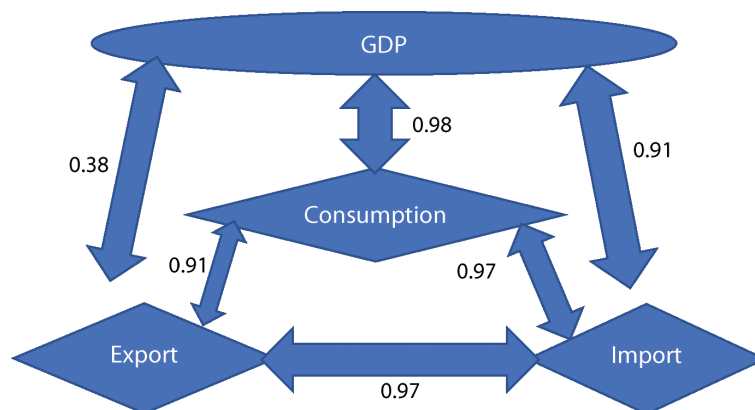
Figure 2 depicts the relations between consumption, export, and import of Oman. The 1% increase in consumption will increase by 0.97% of imports and 0.91% of export, suggesting that Oman people prefer the imported product compared to the domestic product. However, export and imports are strongly correlated with a coefficient of 0.97.

Table 2. Unit Root Test

Dependent		ADF.		Phillips-Perron	
Variable		t-statistic	Prob.	Adj. t-stat.	Prob.
LNG.	Level	0.301	0.971	0.228	0.967
	1st difference	-3.163	0.0406**	-3.163	0.0406**
LNC.	Level	-1.378	0.569	-1.285	0.613
	1st difference	-3.100	0.0458**	-3.165	0.0405**
LNE	Level	-1.268	0.621	-1.277	0.616
	1st difference	-3.405	0.0257**	-3.405	0.0257**
LNI.	Level	-1.730	0.400	-1.888	0.330
	1st difference	-3.497	0.0215**	-3.250	0.021

** represents 5% significance level source; Authors computation on E-views

The unit root test was conducted to check the presence of stationarity using the Augmentin Dicky Fuller test (ADF) and Phillips Perron (PP) test. The aim is to depict that the series becomes stationary at what difference. As shown in table 2, all the variables became stationary at first order, i.e. I (1), and the lag length criterion is 1 for the entire ARDL (p, q_1, q_2) model.

Table 3. ARDL (p, q_1, q_2) F- Bounds Test

Dependent Variable	Test Statistic	Value	Significance	Lower Bound I(0)	Upper Bound I(1)	Decision
LNI	F-Statistics	9.40588	10%	2.72	3.77	ECM
	K	3	5%	3.23	4.35	
			2.50%	3.69	4.89	
			1%	4.29	5.61	
	t-Statistics	-4.4874	10%	-2.57	-3.46	
			5%	-2.86	-3.78	
			2.50%	-3.13	-4.05	
			1%	-3.43	-4.37	

Table 3 represents the ARDL bound test based on F-statistics and t-statistics. This table represents the bound test used on an individual variable to check its significance. The bound test indicates both long-run and short-run for the variable in log form of import for the study.

Table 4a. short run ARDL model equations derived from analysis

Dependent	Equations
LNM	-3.025142 - 0.507414*LNG + 1.124*LNC + 0.5395*LNE

**depicts significance at 10% level

Table 4a depicts the short-run model equation derived from the econometric model, where the import is the dependent variable. It has the long-run equilibrium adjustment at a speed of 3.03 per cent and also harmed the economic growth meaning that a percentage increase of imports leads to a decrease of economic growth by 0.5 percentile of Oman economic growth. As well as, the consumption will increase by 1.124 per cent not only the consumption; it will also boost the export by increasing its percentile by 0.54.

Table 4b. Long-run ECM equations retrieved from analysis

Dependent	Equations
LNM	-3.025142 - 0.507414*LNG + 1.124*LNC + 0.5395*LNE - 0.817538

depicts significance at 10% level, Author's computation on E-views 10

Table 5a is the cumulative representation of the findings of Tables 3 and 4 based on the t-statistics and Wald F- test to check the significance of the tested variables. For the import and export, both t-statistics and Wald F-test are significant, export is significant, and consumption is significant at 10 per cent level.

Table 5a. Summary of Short Run ARDL Model

Dependent	t-Statistics	Wald F Test
LNM	LNE Significant	LNE Significant
	LNC**Significant	

Significant at 10% level Source; Author's compilation

Table 5b is the collective representation of the findings of the results based on the Regressors t-statistics, Error correction term t-statistic and Pairwise Granger Causality test to check the significance of the tested variables. For the import, export is significant to both t-statistics and consumption is only significant at 10 per cent to Regressors t-statistics, and import granger causes to both economic growth and consumption.

Table 5b. Summary of Long Run ECM Model

Dependent	Regressors t-Statistics	ECT t-Statistics	Pairwise Granger Causality Test
LNM	LNE Significant, LNC** Significant	LNE Significant	LNM Granger Causes LNG, LNM Granger Causes LNC

** Significant at 10% level

Table 6 represents the diagnostic test results that revealed the Homoskedasticity model with no serial correlation based on the heteroskedasticity Test: Breusch-Pagan-Godfrey and Breusch-Godfrey Serial Correlation LM Test. Finally, in Figure 4, we can depict our model's robustness and suggest that our model is stable as CUSUM and CUSUM Square are significant at a 5% level.

Table 6. Summary of Diagnostic Test

Dependent variable	Heteroskedasticity Test: Breusch-Pagan-Godfrey			
	F-Statistic	1.05311	Prob. F (4,13)	0.4179	Conclusion
	Obs*R-squared	4.40518	Prob. Chi-Square(4)	0.3539	Homoskedasticity
	Scaled explained SS	2.25979	Prob. Chi-Square(4)	0.6881	
	Breusch-Godfrey Serial Correlation LM Test			
	F-Statistic	0.290705	Prob. F(1,12)	0.5996	Conclusion
	Obs*R-squared	0.425744	Prob. Chi-Square (1)	0.5141	No Serial Correlation

The analysis results indicate that there is a unidirectional causal effect from imports to consumption. Also, a unidirectional causal effect from import to economic growth as supported by the Rahman & Shahbaz (2013), Bakari S (2007), and Bakari & Krit (2017) findings, but not with export although it was well evident that import will lead to promoting the export as import can absorb foreign technology in the domestic economy; this increases the availability of intermediate goods and inputs. This condition includes machinery, human capital, skilled labor, and equipment, which, in general, can increase productivity in Oman's economy. Finally, we can conclude that our model proves to be statistically significant, and Oman's economy's main factor is import that will boost the export capacity of Oman, which in turn will lead to the growth of its economy.

Figure 3. Stability Test for LNM dependent variable
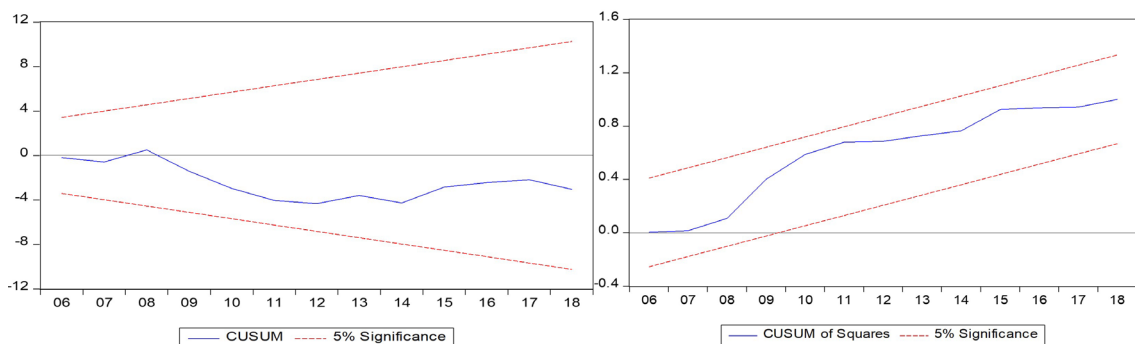
CONCLUSION

Our study relies on a two-fold investigation method. Firstly, it investigates the relationship between consumption, export, import, and economic growth for the Sultanate of Oman; secondly, if such a relationship exhibits tried to investigate the model's causality

direction. The correlation test showed that all the variables were positively correlated, and the variables became stationary at the first difference, having a one lag length criterion. The ARDL bound test indicates the presence of both long and short-run equilibrium for import as dependent and other variables as an independent. The short-run ARDL and ECM model indicates that export is significant at 5% and consumption at 10%. ECM also revealed that exports are significant. Hence, it provides an idea that it has a robust causal effect between imports and exports and imports and consumption. To further strengthen our finding, we used the pairwise Granger causality test that indicates the direction of their causal effect among variables.

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Willingness to Pay for Access to Piped Water Using Hedonic Pricing Model

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Abstract
The main objective of this study is to estimate the determinants of drinking water supply on the housing rental value using survey-based data for the years 2013-14 in Pakistan. The hedonic pricing model is applied using the rental value of the houses per month as the dependent variable. Piped-water connection and several rooms significantly impact housing prices for rural and urban. Using the marginal implicit pricing method, Marginal willingness to pay (MWTP) is also calculated using the median of the rental values of the houses for both rural-urban regions and owned-rented houses. PKR 1676 and PKR 332 are willing to pay per month for urban and rural areas, respectively, to have water quality inside their houses. On the same lines, PKR 1087 and PKR 521 are computed values of WTP for those who have their own houses and living on rent, respectively.

Keywords:
willingness to pay, hedonic pricing models, access to clean water, unsafe water, metered connections

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INTRODUCTION

By the Joint Monitoring Program (JMP) of WHO and UNICEF, it is indicated that 91% of people in Pakistan have access to the sources of drinking water during 2014, approaching the MDG target (93% for the year 2015), but it is further observed that still 38.5 million people are deprived of clean drinking water, and scarcity of water is thriving rapidly. However, such facts sometimes do not indicate that low or bad services are provided. Reforms regarding better water services are required, particularly in rural areas. Usually, households quantify the benefits, including the time, energy, and money saved to get water inside. Households who do not have piped water connections at homes inside are facing many types of costs. First, they face carrying costs to fetch water from other sources, e.g., tube wells, filter plants, wells, taps, or tankers. They have to pay a massive cost per unit purchase of drinking water through other sources. Finally, water from other sources may be unprotected and cause several diseases.

On the contrary, water through piped might be considered protected, lower cost per unit relatively, less probability of suffering from water-borne diseases. There are two ways to measure the value of a piped water connection: one, stated preference, and two, revealed preference methods. We require information about the maximum willingness to pay the households for a water connection (Whittington et al. 2002; Pattanayak et al. 2004). The second approach is the most commonly used approach using the "hedonic property valuation method," which measures the WTP based on housing prices/property values (Whittington et al., 1990; Yusuf & Koundouri, 2005; North & Griffin, 1993). Most of the earlier studies estimated WTP as a percentage of monthly income or expenditures. Solo Montes et al. (2003) found 5.8% of HH monthly income as a WTP for Mexico City. Harapap and Hartono (2007) pointed out that there could be a 9.1% increase in the rental value of the house with one piped water connection in urban areas of Indonesia, while Folmer et al. (2014) found around 8 % monthly income in Indonesia. Nauges et al. (2009) estimated an increase in the sale value of a house by 10–52 % with one piped water connection in El Salvador.

Cebula (2009) also used a hedonic pricing model for Savannah city in Georgia, taking 2,888 single-family homes for five years for the period 2000-2005. Findings reveal that housing prices are significantly positively related to the number of bedrooms, covered area of a house, number of stories, garden, and pool of a house inside. Main findings show that the number of bedrooms positively relates to the actual sales price of the house, toilets, fireplaces, stories, garage car spaces, covered area in feet, garden, a pool, life of a house, i.e., old or newly constructed house. The sales price of the single-family house is negatively affected by the road/street due to heavy terrific and noise. It is further observed that 20-21 premium is also paid for its location per month.

Van den Berg & Nauges (2012) also evaluated WTP after applying the Hedonic price model for Sri Lanka for the survey-based data of 2003-04. Their findings indicate

that Sri Lankan HHs are WTP only 5% of their whole monthly expenditures. Further, they also observed that people who do not have access to water are WTP lower than those who have easy access. It is viewed that providing awareness about the benefits of piped water connection leads to massive investment in installing water-related infrastructure.

Kwak et al. (2013) tried to examine the tap water quality in Pusan, which is the second biggest city in Korea. They used the CVM and Spike model to estimate the odor of taped water, income, gender, age, and education as core variables for estimating WTP. Their principal findings showed that households are WTP $2.2 per month on average using the spike OOHBDC CV model. It was revealed that Pusan residents are WTP $ 32.1 million per year.

Dendup and Kuenzeg (2015) also estimated the hedonic price model for both drinking water and sewage connection for Bhutan using survey-based data compiled from BLSS of 18,766 HHs for two sample periods 2007 and 2012. They applied a fixed effect model by fixing sub-districts to avoid heterogeneity issues. The main results showed that HHs have significant demand for both facilities inside the house. They evaluated the WTP for both facilities for urban residents and found that people of Bhutan who do not have connections at home inside are willing to pay 6% of their monthly, whereas only 2% for rural residents are WTP to avail themselves these facilities. Shazia et al. (2016) also estimated the HHs WTP for Nowshera city obtaining clean water at home inside. They also concluded that awareness, education, and income significantly affect the decision of the household to have clean water at home, which might reduce the risk of water-borne diseases such as cholera, diarrhea, dysentery, and typhoid. They also found that wealthy people are relatively more WTP than poor.

Akhter et al. (2018) also estimated WTP for Lahore city using primary data from the Contingent Valuation Method (CVM). They found a resident of Lahore is WTP only $0.70 and not happy with the water supply. Islam et al. (2019) estimated WTP for one of the Khulna District in Bangladesh and found average WTP is BDT 263, which is relatively low. Islam et al. (2009) examined and measured the WTP for southwest coastal Bangladesh for improved drinking water using contingent valuation survey data of 215 households. Their estimates show that the average WTP for improved drinking water was BDT 193/month (3% of monthly income). They also observed that educated HHs having high income are WTP more for improved water supply.

After going through all related studies, it is observed that WTP is estimated worldwide by different methods, but there is hardly a study that estimated WTP for rural-urban ad rented, and owned house residents WTP for safe drinking water for Pakistan. How the price of water is measured and how much citizens of Pakistan are willing to pay for that utility at home inside. How the affordable prices could be implemented and how the safe water could be provided to their residences conveniently. Such a study is hardly found in literature, and we try to fill this gap by considering all these queries.

The study's objectives are to examine the effect of drinking water on the housing rental value, see the impact of some other factors on the housing rental value, and estimate the WTP for having clean drinking water at home inside. These papers are organized to introduce the main water-related issue and studies on related issues, objectives, and study gaps in section 1. Data and the method used in our analysis are explained in section 2. Section 3 comprises results and discussion. Conclusion and recommendations are highlighted in the last section.

METHODS

Data has been compiled from PSLM 2013-2014 covering 17989 households. It provides information on drinking water sources of households for both rural and urban areas. It also gives information province-wise for all possible drinking sources available and used by HHs. The rental value of the house per month is considered the market value of the house per month, ranging from PKR 2400 to PKR120000 (domestic purpose excluding commercial rent of buildings plazas) is core variable used as the dependent variable in our analysis. Extensive data on utilities, including electricity gas availability, is also being provided. Information of garbage collection from HHs and their neighbors, payments towards this service to the municipality, number of rooms is also given in detail.

Limited information on neighborhood variables is available in this survey, e.g., less than 1% of data is given for the distance of schools near houses, while 99% did not provide any information about school distance. Using PSLM survey-based data and housing prices of the residents of HHs, we have to employ the Hedonic price model, which is the best model for this type of study (Ahmed et al., 2020). It caters only when housing prices are available and provides the best estimates for WTP. Many studies applied the same technique to estimate WTP (Whittington et al. 1990; North and Griffin, 1993; Harapap & Hartono, 2007; Cebula, 2009; Van den Berg & Nauges, 2012; Dendup & Kuenzeg, 2015).

Various approaches are available to value environment-related goods and services; mainly two including revealed preference (RP) and two stated preference (SP) techniques (see Figure 1).

Figure 1. Applications of hedonic price method

Hedonic Price Model (HPM)		
Wage amenity studies To measure WTP, use data on housing prices and wages of HHs.	**Housing prices studies** To measure WTP, use data on housing prices only.	**Health-risk related studies** To measure WTP to value the statistical life of HHs, the risk premium is used as a core variable.
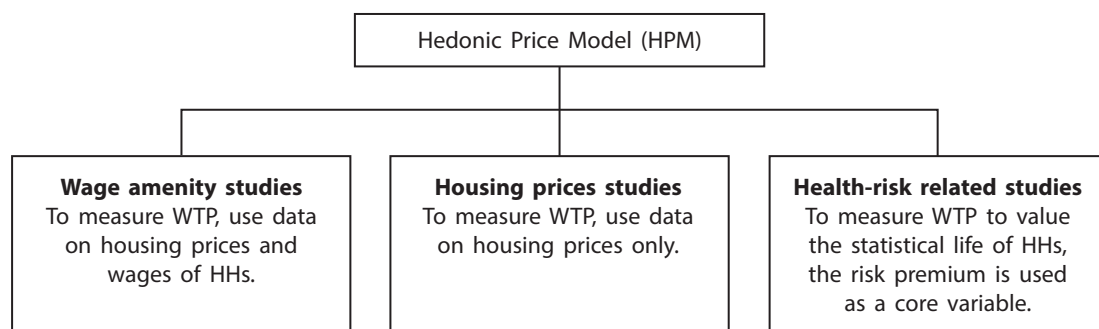
The house's market value or rental value is treated as a dependent variable (Hp), whereas explanatory variables combine all three categories, including Env, Hs, and Nb.

$$Hp= Hp(Env,\ Hs,\ Nb)$$

It also reduces the problem of heteroskedasticity and is easy to calculate. Semilog model may be written as symbolically.

$$\ln H_p = \beta_o + \sum_{i=0}^{n} \beta_i Z_i$$

Marginal implicit price or marginal willingness to pay (MWTP) is calculated as:

$$H_{pzi} = \frac{\partial H_{pi}}{\partial Z_i} = (e^{\beta_j} - 1) H_{pi}$$

In this study, the *hedonic price* model is modified to comply with the first, second, and third goals of the study, i.e., identifying the effects of drinking water supply on the rent price of a house and calculating the value of *implicit marginal price (marginal willingness to pay)* for drinking water. The *hedonic price* model in this study is explicitly written as:

$$H_p = \gamma_0 + \sum_{i=1}^{m} \ln \gamma_1 Hs_i + \gamma_2 N_b + \gamma_4 Wc + \gamma_5 St + \gamma_6 Pr + \gamma_7 Rg + \varepsilon$$

Where:

H_p = Rent price of a house per month

Hs_i = vector of house related variables

N_b = Neighborhood related variables

Wc = water connection dummy variable

St = Sanitation vector dummy variable

Pr = Provincial categorical variable

Rg = Regional dummy variable

In order to estimate the MWTP, we have applied the simple formula:

$$H_{pzi} = (e^{\beta_j} - 1) H_{pi}$$

Where β_j shows the coefficients of regression estimation, e is the simple natural logarithmic numeral, and H_p is the median of the rental value of a house per month.

RESULTS AND DISCUSSION

Table 1 shows the summary statistics of the variables. The statistics show that the rental value of houses starts from 2400 and ends up at 120000 of 15884 households. On average rental value per annum is Rs 30495.8 for all rural and urban regions, not showing a clear picture of rents.

Table 1. Summary Statistics of the Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
The rental value of the house per annum	15884	30495.8	26821.3	2400	120000
Piped water connection	15884	0.2303	0.4210	0	1
Number of rooms	15884	2.2240	1.2780	1	15
Availability of gas or not	15884	0.3056	0.4607	0	1
Garbage collected or not	15884	0.2093	0.4068	0	1
Neighbor pay for garbage collection	15884	6.4385	27.0579	0	600
Garbage collection from a neighbor	15884	2.7117	0.6107	1	3
Employment status	15884	1.1400	0.3469	1	2
Educated or not	15883	1.4427	0.4967	1	2
Income per month	15700	28182.8	12515.3	0	249000
Expenditure per month	15771	33767.0	15164.0	0	250100
Provinces of Pakistan	15884	2.3210	0.8784	1	4
Rural-urban region	15884	1.3242	0.4681	1	2
Age of a household	15884	45.1457	13.8027	15	99

For this purpose, a detailed breakup of the rent per month is given in Table 2. Table 2 shows that about 65 HH pay rent in the range of 2400-30000, rest of 35% (23% pay 30 thousand to 60 thousand, 60 thousand to 90 thousand pay 6.2%). Only 5.1 HH out of 15884 pay more than 90k, only 5.1% of the sample.

Table 2. Main sources of Drinking water (2013-14)

What is the main source of drinking water	Frequency	Percent
piped water	4,421	24.58
hand pump	5,392	29.98
motorized pumping/tubewell	4,954	27.54
open well	612	3.4
closed well	185	1.03
pound/canal/river/stream	717	3.99
Spring	615	3.42
mineral water	48	0.27
tanker/truck/water bearer	638	3.55
filtration plant	349	1.94
Others	57	0.32
Total	**17,988**	**100**

Descriptive statistics of main variables used for the analysis using the Hedonic pricing model are shown in Table 3 shows that PKR 35265 is the rental value per month for urban, while PKR 12735 for rural. On average, around 24 thousand and 495 rupees

is the rent of house per month for overall Pakistan. Only 23% piped water connection (PWC) is available for households in Pakistan, where maximum urban households enjoy this facility and 45 % of urban HH have connections inside their houses. In comparison, only 13 % of rural have PWC inside their residents, and still, 87% are deprived of this facility and use other water sources.

Overall, in all regions, most people have two rooms accommodation, 69% have gas facility about 97% electricity facility. In contrast, 74% have toilets inside their house in urban areas, whereas in rural 88% are still deprived of gas facilities, and about half of the populations in rural still do not have toilets inside their houses.

We have a proper garbage collection system through community and self-help, and 56% use this facility while still in rural they dump in open areas, and no system prevails for garbage collection. It also shows that urban areas for their garbage collection have paid only PKR 54 while it is quite nominal for the whole month, whereas rural residents pay PKR 4. Overall, the people of Pakistan for this facility have paid PKR 20. We have limited information for neighborhood characteristics in PSLM 2014-15. Only 0.4% of people of urban areas provide information about school distance from their residents, while 0.2% rural responded in this respect. We have covered 15884 household data in this study, out of which 32 % are urban HH while around 68 % belong to the rural part of Pakistan.

Table 3. Descriptive Statistics of Hedonic-related variables

Variable	Urban Region	Rural Region	Pakistan
Dependent Variable			
Rent price per month(Pak rupees)	(35265)	(12735)	(24495)
Drinking water sources			
Piped water connection (%)	0.45	0.13	0.23
(No of HH have PWC)	(2321)	(1337)	(3658)
Household characteristics			
No. of room	(2.34)	(2.16)	(2.21)
The gas facility at home	(0.69)	(0.12)	(0.30)
Electricity facility at home	(0.97)	(0.86)	(0.89)
Toilet facility inside house	(0.74)	(0.54)	(0.50)
Environmental characteristics			
Formal garbage collection	(0.56)	(0.04)	(0.21)
Payment for garbage collection/mth	(54.2)	(4.20)	(20.04)
Neighborhood characteristics			
Formal garbage collection from neighborhood	(2.91)	(2.29)	(2.71)
Payment for garbage collection from neighborhood/mth	(17.30)	(1.22)	(6.44)
Distance to school	(0.004)	(0.002)	(0.003)
Total No. of HH	(5149)	(10735)	(15884)
(%age of total sample)	(32.42)	(67.58)	(100)

It is pertinent to estimate rural and urban regions separately to capture the effect of water connectivity and housing prices in most rural regions. Water through pipes is unavailable, and rural regions sometimes have water facilities through boring tubewells,

wells, lakes, and streams. Table 2 indicates the estimation results using equation (1) for the rural and rural regions and Pakistan overall. All variables are significant at 5% and consistent results except a few variables. Regression results for the urban region show that, for example, one unit increase in piped water connection, 8.45% rental value of a house increase as exp (0.07087) = 1.08454. No of rooms also vary significantly, contributing to enhancing the house rent. In order to increase the one room in a house, it increases the house rent by 26% as exp (0.20409) =1.26327. Similarly, the toilet facility inside the house is large, and every household prefers to have it inside their house. It also plays a significant part in increasing house rent, and it contributes significantly by 7.3% exp (0.06167) =1.07315.

We have also examined the willingness to pay off the HH for piped water connection by computing the implicit marginal price for the drinking water, and the results are presented in Table 4. We have used equation two and the median of the housing prices for both urban and rural regions and owned and rented houses for estimation. The median house rent for rural shows around PKR 12000 per month, and for urban it is up to PKR 23500, which is quite apparent. Also rented house and owned the house the median prices of the house as PKR 14000 and PKR 18000 respectively.

Table 4. Calculation of *Marginal Implicit Price (WTP)* for Drinking Water

	Rural			Urban		
	Coef	WTP (Pak Rs)	WTP towards Expenditures	Coef	WTP (Pak Rs)	WTP towards Expenditures
Drinking-Water Characteristics	0.0238	332	0.93%	0.07087	1676	3.05%
Median of house rent per month	12000			23500		
Median of expenditure per month	35684			55000		
	Rented House			Owned-house		
Drinking-Water Characteristics	0.03192	521	1.21%	0.05122	1087	1.46%
Median of house rent per month	14000			18000		
Median of expenditure per month	43210			74321		

Marginal willingness to pay is calculated for both, and it shows that in rural parts of Pakistan, people are willing to pay PKR 332 to avail of this facility, which is 0.93% of their running expenditures. Also, for the urban art of Pakistan, people are already paying some nominal amount for the water usage as water bills. This study shows that they are willing to pay PKR 1676 per month, which is 3.05% of their expenditures, providing clean water inside their houses. Our results are consistent with Caroline and Celine (2012) and Dendup et al. (2015). The rented and owned house dwellers are

willing to pay PKR 521 and PKR 1087, 1.21% and 1.46 % of their monthly houses, respectively. In this, it is viewed that the HHS save their time, energy, and botheration to collect water from other sources, and they prefer to pay more money to enjoy this facility inside their houses (Caroline & Celine, 2012).

CONCLUSION

The study is designed to estimate the people's willingness to pay for piped water connection inside the house along with some other environmental factors, house-related variables, and neighborhood variables by applying the Hedonic pricing model for the survey-based data of PSLM 2013-14 for both urban and rural regions of Pakistan. It is observed that more than 80% of the households pay rent in the range of PKR 2400 to 50k, whereas less than 20% pay huge rent of PKR 50k-120k. It is also viewed that only 25 percent of households avail themselves of the water facility inside the house while the rest of 75 percent are still deprived of such facility and use other water sources declared as un-protective. Surprisingly, more than 85 percent of the HHs have their own houses, while less than 25 percent stay in rented houses.

Using the marginal implicit pricing method, MWTP is also calculated using the median of the rental values of the houses for both rural-urban regions and owned-rented houses. Table 6 shows that PKR 1676 and PKR 332 are the money value households are willing to pay per month for urban and rural areas, respectively, to have water quality inside their houses. On the same lines, PKR 1087 and PKR 521 are computed values of WTP for those who have their own houses and living on rent, respectively.

Water is an asset for any economy, and we also value them, and the government of an economy has to provide it to all citizens. On the one hand, the households must pay water usage price, and waste should be controlled. On the other hand, the government must provide clean and safe drinking water at reasonable rates. Also, the cost of water use must be determined by the availability, area of the house, locality of the house.

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Impact of Authentic Leadership on Organizational Citizenship Behavior by Using The Mediating Effect of Psychological Ownership

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Abstract
The study objective was to examine the role of psychological ownership as a mediator concerning organizational citizenship behavior and authentic leadership. A structured questionnaire was selected to gather primary data from 300 respondents of the telecom sector of Lahore; 263 questionnaires were selected valid. This research use employees of four different companies in the telecom sector as samples. This research uses correlation, independent sample t-test, and one-way ANOVA. The empirical result shows that authentic leadership positively relates to organizational citizenship behavior. According to the findings of this study, psychological ownership partially mediates the relationship between organizational citizenship behavior and authentic leadership among the employees of the telecommunication sector of Pakistan. The Implication of this study is limited to the telecom sector of Pakistan.

Keywords:
authentic leadership, organizational citizenship behavior, psychological ownership, telecom sector, organization

INTRODUCTION

Leadership style is a vital tool for management. If this tool is used efficiently and adequately, it can enhance service performance, promote the climate of an organization, and increase the association with the employee (Watts et al., 2019). People buy into the leader before they buy into the vision. Authentic leaders know about their own multifaceted and promote balanced processing and take decisions based on their core values to create strong relationships with followers based on trust (Afsar et al., 2020). Genuine leadership is the targeted topic of multiple practitioners' researchers (Barry et al., 2017) and researchers (Sebastian et al., 2018). The argument is that this leadership style produces positive employee behaviors, which increases the organization's performance. The organization's performance is dependent on employee performance. This paper will help to know whether the authentic leadership style increases employees' performance or not.

Psychological ownership points to that individual's situation when one feels possession and has the sense of being the owner. Psychological ownership denotes that situation, "where one has the sense of ownership about the target," i.e., it is MINE! (Beard, 2018) Self-efficacy refers to the belief that people can effectively apply action and do well with a particular job (Afsar & Masood, 2018). Sense of belongingness refers to the employee's need to believe that he belongs to his organization; Self-identity refers to internalizing the organization's identity as an implication of self. One expands a common sense of connectedness and meaningfulness (Afsar & Masood, 2018).

The study integrates the authentic leadership style with psychological ownership. The critical component of success in an organization for the managers is to motivate the employees to achieve the highest potential, feel ownership, accept the change, and provide them a safe place that full fill their needs (QWL). The wisdom suggests that people will care for things they own (ownership), and the same sense in business could enhance employee performance and give a positive response to that organization that full fills their Work-life satisfaction needs. Efficient leaders give guidance that motivates the employee to have a sense of ownership of work (PSO), think broadly to solve business issues, and construct better decisions that increase the group's performance (Bennett, 2009). Telecommunication companies should accept the magnitude of leadership and use the principle of this skill to enhance Psychological ownership and organizational citizenship behaviors because the failure of leadership could be very costly for the organization in terms of low performance, employee turnover, customer dissatisfaction, and absenteeism (Watts et al., 2019; Shaikh et al., 2019). Good leadership seems to promote psychological ownership and enhance organizational citizenship behaviors, which leads to promoting employee performance and leadership influencing employee well-being (Firth-Cozens & Mowbray, 2001). Nevertheless, very limited study has been conducted on combining these variables like authentic leadership, organizational citizenship behavior, and psychological ownership.

Employees join an organization to fulfill on-the-job and off-job needs. It is the organization's responsibility to fulfill the needs of the employees. The problem arises when the organization is not fulfilling its needs, and then the behaviors and performance

of employees are also influenced. Studies have shown that leadership style psychological ownership influences the employees' organizational citizenship behaviors (Afsar et al., 2020; Shaikh et al., 2021a; Shaikh et al., 2021b). Therefore, this study is conducted to highlight the impact of authentic leadership style on the employee organizational citizenship behavior with mediating role of psychological ownership.

This study intends to become familiar with the relationship between the authentic leadership style and organizational citizenship behavior through psychological ownership in Pakistan's telecom sector to value the existing gap and problem highlighted above. Therefore, organizations should provide such leadership style that can motivate, direct, and flourish their employees and promote psychological ownership to perform organizational citizenship behaviors. There are several goals from this study. First, to identify the relation of authentic leadership style and psychological ownership. Second, to identify the relation of authentic leadership style and organizational citizenship behaviors. Third, to identify the relation of psychological ownership and organizational citizenship behaviors. Fourth, to identify the mediating role of psychological ownership between authentic leadership style and organizational citizenship behaviors.

It is necessary to have such employees who perform different roles in the present era to remain competitive in the market. The best technique to raise the employees' organizational citizenship behavior is implementing an effective leadership style. This study examined the impact of authentic leadership style on employee organizational citizenship behavior. Therefore, this research study contributes by analyzing the mediating effect of psychological ownership and authentic leadership on organizational citizenship behavior, and the results show that authentic leadership and psychological ownership have positive effects on the organizational citizenship behavior and psychological ownership also has positive results as a mediator on organizational citizenship behavior (Afsar et al., 2020; Shaikh et al., 2021a). This study will help the telecom sector know how a leader can increase employee organizational citizenship behavior. The result of this study could be used to develop the best leadership style that promotes psychological ownership.

Authentic leadership style is described as more oriented towards improving strengths, engaged, caring, and more inclusive climates of an organization (Han & Kwon, 2016). When the followers realize their leader is behaving appropriately, they tend to present more degree of commitment, satisfaction, Organizational practices, and achievement in citizenship (Afsar et al., 2020). Follower's view of genuine management is strongly linked to followers' psychological strength. A higher degree construct involves proficiency, confidence, trust, and spirit (Smith et al., 2009). The first aspect of psychological capital is self-efficacy. So one should predict a good relationship between genuine leadership and self-efficacy as LaRocca et al. (2018) conducted a study to show this relationship. Reliable mentors influence their followers through positive modeling, the primary mechanism (Sebastian et al., 2018). Positive modeling aids in the follower that it is achievable to do the same as their leader does admirably (Hidayat et al., 2020). Authentic leaders shape what they are genuinely conscious of feelings, beliefs, ambitions, motivations, and personality (Carleton et al., 2018; Tunio et al., 2022).

They recognize their identity as leaders and show their awareness of their actions on followers. "That is why; self-awareness should be seen as a guide to true leaders," opening up the constructive modeling. The outcome of the positive modeling may be such that followers recognize themselves following the leader. Ultimately, followers will internalize their leaders' motives, values, goals, resulting in social identity where individuals figure out a self-concept aspect in the form of the organizational attribute (Ashforth et al., 2008). Authentic leaders draw attention beyond personal identifications to such social identity (Newman et al., 2018; Bruce et al., 2004; Whetten, 2006; Tunio et al., 2021).

The most basic human need is the sense of belongingness (Daniëls et al., 2019; Ryan & Deci, 2001). Individuals give importance to stable and optimistic relationships (Hallinger, 2018). As the honest, trustworthy, and open relationship is the crucial part of authenticity (Kernis, 2003), it can be meaningful to suppose that authentic leaders meet the need for followers, a sense of belongingness. Self-improvement is a crucial requirement of human nature (Hallinger et al., 2018). In general, people are searching for knowledge that will reflect them in a positive light. Authentic leaders encourage their subordinates to raise questions and even facilitate them. It is flattered that transparency continues to diminish Self-improvement (Rudolph et al., 2018).

The honest leaders likely cause themselves to be held accountable as they attempt to interpret facts rationally. Self-improvement is a central motivation for human nature (Hallinger et al., 2018). People prefer to search for knowledge that shows them in a positive light. Authentic leaders are mindful of such innate human frailty and strive to counter it by finding knowledge that threatens their firmly held positions (Afsar et al., 2020). Authentic politicians, in other words, promote and even facilitate questioning of their followers. Accountability is considered to aim to minimize self-enhancement (Eva et al., 2019).

When leaders strive to interpret knowledge rationally, they may be prepared to be kept accountable: ideally, beginning the new partnership is beneficial for citizens (Daniëls et al., 2019). By optimistic modeling, trustworthy leaders will respond favorably to the people. In comparison, most people get their highly optimistic faces exposed early on. Authentic leaders respond in such a way that conveys a secure and honest friendship for those who obey. Afsar et al. (2020) studied the relationship between authentic leadership and organizational citizenship behavior. He used samples from three countries. Many studies indicate a positive relation between authentic leadership and organizational citizenship behavior. In the meta-analytical research carried out by Podsakoff et al. (2000).

It was found that leadership behaviors positively impact organizational citizenship behavior. It is specifically related to authentic leadership behaviors because these behaviors help in making an open and fair environment which directly affects employees" behaviors, raise levels of employee satisfaction, willingness to execute OCB (Avolio et al., 2004; and K. Cameron et al., 2003; Govindarajo et al., 2021). Afsar et al. (2020) found that authentic leadership behaviors are positively related to OCB. He used a sample of 397 employees, and 129 were supervisors. He used the level of the employees" identification as mediating variable.

The research conducted by Jiang et al. (2017) shows that employee ownership plans have affirmative social and behavioral consequences when the workers are supported to think of themselves as possessors. Furthermore, Klotz et al. (2018) state that ownership, as an individual attitude, is significant in finding which organizational matters are valuable for labor and concentration, that it forms the associations of the individual with their organization, that it influences the choice of the workers in supporting or obstructing change in organization along with numerous presently unfamiliar effects. The study of Miao et al. (2018). states that the feelings of liability, stewardship, caring the nurturance, selflessness, opposition against change, eagerness toward alteration, inspiration, and citizenship build-up through ownership (Deery et al., 2017). They have concluded in their study about a significant positive relationship between psychological ownership and organizational citizenship, attitudes at work, and behaviors (organizational citizenship and performance).

The studies exist in literature in which it has been found that there is a positive relationship between psychological ownership and the workers' attitudes toward their organization (Wagner et al., 2003). One of the research conducted by Lavy et al. (2017) has shown a significant positive relationship between psychological ownership and dysfunctional behaviors. Ozler et al. (2008) studied the relationship between psychological ownership and organizational citizenship behavior. The data was collected by personnel who belonged to state universities by conducting a questionnaire survey. The study results say that there is a direct relationship between psychological ownership and organizational citizenship behavior, which means if the employees remain in the organization for a more extended period, it will enhance their feelings of psychological ownership. Ultimately, the employees exhibit organizational citizenship behaviors.

Many studies in the literature show a positive relation between authentic leadership and psychological ownership in the meta-analytical study conducted by Podsakoff et al. (2000). It was found that leadership behaviors positively impact organizational citizenship behavior. When followers observe that their leader acts authentically, they tend to present more degree of commitment, satisfaction, Organizational practices, and achievement in citizenship (Afsar et al., 2020). It means that when the employees are feel good about their leaders, they perform extra-role activities. Ozler et al. (2008) studied the impact of psychological ownership on organizational citizenship behavior. Findings of the research mention a simple relation between psychological ownership and organizational citizenship behavior, which means that with employees' feelings of psychological ownership, employees' exhibition of organizational citizenship behaviors also increases.

METHODS

The data that has been collected from the employees of telecommunication sector of Pakistan in order to give study results in form of figures. The purpose of data collection is to study the variables response quantitatively. There are 263 respondents that collected from three telecom companies. This section includes the values resulting from different

tests such as demographics, descriptive statistics, correlation and regression. Reliability of the instrument also has been discussed in detail here. SPSS software as a tool has been used for analysis. The response of the employees regarding authentic leadership, psychological ownership, quality of work life and employee performance also studied quantitatively. Correlation test has been used to see the relationship of variables while regression is used to check the impact of variables on each other.

Figure 1 shows the theoretical framework of this study. This study is going to examine the impact of authentic leadership to organizational citizenship behavior directly and indirect through psychological ownership

Figure 1. Theoretical Framework
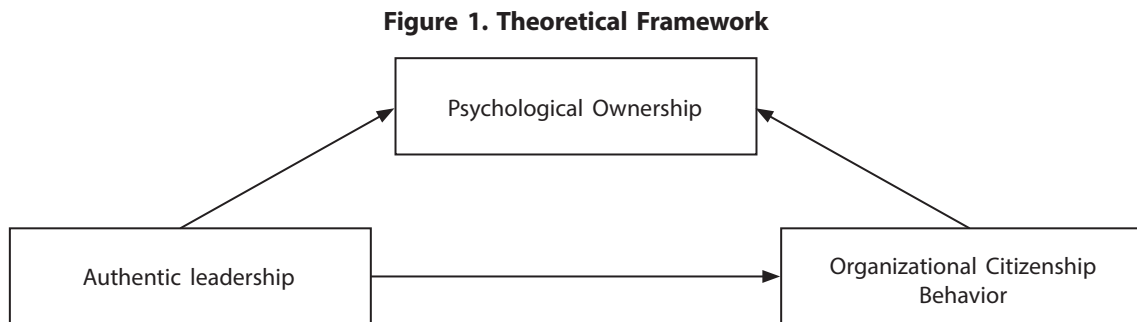
RESULTS AND DISCUSSION

Table 1 shows the correlation coefficient which describes the link between two variables. Its value ranges from +1 to -1. The value of the correlation coefficient is +1 for a positive association, -1 for a negative relationship, and 0 for no link.

Table 1 Correlation Matrix

6-OCB	.079	-.124	-.097	.057	.064	1		
8-Psychological ownership	-.105	-.109	-.042	.013	.040	.569**	1	
9-Authentic leadership	-.018	-.162	-.102	.019	.105	.648**	.612**	1

**.Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed).
Source: Data Processing

The results of correlation matrix in Table 2 show that 2-tailes value of the Authentic Leadership is 0.0000. This value indicating that at 1 % level of significance the relations are significant. At 1% significance level means the above results are true at level of 99 % whereas the rate of tolerance is 1 %. Table 1 shows that there is a positive relation between dependent and independent variables as all the values are positive. There is positive relation between the Authentic Leadership and Organizational Citizenship Behavior and the correlation value is .580. The correlation value of Psychological Ownership is .590 showing that direct relation exists between authentic leadership and psychological ownership.

To find out whether authentic leadership has a major impact on the actions of organizational citizenship or not, analyzes of linear regression have been used and findings discussed below. R value 0.648, from the Table 2 reveals that there is a moderate relation between authentic leadership and organizational citizenship behavior, R values depict the force of relation in results that whether the relation is strong, weak, moderate, or negligible.

Table 2. Regression Result of Model 1

Model	R	R square	B	P	F
1	0.648	0.419	.648	0.000	188.53

Source: Data processing

It is mentioned here that the R-value has been represented the correlation coefficients of the independent and dependent variables. So, these figures 0.648 also show the moderate correlation between authentic leadership and Organizational Citizenship Behavior. So, the conclusion from the data forecast that there is a moderate correlation (0.648) between Authentic Leadership and Organizational Citizenship Behavior. Owing to independent variable, R Square value is the shift division of dependent variable. It is explicitly mentioned in the results from the above table that working environments have a significant effect on worker satisfaction. The above table explicitly shows that OCB improvements of 41.9 percent are due to genuine leadership and that the remaining part can be credited to others Sources/Rounds.

Table 3. Regression Result of Model 2

Model	R	R square	B	P	F
1	0.569	0.324	0.569	0.000	125.24

Source: Data processing

Table 3 shows the result from the second hypothesis. The value of R suggests that there is a mild relationship between genuine leadership and psychological possession. Table 3 shows that R square is equivalent to 0.324. It is explicitly mentioned that Authentic leadership has a modest effect on the ownership of psychology. Thus, the research results indicate a mild association (0.569) among Authentic leadership, and psychological ownership has been moderately associated with that.

Table 4 Regression

Model	R	R square	B	P	F
1	0.612	0.375	0.612	0.000	156.435

Source: Data processing

Table 3 specifically shows that relational ownership shifts of 32.4 percent are due to Authentic leadership and the remaining part can be attributed to other sources/reasons. P-value is stated as .000, meaning that the true p-value is smaller than.001 and is rounded off in this situation. Thus, it is inferred that the null hypothesis H0 would be denied i.e. Authentic Leadership was essentially not strongly linked to psychological Ownership, the results confirm H2 hypothesis. Good relationships exist between Psycological Ownership and Authentic Leadership.

From Table 4, the value of R about 0.612 indicates that there is a mild association between psychological ownership and actions of corporate/organizational citizenship. In the results from Table 4, R square is equivalent to 0.375, it is explicitly mentioned that the quality of working life has a significant effect on the output of the workers. The table above explicitly shows that 37.5 percent improvements in the actions of organizational citizenship are related to psychological ownership and other sources/reasons can be related to the remaining section. P-value is stated as .000, meaning that the true p-value is smaller than.001 and is rounded off in this situation. Thus, it is inferred that the null hypothesis H0 would be denied i.e. psychological ownership was essentially not directly linked to the actions of organizational citizenship behavior, the results support hypothesis H3. Good relationships occur between organizational citizenship and psychological ownership.

Table 5 Regression

Testing steps	R	R^2	R^2 Change	P-Value	B
Analysis 1 X=Authentic leadership Y=OCB	0.648	0.419	0.000	0.648	
Analysis 2 X=Authentic leadership Y=Psychological ownership	0.569	0.324	0.000	0.569	
Analysis 3 X=Psychological ownership Y=OCB	0.612	0.375	0.000	0.612	
Analysis 4					
Block 1: Psychological ownership	0.612	0.375	0.375	0.000	0.360**
Block 2: Authentic leadership	0.712	0.507	0.132	0.000	0.443**

Note:*p<0.01; **p<0.001
Source: Data processing

Firstly, regression is done by considering authentic leadership as independent variables and employee performance as dependent variables, which give the positive and significant association. In the second step, authentic leadership is considered an independent variable to affect the quality of work life. In the third step, quality of work-life is regressed on employee performance. As shown in the second row, the results of this regression tell there is a significant relationship among variables (See Table 5). Figure 2 shows the relationship among variables in this research.

Figure 2. The Relationship among variables

Source: Data processing
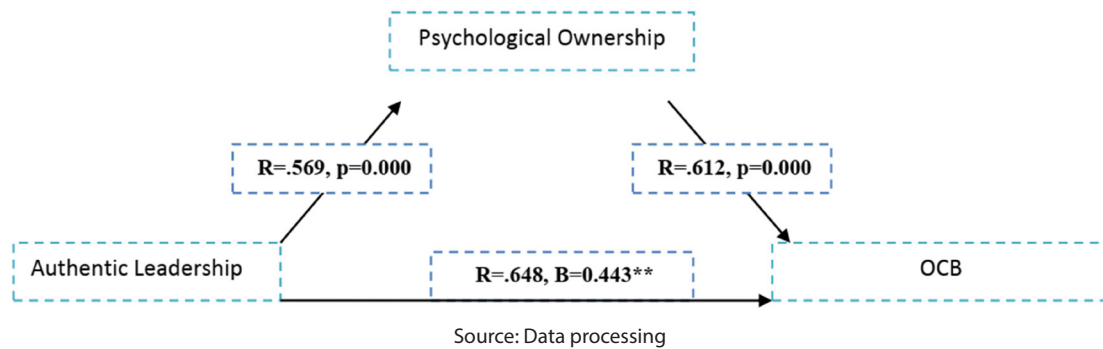
The object of the study was to observe the mediating role of psychological ownership between the relationship of authentic leadership and organizational citizenship behavior. The outcomes demonstrate a positive relationship between authentic leadership and organizational citizenship behavior. The study's findings reveal that psychological ownership partially mediates the relation between authentic leadership and organizational citizenship behavior among the employees of the telecommunication sector of Pakistan. There is a considerable relation between authentic leadership and psychological ownership. Positive relation has been found between authentic leadership and psychological ownership.

This research uses the data collected from the employees of the telecommunication sector of Pakistan to examine the mediating role of psychological ownership on employees. The results show a positive relationship between authentic leadership and organizational citizenship behavior. According to the study's findings, psychological ownership partially mediates the relation between authentic leadership and organizational citizenship behavior among the employees of the telecommunication sector of Pakistan. There is a significant relationship between authentic leadership and psychological ownership. Positive relation has been found between authentic leadership and organizational citizenship behavior.

There is a relationship between authentic leadership style and psychological ownership. The literature supports it (Kara et al., 2013). So the hypothesis is accepted that there is a significant relationship between authentic leadership style and psychological ownership. There is a significant relationship. When leaders value the employee's needs, they increase psychological ownership. The relationship between authentic leadership and psychological ownership is solid and significant. It is consistent with previous literature in which it was considered that authentic leadership has a strong positive relationship with psychological ownership (Alok, 2014; Afsar et al., 2020). Employee considers their leader authentic, and they enhance the sense of ownership. The relationship between authentic leadership and organizational citizenship behavior is solid and significant. It is consistent with previous literature in which it was considered that authentic leadership has a strong positive relation with Organizational citizenship behavior (Alok, 2014; Afsar et al., 2020). Employees consider their leader authentic and look more committed to the organizational goals.

Psychological ownership and Organizational citizenship behavior have a significant relationship. Research in the literature shows a beneficial relationship between psychological

ownership and employees' attitudes about their company (Wagner et al., 2003; Olckers & Koekmoer, 2021). Psychological ownership has a significant impact on the organizational citizenship behavior of employees. It is consistent with the previous research. Psychological ownership showed a more significant impact on organizational citizenship behavior. If the employees have been provided a sense of psychological ownership, they tend to enhance their Organizational citizenship behavior. Tsai (2021) has shown a substantial positive relationship between psychological ownership and organizational citizenship, attitudes at work, and actions in their research.

Psychological ownership mediates the relationship between authentic Leadership Style and Organizational citizenship behavior. The finding of this study is to support the mediation effect of psychological ownership. According to research by Podsakoff et al. (2000), Kuncoro & Wilbowo (2018), leadership behaviors positively influence corporate citizenship behavior. The influence of psychological ownership on organizational citizenship behavior was investigated by (Ozler et al., 2008; Jnaneswar & Ranjit, 2021). According to their findings, there is a clear link between psychological ownership and organizational citizenship behavior, meaning that as workers' sentiments of psychological ownership grow, so do their displays of organizational citizenship behaviors.

CONCLUSION

This research paper adds importance to current studies by explaining the antecedents and implications of genuine leadership and the psychological ownership of telecom sector employees. The current study intends to determine the relationship between the leadership style, psychological ownership, and its ultimate effect on Organizational citizenship behavior. A topology of the independent variable named authentic leadership style is for boosting psychological ownership in a change of organizational citizenship behavior. For data collection, the targeted population of the telecom sector is selected to check their psychological ownership and organizational citizenship behavior outcomes. The organizations selected for the study are PTCL, Mobilink, Zong in Lahore. These organizations are initially contacted for data collection. Detailed analysis of the theoretical model is developed for all organizations.

A leader should focus on its authentic style to enhance organizational citizenship behavior. Based on data analysis, it can be suggested that it is quite helpful for managers. First, if leaders in the organization adopt the authentic leadership style and promote the employee's psychological ownership needs, employees feel engaged in Organizational citizenship behavior and will be more dedicated to organizational goals. Second, there should be a plan to fulfill the employee's needs. Third, there should be a mechanism to promote the sense of psychological ownership among employees. Fourth, in the era of continuous change and a diverse workforce, there must be employees who can perform better, which is one of the most important factors predicting the employees in the organization. Moreover, this study highlights that organizations that focus on boosting up psychological ownership have improved Organizational citizenship behavior than those employees who do not heed these terms.

The future study should focus on the data collection from the managers to focus on Organizational citizenship behavior. Self-rating about the Organizational citizenship behavior was used. Data collection can be made by the leaders how they feel about it. The level of psychological ownership varies from person to person, one person may work better by the feeling of ownership, and one may not. Data analysis can be improved by using more sophisticated techniques.

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The Mediating Role of Brand Attitude for Purchase Intention: Empirical Evidence from Fast Food Industry in Pakistan

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Abstract

This study aimed to examine the role of brand attitude in mediating the relationship between advertising appeal and brand emotion on purchase intention in the fast-food industry of Hyderabad, Pakistan. Primary data was gathered from customers and adopted standard questionnaires from previous studies. The total number of respondents was 150, and for the analysis of data, various statistical tests such as SPSS and AMOS were used to assess the hypothesis, including the Reliability test, Confirmatory Analysis, and Structural equation modeling. The current study's findings indicated a partial mediation effect of brand attitude between advertising appeal and brand emotion for purchase intention. This study helps develop marketing strategies to identify convenience in this field of emotional marketing. They did this by developing a model that reflects on pre-purchase decisions and effects of emotional appeal, feeling, and attitude towards a brand, especially for fast food consumers. For improved market share in the future, marketing organizations in Hyderabad, Pakistan these factors are considered for future marketing strategies.

Keywords:
purchase intention, brand emotion, advertising appeal, brand attitude

INTRODUCTION

Feelings are as persons' affective response to a message in a communication process, this response is not perceived to be an answer to what nature of message it is but it is always according to person's affective state of mind at the time of message exposure. Affective response is different from emotional responses as feelings are usually more general. Gentle and usually are not towards a specific object while emotions tend to be more specific, fierce, vigilant and are usually more directed towards a specific object or thing. (Petty et al., 2001; Schwarz and Clore 1996). This is same in case of advertisement evaluation as a person either perceives an advertisement a whole favorable or not. But in case of feelings positive e and negative feelings build up a single construct, and thus they are bi-dimensional (Ito and Cacioppo 2001).

The result of studies shows that the variable such as product quality, brand advertisement, brand name had a significant impact on customer purchase intention (Akbariyeh et al., 2015). The finding of the research is that the social media advertising has a significant positive impact on the consumer purchase intention under the intermediate impact based on brand attitude so it is recommended that companies should use information that is more professional in social media advertisement to make their buyer willingness to buy their product. The result of the study showed that humor appeal has a most significant impact on purchase intention, whereas gender appeal also has a positive significant impact on purchase intention (He & Qu, 2018). Moreover, emotional and fear also a have an impact less but significant on purchase intention. Furthermore, advertising attitude has a favorable big impact on purchase intention. (Lin, 2011). The study's findings revealed that the while consumer cognition has no substantial impact on buy intention. In addition, customer connection and attachment do have a large impact on repurchase intention and that brand awareness influences emotions and consumer purchase intention (Ekhveh & Darvishi, 2015). The study's findings revealed that there is a clear association between brand perception, feeling, and brand emotion on buy intention, as well as a substantial relationship between product feature and feelings during purchasing (Sadeghi and Tabrizi ,2011). Managers should also work to improve emotional appeals in advertisements and in the physical store. (Nkaabu et al., 2017).

Similar to these studies another study conducted in South Korea, in this study brand awareness and brand attitude have an impact on cosmeceutical product purchases. The findings revealed that cosmetically brand awareness has a big impact on brand attitude and that cosmetically brand attitude has a considerable impact on purchase (Kim and Kim, 2016). Social media advertising has a large impact on brand attitude and social media commercials appearing to be more effective than traditional ads. Brand attitude also has a strong positive impact on purchase intention (Abzari et al., 2014). The study's findings revealed that self-brand congruity, entertainment, and brand placement have a substantial impact on brand attitude and buy intention. In this regard, a favorable association between predicted brand memory, brand attitude, and purchase intention in advertisement (Adis & Jun, 2013).

Researchers have defined purchase intention into 3 main postulates. First, a purchase intention for fast food is derived by a basic need directed towards a brand with some

sentimental attachment towards it. Second, the purchase intention of the consumer is always affected by their feelings. Third, a purchase intension is to forecast an attitude that is directed towards a brand or a specific product like any fast food the most important elements for researchers these days is emotional marketing (Barahona et al., 2018). Consumer choices related to food have become a critical and complex decision these days because people these days are all very much taste conscious with so many choices to make related to food in their daily lives.

This study adds to the field of knowledge in various ways. First, past research examined the impact of attitude on purchase intention of online shopping behavior (Al-Debei et al., 2015). In the past study, authors checked the direct impact of attitude on purchase intention. However, in the present, we have examined the effect of brand attitude as the mediator regarding purchase intention. Second, research scholars (Koenig-Lewis & Palmer, 2014; Song & Qu, 2019) suggested that fast food-related research should be conducted in the future because the research scholars in the past measured mostly online shopping behavior. In this context, in the present study, we have collected data from fast food consumers to verify the mediating effect of brand attitude and purchase intention from developing Pakistan. Third, the present study included both males and females as a respondent, but in past research, only females were taken as a sample to check both variables' attitudes and purchase intention (Zhang et al., 2014; Nicolini et al., 2017).

METHODS

The respondents were chosen using a convenience sample method, which is a non-probability sampling method due to the COVID-19 situation in the country. Respondents were informed that the data collection would be used just for academic purposes and that their profile information would be utilized solely for statistical analysis.

Different tests such as factor analysis, confirmatory analysis, reliability analyses, and SEM have been carried out for data analyses (Structural Equation Modeling). The goal of data collection and analysis is to test the hypotheses as mentioned above. The adopted questionnaire contributed to the collection of the primary research data. The questionnaire consisted of two parts: organized and closely related questions. Respondents were required to fill out a personal profile in the first part, and both dependent and independent variables were requested in the second part. This study used a five-point Likert scale spanning 1 (strongly disagree) to 5 (strongly agree).

Purchase intention is adopted from the study of Chiu et al.., (2012). Research items are "You probably buy products in fast-food restaurants, I would consider buying a product in fast-food restaurants if I need a product of this type & it is possible to buy a product in fast-food restaurants".

Brand attitude is adopted from the study of Haws and Winterish (2013). Research items are "Eating the fast food would be pleasurable, I would enjoy eating the fast-food & If I eat a fast food, it would be satisfying for me".

Brand emotion is adopted from the study of Bagozzi & Dholakia (2006). Research items are "If I can go to eat in fast-food restaurants the next month, I feel contentment,

If I can go to eat in fast-food restaurants the next month, I feel excited & If I can go to eat a hamburger in fast-food restaurants the next month, I feel proud".

Advertising appeal is taken from the research kemps et al., (2014). Research items are "You think advertising of healthy food is aimed both men and women, you remember any healthy fast food advertising & you to go to a healthy fast food restaurant based only in its advertisement".

The sample size is calculated using the rule of thumb formula proposed by Roscoe (1975), 12*10= 120. The best sample size established for better responses as a results is 120. But the authors disseminated the printed questionnaire to 170 respondents in Hyderabad, Pakistan. However, some of the respondents completed the questionnaire right away and returned it. The data collection process from 170 respondents lasted for three weeks. Out of 170 copies, 150 were completed, returned, and analyzed. The overall response rate was 88.23%.

RESULT AND DISCUSSION

Table 1 shows the number of respondents, which are further categorized into 04 clusters Gender, age of respondents, level of education, and income. It shows that out of 150 respondents, the high portion that is 71.3% are male, and 28.7% are female. Most of the respondents are aged between 18-22 includes 45.3% of respondents from 23-27 constituted 25.3%, from 28-32 includes 8.0%, 38-42 constituted 8.7% and Above 42 includes 6.7%. Level of Education. The highest portion of Undergraduate 58.7%, Graduate 40%, and Postgraduate 14.7%. In Terms of Monthly Expenditure on Fast Food, Income below 2,000 includes 46.66%, from 3000-8000 40.0%, and Above 8,000 includes 13.4%.

Table 1. Respondent Profile

Gender	Frequency	Percentage
Male	107	71.3
Female	43	28.7
Total	150	100.0
Age of Respondent		
18-22	68	45.3
23-27	38	25.3
28-32	12	8.0
33-37	9	6.0
38-42	13	8.7
Above 42	10	6.7
Total	150	100.0
Level of Education		
Undergraduate	88	58.7
Graduate	40	26.7
Postgraduate	22	14.7
Total	150	100.0
Monthly Expenditure on Fast Food		
Below 2,000	70	46.66
3000-8000	60	40.0
Above 8000	20	13.4
Total	150	100.00

Table 2 shows the internal consistency and convergent validity of the construct. Factor loading values are more than suggested for all independent variables and dependent variable items (0.35). Composite reliability and Cronbach alpha value are also greater than (0.70). Furthermore, the average variance extraction is more significant than the suggested value (0.50) for all studied variables. These results recommend internal consistency and convergent validity of construct in this study (Hair et al., 2018).

Table 2. Construct Reliably and Convergent Validity

Factor	Items	Factor Loading	Composite Reliably	Cronbach Alpha Value	Average Variance Extraction
Advertisement Appeal	AP1	0.81	0.84	0.84	0.60
	AP2	0.81			
	AP3	0.76			
Brand Emotion	BE1	0.82	0.86	0.86	0.67
	BE2	0.84			
	BE3	0.79			
Brand Attitude	BA1	0.78	0.87	0.78	0.68
	BA2	0.84			
	BA3	0.86			
Purchase Intention	PI1	0.87	0.87	0.88	0.69
	PI2	0.88			
	PI3	0.73			

Confirmatory factor analysis is a technique used to identify the potential of variables while demonstrating relative factors Confirmatory factor analysis (CFA) is a technique used to analyze data quantitatively; it refers to structural equation modeling methods and techniques. CFA is also called a covariance structure. CFA is theses examining process here. The examiner clarifies the total quantity of factors and the design of indicators factor loading. The examiner will compel variables for loading only on specific construct related to them and examine their model fitness. The examiner signifies that the identified variable is the exponent to that fellow variable through CFA. This technique helps to approve or disapprove of any specific menstruation theory.

Table 3 displays a detailed summary of the confirmatory factor analysis. It is widespread to represent the CFA model in route diagrams, where the square represents variables under observation and circles represent latent variables. Moreover, the single-headed arrow indicated supposed causative impact; the double-headed arrows signify covariance between two latent variables (Al-bright, 2008). Here are four latent factors: AA, PI, BA, and BE. Here AA1-AA3 PI1-PI3, BA1-B13, and BE1-BE3 show measured indicator variables. At the same time, the e1-e10 shows errors related to very considered items. Here the arched arrows between the factors indicate the linkage among them, signifying correlation ships occurred after the application of CFA. The factors show high factor loading scores with better reliability. The errors related to every item are encircled and marked as e3-e1 for (AA) advertising Appeal, e6-e4 for (PI) Purchase invention, e9-e7(BA) brand attitude, and e11-e10 for (BE) Brand-emotion. In the factor analysis process, the weight age less than 0.25 is eliminated, but this research shows weight age more than that, and thus they all

are approved. Table 3 displays the value of CMIN, which is 62.620, this value is lower than the independence Model, whose value is 400.946, and thus the value is acceptable. Also, that the CMIN/DF value is 1.648 (CMIN= 62.620/DF= 400.946). This value is lower than 5.0, and thus it indicates the fitness of this model.

Figure 1. Confirmatory Factor Analysis
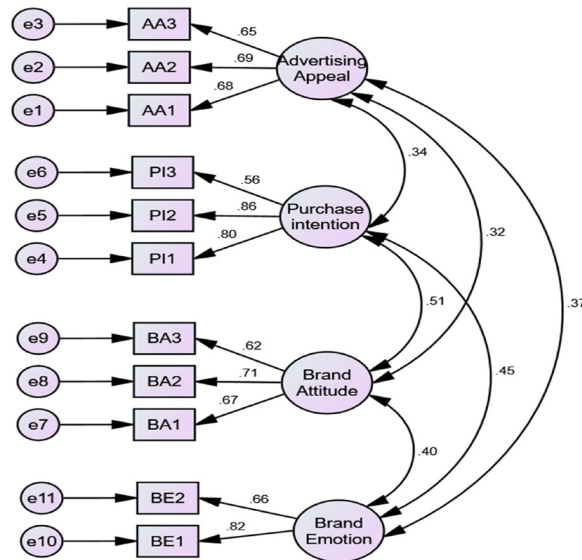
Table 4 shows that all the direct and indirect relationships are significantly related between purchase intention, advertising appeal, and brand attitude mediation. The total effect value of purchase intention and advertising appeal is 0.216, with the R (square) value of 0.09 and a significant P-value of 0.00. At the same time, the direct effect relation among purchase intention and advertising appeal is 0.30, with an R-square value of 0.091 and a P-value of 0.00, showing significance. The indirect relationship effect among purchase intention and advertising appeal shows the value of 0.216 with an R-square value of 0.221 and a significance value of 0.020, showing a significant positive relationship. Here, the R (square) value represents model effectiveness and indicates acceptance of a hypothesis. The SEM models represent partial mediation among the variables.

Table 3. Model Fit Analysis

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	28	62.620	38	.007	1.648
Saturated model	66	.000	0		
Independence model	11	400.946	55	.000	7.290

Table 5 represents that all the direct and indirect effects are positively related between purchase intention and brand emotion and the mediation effect of brand attitude. This model shows a partial mediating effect of Brand Attitude. The total effect value

of purchase intention and Brand emotion is 0.266, along with the R (square) value of 0.243, and has a significant P-value of 0.01. At the same time, the direct effect relation among purchase intension and Brand emotion is 0.364, with an R-square value of 0.133 and P-value of 0.00 showing significance. Indirect relationship effect among purchase intension and Brand emotion shows the value of 0.266 with R (square) value of 0.243 and a significance value of 0.003 showing the significant positive relationship. Here the R (square) value represents model effectiveness and indicates acceptance of a hypothesis.

Table 4. Advertising Appeal (Mediation- SEM)

Purchase Intention-> AA	β	Significant Value	R²
Total Effect	0.216	***	0.09
Direct Effect	0.30	***	0.091
Indirect Effect	0.216	0.020	0.221

Another aspect influencing consumer choice when making a purchasing decision is advertising attractiveness. This study looked at many appealing forms, including emotional, humorous, gender, and fair appeals. Furthermore, they tend to have a long-term impact on client purchasing intentions. The study result shows a significant relationship between advertising appeal and purchase intention, especially humor appeal. "Other than this, another study has been conducted by Long Yi Ling in (2011) on the effect of advertising appeal and advertising spoke person on advertising attitude and purchase intention. A study was conducted in the cell phone industry of Taiwan. This study also proved to have a positive and significant impact of advertising appeal on advertising attitude and thus on purchase intention. This study shows a significant indirect impact of advertising appeal on purchase intention.

Table 5. Brand Emotions (Mediation- SEM)

Purchase Intention->BE	β	Significant Value	R²
Total Effect	0.266	0.01	0.243
Direct Effect	0.364	***	0.133
Indirect Effect	0.266	0.003	0.243

Furthermore, in the past various studies recommended that the attitude positively influences intention to buy (Hwang et al., 2011). Similarly, other authors also confirmed the context of eating behavior's positive and negative results (Ghoochani et al., 2018). The mixed findings were revealed in these past studies. With this information, the present study's authors can say that the attitude has an indirect effect regarding fast food purchase intention, and results are aligned with study Lang & Lemmerer (2019). The study conducted by Zhang et al. (2014) also confirmed the relationship between attitude and purchase intention. Similarly, Jahn et al. (2019) suggested that the attitude for goods and services is directly affected regarding the intention to purchase with the understanding of problem and sustainability.

Emotions are starting point of consumer intention, and these emotions explain the evaluation of any brand before buying it or intending to purchase it. Moreover, advertising may help emotions through physiological changes in an individual (Small & Verrochi, 2009). There is also the role of individual culture on emotions to suggest the intention to buy, and positive emotions lead to customer satisfaction (Wen et al., 2018; Lo, 2017).

This result has been proved to have a significant impact on Purchase intention by several studies also done in the past, just like one done by (Sadeghi & Tabrizi, 2011), in their research study of the correlation between brand perception their impact on purchase intention in fragrance industry of Iran. The study proves that there are a direct relationship in-between feelings, brand and purchase intention showing the significant value of P". Lastly, the study that supports the stated theory from Nkabbu et al. (2017), who investigated the impact of emotional experience on purchase intentions SEM model on social and hedonic value in Kenya's retail business. This study also provided a substantial value by demonstrating the mediating impact on emotional experience and purchase intention and their direct impact on each other. Based on all of these studies and results, it is now determined that in the fast-food sector, emotional connection, feelings, and emotional branding play a critical role in influencing customer purchasing behavior and, in particular, purchase intention.

CONCLUSION

The key objectives of this study were to examine the mediating role of brand attitude between advertising appeal and brand emotions for purchase intention for the fast-food industry of Hyderabad, Pakistan. In the present study, partial mediation was revealed for both variables advertising appeal and brand emotions for purchase intention in brand attitude. However, brand emotions confirmed more significant purchase intention than advertising appeal regarding the fast industry of Sindh, Pakistan.

There are some managerial implications of this study. First, Managers of fast-food restaurants should have to focus on findings that the attitude leads to purchase intention. Second, brand emotions are highly anticipated for purchase intention in the presence of mediator brand attitude compared to advertising appeal in Hyderabad, Pakistan. The managers should study the various emotions, including excitement and contentment, to have better consumer satisfaction in the context of fast-food restaurants.

In the present study, there are contributions and some limitations, which will help the future researcher, fill these gaps. First, incorporating more variables not limited to advertising appeal and brand emotions can test a more complex model. Second, this study is limited to Hyderabad, Pakistan, in the fast-food industry. Lastly, the moderation effect of age and gender can also be studied in the context of the fast-food industry.

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Organizational Citizenship Behavior in Online Transportation Drivers: A Mediation Model

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Abstract

The research originality is the use of organizational commitment variable as mediation and object of research in transportation start-up companies that have not been studied before. The objective of this research was to examine the mediating role of organizational commitment between job involvement and organizational citizenship behavior (OCB). This research is used to develop knowledge about human resource management in start-up companies with partner status. The partial least square structural equation modeling technique is used to test quantitative data and hypotheses. The result of this research is that organizational commitment does not mediate the effect of job involvement on organizational citizenship behavior. Furthermore, job involvement has a significant positive effect on OCB. This study also provides the practical implication that employees who have a high commitment do not make them work extra because the status as partners is very different, so further discussion is needed.

Keywords:
Job involvement; organizational citizenship behavior; organizational commitment

INTRODUCTION

Nowadays, research on organizational citizenship behavior has been widely carried out in academic circles. However, most researchers research employees of a company both on a small and large scale. Few researchers study organizational citizenship behavior among online transportation driver-partners who are different from employees. While increasing online transportation companies, they get more attention about their driver-partners. Organizations need to identify the factors that encourage employees to volunteer for activities outside of their call of duty (Gupta et al., 2017). One of them is organizational citizenship behavior (OCB). OCB is behavior that goes beyond the normal limits of the tasks specified in writing. However, it is not an essential component in the company but can encourage more outstanding organizational function and efficiency (Srivastava & Pathak, 2020).

Previous research has found that job involvement is considered a critical factor that influences an individual's success in the organization. Based on the development of scientific research on job involvement which causes an increase in OCB (Chu et al., 2005; Chughtai, 2008; Cohen, 2006; Dimitriades, 2007; Mustafa & MahaAbdeenAbdeenkeder, 2021; Zhang, 2014). Job involvement is considered a critical factor that influences the success of an individual in the organization because job involvement can improve employee psychology towards his work, which employees will feel directly involved in it and can make an employee give full support to organizational goals so that they can increase organizational productivity and efficiency (Zhang, 2014). Job involvement is a more complex matter than employee involvement, where employees are actively involved, bound, and always related to their work.

In addition, OCB is influenced by many factors, including job involvement (Mustafa & MahaAbdeenAbdeenkeder, 2021). Furthermore, OCB can arise from various organizational factors, including job satisfaction and employee commitment (Bies, 1989; Utami et al., 2021; Zeinabadi, 2010). However, few studies examine the effect of job involvement on OCB mediated by organizational commitment. The majority of previous researchers tested job involvement and organizational commitment as independent variables in partially or simultaneously influencing OCB (Saxena & Saxena, 2015). The concept of organizational commitment refers to the desire and willingness of an employee to contribute to the success of the organization and provide loyalty to the organization and not only provide the best for the organization but also serves as one of the vital reasons not to leave the organization (Redondo et al., 2021). Many researchers have found that organizational commitment can affect employee performance, motivation, and job satisfaction. Therefore, organizational commitment plays an essential role for the company (Organ & Konovsky, 1989). This research will be interesting because the status of driver-partners is different from employees in general. Online transportation companies place drivers as partners, not employees. So this study aims to contribute to the literature by examining the effect of job involvement on OCB and the mediating role of organizational commitment.

Job involvement is identified as how far an employee is involved, bound, and related to his work (Kinicki & Kreitner, 2014). Employees who have high job involvement can

consider their work as a big part of themselves. The involvement creates a strong employee attachment to his work and will minimize the desire to quit his job. Vroom Expectancy theory suggests that administrators should use reasonable personal expectations to inspire employees. If expectations are lower than the offer provided by the organization, then job involvement will increase.

On the other hand, when expectations are higher than the offer provided by the organization, job involvement will decrease. Rabinowitz and Hall's theory, unified theory. In this conceptualization, job involvement will be influenced by leadership style, unique opportunities involved in decision making, social factors. Such values are internalized with work attitudes. When personal characteristics and congruence reach the situation, individuals will develop high job involvement. A multidimensional model, presenting a multidimensional model of job involvement, is not a unidimensional concept. The concept of job involvement consists of three dimensions: emotional job involvement, behavioral work engagement, and cognitive job involvement. Emotional job involvement shows how strongly employees are interested in their work or how much people like their work. Behavioral work involvement shows how strong workers are in managing time in completing work and thinking skills, as seen from completing work and energy devoted to completing work. Cognitive job engagement indicates how strongly the worker wants to participate in making his/her job-related decisions or how important this job is in his/her life (Nursanti et al., 2015). Some of the above theories allow us to examine the effect of job involvement on OCB.

Zhang (2014) explaining more deeply about job involvement is considered a critical factor that influences the success of an individual in the organization because job involvement can improve employee psychology towards his work, where employees will feel directly involved in it and can make an employee give full support to the goal. Organization, to increase the productivity and efficiency of the organization. To improve employee OCB, companies need to pay attention to several factors that can affect the OCB. The first factor is the influence of job involvement. Employees who have high job involvement can consider their work as a big part of themselves. The involvement creates a strong employee attachment to his work and will minimize the desire to quit his job. Mustafa & MahaAbdeenAbdeenkeder (2021) stated that it is essential for the employee to be involved in specific problems where it requires him to spend all his ability and time for the job. Thus, employee engagement is expected to have a significant impact not only on individual outcomes but also on organizational success (Hussein & Tahir, 2019). The organizational theory of Podsakoff et al. (2000) stated that organizational theory, following a cooperative system, and the willingness of the community to contribute and strive in a cooperative system are absolute requirements for an organization.

The relationship between job involvement and OCB has received little empirical attention (Zhang, 2014). Several previous studies have even considered this relationship and found a positive relationship between job involvement and OCB (Chu et al., 2005; Chughtai, 2008; Cohen, 2006; Dimitriades, 2007; Mustafa & MahaAbdeenAbdeenkeder,

2021; Zhang, 2014). Ueda (2011) found that job involvement has a positive effect on OCB for professors and administrative workers in the private sector. Nwibere (2014) has also investigated the relationship between work engagement and OCB of academic staff at Japanese universities. Academic staff who are engaged in their work, for example, tend to be satisfied with their work, become committed to their organization then exhibit more OCB in their work. Then, Arifin & Puteri (2019) also found that job involvement positively affected OCB of 132 lecturers at the Indonesian Ministry of Industry's vocational industrial colleges.

Organizational commitment refers to the bond between an employee and the employer's organization as a whole (Lambert et al., 2020). According Lee & Miller (1999), organizational commitment has been actively and deeply researched. There are values and goals identified by members to form an enthusiastic work attitude in the organization, which leads to increased performance. Furthermore, OCB can arise from various organizational factors, including job satisfaction and employee commitment (Bies, 1989; Utami et al., 2021; Zeinabadi, 2010). Job involvement also has a positive relationship with OCB (Zaraket, 2017). Consistent with corporate behavioral theory (O'Reilly & Chatman, 1986; Organ & Konovsky, 1989), organizational commitment can lead to better results regarding OCB from workers, more extraordinary dedication to the company, and efforts to exceed minimum job requirements. Furthermore, job involvement is related to the psychology of employees with their work or employee commitment to their work and forms organizational commitment (Saxena & Saxena, 2015). Likewise, employees who have a high commitment to the organization will do anything to advance the company because they believe in their work (Qing et al., 2020).

The purpose of this research is to develop knowledge of human resource management for start-up companies, with the difference in status as partners and employees, it is very different in any case, this is a very complex problem for the company that needs to be studied more deeply so that partners become prosperous. Specifically, job involvement is a strong reason for raising organizational commitment, especially during the COVID-19 pandemic, to provide complete dedication to the company. Employees with high job involvement include actively participating and considering work as essential to forming organizational commitment that can lead to OCB workers. In addition, employees who have the assumption that work is self-esteem can provide a stimulus for full responsibility for the current job. Consistent with the reasons above, we argue that job involvement will directly shape employee organizational commitment to creating OCB. In this study, we try to add the organizational commitment variable as a novelty from previous research and previous research has not examined organizational citizenship behavior in online transportation drivers. The main objective of the research is to investigate more deeply the organizational citizenship behavior of Grab driver-partners which is influenced by job involvement and mediated by organizational commitment.

METHODS

In this study the population of Grab online transportation drivers in Malang City, Indonesia. Because the population is not known, so this study uses purposive sampling.

Questionnaires were distributed to driver-partners at the online transportation company Grab. After the data was cleaned, only 127 respondents out of 142 had filled in and were ready to be tested. The selection of the number of samples was due to the limitations of researchers in taking samples and because the large-scale social restriction policy made the drivers we met limited. The majority of respondents, around 96.9 percent of respondents are male. Then, about 80.3 percent are senior high school graduates. Approximately 89 percent have more than one year of work experience. Also, as a side job, 66.1 percent, while 33.9 percent is the primary job.

The job involvement variable constructs use five items from (Coulter 2010) to measure this construct. Where those who have three dimensions actively participate in work as essential and work as self-esteem. Cronbach's alpha of this measurement is 0.83. Organizational Commitment to measure this construct with ten items from (Robbins & Judge, 2008), which has three dimensions: affective commitment, continuance commitment, and normative commitment. Cronbach's alpha of this measurement is 0.92.

Organizational Citizenship Behavior to measure this construct with twelve items from (Organ & Konovsky, 1989). The OCB scale has five measurement dimensions: altruism, conscientiousness, civic virtue, courtesy, and sportsmanship. The items are rated using a Likert scale from 1 "never" to 5 "always".

In SEM-PLS, we used two tests, namely the algorithm as a test of validity and reliability, followed by bootstrapping as a research hypothesis testing equipped with the goodness of fit as a research model test (Hair Jr et al., 2017). Furthermore, in this research in detail, the measurement model assessment is used to test the validity with the value of loading factor, average variance extracted and reliability with composite reliability and Cronbach alpha. Followed by a structural assessment model that is used to answer the research hypothesis.

RESULT AND DISCUSSION

Empirical Result

There are three constructs in the research including, job involvement, organizational commitment, and organizational citizenship behavior. Table 1 present the means, standard deviation, and correlation among variables. Furthermore, the results obtained that job involvement positively on organizational commitment ($r = 0.367$, $p = 0.01$) and organizational citizenship behavior ($r = 0.578$, $p = 0.01$). There is no correlation between the demographics of respondents in the form of gender to the three variable constructs.

Table 1. Means, Standard Deviations and Correlation Among Study Variables

Variable	Mean	SD	1	2	3	4
Respondent Gender	1.03	0.175	-			
Job Involvement	3.946	0.678	-0.092	-		
Organizational Commitment	3.371	0.753	-0.065	0.367**	-	
Organizational Citizenship Behavior	4.252	0.533	0.056	0.578**	0.414**	-

Notes: $n = 127$. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Our measurement model uses five constructs of latent variables, including job involvement, organizational commitment, and organizational citizenship behavior. Measurement of construct variables using validity and reliability test assessments (Hair Jr et al., 2017). The validity test is measured using a loading indicator value of 0.70 (Hair et al., 2008). Furthermore, we assessed using the composite reliability value and Cronbach equipped with the average variance extracted (AVE) value for convergent validity in the reliability test. Table 2 shows the results that the composite reliability (CR) value is higher than 0.70, and the Cronbach value has met the cut-off (Hair et al., 2008). In other words, the instruments used in the research are reliable or consistent and reliable.

Table 2. Result of The Measurement Model Assessment

Construct and Item Description (composite reliability/average variance extracted)	Mean	SD	Skewness	Kurtosis	SFL	α
Job Involvement (Robbin and Judge, 2010) CR = 0.882; AVE = 0.599						0.832
JI1: personally very involved with work	4.110	0.969	-0.914	0.100	0.800	
JI2: my job is an essential part of my life	4.118	0.841	-0.634	-0.324	0.777	
JI3: most of my attention is on my work	3.527	1.060	-0.256	-0.554	0.786	
JI4: the work as self-respect and self-respect that is important to my life	4.094	0.820	-0.528	-0.447	0.786	
JI5: solid bond with work	3.811	0.940	-0.368	-0.485	0.716	
Organizational Commitment (Robbins, 2008) CR = 0.932; AVE = 0.578						0.923
OC1: feel comfortable in this organization	3.574	1.011	-0.417	-0.211	0.747	
OC2: problems that occur in the organization are my problems too	3.409	1.093	0.013	-1.041	0.780	
OC3: desire to spend a lifetime in this organization	2.677	1.271	0.371	-0.990	0.783	
OC4: have a new family in this organization	3.653	1.191	-0.529	-0.816	0.771	
OC5: wants to stay because of salary needs	3.330	1.091	-0.059	-0.724	0.780	
OC6: want to stay because of the benefits	3.464	1.044	0.074	-0.997	0.807	
OC7: find it hard to leave the organization even if you want to	3.220	1.147	0.005	-0.639	0.741	
OC8: It is complicated to get a job if I leave	3.110	1.261	-0.163	-0.898	0.700	
OC9: I want to spend the rest of my career in this organization	2.897	1.314	0.170	-0.939	0.730	
OC10: I believe in this organization	3.433	1.066	-0.142	-0.660	0.757	
Organizational Citizenship Behavior (Organ, 1988) CR = 0.956; AVE = 0.642						0.949
OCB1: I am happy to help coworkers who need help without expecting anything in return	4.307	0.859	-1.098	0.429	0.730	
OCB2: I am willing to take the time to help when my coworkers need my help	4.338	0.726	-0.999	0.934	0.800	
OCB3: I am willing to help coworkers who have difficulty in orientation because they have just joined	4.212	0.803	-0.873	0.377	0.815	
OCB4: I always obey company rules even though no one is watching	4.330	0.787	-0.861	-0.211	0.765	

Construct and Item Description (composite reliability/average variance extracted)	Mean	SD	Skewness	Kurtosis	SFL	α
OCB5: I do my job to the fullest with honesty and responsibility	4.448	0.783	-1.485	1.856	0.858	
OCB6: I regularly follow the activities held by the company	4.332	0.744	-1.191	1.721	0.792	
OCB7: I always follow the changes that occur in the company	4.401	0.758	-1.267	1.392	0.801	
OCB8: I remind my coworkers not to break company rules	4.196	0.797	-0.848	0.392	0.736	
OCB9: I always maintain good relations with coworkers	4.440	0.741	-1.513	2.523	0.859	
OCB10: I try not to cause trouble with coworkers	4.354	0.750	-1.260	1.776	0.840	
OCB11: I will adapt and implement the policy	4.409	0.759	-1.399	1.972	0.826	
OCB12: I am not exaggerating matters out of proportion	4.401	0.758	-1.377	1.936	0.783	

Notes: $n = 127$. SFL, standardized factor loading; CR, composite reliability; AVE, average variance extracted; α, Cronbach's α

Then, the convergent validity test was carried out, as seen from the AVE value using a minimum limit of 0.5 (Chin & Newsted, 1999). Table II shows that the AVE value has a value already higher than 0.5. Then, Henseler et al. (2015) has developed a test using the HTMT criterion in discriminant validity testing. Table 3 shows that the HTMT criterion value is smaller than 0.85, which indicates that the discriminant validity test in this study is fulfilled.

The structural model is used to test the hypothesis, namely to examine the effect of job involvement on organizational citizenship behavior, both direct and indirect (mediated organizational commitment). After describing the results of the metric measurements, we tested the structural model based on the magnitude and significance of the path coefficient values using a 5000 resampling with bootstrapping procedure. In Figure 3, the results of the assessment model have been presented.

The results of model testing can be seen in Table 4 and Figure 1, which show that job involvement directly influences OCB ($\beta = 0.56$, t = 9.79, p < 0.05), which means it supports H1. However, this study also examines the mediating role of organizational commitment on the relationship between job involvement and OCB.

Table 3. Discriminant Validity (HTMT Criterion)

Constructs	1	2	3
1. Job Involvement	-		
2. Organizational Citizenship Behavior	0.624		
3. Organizational Commitment	0.413	0.251	-

Note: $n = 127$

Based on the criteria of using smartPLS 3.0 from Hayes (2017) found the mediation result of organizational commitment between job involvement and OCB ($\gamma = 0.01$, p > 0.05)

was not significant. In our mediation test, we used bias-corrected bootstrapping at 95% CI. However, we found that organizational commitment was not a medical variable. So, H2 is not supported. Overall, our proposed model can explain the OCB variant by 32.9 percent. Next, we tested the goodness of fit model using Q-square predictive relevance and standardized root mean square residual (SRMR). Q-square predictive relevance is used to measure the structural model, measuring how well the model's observed values and parameter estimates are. Q-square value > 0 indicates the model has predictive relevance (Geisser, 1975; Stone, 1974). In our study, the Q-square value was 0.442. While the SRMR value is 0.089, which means it is smaller than 0.7 (Bagozzi & Yi, 2012).

Table 4. Result of The Hypothesis Testing

Relationship	Path Coefficient	T-Statistic	95% CIs (bias-corrected	Result
JI → OCB	0.56***	9.795	[0.010, 0.653]	Supported
JI → OC	0.41***	6.664	[0.010, 0.504]	Supported
OC → OCB	0.02	0.444	[-0.004, 0.149]	Not supported
JI → OC → OCB	0.01	0.413	[-0.050, 0.069]	Not supported
Q-square	0.442			
SRMR	0.089			

Notes: *n* = 127. JI, Job Involvement; OC, Organizational Commitment; OCB, Organizational Citizenship Behavior; SRMR, Standardized Root Mean Square Residual *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Discussion

The research only focuses on the direct effect of job involvement on OCB. However, this study examines the mediating role of organizational commitment in providing a comprehensive understanding of OCB theory. Several previous studies have found that job involvement can increase OCB (Arifin & Puteri, 2019; Chu et al., 2005; Chughtai, 2008; Cohen, 2006; Dimitriades, 2007; Mustafa & MahaAbdeenAbdeenkeder, 2021; Rotenberry & Moberg, 2007; Ueda, 2011; Zhang, 2014). This study contributes to employee and employee engagement by providing empirical evidence of job involvement on OCB in the online transportation sector in Indonesia. The results of this study are following organizational theory of Podsakoff et al. (2000) that the willingness of the community to contribute to the organization is an absolute requirement. During the COVID-19 pandemic, all companies are required to stick with the rules regarding restrictions on community activities. These policies impact decreasing the income of online transportation drivers because people are limited in their mobility. As a result, companies need to continue to pay special attention to driver-partners to not think about stopping being a driver-partner and always work beyond the company's target. Our research emphasizes a decisive job involvement from driver-partners is needed. As a company engaged in the transportation sector, Grab Indonesia must know how much self-control the driver has because, in this case, the driver is the company's main milestone in increasing the company's effectiveness and efficiency. Furthermore, the level of involvement of a

driver in any activities that help drivers recognize company regulations will provide job knowledge that impacts company profits.

Figure 1. Result of the structural model assessment
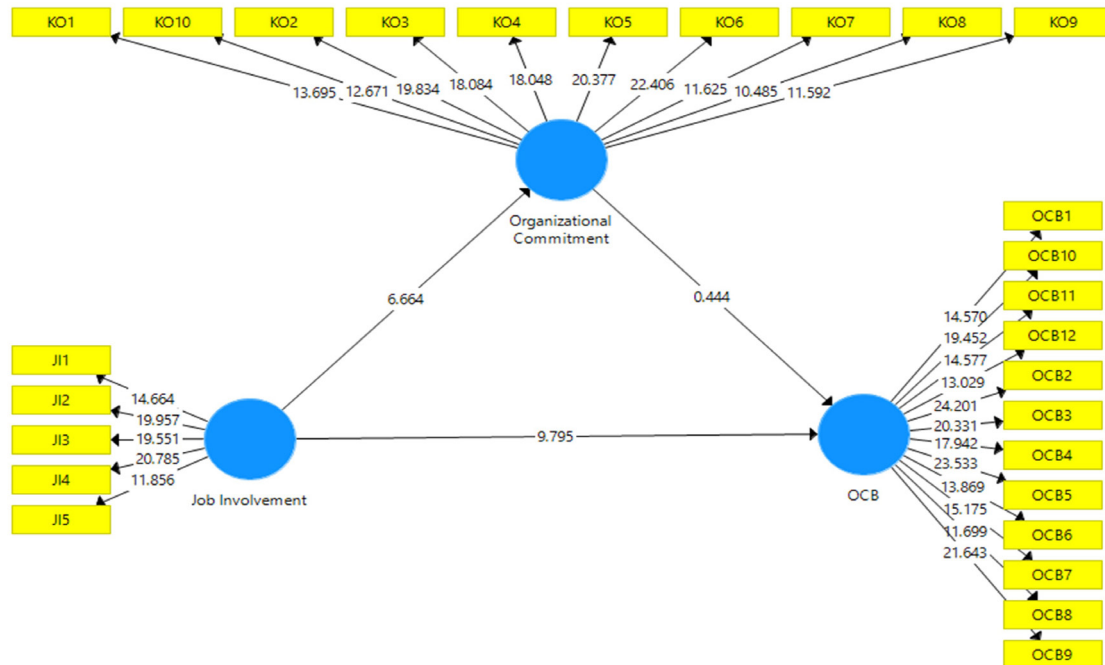
Furthermore, several factors can increase OCB (Dierdorff et al., 2021; Nwibere, 2014; Wang et al., 2021). Our research develops the literature on job involvement on OCB with a mediating mechanism with organizational commitment. Contrary to our expectations, the test results show that organizational commitment does not mediate the effect of job involvement on OCB. Perhaps, this happens because organizational commitment does not have a significant effect on OCB. However, the results of this study add new findings regarding mediation theory from previous researchers that have not been found in previous studies because previous studies focused on testing the direct effect of job involvement and organizational commitment to OCB directly (Saxena & Saxena, 2015), researchers still have not found the mediating results of organizational commitment. The results of our study found that organizational commitment did not mediate the effect of job involvement on OCB in 127 online transportation drivers in Malang, Indonesia. Thus, our research provides a new understanding of the effect of job involvement on OCB through an organizational commitment from online transportation drivers in Indonesia.

However, in this study, an organizational commitment was not proven to mediate between job involvement and OCB for Grab driver-partners in Malang City, Indonesia. The results of this study are in line with research from Sumarsi & Rizal (2021) which found that organizational commitment does not affect OCB. Furthermore, the study explains that employees with strong organizational commitment are not able to push

themselves, nor are they able to develop suggestions from leaders to be able to mobilize existing human resources to achieve goals and reduce intentions to leave the company. This study provides empirical evidence that employees who are highly committed do not make them work extra, contrary to opinion (Saxena & Saxena, 2015). The results of this study are also different from research od Shahjehan & Shah (2019) which found research results that organizational commitment can increase organizational citizenship behavior. Differences in the results of this study can occur from the time of the study, this study was carried out during the covid-19 pandemic that allows for differences in results both before and after the pandemic, and there are other possibilities due to differences in the object of research. So the results of this study can still be discussed because commitment does not mediate the effect of job involvement on OCB on Grab driver-partners in Malang City, Indonesia.

CONCLUSION

Based on the research findings show that only job involvement has a positive effect on OCB. Surprisingly, organizational commitment does not directly affect OCB, and organizational commitment does not mediate the effect of job involvement on OCB. This research is helpful for the existing literature on the job involvement of driver-partners of online transportation companies. There are still few researchers who study in this area. Thus, organizational commitment is not essential in improving OCB. Thus, the policy implication that we can present is that companies need to continue to provide proper welfare for drivers because they are not employees but partners, through a fair incentive scheme for drivers and the application of points aimed at mutual benefit between the company and partners. Driver-partners are different from employees in general. They never meet the director of the company where he works. They become partners who have different requirements and policies applied to employees. Driver-partners are given incentives in the form of a percentage of profit-sharing, so the wages they receive depend on how long they work in a day for 24 hours.

This research was conducted on Grab driver-partners in Malang City, one of the many cities in Indonesia, a developing country with the fourth largest population globally, so there is still the possibility of having different results if the research is conducted in another city. Future researchers are expected to expand the research object by comparing several big cities such as Surabaya, Jakarta, and Bandung. In this study, organizational commitment did not mediate the effect of job involvement on OCB. Therefore, further researchers need to try to use other variables that can mediate the influence of these two variables, such as job satisfaction, reward and incentive systems, considering that Grab drivers are partners, not as employees or employees, this has a different perspective because it could be a job as a partner. A driver is a primary job or side job. Therefore, by understanding this perspective, it is hoped that future researchers can understand it from a different point of view.

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The Probability of the Financing Sustainability of Micro-firms Supported by Islamic Social Fund

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Abstract

This study aims to identify factors that influence financing sustainability, thereby determining the probability of attaining the subsequent financing from Islamic social funds. Islamic social funds provide funding for micro-firms using a financing scheme that differs from conventional financing terms. For the lower level, Islamic social funds usually offer a limited amount of no-cost financing called qard. In contrast, for more profitable micro-firms, Islamic social funds provide low-cost financing called murabahah. However, most micro-firms need financing in sustainable terms, either using a qard scheme or a murabahah scheme. We assume that only micro-firms showing business growth may generate higher financing using the murabahah scheme. We use data from 1,346 micro-firms. We found several factors that contribute significantly to a micro-firm having a higher chance of generating further funding, such as group-type financing, amount of funding (plafond), time to maturity, and demographic aspects such as age and number of dependents. However, we found that the initial contract scheme (whether qard or murabahah) does not relate to the chance of eligibility for further financing.

Keywords:
financing sustainability; business growth; microfinance; Islamic social fund; murabahah scheme; mudharabah scheme

INTRODUCTION

Alleviate poverty is crucial since poverty is the greatest moral challenge of many countries. About three billion people are still trapped in poverty (Obaidullah, 2008). Financial institutions have been acknowledged as tools to alleviate poverty recently. People who have limitations in job choice commonly expand their possibilities by becoming micro-business actors (Fiala, 2018).

Unfortunately, pre-prosperous societies are generally non-bankable societies. People in such societies do not have bank loans since it is hard to fulfill their collateral requirements (Dalimunthe et al., 2019). Thus, micro-firms need a specific policy rather than the standard loan requirements of formal financial institutions.

Islamic banks are expected to carry a social mission to reduce poverty, especially in Muslim countries. However, Islamic banks to fulfill this expectation paced with many constraints stemming from the banking industry environment, such as high administrative costs and the lack of collateral (Obaidullah, 2008), high asymmetric information (Dalimunthe et al., 2019), the need to reach high performance and soundness (Al Arif et al., 2020), and disparities in economic growth in areas where Islamic banks operate (Mufraini et al., 2020).

Among poverty alleviation programs adopted recently is economic empowerment through micro-business financing or micro-financing (Fitriasari & Dalimunthe, 2019). Microfinance is an economic development approach that benefits low-income people who run businesses. The concept of microfinance was introduced by Muhammad Yunus, who founded the Grameen Bank in Bangladesh. Currently, microfinance institutions are non-negligible financial intermediaries in less developed countries' financial systems and emerging economies (Soumaré, Tchuigoua, & Hessou, 2020). El-Komi and Croson (2013) show that microfinance can significantly reduce poverty.

Microfinance programs can serve the financial needs of micro-business actors to continue to operate. A business run at the micro-level offers additional income to supplement one's earnings (Hassan and Saleem, 2017; Fianto et al., 2018; Fajarini et al., 2021). The path of micro-empowerment offers a significant positive change in poverty alleviation (Coulibaly et al., 2018). Microfinance creates opportunities to strive individually (Verrest, 2013) and is a helpful instrument for new entrepreneurs (Arbolino et al., 2018). Microfinancing encourages pre-prosperous communities' empowerment (Weber and Ahmad, 2015; Fianto et al., 2018). Microfinance institutions' operations directly increased society's welfare by providing more entrepreneurial activities that ultimately enhanced economic growth (Abrar, Hasan & Kabir, 2020).

Islam is a religion in which providing social funds for alleviating poverty is a part of worship activity. Islamic social funds consist of zakat funds, infaq, and alms and are mainly collected by the zakah institutions. The allocation of Islamic social funds can partially overcome the lack of financing for micro-firm. A Zakat institution may have a variety of empowerment programs to channel productive funds. Indonesia is one country where zakat funds have been used to finance micro-firms. For example, Badan

Amil Zakat Nasional (BAZNAS), an Indonesian social institution that partners with the UN, formed a Baitul Qiradh, meaning that it is devoted to applying social funds for productive purposes, which is a microfinancing initiative (Ascarya, 2007; Obidullah, 2008). Islamic social funds aim to alleviate poverty and improve the recipients' socio-economic welfare (Hassan & Saleem, 2017).

Obaidullah (2008) explains two broad categories of microfinancing models: social-based (non-profit) and commercial-based. The social-based model does not require compensation for the loan. It is financing with a qard contract, a virtue contract with zero interest rate (Salleh et al., 2014). For targets of pre-prosperous societies, ultra-micro entrepreneurs, or new businesses, a qard contract is appropriate (Obaidullah, 2008). According to Mustofa (2016), financing with qard contracts provides many benefits, including helping customers in times of trouble by providing short-term bailouts and supporting small traders to expand their business. Thus, a qard contract is a social mission for sharia-based financing institutions in assisting pre-prosperous clients.

On the other side is commercial-based financing - murabahah and ijara contract (Shaikh, 2017)-which require a margin over the principal loan repayments. Murabahah aims to *make a profit*. Murabahah is a kind of sale and purchase transaction. There are terms and essential financing elements with a murabahah agreement (Acharya, 2007). First, murabahah financing is not an interest-bearing loan. Murabahah financing is the buying and selling commodities at a substantial price that includes a profit margin above the mutually agreed cost. Secondly, murabahah is one form of buying and selling when the seller explicitly states the cost of goods sold and sold by adding the desired profit (margin). Thirdly, murabahah is declared valid when the cost of goods can be determined with certainty. Murabahah financing currently dominates the existing products in Islamic financial institutions (Muhamad, 2014).

Islamic microfinance programs can contribute to socio-economic factors. The Sharia financing approach involves developing micro-business through financial and non-financial assistance. Shariah micro-financing seeks to embrace people who experience financial exclusion, helping them obtain sustainable microfinance facilities as part of a vision of the prosperous welfare of society (Obaidullah, 2008). Theoretically, the Islamic approach in the financing or investment sector involves ethical and moral principles based on Islamic values of trust, honesty, and brotherhood. These dimensions lead to differences in characteristics vis-à-vis conventional lenders (Al-Harran, 2014). Transactions are about how to make a profit and how to empower the community.

The Islamic social fund should produce healthy and prosperous funding, characterized by a reasonable repayment rate. Although socially oriented, this Islamic social fund should conduct a screening process of potential recipients through a feasibility survey. Potential recipients are expected to survive in their business, sustainable and growing. Whereas mainstream financing institutions apply specific selection criteria for potential recipients, such is not the case in empowerment through microfinance based on social funds. If potential fund recipients are pre-prosperous societies with social assistance for business capital, they are among the targeted recipients of social funds from microfinance

institutions. However, this looseness may increase the risk of repayment, which will result in the subsequent unsustainability of the financing, which will certainly hamper the process of empowering the pre-prosperous society. Therefore, it is necessary to identify the factors affecting funding and business growth sustainability.

This study identifies factors determining a microfinance program repayment performance, both from borrower and loan attribution. From the borrower side, we perceived it is crucial to identify the demographic aspects and financing attributes that may affect the funding performance. Abdou et al. (2014) suggest several factors to evaluate a micro-financing, such as the clients' profile–gender, age, marital status, occupational education level. On the other side, financing attribute factors are critical factors determining microfinance program performance. Those factors are the types of financing (group or individual), funding size, and time to maturity (tenor).

Mirpourian et al. (2016) show that motivation to reach higher loans affects better repayment performance. Studies conducted by Bilau and St-Pierre (2017) show that older borrowers are wiser, more risk-averse, more insightful, and more responsible than younger borrowers. Older borrowers are more likely to return their loans, while the likelihood of failure is higher in younger age borrowers (Bilau & St-Pierre, 2017). Studies in microfinance have a particular concern regarding the gender of the borrower. D'Espallier et al. (2011) found that, in general, women microfinance clients tend to exhibit lower credit risk for lenders than men clients.

Weber & Ahmad (2015) showed that microfinance empowers women who receive loans. Dorfleitner & Oswald (2016) shows similar results regarding better repayment rates, unless in group lending. All those women's borrowers face additional barriers as their gendered role forces them to be less risky and follow traditionally accepted business modes (Dutta & Banerjee, 2018). From loan attributes, Dorfleitner & Oswald (2016) found that the loan size, the duration of the loan (tenor), and the grace period may affect the possibility of default. Microfinance institutions in a given region typically lend to individual borrowers with existing micro-enterprises rather than exercising a group lending approach, resulting in more substantial loan provisions.

Group financing has advantages in terms of ease of information, group support, and situations where group pressure is required. Several studies show the effect of these factors on the performance of financing. Other studies show that group financing is better in mitigating crime in funding than special financing (Kodongo & Kendi, 2013). Group financing programs are more effective than individual financiers in reducing the risk of returns failure (Kodongo & Kendi, 2013). This scheme is suitable for the underprivileged or households with no entrepreneurial experience and a history of borrowing and successful payments. This article is structured in four parts—introduction and literature reviews described in the first part. The second and third parts describe research methods, results, and discussions. The conclusion provides in the last part.

METHODS

This study examines the phenomena occurring in micro-financing using Islamic social funds. We used secondary data in this study. We obtained data from institutions providing micro-financing based on Islamic social funds. The data contains track records of client participation (the debtor) in financing and the type of contract engaged. As well, the data contains demographic and financing attributes. Demographic data include age, gender, and the number of dependents. Data on financing attributes include the type of financing agreement, type of financing (i.e., individual or group), loan size, and tenor. The recipient of funds is a pre-prosperous community group, owns a micro-business with assets below 5 million, and is financed from Islamic social funds, either the qard or murabahah schemes. The data of 1,346 micro-firms was tested in this research.

Financing sustainability occurs when a micro-firm owner generates further financing to the subsequent stage, with larger new loan sizes and tenors, after fully repaying the first loan. Financial sustainability shows that the business run by clients is still running. In empowerment-based financing, the financing provided for the client is a social contract (qard) loan or a zero-interest loan. Only a tiny portion of the micro-firm owner did not get financing with a qard contract at the first stage.

Next, the micro firms whose businesses run and grow will be offered financing with a murabahah contract for the subsequent stage. The existence of business growth indicates the ability of clients to pay more than the principal amount. Clients' ability to transform from a social-financing (qard) contract to a commercial contract (murabahah) accompanied by a margin indicates the business's growth. The change in this type of contract correctly assesses business growth variables. Figure 1 show the overview of the research framework for this study.

Figure 1. Research Framework
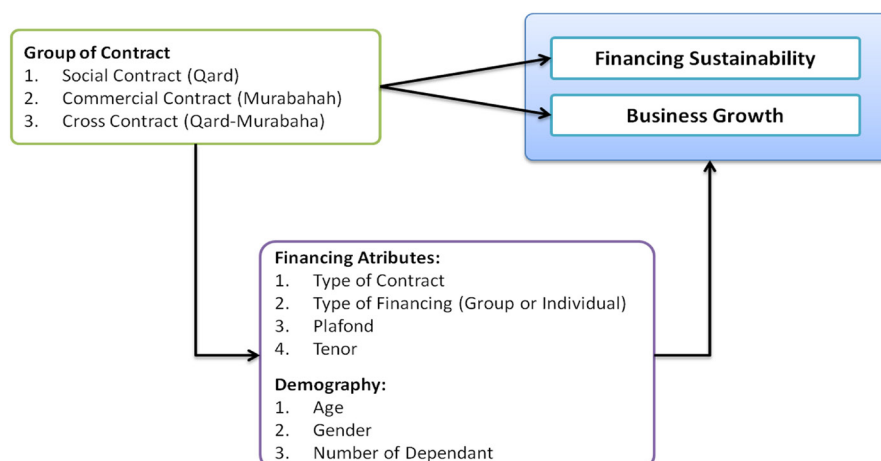
We develop two models in this research. The first model analyzes financing sustainability, while the second analyzes business growth. Our analysis was conducted with two logistic models.

Model 1:

$$FS_i = \beta_0 + \beta_1 \text{Contract}_i + \beta_2 \text{FinType}_i + \beta_3 \text{plafond}_i + \beta_4 \text{tenor}_i + \beta_5 \text{age}_i + \beta_6 \text{Gender}_i + \beta_7 \text{ND}_i + \varepsilon_I \quad (1)$$

Model 2:

$$BG_i = \beta_0 + \beta_1 \text{FinType}_i + \beta_2 \text{plafond}_i + \beta_3 \text{tenor}_i + \beta_4 \text{age}_i + \beta_5 \text{Gender}_i + \beta_6 \text{ND}_i + \varepsilon_i \quad (2)$$

Where:

FS (Financing Sustainability); 1 if the financing continues and 0 if the financing does not continue

BG (Business Growth); 1 if the move to murabahah contracts for further financing and 0 if not

RESULT AND DISCUSSIONS

In this section, we provide the F-test result for both models, as presented in Table 1. Based on the processing result, the chi-square value has a significant level of 0.000 < 0.05. However, the R-squared of the first model is 0.25, while the second model is 0,38. It means the first model's explanatory ability (sustainability in financing) is 25%, while the second model (business growth) is 38%. We conclude that both models can explain the sustainability of financing and the business growth of micro-firms.

Table 1. F test results of two models

DV	-2 Log-likelihood	Chi-square	Sig	Nagelkerke R Square
FS	1545.771	6.052	0.000	0.25
BG	654.242	1.650	0.000	0.38

Table 2. Regression results of Model 1 (DV. Financing Sustainability)

Variable	Hypothesis	Coeff	Prob	Exp(B)
Constant		1.11	0.000***	3.033
Contract	-	-0.505	0.144	0.604
FinType	-	-1.141	0.000***	0.320
Plafond	-	-1.458	0.000***	0.233
Tenor	-	-1.975	0.000***	0.139
Age	+	0.627	0.000***	1.873
Gender	-	0.081	0.595	1.085
Number of Dependents	-	-0.206	0.112	0.814

*10%, **5%, ***1%

The following calculation in Table 2 presents the logit regression of the influence of financing attributes and demographic factors on financing sustainability. Seven independent variables significantly influence the types of financing (group/individual), loan size, tenure, and age. Overall independent variables significantly affect the independent variables.

The following calculation in Table 3 gives the results of logit regression of the influence of attributes of financing and demographic factors on business growth. We divide the discussion into two parts. The first part discusses factors that determine the chance of a micro-firm owner to receive further financing or sustainability financing. This part is the study's model 1 (one), and the result is shown in table 2. Here, financing sustainability is defined as a micro-firm that received further financing after full repayment from the previous loan. As shown in Table 2, several factors that have a significant relationship with financing sustainability are the type of financing, maximum loan size or plafond, loan term or tenor, and age of the micro-firm owner. Type of financing variable divided into individual financing (1) and group financing (0).

Table 3. Regression results of Model 2 (DV: business growth)

Variable	Hypotheses	Coeff	Prob	Exp(B)
Constant		-1.556	0.000***	0.211
FinType	+	1.102	0.000***	3.011
Plafond	+	-19.57	0.990	0.000
Tenor	+	-14.453	0.997	0.000
Age	+	0.324	0.102	1.383
Gender	-	-1.285	0.000***	0.277
Number of Dependents'	-	0.042	0.830	1.043

* 10%, **5%, ***1%

The logistic regression coefficient for the financing type is -1.141, with a significance value of 0.000 <0.05. This result indicates that micro-firms with individual financing will be less likely to sustain financially than group financing with only 0.32 times of chance to receive further financing. In other words, group financing has a 1.47 times higher chance to receive further financing compared to individual financing. This finding is in line with a study conducted by Kodongo and Kendi (2013), who conclude that group financing programs are more effective in mitigating risks, especially the risk of default. The second variable that has a significant relationship to financing sustainability is the maximum loan size, known as 'plafond.' The group members remind each other regarding loan repayment schedules and play social control.

This research defines maximum loan size IDR 1 million and above as 1 (one) and below IDR 1 million as 0 (zero). As shown in Table 2, the logistic regression result

shows a coefficient -1.458, with a significance value of 0.000. These results indicate that clients with a financing loan size IDR 1 million or above are less likely to sustain with 0.233 times of chance. In other words, a micro-firm owner with a maximum loan of less than IDR 1 million is 1,29 times chance higher to financially sustain compared to a micro firm with a maximum loan size of IDR 1 million or more. The third significant variable is the loan repayment period or 'tenor.' The tenor is also a dummy variable in this study, identifying 1 (one) for above six-month tenor and 0 (zero) for six months or less. The logistic regression coefficient for the tenor variable is -1.975, with a significance value of 0.000.

These results show that a micro-firm with a financing period of six months or less is 0,139 times the chance to sustain. In other words, a loan with a financing period of more than six months is a 1,16 times chance higher to financially sustain compared to a micro firm with a financing period of six months or less. The following variable is the age of the micro-firm owner, divided into clients above 40 years old (1) and up to 40 years old (0). The logistic regression coefficient for the age variable is 0.627, with a significance value of 0.000. This result indicates that micro-firms with an owner over 40 years old have a 1.873 times higher chance of financially sustaining than micro-firm with owners who are 40 years old or younger. This finding aligns with Bilau and St-Pierre's (2017) study, which suggests that older borrowers tend to be wiser, more risk-averse, more insightful, and more responsible for borrowing than younger borrowers.

The second part discusses factors determining the chance of a micro-firm owner receiving a virtue-based qard contract in the first phase to switch to a commercial-based contract in the subsequent term. This switch indicates that the micro-firm experience business growth. This study is expressed in model 2 (two), and the result is shown in table 3. As shown in table 3, we found two variables have a significant relationship with business growth, type of financing and gender. The logistic coefficient shows that the logistic regression coefficient f is 1.102, with a significance value of 0.000. This result indicates that micro-firms with individual financing will have a 3.011 chance to grow higher than micro-firms that generate financing through group financing. This finding is interesting because even though group financing shows higher performance in terms of repayment than individual financing, the micro-firms opportunity to grow is higher in individual financing.

Furthermore, the second significant variable to determine micro-firm growth is gender. The logistic regression coefficient is -1.285, with a significance value of 0.000. These results indicate that female-owned micro-firms will be 0.277 times less likely to enjoy business growth. In other words, a micro-firm with a male owner is 1.38 times more likely to grow than a female-owner micro-firms. This finding support Fiala (2018), who shows that men can better use business capital to increase their business.

Table 4. Coefficient for Simulation

Variable	Category	Coding	Multiplying Coefficient
Type of contract (Qard)	Qard	0	0.505
	Murabaha	1	
Type of financing (Group lending)	Group lending	0	-1.141
	Individual lending	1	
Loan size (IDR 500.000)	Under IDR 1 million	0	-1.458
	IDR 1 million up	1	
Tenor (5 months)	Up to 6 months	0	-1.975
	Above six months	1	
Ages (45 years old)	Up to 40	0	0.627
	Above 40	1	
Gender (female)	Female	0	0.081
	Male	1	
Number of defendants (2 persons)	0 - 2 persons	0	-0.206
	More than two persons	1	

From the previous regression result, we can simulate the probability of how a micro-firm might generate the subsequent financing (sustainable in financing). Suppose there is a potential client who proposes funding to an Islamic microfinance-based microfinance institution with the following criteria:

- The client applies for financing using a qard contract.
- The client chooses group financing.
- The loan size requested is IDR500.000.
- The client is willing to pay installments for five months.
- The client is 45 years old.
- The client is female.
- The client has two dependents.

Microfinance institutions may use this study's results to predict potential clients' likelihood of going to the subsequent financing or not based on the above data. The calculation shows in Table 4.

The data in Table 4 is coded according to the criteria of potential clients. Then the coding is multiplied by the coefficients of the result of the logistic regression calculation as follows:

$$FS = 1.110 - 0.505 * 0 - 1.141 * 0 - 1.458 * 0 - 1.975 * 0 + 0.627 * 1 + 0.081 * 0 - 0.206 * 0 = 1.74$$

The number of FS (Financing Sustainability) obtained is 1.74. Then, to calculate whether prospective clients have a chance of experiencing the sustainability of financing,

perform the calculation based on Hosmer and Lemeshow (2000)'s formula:

$$Probability = \frac{Exp(1,74)}{(1 + Exp(174))}$$

The calculation using Microsoft Excel then obtained the number of 0.85, meaning the prospective clients' probability of the sustainability of the financing is 85%. Therefore, the recommendation is: Approved.

CONCLUSION

This study aims to evaluate the performance of micro-enterprises supported by Islamic social funds. The performance of micro-enterprises here is measured by whether a micro-enterprise is financially sustainable and enjoys business growth. A financially sustained micro-firms generate further financing after the previous loan is fully repaid. Meanwhile, a growing business if a micro-firm got a limited amount of virtue-based zero-interest loans (or a qard contract) at the initial stage and then generated a more commercial loan at the subsequent stage. Commercial financing is available at a higher maximum amount.

This research found some interesting things. First, group lending has a greater chance of obtaining further financing than individual financing. However, individual financing is more likely to grow. Second, financing with maximum financing of above IDR 1 million is more likely to receive further financing, although there is no evidence that this group has the opportunity to generate better growth. Third, micro-business owners over 40 years are more likely to be sustainable in the financing, although no evidence managed businesses grow better than micro-firms managed by owners under 40 years old. Fourth, micro-enterprises managed by women are more likely to receive further financing than those managed by men, although the growth opportunities are higher in micro-enterprises managed by men. This study simulates the probability of a specific micro-firm getting the subsequent financing from the Islamic social fund. However, the model needs to be tested and developed through further research.

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Profitability, Good Corporate Governance, Dividend Policy, and Firm Value at ISSI

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Abstract

This study aims to determine the relationship between profitability, good corporate governance, dividend policy, and firm value from 2016-2018 in manufacturing companies at ISSI. This study uses classical assumption tests and path analysis. The results show that the board of commissioners has a significant negative effect on profitability and has no impact on firm value. The audit committee and dividend policy do not affect profitability and firm value. Profitability has a significant positive effect on firm value. Profitability mediates the impact of the board of commissioners and dividend policy but does not mediate the audit committee on firm value. This finding shows a relationship between variables that impact firm value. The implication of this research is to suggest that investors need to look at the company's prospects by paying attention to the company's value and analyzing the company's performance by considering the influencing factors.

Keywords:
good corporate governance, dividend policy, firm value, profitability

INTRODUCTION

The primary purpose of a company is to earn a profit. A company with the ability to generate optimal profits will increase the value of a company (Brigham and Houston, 2009). An increase in the value of a company gives a positive response to investors to invest in the company. Its share price can show the rise and fall of its value. Companies with a high level of company value are considered to prosper shareholders. Therefore, the higher the share price, the more the firm value and the prosperity of shareholders (Rachman et al., 2015). The high share price will increase investors' confidence in its current performance and its prospects for the future. Fundamentally, the firm value will be influenced by the company's financial performance (profitability). Because of high profitability, the company is expected to pay dividends, which will increase the share price (Fajaria & Isnalita, 2018).

Meanwhile, the PT Saratoga Investama Sedaya Tbk (SRTG) case recorded a net loss of 6.2 trillion rupiahs in 2018, in contrast to 2017, which still managed to record a profit of Rp. 3.3 trillion. The company explained the losses suffered due to the decline in the share price of the subsidiary owned by the company. From these cases, it is clear that the decline in stock prices had significant consequences for investors, so it is essential to increase the company's value because an increase in the value of the company is considered to determine the welfare of its shareholders (Ararat et al., 2017). The importance of the company's worth for investors is necessary to analyze what factors affect the company, some of which are through Good Corporate Governance (GCG) dividend policy and profitability.

Implementing sound corporate governance in the company will provide direction for managers and employees to work better so that it is expected to improve the company's performance or profitability (Yameen et al., 2019). The implementation of GCG will also increase investor confidence so that investors will prefer that company shares. In addition to increasing productivity, it will also increase firm value (Ciftci et al., (2019). The effectiveness of good corporate governance in the long term can improve company performance, benefit stock performance, and increase company value. Corporate governance has received considerable attention due to a series of scandals and corporate failures that seemed to be attributed to the implementation of different accounting and disclosure practices (Gerged & Agwili, 2019). A conflict of interest arises between managers and shareholders in maximizing the company's value, known as the agency problem. Managers have goals that differ from the company's main objectives for all shareholders. This happens because managers prioritize personal interests (Irwanti & Ratnadi, 2021). On the other hand, shareholders feel aggrieved by the manager because the manager's behavior can increase costs in the form of agency costs for the company, which causes a decrease in company profits.

Financial statement fraud cases are a phenomenon that often occurs and is repeated, as in the case of PT. Garuda Indonesia. The financial audit agency said Garuda was suspected of fabricating financial statements, which showed the company was reporting profits. This finding makes the Financial Services Authority oblige the company to improve

the report. After the repairs, the report indicates that Garuda recorded a loss of US$175 million, or equivalent to 2.45 trillion rupiahs. Whereas in the previous statement, the company claimed to have made a net profit of US$ 5 million or 699.9 billion rupiahs. One of the causes of weak governance practices in developing countries is auditors' soft supervision practice. This allows companies in Indonesia to realize the importance of internal audits, proven by forming audit committees and boards of commissioners in each company. Therefore corporate governance aims to create a control and balance system (checks and balances) to prevent misuse of company resources and encourage growth (Pibri, 2021).

A dividend policy is needed to reduce agency problems and costs by increasing the dividend payout ratio. Djabid (2009) states that dividend payments will give shareholders additional returns and capital gains. Dividends also provide shareholders with certainty and reduce the agency costs of equity. Management's actions on the company's cash flow decrease monitoring costs because shareholders believe management's policies will benefit them, increasing value (Kusumawati & Harijono, 2021). Investors often consider dividend policy as a sign of giving value to the company because it can affect the firm's value. Investors will prefer companies that can provide certainty of return on investment in the form of dividends. The higher the rewards distributed, the company is considered profitable and has good performance.

The effectiveness of good corporate governance and dividend policy to reduce agency problems and create firm value will positively impact profitability. Profitability is one information that can signal investors that the company has good financial performance (Ararat et al., 2017). Profitability shows the company's financial performance, which is used to indicate the company's good and evil. The amount of profitability demonstrates that the company's management is working effectively and efficiently (Tui et al., 2017). Many requests for company shares will trigger the share price in the capital market, thus affecting the company's value. This means that an increase in stock prices in the capital market will undoubtedly positively impact the increasing importance of the company (Fajaria & Isnalita, 2018). According to Rahmawati et al. (2021), this is in line with signal theory, an action taken by a company's management that gives investors instructions on how to view the company's prospects. In this case, the improvement of suitable corporate governance mechanisms and profitability is a positive signal for outside investors regarding the company's opportunities in the future. Therefore, this study uses the profitability variable, which is considered to mediate all variables in increasing firm value.

Pibri (2021) research provides empirical evidence that good corporate governance is projected by the board of directors, independent commissioners, and the audit committee, which positively affects company value. Pibri (2021) shows that several things that can cause corporate governance to affect company value, namely: (1) the high awareness of companies to implement GCG as a necessity, not just compliance with existing regulations, (2) company management is interested in the long-term benefits of implementing GCG, (3) the increase in share ownership by management and institutional investors has led to

tremendous pressure on companies to implement GCG, (4) the existence of the board of commissioners and audit committees within the company can monitor the company in implementing GCG.

In addition, dividend policy shows that investors prefer companies that distribute dividends because of the apparent certainty of their investment returns (Kusumawati, & Harijono, 2021; Rahmawati et al., 2021). This means that the greater the dividend distributed by the company to shareholders, the company's performance is considered excellent and profitable. A similar study was also conducted by Anjani and Yadnya (2017) that implementing good and correct good corporate governance must choose the board of commissioners, board of directors, and audit committee more selectively because these positions greatly determine the success and improvement of company performance. Competent and professional independent commissioners will be able to properly monitor the board of directors' performance in implementing strategies and policies within the company so that their performance is always controlled and the company's performance will increase.

A competent board of directors in determining the company's strategy will significantly affect the company's progress. Then choose an audit committee that is truly independent and can carry out internal supervision of the company because the role of the audit committee is crucial to assist the board of commissioners in supervising the company's internals so that the work environment becomes more conducive and acts of fraud and manipulation can be minimized. Similar research on dividend policy by Kusumawati (2021). The results of this study are in line with the bird in the hand theory, where the high dividends distributed by the company will have an impact on the company's high value. In addition, investors also prefer companies that distribute dividends due to their investment. The higher the level of DPR, the higher the company's value. Profitability has affected the firm value because the substantial value has positive sentiment on the achievement of profit to justify the payment of dividends so that the stock price will increase. Further research was conducted by Sabrin et al. (2016), Irwanti and Ratnadi (2021), and Tui et al. (2017), research is also supported by research. After all, the company showed a positive signal to pay dividends.

The empirical literature reviewed above shows that firm value is influenced by various supporting factors and is used to increase the value of a company to attract investors. Previous studies have not extensively conducted research that focuses on the relationship between good corporate governance, dividend policy, and firm value mediated by profitability. Therefore, researchers are interested in working on the test because good corporate governance, dividend policy, and profitability can be essential elements in a company. Weak corporate governance and low dividend and profitability policies can affect company value and decrease stock prices. Second, researchers want to know whether good corporate governance, dividend policy, and profitability in manufacturing companies listed on ISSI influence firm value. Third, until the completion of this research, researchers have not found any study that specifically examines the effect of good corporate governance and dividend policy on firm value in manufacturing companies listed on ISSI.

Fourth, the researchers have not found any research that explicitly examines profitability as mediating variable. This research is expected to contribute to the theoretical and practical dimensions. It is expected to be useful for companies, especially manufacturing companies listed on ISSI, as a consideration used by investors to prevent a decline in company value.

METHODS

This research is quantitative research using secondary data obtained through www.idx.co.id. The population used in this study are all manufacturing companies indexed in the Indonesian Sharia Stock Index (ISSI) for the 2016 – 2018 period, namely 92 companies and 11 companies used by purposive sampling. The purposive sampling method takes samples taken by following the research objectives set.

The criteria for the companies that are sampled in this study are: First, Manufacturing companies listed on the Indonesian Sharia Stock Index (ISSI) for 2016 – 2018; Second, The company did not experience delisting (never leaving) from ISSI during the research period; Third, Manufacturing companies have published annual reports or financial statements that an independent auditor has audited during the research year; Fourth, Manufacturing companies listed on the Indonesian Sharia Stock Index (ISSI) for 2016 – 2018 and implementing a dividend policy.

There are three research variables used in this study: First, the independent variable is good corporate governance announced by the commissioners and audit committee. The dividend policy used is the dividend payout ratio. Second, the dependent variable in this study is the value of the company used price to book value. Third, the intervening variable profitability used return on assets. This research uses signal theory as the theoretical basis. Signal theory suggests how companies should signal users of financial statements. The principle of signal theory shows that every action contains information because the information is asymmetrical. In this case, the increase in dividends and the mechanism of good corporate governance is a positive signal for outside investors regarding the company's prospects in the future. Companies that have opportunities, in the end, mean that they have a high value. They always generate profits for investors and signal their company which is relatively not easy to go bankrupt.

The analysis technique in this study uses path analysis to test the intervening variables. This study uses analytical methods with the help of IBM SPSS version 22. Path analysis is used to assess variables (directly or indirectly) on the dependent (dependent) variable. (Ghozali, 2016) Path analysis is an extension of multiple regression analysis that can help see the magnitude of the coefficients directly and indirectly. In conducting data analysis, several forms of tests are used, namely the Classical Assumption Test in the form of normality test, linearity test, multicollinearity test, autocorrelation test, and heteroscedasticity test. The steps in path analysis can be done as follows:

Stage I. Define a path diagram based on the variable relationship paradigm shows in Figure 1.

Figure 1. Path Diagram
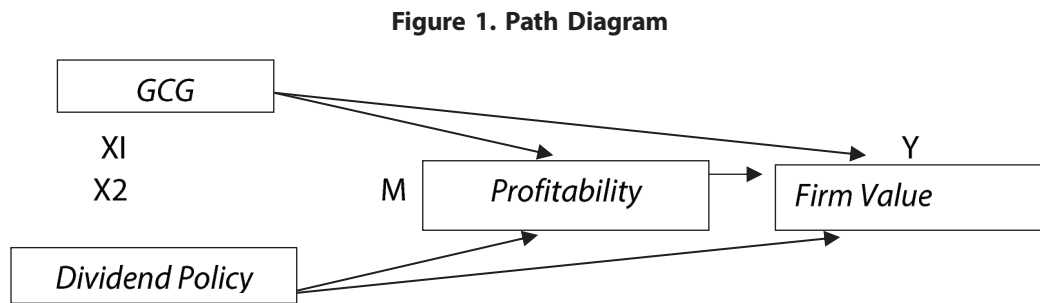
Stage II. Determine the structural equation as follows:

M (Profitability) = (X1a) + (X1b) + (X2) + e   (1)

Y (Company Value) = (X1a) + (X1b) + (X2) + (M) + e   (2)

Where:

X1a: Board of Commissioners

X1b: Audit Committee

X2: Dividend Policy

E: Equation

M: Profitability

Stage III. Analysis for substructural one and substructural 2:

Substructural analysis I

M (Profitability) = (X1a) + (X1b) + (X2) + e

Steps to calculate the regression equation. Implementation of SPSS calculation results based on regression analysis values and determining structural equations based on predetermined path diagrams.

Substructural analysis II

Y (firm value) = (X1a) + (X1b) + (X2) + (M) + e

Steps to calculate the regression equation. The implementation of SPSS calculation is based on the value of regression analysis and determines the structural equation based on the specified path diagram.

RESULTS AND DISCUSSION

This research uses secondary data obtained or collected through specific sources. The data in this study was obtained through manufacturing companies listed and published on the Indonesian Sharia Stock Index from 2016 to 2018. The descriptive statistical results in this study are shown in Table 1.

The board of commissioners, audit committee, dividend policy, and profitability are positive, while only the company's value is in an adverse order. It can be seen that the standard deviation for firm value is the highest among the five variables. If the standard deviation exceeds 0.05%, this indicates that the null hypothesis of the normal distribution for the series is rejected at this significance level. A maximum of 4.60% shows that most dividend policies are high, while the company value shows the lowest percentage of -4.61%.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
BC	33	0.69	2.48	1.6866	0.40855
Air conditioning	33	1.10	1.39	1.1248	0.08399
DP	33	2.34	4.60	3.7395	0.61944
FV	33	-4.61	4.41	0.7560	1.53533
PROF	33	1.03	3.84	2.1780	0.71402
Valid N (listwise)	33				

Source: SPSS output, data processing.

The results of the Jarque Bera test in Table 2 show that the jarque bera value in model 1 is 7.92 and significant at 0.05. The jarque bera value in model 2 is 14.19 and effective at 0.05. The result of the two models shows that the linear regression model built in this study has normally distributed data.

Table 2. Normality Test Results

	N	Skewness		Kurtosis		Count
	Statistics	Statistics	Std. Error	Statistics	Std. Error	Jarque Bera
Model 1	33	0.854	0.409	1.303	0.798	7.92
Model 2	33	-0.497	0.409	-0.057	0.798	14.19
Valid N (listwise)	33					

Source: SPSS output, data processing.
Information:
Model 1: Effect of good corporate governance and dividend policy on profitability
Model 2: Effect of good corporate governance, dividend policy, and profitability on firm value

Table 3 shows that the independent variables used in models 1 and 2 have no symptoms of multicollinearity between the independent variables. This result shows from the VIF value <10 and tolerance value> 0.1, which means there are no symptoms of multicollinearity.

Table 3. Multicollinearity Test Results

Variable	Model 1		Model 2	
	TOLL	VIF	TOLL	VIF
BC	0.544	1.840	0.465	2.151
air conditioning	0.657	1.522	0.630	1.587
DP	0.790	1.265	0.748	1.336
PROF	-	-	0.719	1.391

Source: SPSS output, data processing.

Table 4 shows that the significant value for all model variables is > 0.05. it can be concluded that all model variables are free from heteroscedasticity or do not experience symptoms of heteroscedasticity. Table 5 shows that in model 1, the board of commissioners shows t-statistic test results obtained t-count of -2.217 and a significance level of 0.035. It is concluded that the board of commissioners has a significant negative effect on profitability. The audit committee obtained a t-count of 1.117 and a significance level of 0.273. concluded that the audit committee does not affect profitability. Meanwhile, dividend policy received a t-count of 1.76 and a significance level of 0.261, which concluded that dividend policy does not affect profitability.

Table 4. Heteroscedasticity Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.530a	0.281	0.207	0.63599	1.073
2	0.793a	0.629	0.576	0.36048	1.638

Source: data processing.

In model 2, the board of commissioners obtains t-count is 0.058, and the significance level is 0.954, concluding that the board of commissioners does not affect firm value. In table 2, the audit committee obtained a t-count of 1.035 and a significance level of 0.310, concluding that the audit committee does not involve substantial value. In the dividend policy, the earnt-count is 0.100, and the significance level is 0.921, concluding that dividend policy does not affect firm value. Meanwhile, profitability obtained a t-count of 5.840 and a significance level of 0.000, which conclude that profitability has a positive and significant effect on firm value.

Table 5. Hypothesis Test Results

Variable	Model 1			Model 2		
	B	T	Sig	B	T	Sig
(Constant)	0.525	0.291	0.773	-1.758	-1.720	0.097
BC	-0.827	-2.217	0.035	0.013	0.058	0.954
air conditioning	1.844	1.117	0.273	0.989	1.035	0.310
DP	0.261	1.276	0.212	0.012	0.100	0.921
PROF	-	-	-	0.615	5840	0.000

Source: data processing

Based on the research results, good corporate governance, which is proxied by the commissioners, has a significant negative effect on profitability. This means that the increase in the presence of the board of commissioners will increase the amount of expenditure to reduce returns. The board of commissioners is a party that is not allowed to have any relationship relating to the company's management. It shows that the implementation of the board of commissioners is not concerned in terms of assets management will be more efficient, so that management has not been able to produce

high rates of return (Anjani and Yadnya, 2021). Therefore, the higher the number of the board of commissioners, the lower the rate of return returns. This is due to the high expenditure required to implement the board of commissioners. The results of this study are consistent with research conducted by Anjani and Yadnya (2021) and Sutrisno (2020).

Based on the research results, good corporate governance, which is proxied by the audit committee, does not affect profitability. This study indicates that increasing and decreasing the number of members on the audit committee does not guarantee that a company's performance will improve. Hence, investors consider the existence of an audit committee is not a factor that can be used as consideration in increasing the value of the company that can affect returns. There is no influence on the number of audit committees in a company because the audit committee's role is less than optimal in carrying out the supervisory and control functions in the company's management (Feviana and Supatmi, 2021). Therefore the audit committee in the company is still considered as compliance with regulations and formalities only so that its performance does not affect the level of profitability. The results of this study are consistent with research conducted by Rimardhani et al. (2016) and Ekasari and Noegroho (2020).

Based on the study results, dividend policy does not affect profitability. The results of this study do not support the signal theory, which explains that the increase in dividends above the expected amount is a signal for investors that company management is predicting good earnings in the future. This shows that changes in dividends do not convey information about future profitability and good company prospects. Companies with a high level of profitability will distribute dividends in low amounts, and conversely, if the company gets low profitability, the company will increase dividend payments. This is intended to maintain the company's reputation to remain reasonable in the eyes of investors. Therefore, dividend policy does not affect profitability and is not material for future consideration in predicting increased returns. The results of this study are consistent with the results of research conducted by Mudzakar (2019) and Tamrin et al. (2017).

Based on the research results, good corporate governance, which the commissioners proxied, does not affect firm value. The board members of commissioners must be professional, with integrity and the ability to carry out their functions properly, including ensuring that they pay attention to all the interests of other position holders. The company's board of commissioners meets the needs without optimizing the role of the board of commissioners as supervisor of management performance in managing the company. Therefore, the existence of the board of commissioners does not affect increasing the company's value. The results of this study are consistent with the research results conducted by Susanti and Nidar (2016).

Based on the research results, good corporate governance, which is proxied by the audit committee, does not affect firm value. These results indicate that the existence of the audit committee cannot influence the effectiveness of the company's performance. This statement is caused because the company's appointment of the audit committee is only made for compliance with regulations or formalities (Feviana and Supatmi, 2021).

This is Contrary to the functioning of the audit committee effectively and efficiently, the control of the company will be much better (Anjani and Yadnya, 2017). So investors consider the existence of an audit committee is not a factor that can be used as a material consideration in increasing the company's value. Therefore, the presence of an audit committee does not affect expanding the company's value. The results of this study are in line with the results of research conducted by Ramadan and Raharja (2014).

Based on the study results, dividend policy does not affect company value. This study indicates that the high and low amount of dividends cannot tell the future investment opportunities for companies. The high ratio of dividend payments makes the company's internal funds inadequate for investment, leading to increased profits obtained in the future, thus making the company unable to conduct investment activities. This has led to uncertainty about future investment returns that can cause investors to choose to release their shares to affect the company's value adversely. The results of this study do not support the signal theory that explains that an increase in dividends will attract investors to invest in increasing share prices, affecting the company's value. Therefore, dividend policy does not affect expanding the value of the company. The results of this study are consistent with the research results conducted by Desy (2017).

Based on the study results, profitability has a significant positive effect on firm value. The results of this study state that an increase in profitability shows a better prospect of the company, which will be considered a positive signal by investors (Fajaria & Isnalita, 2018). This means that when profitability has increased, the company value will automatically increase (Tui et al., 2017). So a company must be in a favorable condition because without profit, it will be difficult for companies to attract investors to invest their funds in company shares. Therefore, efforts to increase profitability are essential for the survival and future of the company because it has a positive effect on the company's value. The results of this study are consistent with the results of research conducted by Kumalasari and Pratikto (2018) and Irwanti and Ratnadi (2021).

Figure 2. The board of commissioners on the value of the company through profitability
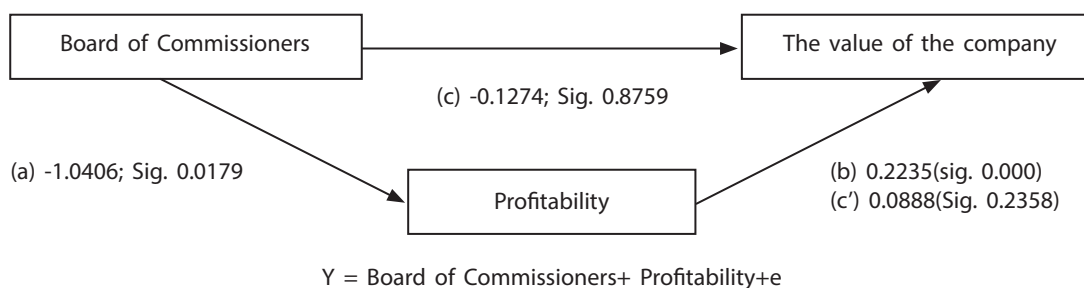
Y = Board of Commissioners+ Profitability+e

The analysis results found evidence that profitability is significant to firm value. The significance value is 0.0000 < = 0.05 and the regression coefficient (b) = 0.2351. Then it is found that the direct effect of c' is 0.0888, which is greater than c =

-0.1559. The effect of the board of commissioners on firm value is 0.2015 that larger than 0.05 after being mediated by profitability (see Figure 2). It can be said that this model is a complete mediation, which means that the board of commissioners is fully engaged in the value of the company, which is mediated by profitability. Chabachib et al. (2019) explained that the board of commissioners is the core of good corporate governance which is tasked with ensuring company strategy and supervising managers in managing the company so that the board of commissioners has a powerful influence on firm value.

The results of the analysis found evidence that profitability was significant to firm value with a significance value of $0.000 \leq 0.05$ and a regression coefficient (b) = 0.2235. Then it is proved that the direct effect of c' is 0.3556, which is greater than c = -0.1274. The impact of the audit committee on firm value with a significance of $0.8759 \geq 0.05$ after being mediated by profitability (See Figure 3). It can be said that this model is Unmediated, which means that the audit committee does not affect firm value judged by profitability. The effectiveness audit committee does not increase the investor's response to earnings reported by the company (Hermawan, 2011; Feviana & Supatmi, 2021).

Figure 3. The audit committee on the value of the company through profitability
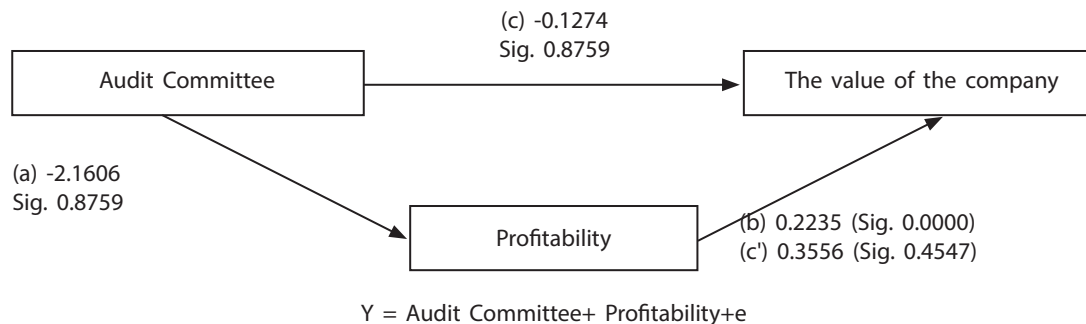

Y = Audit Committee+ Profitability+e

The analysis results found evidence that profitability is significant to firm value. The significance value is $0.0000 \leq 0.05$ and the regression coefficient (b) = 0.2263. Then it was found that the direct effect of c' was -0.0117, which was greater than c = 0.0528. The effect of dividend policy on firm value with a significance of $0.1569 \geq 0.05$ after being mediated by profitability (See Figure 4). It can be said that this model is a complete mediation, which means that dividend policy has a full effect on firm value after being mediated by profitability. Companies that have a high level of profitability show that management of companies is managing resources companies can achieve high incomes. High profits will also distribute a high dividend, and it will attract investors and increase demand for stocks. This will lead to the better value of the company (Fajaria & Isnalita, 2018). This result follows the signaling theory, which states that a company with a high DPR level will signal investors and gain high trust from investors (Kusumawati and Harijono, 2021).

Figure 4. Dividend Policy on firm value through profitability

Y = Dividend Policy + Profitability+e
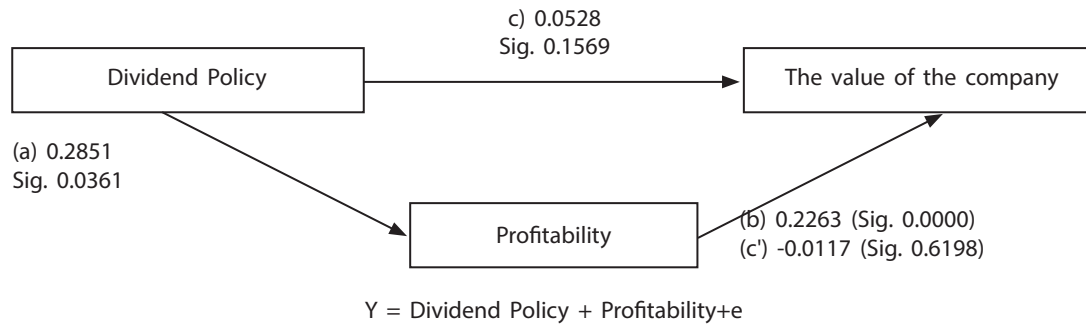
CONCLUSION

This study examines the effect of good corporate governance and dividend policy on firm value with profitability as an intervening variable. This study indicates that good corporate governance as proxied by the board of commissioners and the audit committee has a significant negative effect and has no impact on profitability. This result shows that the increase in the number of the board of commissioners will increase the amount of expenditure to reduce returns. The conclusion also means the addition and reduction of the number of audit committee members are not considered to increase returns. Meanwhile, dividend policy also does not affect profitability.

Furthermore, the study results also show that the board of commissioners, audit committee and dividend policy do not affect firm value. So, the board of commissioners, audit committee, and dividend policy are not the determining factors to increase substantial value. This condition is inversely proportional, and profitability positively influences the company. The results of this study state that an increase in profitability indicates a good prospect for the company, which is considered a positive signal by investors. This result means that when profitability increases, the company value automatically increases.

After mediating all variables, it shows that profitability as a mediating variable can fully moderate the board of commissioners and dividend policy. This role can be used as a reference for investors in investing in a company. However, profitability cannot mediate the audit committee's role on firm value, which indicates that the audit committee's role is not a determining factor in increasing the value of a company. The implication of this research for the investors is to pay more attention to fundamental factors that affect the company's value before investing. As for the capital market, the supervisory agency issues related rules to increase company value.

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The Circular Economy and Marketing:
A Literature Review

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Abstract
The focus on the circular economy (CE) is currently gaining momentum. In this paper, we examine how the objectives of the CE significantly overlap with those of the new generation of marketing, which emphasizes customer involvement in product design and responsible consumption. While the marketing function is essential for realizing the CE, there is still a lack of studies examining the intersection of these two critical concepts. Methodically, this paper aims to bridge this knowledge gap by conducting a systematic literature review that explains the CE-marketing nexus. In total, 45 studies were thoroughly analyzed, and findings indicate that the intersection between the CE and marketing spans four main research themes; (1) contribution of green marketing to the CE, (2) remanufacturing marketing, (3) product-service systems, and (4) neuromarketing tools. An agenda for future investigation of the CE and marketing concepts is suggested, followed by a brief conclusion. This review is valuable for scholars and managers, including those striving to have an increased understanding of the relationship between the CE and marketing.

Keywords:
circular economy, marketing, review, remanufacturing, sustainability

INTRODUCTION

The circular economy (CE) has recently received significant attention from academia, industry, and policymakers (Fogarassy et al., 2020). The concept of CE denotes a new way of reinventing the conventional linear model of take, use, and dispose (Aboulamer, 2018). The increasing world population, consumer affluence, resource scarcity, pollution, and environmental pressures have resulted in more calls for shifting from the linear economy to the CE. The transition toward the sustainability-driven CE becomes urgent as there is a need to optimize resource usage, reduce waste, and unlock the potential of innovation and value creation in business markets (Ranta et al., 2020). Presently, there is a continuous push towards a CE, and governments, green non-governmental organizations (NGOs), think tanks, and private sector organizations are all advocating the development and implementation of more CE business models. For example, in the European Union (EU), the CE is at the heart of a recent strategy aimed at balancing economic growth and environmental sustainability. According to Gusmerotti et al. (2019), the CE is the ultimate output of a set of EU policies to decouple economic growth from resource use and waste generation. Similarly, applying the CE, organizations seek to continuously achieve a positive development cycle, which preserves and improves natural resources, maximizes resource use efficiency, and reduces system risks by managing limited stocks and renewable flows (Maugeri et al., 2017). Therefore, the CE can be operationalized and leveraged to realize several sustainable development goals.

The rapid advances in information technologies have significantly reshaped the marketing function. In a recent study, Vassileva and Ivanov (2017) posit that the new generation of marketing, or the so-called marketing 4.0, is becoming a necessity because consumers are looking for products that meet their basic needs and social values. The authors further argue that marketing has emphasized consumer involvement in the design and production process, thereby encouraging responsible consumption. While these objectives considerably overlap with those of the CE, there is a lack of review studies investigating the CE and marketing intersection. For example, Nosratabadi et al. (2019) conducted a comprehensive review of sustainable business models in different application areas. While the authors identified a taxonomy of CE and marketing applications, they did not analyze the intersection of these two concepts. Schallehn et al. (2019) performed a content analysis-based literature of 69 empirical studies discussing product-service systems related to used products (PSSuP). The findings of the study yield the identification of different types of PSSs for used products and four strategic orientations of customer experience creation in PSSuS, including price, confidence, convenience, and delight orientation. While PSSuS represents a building block of the CE, a clear and general focus on the importance of marketing capabilities in accelerating the transition toward the CE is missing. Furthermore, Pagan et al. (2020) made a literature review on the papers that applied eye tracking and electroencephalography (i.e., an efficient method utilized to capture signals from the brain) to assess aspects of sustainability in consumption. Despite its valuable contribution, the review was very specific and fell short of broadly discussing the relationships of these neuromarketing tools with the CE.

To address the knowledge gap, this paper strives to examine the potential of marketing as one strategic function to address sustainability issues and foster the CE paradigm. A systematic literature review is carried out to summarize prior academic works on the intersection of CE and marketing. Despite recent attempts to comprehend the linkages between the two concepts, there are still limited insights into the contribution of marketing efforts to the CE transition. For example, Chamberlin and Boks (2018) noted that even with the prominence of the consumer mindset, the influence of consumer behavior has been under-studied in the CE literature. The authors further argued that there is a need to understand how circular businesses attempt to reshape their customers' behavior or affect the relationship they maintain with them through communication and marketing practices. Moreover, several scholars investigated the contributions of collaborative consumption to sustainable development (Armstrong & Lang, 2013; Becker-Leifhold, 2018); however, a clear analysis of what this marketing trend entails is lacking (Hu et al., 2019). For instance, current studies have focused on specific marketing themes like customer behavior, collaborative consumption, and green packaging (Ek Styvén & Mariani, 2020; Holtström et al., 2019; N. L. Kim & Jin, 2020; Kim & Kim, 2020; Lang & Joyner Armstrong, 2018; Lee & Huang, 2020). Nevertheless, these studies omit a broader perspective on marketing and the CE. To the best of our knowledge, no systematic review has been undertaken recently on the CE and marketing with the goal of analyzing the current state-of-the-art of research in this field. Therefore, there seems to be an urgent need to examine the existing scholarly literature to offer a clear understanding of the relationship between these two concepts, highlighting the main research topics elaborated to date and, thus, laying the foundation for future research. Summing up, the research objectives of this papers are to summarize extant studies on the CE and marketing, by highlighting the main bibliometric indicators and research methodologies applied, the industrial focus of publications, and the keywords used by the authors in their works. Also, this papers aspires to provide suggestions for future research.

To attain these research objectives, a systematic review (Rejeb et al., 2021c; Rejeb et al., 2021a) has been performed to examine 45 studies written in English, published in the timeframe of 2016-2021, and related to the CE and marketing. The main novelty of this paper is to provide a state-of-the-art review of the CE and marketing. In addition, content analysis has been conducted to identify the annual distribution of publications, the major contributing countries, the most relevant journals, the research methods used, the industrial focus of the selected literature, and the most frequent keywords. The main topics discussed in the literature have been highlighted along with several directions for future research in this field.

Obtaining an in-depth understanding of the CE-marketing nexus offers fresh ideas on the marketing efforts necessary to reduce waste, promote resource use efficiencies, and foster sustainable product development. Furthermore, marketing efforts may lead to competitive advantages by allowing access to a more extensive base of customers without degrading the environment.

The remainder of this paper is structured as follows. After the introduction, the research method applied in the study is described in detail. Section 3 discusses the descriptive statistics and the main topics identified from the selected studies. Next, we propose an agenda for future investigation of the CE and marketing concepts. Lastly, a brief conclusion is provided, highlighting the study's contributions and limitations.

METHODS

Despite the prominence of blockchain and the CE, existing research on the intersection of both concepts is scarce (Chamberlin & Boks, 2018; Vassileva & Ivanov, 2017), and the current systematic literature review aims to provide an in-depth examination of the extant literature on the CE and marketing. This approach pursues widely accepted steps and thus allows evaluation and replication by other researchers (Adams et al., 2016; Denyer & Tranfield, 2009). The review process has been carried out following the guidelines suggested by Tranfield et al. (2003). Figure 1 depicts the research process following the five stages, which are described below.

Figure 1. The Steps of the Systematic Literature Review
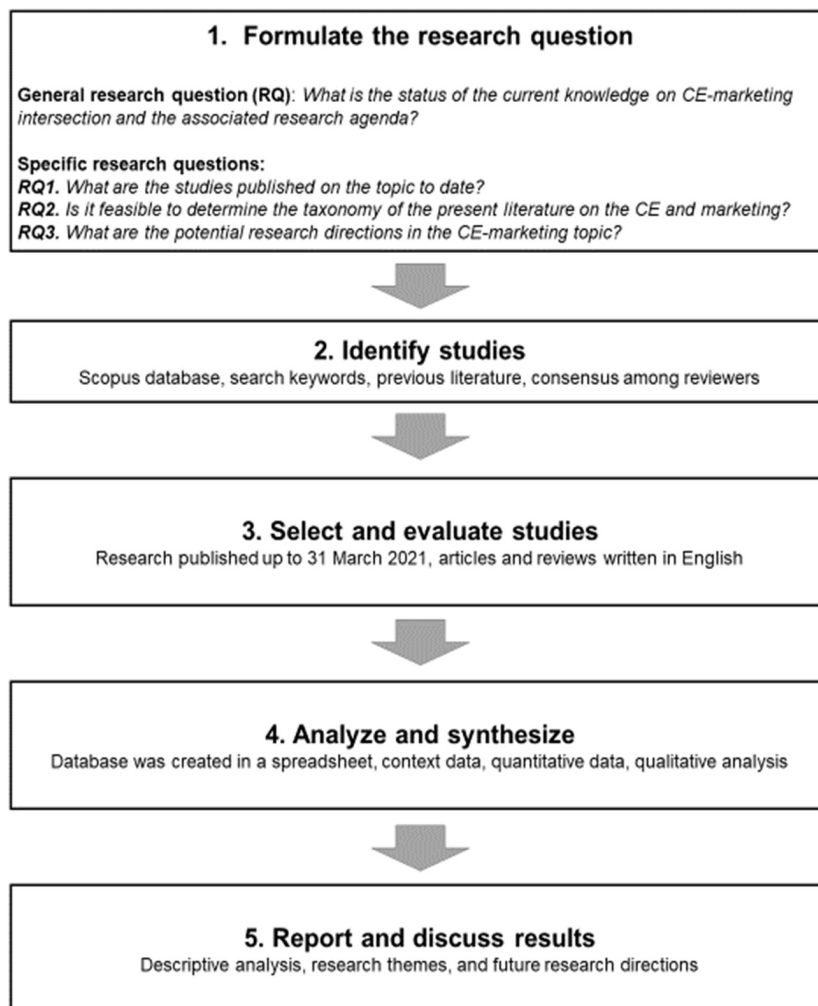
First, the main objective of this review is positioned at the intersection between marketing and the CE. Thus, the search has particularly been designed to determine publications in this junction area. On this basis, the next research question (RQ) has been developed to guide the current study:

RQ. What is the existing status of the current knowledge on the marketing-CE nexus and the associated research directions?

This broad research question is split into three related sub-questions:

RQ1: What are the articles published on the subject to date?

RQ2: It is possible to identify the taxonomy of the current literature on marketing and the CE.

RQ3. What are the future research directions in the marketing-CE topic?

Second, locating the most relevant publications represents the second step of the research process. Two important points are thus considered: academic databases and search terms. Concerning the former, the Scopus database has been selected to identify the publications related to marketing and the CE. This database is widely utilized in systematic literature reviews because of its high-quality content and comprehensive coverage (Rose & Kitchin, 2019). The research objective is in the intersection area of marketing and the CE. An investigation of search terms and a brainstorming session performed by the authors helped identify the search keywords related to marketing and the CE. Consequently, a string query containing Boolean operator AND and the keywords were formulated to find the relevant publications in the databases. In Scopus, the search field "TITLE-ABS-KEY" was chosen as the tag of the searches, which signifies that the combination of terms should be found either in the title, abstract, or author keywords of the studies. This search query returned 116 publications (Figure 2).

Third, some criteria were defined to identify the publications that should be included and eliminated (Rejeb et al., 2021b). As the research was carried out in March 2021, we limited the search to articles published up to 31 March 2021. Only English-speaking peer-reviewed publications related to the nexus of CE and marketing were selected. The use of these inclusion criteria helped reduce the total number of articles to 78. Next, the title, abstract, and keyword fields were attentively read, resulting in the selection of 45 articles for the final review and analysis.

Fourth, we analyzed and synthesized all publications selected and assessed in the earlier phase by reading the entire publication and coding the content. A pre-determined coding of the content was carried out to retrieve the main details in each study and involve two reviewers in the process (Seuring & Gold, 2012; Seuring & Müller, 2008). This is essential to reduce single-researcher bias and guarantee the validity and reliability of the findings. As a result, the authors reached a consensus in the coding and data collection phase to gain more objective findings and eliminate selection bias (Seuring & Gold, 2012). Concerning the coding procedure of studies, we created a database in a spreadsheet including the following three categories such

as (1) Context data: the industrial context in the intersection of CE and marketing is discussed; (2) Quantitative data: Descriptive statistics that include the growth of scholarly production in the area of CE and marketing, the main journals, the countries of contributors, the research methods applied, and the main keywords used; (3) Qualitative analysis: A detailed analysis applying an inductive coding approach to identify the relevant and common topics discussed in the literature without being constrained by pre-defined categories.

Table 1. Selection criteria.

Inclusion Criteria
- Publications must be written in English
- To ensure the quality and academic nature of the retrieved literature, publications should be peer-reviewed and published in academic journals
- Publications must present pertinent discussions on the nexus of CE and marketing

Exclusion Criteria
- Conference proceedings, books, and chapters were not considered
- Articles exclusively focusing on the CE without presenting discussions from the marketing perspective were not included
- Non-English speaking articles were excluded

Figure 2. The Selection Process
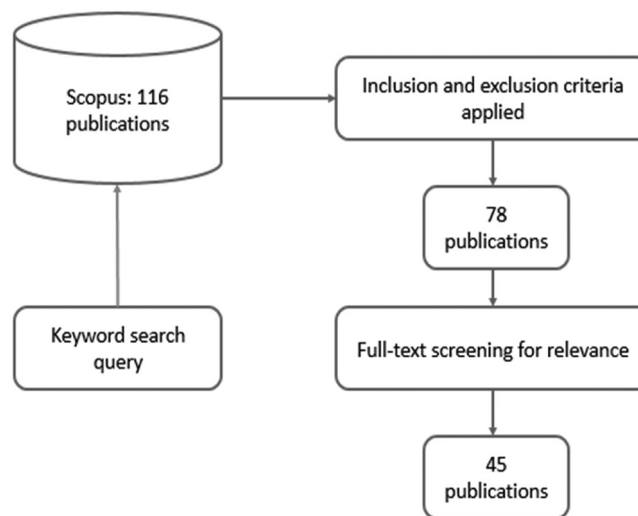
RESULTS AND DISCUSSION

Publications by Year

The temporal distribution of the articles is displayed in Figure 3. In general, the annual number of publications presents a growing trend, showing that the intersection of CE and marketing is a recent topic. The first articles studying this combination were published in 2016. Four years later, in an arguably short period, the number of articles increased to 11 in 2020. Although in 2021, there is a slight drop in the number of published articles, it must be taken into consideration that this year is

incomplete and more articles are expected to be published on the topic. As a result, it can be concluded that the academic community is increasingly engaged in studying the CE and marketing.

Publications by Country

The analysis of the national distribution revealed that 32 countries researched the CE and marketing. As shown in Figure 4, Italy, Sweden, and the UK published six studies each, thereby dominating the list of contributing countries. This finding is consistent with Ferasso et al. (2020) confirming the dominance of European scholars in advancing the CE literature. In Italy, the manufacturing sector is featured by industries as diverse as textile, leather, pulp and paper, which are responsible for significant environmental impacts (Gusmerotti et al., 2019). The importance of CE in Sweden is manifested in introducing economic incentives that encourage repair, such as reducing value-added tax at the point of sale and offering tax rebates to citizens on repairs. The country has also been identified as a leading actor in promoting new environmental policies, sustainable procurement practices, and eco-labelling (Gåvertsson et al., 2020).

Figure 3. Annual Distribution of Publications (until February 2021)
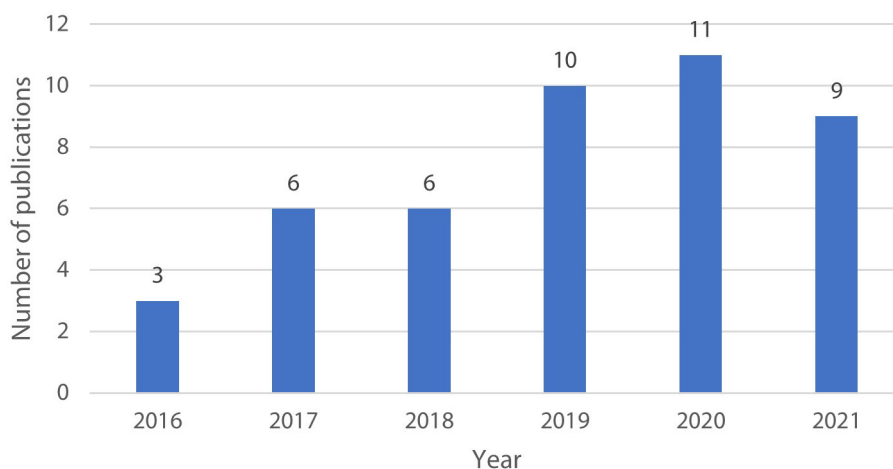
The implementation of CE in the UK has supported the economy, created over 50,000 new job opportunities, and generated € 12 billion property (Alizadeh-Basban & Taleizadeh, 2020). To a lesser extent, Scholars from the USA published five articles, and the remaining countries in Figure 4 published four papers each. Overall, the country-wise distribution indicates the interest of developed nations in circularity issues and their consideration in developing business models (Ferasso et al., 2020). Developing countries represented by China also have a role in advancing the CE literature.

Figure 4. Country-wise Distribution of Publications
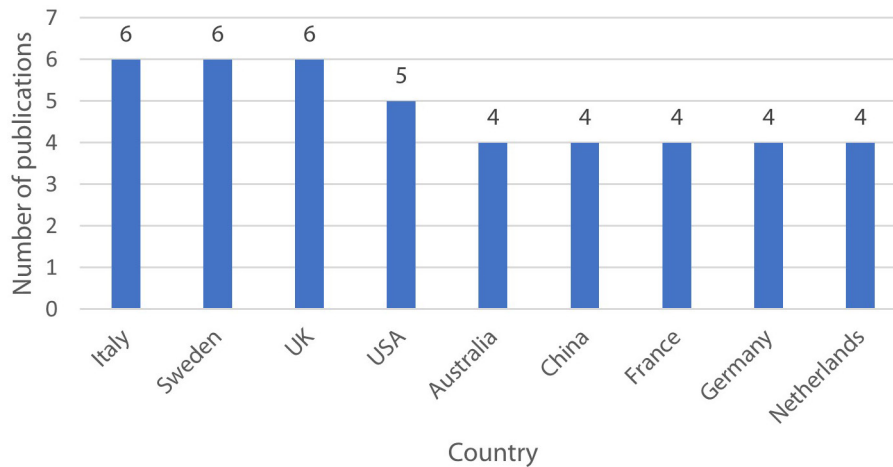
Publications by Journal

For the journal-wise distribution, research at the intersection of CE and marketing is published in 30 academic journals. Table 2 shows the journals with two publications and more. Journal of Cleaner Production was the most preferred outlet with eight articles, followed by Sustainability with four articles. The remaining journals on the list published two articles each. It should be noted that the category "Others" compiled all journals publishing one article each, which were in total 23 journals. Summarizing, the reasons behind this journal-wise distribution are attributed to the journal influence and orientation. For instance, the Journal of Cleaner Production, Sustainability, Resources, Conservation, and Recycling, and Science of the Total Environment are flagship outlets in the field of CE and sustainable production and consumption. While these journals have significantly contributed to the CE literature, marketing-related journals still lag far behind in terms of contribution to the CE literature. Thus, it is recommended that marketing-focused journals should consider publishing on the topic of CE and marketing and encourage scholars to search for patterns and associations between the two concepts.

Table 2. Journal-wise Distribution of Publications.

Journal	Number of articles
Journal of Cleaner Production	8
Sustainability	4
Industrial Marketing Management	2
International Journal of Production Economics	2
Resources, Conservation and Recycling	2
Science of the Total Environment	2
Thunderbird International Business Review	2
Others	23

Distribution of Publications According to Research Methods

The CE represents a future paradigm in business that aims to reinvent the conventional linear model of take, use, and dispose and to shift to enhanced collaboration and more efficient and wiser usage of limited resources (Aboulamer, 2018). The concept of CE draws upon sustainability, waste management, innovation, and the environment (Ranta et al., 2020; Spring & Araujo, 2017). Therefore, given the different CE and marketing research interests, diverse methodologies were applied (see Table 3). According to Figure 5, empirical research methods outnumber conceptual research. Within empirical research, surveys were used most commonly in 14 papers, followed by case studies (8 papers), and interviews (3 papers). Surveys were used to evaluate the adoption of eco-labelling among different stakeholders, including consumers and public authorities (Marrucci et al., 2021), investigate the drivers of consumer demand for remanufactured products (Pisitsankkhakarn & Vassanadumrongdee, 2020), and examine the consumer's expectation and willingness to engage in sustainable purchasing behavior (Kabel et al., 2021). The conceptual research is mainly represented by 13 conceptual papers and 3 reviews. Researchers also applied mathematical models in two papers and multi-methods in two others. The portion of conceptual papers is significant, indicating that research on the CE and marketing is in its development phase and that researchers have recently started to conceptualize the intersection of these two concepts.

Figure 5. Distribution of Publications According to the Research Methods
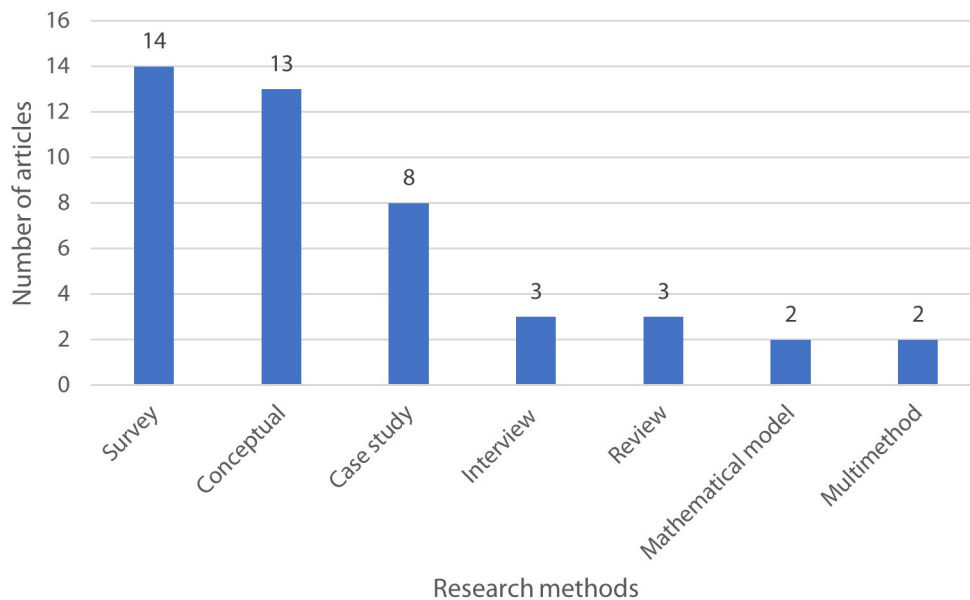
Publications by Context

Besides identifying the research methods used in the CE and marketing literature, we attempted to identify the industries that were explicitly highlighted in the reviewed studies. Most articles, nonetheless, were kept at a generic CE level without focusing on a specific industrial context. Figure 6 depicts the prevalence of studies on manufacturing

and agri-food industries. The manufacturing industry has attracted significant attention from CE-marketing scholars because firms have realized the importance of implementing the CE, rethinking the manufacturing value chain, improving the efficiency of production processes, and responding to customers' expectations (Gusmerotti et al., 2019). Kamble et al. (2021) argue that manufacturing firms highly appreciate the pursuit of a CE strategy as it enables them to achieve sustainable performance, competitive advantage, and better operational practices, including recycling, reducing, and resuing optimization methods. The agri-food industry was mentioned in six studies. More recently, food waste has been a problematic issue that requires the implementation of CE. In the context of CE, McCarthy, Kapetanaki, and Wang (2019) note that the conversion of food waste into high-value products requires, among others, the sophisticated marketing of food products. Similarly, Mondéjar-Jiménez et al. (2016) posit that the CE can reduce food waste resulting from the marketing strategies carried out by retailers, such as promotional offers on food products.

The authors believe that these strategies can influence consumers' intentions and behaviour because they encourage the excessive purchase of food quantities, thereby increasing food waste. Three papers discuss the importance of circular marketing strategies to support conservation behaviours (Kabel et al., 2021) and stimulate the sustainable use of resources in the automotive industry (Kalverkamp & Raabe, 2018). The intersection of CE and marketing was discussed in the scope of the information, communication, and technology (ICT) industry in three studies. The remaining industrial contexts that have been covered from the CE and marketing perspective were the hospitality, textile, and wood sectors.

Table 3. Classification of Publications According to Research Methods

Research method	References
Survey	(Fogarassy et al., 2020; Grębosz-Krawczyk & Siuda, 2019; Gusmerotti et al., 2019; Kabel et al., 2021; Kamble et al., 2021; Kréziak et al., 2020; Marrucci et al., 2021; McCarthy et al., 2019; Mondéjar-Jiménez et al., 2016; Pisitsankkhakarn & Vassanadumrongdee, 2020; Russo et al., 2019; Sehnem, 2019; P. Wang & Kuah, 2018; Y. Wang & Hazen, 2016)
Conceptual	(Aboulamer, 2018; Chamberlin & Boks, 2018; Confente et al., 2020; de Koeijer et al., 2017; Jaroebsathapornkul, 2021; Kalverkamp & Raabe, 2018; Lieder et al., 2017; Ozanne et al., 2021; Pagan et al., 2020; Spring & Araujo, 2017; Vanapalli et al., 2021; Vogtlander et al., 2017)
Case study	(Drábik et al., 2020; Jensen et al., 2019; Li et al., 2021a; Maugeri et al., 2017; Menegaki, 2018; Ranta et al., 2020; Šomplák et al., 2019; Wieser, 2016)
Interview	(Donner et al., 2020; Gåvertsson et al., 2020; Vassileva & Ivanov, 2017)
Review	(Nosratabadi et al., 2019; Schallehn et al., 2019a; Wandosell et al., 2021)
Mathematical model	(Alizadeh-Basban & Taleizadeh, 2020; Shen et al., 2019)
Multimethod	(Donner et al., 2021; Pitti et al., 2020)

Keyword Analysis

We carried out a keyword analysis across the 45 articles. Table 4 shows the frequency of author-supplied keywords used in the literature. "CE" is the most frequent keyword in most publications, which is not surprising because it was included in the initial search query. "Sustainability", "Remanufacturing", and "Marketing" are the next most frequent keywords on the list. The key objective of sustainability is to overcome environmental and socio-economic issues and ensure a more sustainable economic system (Nosratabadi et al., 2019). From the consumer perspective, the increased awareness of sustainability issues has led to an increase in the number of consumers embracing lifestyles directed toward ethical consumption (Confente et al., 2020). The high frequency of "Remanufacturing" is attributed to the central role of this strategy in developing circular business models and managing resource loops in the future CE (Jensen et al., 2019).

As a practical approach, remanufacturing also aims to protect the business supply chain economically and environmentally, maximize profitability, and support CE and marketing activities (Alizadeh-Basban & Taleizadeh, 2020). Relevant keywords used in the CE and marketing literature also involved "Business Models" and "Sustainable consumption". These two concepts are closely related to CE. For instance, Nosratabadi et al. (2019) point out that the circularity of business models implies the way organizations create a system of sustainable value flows among several stakeholders, considering the natural environment and society. The remaining keywords on the list occurred three times each and included "Bieconomy," "Green Marketing," "Reuse," "Theory of Planned Behaviour," and "Waste Management." Additional details related to these keywords and their connections with the CE and marketing are discussed in the subsequent sections.

Figure 6. Classification of publications according to industry
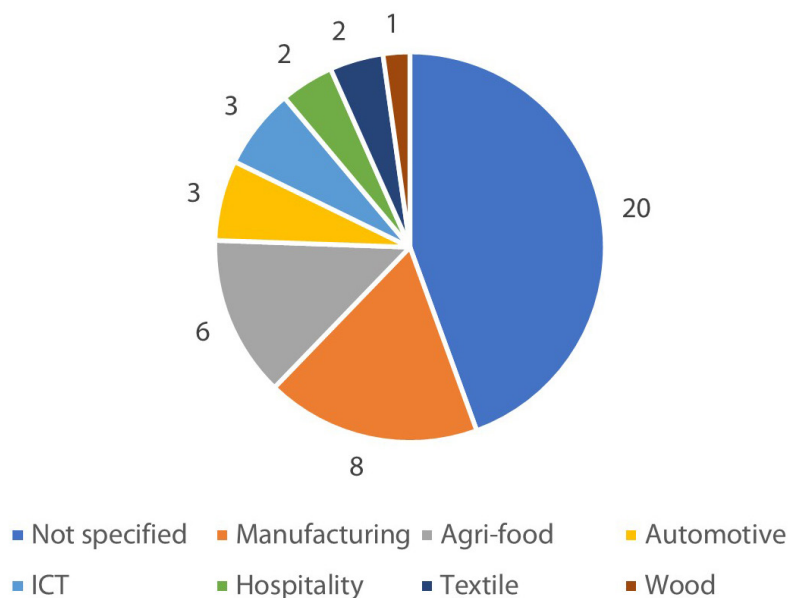
Table 4. Keywords with three or more occurrences

Keyword	Occurrences
CE	32
Sustainability	9
Remanufacturing	7
Marketing	6
Business Models	5
Sustainable Consumption	4
Bioeconomy	3
Green Marketing	3
Reuse	3
Theory of Planned Behaviour	3
Waste Management	3

Discussions

The complete reading of the publications and the creation of the database allowed us to identify four main research themes in which the studies are positioned. Researcher consensus ensured inter-coding reliability (84) (Seuring & Müller, 2008). The determined thematic classes are the following: (1) Contribution of green marketing to the CE, (2) Remanufacturing marketing, (3) Product-service systems, and (4) Neuromarketing tools. Figure 7 depicts the categorization of the relevant literature. While marketing has evolved into an all-encompassing function in the firm, its integration in the CE still remains unclear. Thus, research on marketing and the CE is in the infant stage. The content analysis of the studies classified into the identified research categories is described below.

Figure 7. Topics at the CE-marketing nexus
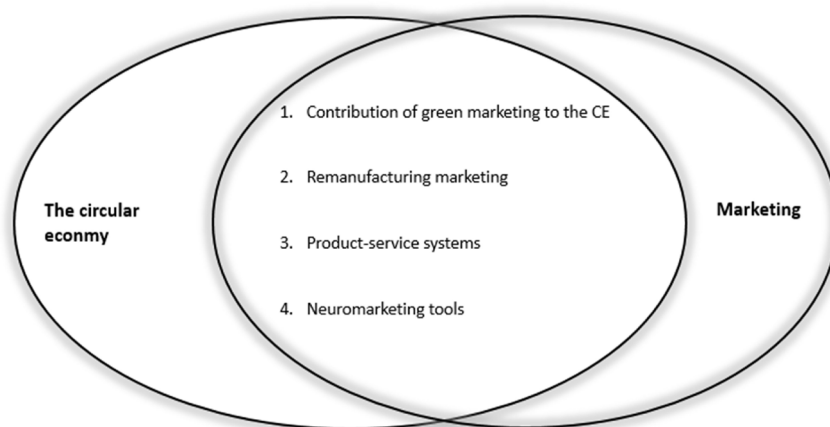
Contribution of Green Marketing to CE

The increasing interest in the issues of green marketing with an emphasis on environmental issues started in the early 1990s (Nekmahmud & Fekete-Farkas, 2020). In that era, green marketing was envisioned as a mix of organizational efforts to highlight the causes of environmental problems and provide solutions to their inhibition, mitigation, and elimination. Even though these ideas remain important to the contemporary understanding of green marketing, the term has become remarkably consolidated and enriched through time. Green marketing represents a modern phenomenon where most firms have rebranded their products and begun to remarket them as green products or environmentally friendly (Chakrabarty & Das, 2019). It also incorporates a broad range of activities such as product modification, changes to the production process, packaging changes, and modifying advertising. Like conventional marketing, green marketing strategies rely on segmentation, targeting, positioning, differentiation, and the 4Ps (i.e., product, price, promotion, and place) marketing mix, with most consumers having positive attitudes to green advertising and promotion (Chamberlin & Boks, 2018). The initial objective of implementing the CE is to achieve a harmony of the resource enterprise and nature and a balance between economy, society, and environment under the demands of the market and ecology (Miao & Yang, 2013). To accelerate the transition toward the CE, green marketing strategies consider sustainability as a key attribute for consumers and an integral part in the development of product image and quality (Pagan et al., 2020). The increasingly heightened environmental consciousness among consumers constitutes a great marketing opportunity for firms wishing to attract customers by offering eco-innovative products and establishing a long-term connection between environmentally-conscious customers and brands. According to Kopnina (2019), green marketing encourages consumers to purchase sustainable products and drive continuous demand for new products intended not to last or made with "planned obsolescence". The practice of reducing the negative social and environmental impacts of linear production systems also involves the promotion of re-consumption, the influence of consumer choice behavior, the alignment of the marketing mix with current sustainability issues, the promotion of adequate changes in corporate culture, and the engagement of all stakeholders (Gusmerotti et al., 2019; Pagan et al., 2020). While eco-labelling has helped promote green products and support CE, label proliferation has increased consumer uncertainty and affects firms' efforts (Marrucci et al., 2021). Thus, besides green marketing, firms should consider eco-design and green purchasing since they represent key elements of enhanced environmental performance for organizations adopting the CE. To promote green products and improve consumers' green awareness, firms also need to invest in green marketing like advertising strategies and parity marketing (Li et al., 2021b). Under such conditions, upstream firms may contract with retailers to boost marketing efforts by adopting a series of green marketing strategies and cooperative contracts. As a result, the implementation of green marketing in CE projects goes beyond reassuring customers with end-of-pipe solutions to reduce pollution and overcome moral issues, creating new markets and competitive advantage through sustainable green products and services (Chamberlin & Boks, 2018).

Remanufacturing Marketing

Remanufacturing is a routine business activity that helps realize CE benefits. For instance, this approach has gained popularity among corporate leaders and decision-makers. Increasingly more firms are involved in remanufacturing to comply with regulatory requirements and take advantage of this business opportunity to generate a positive influence on the economy (Subramanian et al., 2013). In this regard, remanufacturing is considered an appealing solution for firms to support CE practices. Remanufacturing is considered a strategy that aims to develop circular business models to manage resource loops in the future CE (Jensen et al., 2019). While modern approaches to remanufacturing have existed since the end of World War II, this business model has recently received environmentalists' attention because of its role to slow down materials depletion and reduce CO_2 emissions (Vogtlander et al., 2017). As a critical element of CE, remanufacturing enables organizations to recover the residual value of used products via reusing, refurbishing, and/or replacing components such that the end product is restored to its original state (Y. Wang & Hazen, 2016). From the marketing perspective, remanufacturing systems are becoming increasingly relevant to achieve sustainability objectives (Kalverkamp & Raabe, 2018). To ensure the success of this strategy, marketers need to capitalize on marketing to improve consumers' attitudes towards remanufactured products.

Aided by environmental greening practices and initiatives, the combination of remanufacturing and marketing is concerned with closing the materials use cycle, focusing on value-added recovery, and fostering innovation for the realization of sustainability goals (Kalverkamp & Raabe, 2018). Under competitive environments, remanufacturing can turn into an effective marketing strategy, which enables manufacturing firms to improve their market share via better economic and environmental performance in the supply chain (Alizadeh-Basban & Taleizadeh, 2020). The commitment of organizations to remanufacturing marketing paves the way for an integrated approach that adds value to triple-bottom-line sustainability and profitability (Jensen et al., 2019). In a recent study, Vogtlander et al. (2017) argue that the remanufacturing of products can be used to deliver lower eco-costs of materials depletion and pollution. For remanufacturers, the satisfaction of green consumers represents a marketing opportunity since they are involved in returning cores, repairing, reusing, and purchasing remanufactured products, thereby facilitating the circularity of materials within the supply chain. Moreover, the green knowledge of remanufactured products is valuable for understanding the significance of resource and energy savings and reducing waste and pollution through the manufacturing process (P. Wang & Kuah, 2018). Therefore, remanufacturing, coupled with marketing, can enable organizations to achieve a durable competitive advantage, mainly when competition is high, innovation is relatively slow, and the offered products respond to the concerns of environmentally-conscious consumers (Ozanne et al., 2021).

Product-service Systems

As the concept of CE no longer concentrates on profit maximization or achieving cost efficiencies, organizations may maintain the ownership of their products and offer

product-service systems (PSS). These systems represent an integrated mix of products and services, like repair and maintenance (Ackermann et al., 2018). According to Schallehn et al. (2019), PSS constitutes a well-established concept in sustainability research given its criticality for the sustainable shift from consumption-based markets toward CE-based offerings. The deployment of PSS methodologies is an auspicious pathway for organizations aiming at promoting CE initiatives. When it comes to the role of marketing in supporting circular consumption, it is argued that close communications between an organization and its user or consumer group are fundamental to the success of PSS, especially in the introductory phases of a product or service cycle (Chamberlin & Boks, 2018). A sound basis for the development of PSS marketing strategies could be the notion of customer experience, which is acknowledged as a future marketing technique that is used to realize differentiation in competitive marketplaces (N. Bolton et al., 2014). The combination of marketing and PSS operations strategies concentrates on the after-sales services to keep the product in functional condition for more extended periods. In the CE, reverse flow and end-of-life (EoL) purchase of products is essential as customers may consider the minimization of the expenses with the dispatching and uninstalling of the EoL products (Schallehn et al., 2019b). As a result, the interaction between engineering design and marketing is crucial to inform PPS designers on the necessary aspects to commercialize PPS offerings and meet consumer expectations in terms of economic and environmental feasibility. The combination of marketing and design engineering is fruitful since it may enrich the understanding of the PSS design process. For example, CE businesses can develop marketing strategies that promote and increase awareness of environmentally and socially more acceptable practices by providing consumers with information and presentations about the efficient use of their products (Mont, 2002). Moreover, marketing capabilities, including customer relationship management, customer involvement, and product design and positioning, are the underlying drivers for the development and implementation of a PSS.

Neuromarketing Tools

According to Morin (2011), neuromarketing is an emerging interdisciplinary field that connects consumer behavior with neuroscience. As a new concept in economics, neuromarketing merges multiple disciplines like neuroscience, marketing, and psychology (Lee et al., 2007; Lim, 2018; Ulman et al., 2015). The core notion of neuromarketing is that it depends on sensory stimuli that occur when an individual sees specific visuals. If it is related to the marketing field, visuals in this situation can be the brand, name, and logo of a specific product (Kotsi et al., 2018). Researchers have employed neuroscience to support the brain area localization of the feeling type evoked by the stimuli and the persons' behavioral tendency (Schupp et al., 2003). When the persons carry out the intertemporal choice tasks utilizing functional resonance imaging (fMRI) experiments, the brain region of emotions is driven by immediate monetary rewards (Davidson, 2004), which demonstrates that the immediate consequences could stimulate the emotional brain ideas.

The application of neuromarketing tools allows greater interpretation than conventional survey methods and enables accurate measurement of certain variables. To improve organizational sustainability and accelerate the overall transition toward the CE, neuromarketing tools like eye tracking and electroencephalography have the potential to analyze several aspects of consumer behavior in regard to sustainable consumption (Pagan et al., 2020). With the support of these marketing advances, CE businesses would have the opportunity to understand diverse consumers' emotions, psychological reactions, cognitions, and behaviors. Through neuromarketing methods, current consumer wants, needs, and behaviors can be studied, grasped, and eventually, firms can rely on this information to design relevant products and ads (O'Rourke, 2014). In their recent study, Pagan et al. (2020) argue that neuromarketing has been applied in assessing consumer behavior, advertising effectiveness, and decision-making processes for different kinds of product labels, including green product labels and eco-designs. Using neuromarketing, organizations can improve their product development activities and guide their consumers toward more sustainable product choices and consumption. Neuromarketing methods have the potential to analyze the interaction of the body and human brain in response to green advertising (Martínez-Fiestas et al., 2015).

Beyond product design, neuromarketing techniques can be used in sustainable product marketing (Wandosell et al., 2021), thereby helping marketers enhance their efficiency, effectiveness, and decision-making. While the significant promise of neuromarketing has been met with increasing attention from both scholars and marketers, there is still a need for actionable research within the growing field of CE. Challenges associated with the application of neuromarketing remain unaddressed. For example, the extension and validation of neuromarketing are still hampered by the expensive and time-restricted nature of neuroimaging experiments, the reliance of equipment on artificial laboratory environments, and ethics. Therefore, potential solutions to support neuromarketing in CE without carrying out invasive and intrusive marketing experiments in CE settings are needed.

Research Agenda for Future Research

The concept of CE has spread rapidly to reflect the actions that replace the idea of an end of life for a product by minimizing, recycling and recovering materials in production, distribution, and consumption processes (Kirchherr et al., 2017). The transition from the linear economy to the CE is a challenging task to be tackled. Nevertheless, the growing complexity of materials and products, coupled with the urgent calls for sustainability, has led to the sophistication of the marketing function. The multitude of sustainability-related concepts, including eco-design, waste management, recycling, and remanufacturing, provides an opportunity to rethink how marketing can accelerate the transition toward the CE. In this study, we identify green marketing as a significant contributor to the CE. The efforts to reduce material use, improve environmental sustainability, and conserve scarce resources are among the priorities of green marketing. While the topic of green marketing has been extensively discussed in the CE literature, there is still a need to

examine how green marketing can increase the adoption of CE from the business-to-business perspective. Whether green marketing can increase the profitability of CE business models and drive revenues across circular supply chains remains unknown. Moreover, despite the critical role of remanufacturing in the CE, it is recommended that future research should investigate how marketing can optimize remanufacturing outcomes and improve customer perceptions toward remanufactured products (Govindan et al., 2019). Related to PSSs, future research may look into the marketing capabilities necessary to support the success of PSSs and to trigger higher levels of circularity within supply chain networks. It is also interesting to assess the role of marketing to improve PSS by influencing consumer behavior and increasing their engagement in closing the loop of resource flows. Moreover, the advent of neuromarketing has extended the marketing capabilities of organizations embarking on CE initiatives, clarifying how emotions and unconscious responses influence customer perceptions and decisions. Neuromarketing can also be used by scholars to understand better the resistance that each industrial sector has to the broad implementation of the CE in different cultures with various linear consumption attitudes. What is urgent to understand is the potential of neuromarketing technologies for assessing customer behavior tied to consumption experience in the CE context. Future research, thus, should demonstrate how neuromarketing can guide and optimize the development of better and innovative products that support the CE and respond to customer preferences and judgements.

CONCLUSIONS

This study attempted to investigate the current state of research on the intersection of CE and marketing by carrying out a systematic literature review on selected publications. In total, forty-five (45) studies were thoroughly analyzed for this purpose. The review findings indicate that the CE is an emerging concept that is insufficiently studied from the marketing perspective. Furthermore, the review focused on identifying the research methods adopted in the selected studies. The use of empirical methods dominates the current discussions on the CE and marketing, providing insight into the implementation of CE strategies within organizations and the supporting role of marketing for CE business models. Empirical methods were mainly represented by surveys and case studies; they were used to examine consumers' expectations and willingness to engage in sustainable consumption. Research tendencies for the CE-marketing nexus were derived and classified into four main categories: (1) contribution of green marketing to CE, (2) remanufacturing marketing, (3) product-service systems, and (4) neuromarketing tools. The majority of studies suggest that green marketing represents one building block of CE, helping organizations incorporate pollution and waste measures into the process and product design.

From the theoretical perspective, this paper investigates the existing literature on the CE and marketing. It also identified several thematic categories related to the literature and performs a novel categorization of existing studies based on these categories. Furthermore, this paper represents one of the first attempts to investigate the convergence

of the CE and marketing. Both concepts are emerging topics in the literature. By means of several marketing efforts, the transition towards the CE can be facilitated. Also, from the theoretical perspective, this work suggests many potential research directions, which will be highly insightful for researchers who devoted their attention to the CE and marketing. From the managerial perspective, practitioners can utilize this review to determine how marketing can benefit the CE initiative and promote sustainability. The existing contributions will enable marketers to inspire novel solutions and applications in their organizations to achieve competitive advantages and transit to the CE paradigm. For instance, firms can capitalize on marketing capabilities to reduce waste, foster sustainability, and assure accountability for their CE initiatives. The review findings can guide managers on how to leverage green marketing, remanufacturing marketing, product-service systems, and neuromarketing tools to increase operational efficiencies and realize sustainability objectives. Developing marketing capabilities to manage CE activities efficiently is essential to guarantee the successful synergy of marketing and the CE.

Despite being the first study to investigate the CE-marketing nexus, our study is not without limitations. The selection of Scopus and Web of Science databases might neglect studies that might be relevant to the scope of this review. Therefore, future reviews may consider the use of additional databases such as Google Scholar to include more additional studies non-indexed in Scopus and Web of Science. The review findings are limited to the handful of selected articles; therefore, the theoretical arguments drawn here should be tested and validated with other research methods such as expert interviews and surveys.

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Halal Tourism and Foreign Exchange Reserves in Indonesia: Error Correction Model

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Abstract
This study aims to look at how the number of tourists and the exchange rate affects Indonesia's foreign exchange reserves before and after the implementation of halal tourism from 2010 to 2019 (monthly). The Paired t-Test model was used to look at the differences in Indonesia before and after halal tourism. By examining the short and long-term effects of tourist numbers and currency rates on foreign exchange reserves using the Error Correction Model. Halal tourism, according to the research, helps Indonesia's foreign exchange reserves. The exchange rate has a negative impact on foreign exchange reserves in this situation. Meanwhile, the number of international visitors has a favourable impact on both short- and long-term foreign exchange reserves. It demonstrates that the tourism sector, particularly halal tourism, can be one of the supporting sectors in increasing the country's foreign exchange, encouraging the government to implement policies to support its tourism industry.

Keywords:
Halal tourism, exchange rate, foreign exchange reserves, error correction model

INTRODUCTION

The era of globalisation has made every country cooperate in politics, economy and socio-culture. In the economic field, cooperation can be carried out through international trade, which occurs because of the limited resources of each country, so there are export and import activities as a means of meeting these limitations (Ichsan, 2014). International trade is also positively correlated with the service industry in the tourism sector (Chaisumpunsakul & Pholphirul, 2018). In international trade, every country needs financing to make transactions. One of the funding sources is foreign exchange reserves (Uli, 2016).

Deposits of foreign currency with central banks and monetary authorities are known as foreign exchange reserves (Hariadi et al., 2020). Foreign exchange reserves, according to Nurjanah and Mustika (2021), are reserves held by the central bank in foreign currency units to cover financial obligations arising from international transactions (reserve currency). A country's international finances will become stronger as a result of its substantial foreign exchange reserves, which means the value of the country's currency will strengthen. As previously stated by (Kaligis et al., 2017). The variable foreign exchange reserves and the exchange rate have a one-way (unidirectional) causal relationship, which means that changes in foreign exchange reserves affect the exchange rate. It demonstrates that Bank Indonesia's participation in the foreign currency market through foreign exchange reserves has an impact on the stability of the rupiah exchange rate.

Exports are one aspect that can have an impact on the country's foreign exchange reserves. One of the international commerce activities that plays a significant part in the economy of a country is export (Maranata et al., 2021). Since the term tourist spending is calculated as export revenue, tourism has been deemed an export product that is a mean international commerce service. The tourism industry's growth will contribute to a country's economic growth (Tiurma et al., 2014), as well as considerably to the country's foreign exchange profits, bolstering foreign exchange reserves (Afdi, 2015). Because of its expanding contribution to long-term economic growth, inbound tourism has expanded in importance enormously (Rasool & Maqbool, 2021). The tourism industry has a favorable impact on the community by improving community income, expanding employment possibilities, distributing development, and raising government revenue (Budi et al., 2017).

Based on Figure 1, we can see that tourism in Indonesia has advantages compared to other sectors, namely the oil and gas, coal, and CPO (crude palm oil) sectors. Therefore, the tourism sector is projected to have the highest growth rate compared to other sectors as the country's foreign exchange earnings. It makes tourism the primary target for the government in improving the economy. Tourism can be described as the act of traveling from one location to another for the aim of achieving a specific goal. Tourism is defined by the United Nations World Tourism Organization as "persons traveling to and staying in regions outside their typical environment for not more than

one year for leisure, business, and other objectives" (Aji et al., 2020). Furthermore, because tourism has ties to a variety of businesses, such as insurance and transportation, it can help to grow other supporting industries (Afdi, 2015).

Figure 1. Foreign Exchange Receipts from Major Sectors
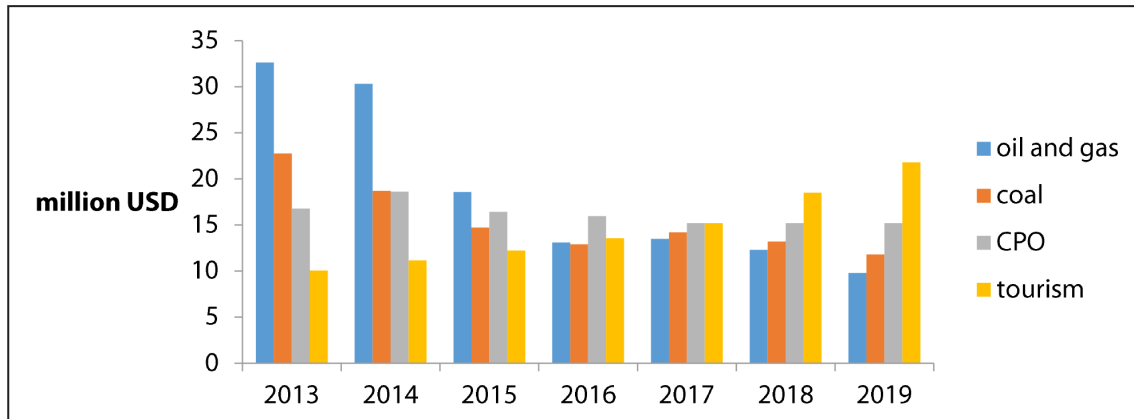
Source: Work Report of the Ministry of Tourism and the Central Bureau of Statistics, Indonesia (2020)

The halal tourist trend is one of the many developments that have occurred in the growth of tourism. A halal tourist destination is a geographical area in one or more administrative regions with interconnected tourist attractions, religious and public institutions, tourism amenities, accessibility, and communities that support the fulfillment of a statement based on the sharia concept (Mardianto et al., 2019). Halal tourism will become a competitive service business for non-Muslim destinations in the future, according to Battour & Ismail (2016). Halal tourism is a new trend in tourism management that is attracting more Muslim tourists to both Muslim-majority and non-Muslim nations every year (Satriana & Faridah, 2018). Part of this trend is the concept of tourism items paired with a halal idea based on Islamic values that can provide to the demands of Muslim tourists (Wibawa et al., 2021).

Halal tourism is a concept that complements traditional tourism, meaning that it is suitable for both Muslim and non-Muslim visitors. Those are intended to become the country's identity that implements it, and visitors who visit can feel safe and comfortable during their trip (Aji et al., 2020), to be a favorite destination (Moshin et al., 2020), and to perform as a halal-friendly destination (Al-Ansi & Han, 2019). Some of the countries that have implemented halal tourism are Thailand and Malaysia. Malaysia has built the concept of halal tourism starting in 2006 and even has a unique institution to handle halal tourism, namely the Directorate General of Sharia Tourism built-in 2009. For Thailand, although most of the population is non-Muslim, the Thai government has designed halal tourism. In 2005, it succeeded in developing its tourism performance, especially in the culinary and hospitality fields. In addition, the Thailand Muslim friendly destination application has also been provided to access the location of the nearest restaurant and mosque (Peristiwo, 2020).

The halal tourism segment in Indonesia has been developed since 2015. It is managed by the Ministry of Tourism of the Republic of Indonesia. In 2018, the halal tourism market experienced growth reaching 18%, with foreign exchange earnings reaching more than 40 trillion rupiahs, so the Ministry of Tourism has selected ten provinces for halal tourism development, some of which are Nusa Province. West Southeast, Aceh, Riau Islands and West Sumatra (Wibawa et al., 2021). Indonesia's participation in the Islamic Cooperation Organization (OIC) is also one way of developing its economic performance by offering a tourism sector with a halal tourism concept to increase foreign exchange reserves. In addition, Indonesia's achievements won 12 awards from 16 categories contested at the 2016 World Halal Tourism Awards in Dubai. Indonesia's achievements which won second place as a world halal tourist destination can also strengthen Indonesia to continue to develop its halal tourism performance (Global Muslim Travel Index, 2017).

Indonesia's achievements are still below the ranks of the world's first halal tourist destinations for eight consecutive years among OIC countries (Global Data Muslim Travel Index, 2017). The government regulations regarding the development of halal tourism have not been resolved, and there are still tourism products and businesses that have not been certified halal. Therefore, more superior performance is needed for Indonesia in developing the tourism sector to attract the attention of foreign tourists to make their tours of Indonesia. Based on this background, the authors are interested in examining the effect of the number of tourists and the exchange rate on foreign exchange reserves in Indonesia before and after the implementation of halal tourism (Hendratono & Puspitasari, 2018).

Indonesia is a country that applies an open economic system, which allows export and import activities between countries, both in the goods and services sector. In carrying out these transactions, Indonesia requires foreign exchange reserves as a source of financing, where the exchange rate also affects the position of the foreign exchange reserves. *Foreign exchange* is a foreign currency that functions as a means of financing in international trade transactions, which must be accepted and recognised by the international community. Foreign exchange reserves can be monetary gold, special drawing rights, reserve position in the fund, and other claims reserved by the central bank (Ichsan, 2014).

The Keynesian theory explains that a country's exchange rate depreciates (foreign currency strengthens, while domestic currency weakens), so it can relatively cause the price of goods-goods the domestic export becomes cheaper. In contrast, the cost of goods imports become more expensive. This condition led to an increase in exports and a decrease in imports. If exports are more significant than imports, it will cause a surplus in the balance of payments, increasing its foreign exchange reserves. Therefore, according to Keynesian theory, the relationship between exchange rates and foreign exchange reserves is negative, assuming C*ateris Paribus* (Nopirin, 2017). The exchange rate and the building of foreign exchange reserves have a link (Lee & Yoon, 2020). Furthermore, international tourism is viewed as an exogenous component of aggregate demand by Keynesians, which

has a beneficial impact on earnings and employment, resulting in greater growth rates (Majeed & Mazhar, 2021).

Indonesia can obtain foreign exchange reserves through various international transaction activities through the tourism service sector, namely through the number of foreign tourists visiting. This tourism sector activity will positively impact foreign exchange reserves, which affect state income. Halal tourism has emerged as a new trend and a requirement for Muslim and non-Muslim countries alike (Adinugraha et al., 2021). Halal tourism has risen in popularity and become a recent phenomena in the tourism business, and countries all over the world should seize this chance. As a result, it is clear that there are several potential to apply the Halal Tourism concept. This market sector is predicted to increase rapidly due to the growing Muslim population and Muslim travelers (Chandra, 2014). Sharia tourism is another term for halal tourism. This tourism concept is defined as a tourism activity that incorporates Islamic principles in all aspects and is built on Islamic norms (Ramadhany & Ridlwan, 2018). Another viewpoint was that halal tourism is a type of tourism that is approved by Islamic principles (Nurjaya et al., 2021). According to Preko & Mohamed (2021), Islamic principles or traits were the most important components that attracted Muslims to a tourism location and provided value to the area (halal food, separate prayer facilities, Islamic dress code, and place of worship).

According to the Mastercard Crescent Rating Global Muslim Travel Index (2019), the concept of halal tourism is based on several basic needs of Muslim tourists when travelling, including; a). Halal food is an essential service, so there is no doubt when consuming local food and drinks; b). Prayer facilities, namely mosques complete with ablution facilities, make it easier for Muslims; and c). There is no Islamophobic sentiment, meaning there is a guarantee of security and safety when Muslim tourists travel to a particular place.

Halal or Islamic tourism has been a popular research topic in recent years in the United States, Malaysia, Indonesia, Turkey, Iran, Saudi Arabia, and Japan, among other countries and situations (Suban & Madhan, 2021). According to GMTI 2019, Indonesia ranked first among halal-friendly tourist destinations in 2019. The Muslim population in Indonesia is the world's largest, accounting for 90% of the total population. Indonesia, on the other hand, is not a Muslim-majority country. The Muslim population in Indonesia is the world's largest, accounting for 90% of the total population. Indonesia, on the other hand, is not a Muslim-majority country. There is a specific type of Islamic religious group based on the history of Islam's spread in Indonesia. As a result, because Indonesia has the world's largest Muslim population, it is the best place to conduct this research in order to identify their halal tourist requirements (Wibawa et al., 2021).

Jaelani (2017) examines the halal tourism industry in Indonesia, states that Indonesia has good economic prospects in the halal tourism industry, which is intended for Muslim tourists and non-Muslim tourists. This application is expected to realise Indonesia as the world's halal tourism mecca to increase government revenue significantly.

Therefore, Indonesia must make improvements in the field of tourism promotion and services. Jailani's research only focuses on the prospects of the halal tourism industry. In contrast, the author's research adds a variable of foreign exchange reserves in seeing halal tourism.

Peristiwo (2020) finds that the tourism industry's positive impact in the economies of Indonesia and Malaysia, especially in foreign exchange earnings and employment opportunities, has risen. Furthermore, Afdi (2015) states that the number of tourists visiting Indonesia in the long and short term has a positive and significant influence on net exports. This study has similarities with the author's research, but the author sees the number of tourists on foreign exchange reserves. Nizar (2012) found that tourism growth (tourism foreign exchange and number of tourists) and exchange rates had a positive reciprocal causality relationship. This study differs from the author's research, where the author sees the relationship between the number of tourists and the exchange rate and foreign exchange reserves in the short and long term.

Darsana & Swantara (2015) found that the number of tourist arrivals, income from the trade, hotel, and restaurant sectors affected user fees in Gianyar Regency. Research conducted by Henderson (2015) in developing halal tourism in their countries to increase state income is also very concerned about the needs of Muslim tourists, especially for the availability of halal food and worship facilities. Previous research focused on the concept of halal tourism, in contrast to the authors who looked further at the impact of halal tourism on foreign exchange reserves. Hendratono & Puspitasari (2018) study the same thing, namely tourism in Indonesia which analyzes the influence of tourism on exports and imports in Indonesia. The difference between this study and the author's research can be seen from the effects of tourism, where the author looks at the impact of the number of tourist arrivals and exchange rate on foreign exchange reserves. In contrast, previous research only looks at local revenue, export, and import effects.

The Keynesian approach has explained the relevance between foreign exchange reserves and the tourism economy, which demonstrates that international tourism is one of the variables that can increase income, in this case through the country's foreign exchange reserves obtained from visiting tourists (Afdi, 2015). In addition, tourism receipts in the balance of payments are located in the current account and are considered foreign exchange flows. The entry of foreign tourists (inbound) causes foreign exchange from the country's tourism to increase, so foreign reserves (foreign reserves) will increase. Likewise, on the contrary, the existence of outbound tours will reduce foreign exchange reserves (Nizar, 2012). Several previous studies only examined halal tourism concepts descriptively, without further analyzing the effect on foreign exchange reserves. In addition to this, previous studies examine the impact of the number of tourists on national income. In this study, the author tries to fill the gap from previous research by further exploring the effect of halal tourism on the country's foreign exchange reserves in the short and long term.

The goal of this research is to determine the contribution of the tourism sector to foreign exchange reserves in Indonesia before and after the implementation of halal tourism, as well as the effect of the exchange rate and the number of foreign tourists on foreign exchange reserves in Indonesia over the short and long term. The government can be encouraged to boost the attractiveness of the tourism sector in Indonesia by understanding the impact of halal tourism, the effect of the number of tourist arrivals, and the exchange rate on foreign exchange reserves. Following the explanation of the purpose and earlier research in the introduction, the analysis employed in the methods follows. Continue to talk about the regression results and make a conclusion.

METHODS

This study uses the Paired Sample t-Test approach to compare the averages of two groups, which means a sample with the same subject but experiencing two different measurements (before and after an application) for the data period 2010-2019. This method was proper to know the tourism sector's contribution to foreign exchange reserves before and after the implementation of halal tourism. In addition, this study also uses time series analysis with the Error Correction Model (ECM) approach. This model can see the effect of variables in research for the short and long term using Eviews ten software to aid data processing.

The data used in econometrics must be stationary, especially for time series data. To determine if the data or variable will tend to return to a fixed long-term trend over time, a test of stationary data is required. The stationary test of data utilizing the Augmented Dickey-Fuller Test was used in this investigation (ADF-Test). The minimum and maximum AIC (Akaike Information Criterion) values are used to establish the ADF test's optimal lag. Stationary tests are performed on all variables, starting with a constant (drift) and trend.

Using Error Correction Model (ECM), a derivative of the Ordinary Least Square (OLS) regression model, divides the equations of the cointegrated variables into two equations, namely long-term and short-term. It follows the research objectives of the authors who want to see the long-term and short-term effects between variables. In addition, ECM can analyse long-term economic phenomena, examine the consistency of empirical models, and avoid spurious regressions (Engle & Granger, 1987). The initial formula for the Error Correction Model (ECM) is as follows:

$$Y = F(X_1, X_2, X_3) \tag{1}$$

The formula (1) then formed into the Ordinary Least Square (OLS) multiple regression model as follows:

$$Y_t = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + v_t \tag{2}$$

Then the Error Correction Term (ECT) is included as part of the Error Correction Model (ECM) as follows:

$$DY_t = \beta_0 + \beta_1 DX_{1t} + \beta_2 DX_{2t} + \beta_3 ECT_{t-1} + v_t \qquad (3)$$

So, in general equation (3) can be written as equation below:

$$DFER_t = \beta_0 + \beta_1 DER_t + \beta_2 DFNT_t + \beta_3 ECT_{t-1} + v_t \qquad (4)$$

Where *DFER* is foreign exchange reserves or a dependent variable that many foreign currency assets reserved by the Central Bank of Indonesia for the period 2010 to 2019 (monthly), which are measured in US Dollars; *DER* is the exchange rate of the rupiah against the US Dollar; *DFNT* (halal tourism) is the number of foreign tourists visiting Indonesia from 2010 to 2019 (monthly); β_0 are the constant; β_1, β_2, β_3 are the coefficient of the estimated of independent variables and v is the error term, and period t.

RESULTS AND DISCUSSION

Finding out whether there has been a change or difference in the conditions of tourism in Indonesia after the implementation of halal tourism, a different test was carried out with the Paired Test. After being tested, the results show differences before and after the performance of halal tourism in Indonesia. The changes that occur are more tourists visiting Indonesia. It is made clear from the positive coefficient of difference test of Paired t-test.

Table 1 explains that the average value before the implementation of halal tourism is equal to 102370583.9, and after the performance of halal tourism, it became 117672933.7, so there was a descriptive increase. The variance results are much different, respectively 1.78 and 7.41, with the number of observations used as many as 60, so that the degree of freedom (df) is 60-1 is 59. In addition, there is a descriptive Pearson correlation of 0.42 which means that there is a relationship for each variable. Based on the value of t count, which is equal to 9.5114 is greater than the t table value of 2.0000, which means that H0 is rejected and H1 is accepted, which means that foreign exchange reserves in Indonesia before the implementation of halal tourism are not the same as after the performance of halal tourism. Or in other words, the implementation of halal tourism contributes to foreign exchange reserves in Indonesia.

Table 1 shows that by using the Paired Test, the result is that the implementation of halal tourism contributes to Indonesia's foreign exchange reserves. This study's test shows that implementing halal tourism on foreign exchange reserves in Indonesia is different from some previous studies. This research contrasts to the analysis of Kusumaningrum et al. (2017), which states that the implementation of halal tourism in South Korea is based on Korean interests. The South is constructing an image of a Muslim-friendly country to increase people's income and investment through the halal tourism program. Jaelani (2017), which examines the halal tourism industry in Indonesia, states that Indonesia has good economic prospects in the halal tourism industry, which is aimed at both Muslim and non-Muslim tourists.

Table 1. Result of paired t-Test

	Before	After
Mean	102370583.9	117672933,7
Variance	1,78731E + 14	7,41924E + 13
Observations	60	60
Pearson Correlation	0.423873871	
Hypothesized Mean Difference	0	
Df	59	
t Stat	-9.511415505	
P (T <= t) one-tail	8,11311E-14	
t Critical one-tail	1.671093032	
P (T <= t) two-tail	1,62262E-13	
t Critical two-tail	2,000995378	

Table 2 shows that foreign exchange reserves, exchange rates and halal tourism are not stationary at the level (the ADF value is greater than the critical value), meaning that it rejects H1 and accepts H0, so the next stage is needed carry out testing.

Table 2. Result of Unit Root Test with Augmented Dickey-Fuller (ADF) at level

Variable	ADF statistics	ADF critical value			Prob	Decisions
		1%	5%	10%		
FER	-3.0250	-4,0376	-3,4483	-3.1493	0.1299	Not Stationary
ER	-1.8249	-4,0376	-3,4483	-3.1493	0.6865	Not Stationary
NFT	-1.6461	-4.0460	-3.4523	-3.1516	0.7679	Not Stationary

Based on Table 3, at first difference, all variables, foreign exchange reserves, exchange rates, and halal tourism, are stationary, so they qualify for the ECM test. Table 4 shows a long-term relationship between variables because the residuals are stationary at the 1%, 5% and 10% levels.

Table 3. Result of Unit Root Test (ADF) at first difference

Variables	ADF statistics	ADF critical value			Prob	Decisions
		1%	5%	10%		
FER	-9.1469	-4,0376	-3,4483	-3.1493	0.0000	Stationary
EE	-8,7096	-4,0376	-3,4483	-3.1493	0.0000	Stationary
NFT	-5,0648	-4.0460	-3.4523	-3.1516	0.0003	Stationary

Table 4. Result of Cointegration Test

Variable	ADF value	ADF Critical Value			Prob.	Decision
		1%	5%	10%		
Residual	-10,569	-4,0383	-3.4480	-3.1495	0.0000	Stationary

Table 5 shows that the exchange rate variable has a significant t-statistic value at α = 5% and a probability of 0.1018 with a coefficient of -1391.5, which means that in the long run, the exchange rate has a negative correlation but insignificant effect on foreign exchange reserves in Indonesia. The number of foreign tourists who in the long-run has a significant t-statistic value at α = 5% and a probability of 0.0000 (less than 0.05), and a coefficient of 42.2639, meaning that the variable number of foreign tourists has a positive effect on foreign exchange reserves in the long term.

Table 5. Long Run Estimation on Foreign Exchange Reserves

Independent variables	Coefficient	t-statistics	Prob
C	8857	6183	0.0000
ER	-1391.5	-1.6493	0.1018
NFT	42.2639	6.6838	0.0000

ECT value, which is significant and has a negative value, is one of the requirements for the ECM model to be valid. In Table 6, the ECT value of -0.0786 is obtained, which is significant at α = 5%, and a probability of 0.0030 (less than 0.05), which means that the ECT coefficient is significant in this model, so that the independent variables used in this study has a significant effect on the dependent variable in the short and long term. It is also supported by the F-statistic probability value of 0.0000.

Table 6. Short-run estimation on Exchange Reserves

Independent variables	Coefficient	t-statistics	Prob
C	6614	2.6101	0.0103
DER	-5096.2	-4,1272	0.0001
DNFT	6.6617	2.1954	0.0301
ECT(-1)	-0.0786	-3.0338	0.0030

The value of the error correction term is negative and significant. It means the model has a long-run equilibrium. The exchange rate variable has a negative relationship, and the number of foreign tourists has a positive relationship to foreign exchange reserves in the short run. All variables are significant in this study, the coefficient is -5096.2 and 6.6617, and the probability is 0.0001 and 0.0301.

Based on Table 7, the normality test shows that the Jarque-Bera is 2.2674 with the probability of significance is 0.3218 (> 0.05), which means the data is normally distributed. The VIP values of the variables are 1.0202 and 1.0413, respectively, meaning less than 10, so there is no multicollinearity in this model—next, the Prob. The Chi-Square from Obs * R-Squared is 0.6146 (> 0.05), meaning no heteroscedasticity in the model and the Prob. Chi-Square is 0.4493, more significant than 0.05, so there is no autocorrelation problem in the model. After knowing the results of the classical assumption test, it is known that nothing has been violated, then the regression results are not biased in this ECM modelling, and continue to the analysis.

Table 7. Classical Assumption

Normality			
Jarque-Berra			Probability
2,2674			0.3218
Multicollinearity			
Independent Variables			Variance Inflation Factor (VIP)
Exchange rate			1.0202
Halal Tourism			1.0413
Heteroscedasticity			
F-statistics	1,6886	Prob. F (20,38)	0.6232
Obs * R-Squared	5.0210	Prob.Chi-Square (20)	0.6146
Scaled explained SS	5.3776	Prob.Chi-Square (20)	0.5462
Autocorrelation			
F-statistics	0.3022	Prob. F (2,113)	0.4654
Obs*R-Squared	0.6332	Prob. Chi-Square (2)	0.4493

Foreign exchange reserves are influenced by the exchange rate, which has a negative value in both the short and long term but is only significant in the short term. In contrast, the number of foreign tourists has a positive and significant short and long-term impact on Indonesia's foreign exchange reserves. Furthermore, the ECT variable is significant and valid, indicating that the variables used in this study have an impact on foreign exchange reserves in both the short and long term.

Exchange rates have a negative and significant relationship in the short term with foreign exchange reserves. A more substantial exchange rate can reduce foreign exchange reserves in Indonesia. It follows Keynes's theory which states that when a country experiences depreciation (foreign currency strengthens, while the domestic currency weakens), it can relatively cause the price of goods-goods the domestic export becomes cheaper. In contrast, the price of goods-imports become more expensive. This condition led to an increase in exports and a decrease in imports. If exports are more significant

than imports, it will cause a surplus in the balance of payments, increasing its foreign exchange reserves.

The relationship between the exchange rate and foreign exchange reserves is similar to several theories, as evidenced by research from Sayoga & Tan (2017) and Andriyani et al. (2020), who discovered that the exchange rate had a negative and significant effect on Indonesia's foreign exchange reserves. Furthermore, this study contradicts research from (Kaligis 2017), which discovered that the exchange rate has a positive and significant effect on Indonesia's foreign exchange reserves. However, Murni et al., 2021 found that foreign tourists have no effect on foreign exchange reserves. That result has not supported this research.

For the variable number of tourists, The number of foreign tourists has a significant effect in the short and long term, with the coefficient being both positive. These results are in line with research (Afdi, 2015), where the number of foreign tourists visiting Indonesia has a positive and significant impact on Indonesia's export and import growth in the long run, thereby increasing foreign exchange reserves. Research from Adinugraha (2018) explains that the implementation of halal tourism has a good influence on improving the welfare of a region or country. Battour et al. (2021) discussed the impact of halal tourism on a sustainable economy. From an economic aspect, the success of halal tourism is an excellent first step towards a sustainable economy and contributes to the economy in the long term. So halal tourism can be used as a prospect for entrepreneurs in developing their industry by introducing their products to Muslims and non-Muslim (Battour et al., 2021). Wibawa et al. (2021) discover that the characteristics of halal tourism can be used in tourism bureau marketing strategies. As a result, the characteristics of halal tourism had a significant positive impact on the compelling destination image, as well as the country's economy.

Previous research indirectly explains the link between halal tourism and foreign exchange reserves by examining its impact on economic growth. The strategy for transforming halal tourism into a destination of choice for tourists worldwide is supported by this study's findings, which show that halal tourism has a positive impact on foreign exchange reserves. It implies that for a country's foreign exchange reserves to be strengthened, expanding and supporting the halal tourism industry is necessary.

CONCLUSIONS

Based on the discussion discussed accordingly regarding the implementation of halal tourism on Indonesia's foreign exchange reserves by paying attention to exchange rate movements. The implication of the halal tourism implementation contributes to foreign exchange reserves in Indonesia. The exchange rate has a negative and significant effect in the short term but not significant in the long term on foreign exchange reserves, meaning that the strengthening of the rupiah currency will have a negative impact on foreign exchange reserves in Indonesia. The number of foreign tourists has

a positive and significant impact on foreign exchange reserves both in the short and long term.

There are various recommendations for the government based on the findings of this study, including improving the government's performance in raising the attractiveness of the tourism sector. Halal tourism, a novel concept in the tourism industry, is predicted to grow in popularity as more appealing ideas and promotions are developed to entice foreign visitors to visit the country. As a result, tourist attractions must be adequately maintained and clean and meet Muslim tourists' needs. By asking influencers and state content makers to work in the near term, the government may use the digital realm to promote tourism. Meanwhile, tourism development and tourist attractions based on current trends can attract foreign tourists in the long run while maintaining existing cultural values. It is hoped that by incorporating other characteristics, future researchers will gain a more comprehensive understanding of halal tourism. Furthermore, the researchers can make recommendations, even to the government. It is intended that policies implemented by the monetary authority will build foreign exchange reserves while maintaining exchange rate stability.

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Policy Socialization and Business Strategy Direction of Eco-Tourism

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Abstract
This study aims to estimate the losses of tourism-related sectors and businesses to take recovery steps by disseminating policies and strategic directions. This study uses the Seasonal Autoregressive Integrated Moving Average (SARIMA) to calculate losses. This study indicates that the average percentage of losses in the tourism sector from January to August 2020 is 68% (9,508 million USD) to 69% (10,328 million USD). Several sectors experienced losses, especially accommodation (2978 to 3235 million USD); food and beverages (1750 to 1900 million USD); and shopping (1530 to 1662 million USD). Business actors need to know the socialization of government policies such as fiscal stimulus, CHSE (Cleanliness Health Safety Sustainability) certification, and market reactivation. The direction of the right strategy is also carried out, such as product innovation, improvement of health protocols, digitization, and certification.

Keywords:
economic impact, Recovery strategy, Tourism demand forecast (TDA)

INTRODUCTION

The COVID-19 pandemic does not only have an impact on the health crisis but also on the social and economic conditions of the community (Abodunrin et al., 2020; Karabag, 2020; Khalid et al., 2021; Milani, 2021). The development of COVID-19 cases in Indonesia is relatively fast compared to other ASEAN member countries. The increasing number of COVID-19 cases in Indonesia weakens economic conditions (Hadiwardoyo, 2020; Hanoatubun, 2020; Jalil et al., 2020; Livana et al., 2020; Thaha, 2020; Yamali and Princess, 2020). Several countries in ASEAN, such as Singapore, Vietnam, and Thailand, have taken control efforts for the COVID-19 pandemic. The Indonesian government's efforts to control the pandemic by imposing a lockdown and travel restrictions have increased the negative impact on the economy (Esquivias et al., 2021).

Large industries also felt, the impact of COVID-19, well-known companies in the United States such as Sears, JCPenney, Neiman Marcus, Hertz, and J. Crew are currently under financial pressure. 80% of hotel rooms are empty, and airlines lay off 80% of existing workers. The tourism sector and related sectors will certainly not profit in 2020 (Donthu & Gustafsson, 2020). Surveys in India show that the transportation, tourism, and hospitality sectors can no longer attract consumer demand, so there is no production in these three sectors. In China, the hotel sector experienced a decline in hotel occupancy by 89% at the end of January 2020. In Germany, the hotel occupancy rate fell by more than 36%. Hotel occupancy rates in Italy are only 6%, and London at 47% (Nicola, 2020).

The United States appears to be suffering so severely that one million restaurants, the second-largest private sector in the United States and employing 15.6 million people, lost eight million jobs and food services due to the pandemic. Hotel occupancy rates fell 11.6% for the week ended March 7, 2020, and suffered a loss of US$ 13 billion as of February 2020. It is predicted that hotels will lose US$ 3.5 billion per week (Sönmez et al., 2020; AHLA, 2020). Economic impacts include the temporary closure of hotels, restaurants, entertainment centers, tourist centers, shopping centers, and other points of interest. In June 2020, there were 1,800 hotel closures in Indonesia. Online agent Traveloka laid off 10% of total staff, hotel chain Airbnb cut staff by 25%, and Airy Rooms in Indonesia are permanently closed.

Various countries have faced and improved the impact of COVID-19 with various policies. Europe has prepared 1.7 Trillion Euros for COVID-19 rescue packages. The European Central Bank (ECB) has created an asset purchase program to stabilize and strengthen the euro. The government is also easing the budget to encourage public spending and support businesses affected by this pandemic. Germany has also prepared loans for companies and compensation for employees affected by the COVID-19 pandemic. The government has assisted affected communities in the UK by delaying tax payments, corporate and SME loans, and business funding. In addition, the British government also promised to reduce company costs by paying 80% of staff salaries. The Bank of England also cut interest rates to 0.1%. (Goniewicz, et al., 2020; Nicola, 2020).

In order to flatten the curve of COVID-19 cases, various strategies are carried out, such as lockdown, social distancing, stay-at-home, travel, and mobility restrictions. Not only hospitality, but all restaurants also limit their operations by enforcing only a take-a-way system. This resulted in temporary closures and decreased demand for the hospitality business (Bartik et al., 2020). Operational restrictions by hotels and restaurants led to a decrease in the income of this business (Gursoy & Chi, 2020). Countries such as Italy, Spain, France, China, and the United States have received a significant impact as the world's most prominent tourist destinations (Farzanegan et al., 2020; Rogerson, 2020).

The declining condition of the Indonesian economy has resulted in a decrease in income which leads to a decrease in people's purchasing power. Economic growth contracted to -5.32% in Q2 2020 (Central Bureau of Statistics, 2020). Unemployment also increased by 3.7 million people as of July 2020 due to the pandemic. Exchange rate depreciation to negative inflation in July 2020 also occurred. The economies of other countries are also experiencing similar economic effects in the tourism sector (Gössling et al., 2020; Polyzos et al., 2020; Nicola, 2020; Williams, 2020).

The COVID-19 shock is different from previous shocks that have occurred. This is because COVID-19 impacts an economic slowdown that is twice as large as the previous crisis. The shock caused by COVID-19 also significantly impacted the decline in global travel, thus potentially triggering structural changes in tourism-related sectors (Dolnicar & Zare, 2020; Khalid et al., 2021). COVID-19 has a more severe impact than the impact of the influenza epidemic in 1981. Small businesses have financial fragility and are very vulnerable to the COVID-19 pandemic. A survey on small businesses in the United States shows that they have reduced their workforce by about 40% since January 2020. The more considerable impact resulted in 54% of companies closing and a 47% decline in employment. Most of these impacts are felt by businesses in the tourism sector and its derivatives (Bartik et al., 2020).

Prior to the pandemic, it was predicted that the tourism sector would grow annually by 4%. However, the spread of COVID-19 triggered a change in his predictions, with a decline of up to 57% during 2020 (UNWTO, 2020). The Asia Pacific occupies the area with the highest decline in tourist arrivals, around 35% or around -33 million visits in the first quarter of 2020. The Central Statistics Agency said that this pandemic would reduce foreign exchange from foreign tourists, especially China, which accounts for around 12% of the total visit in 2019. The Ministry of Tourism and Creative Economy predicts that in 2020 Indonesia will lose around IDR 40 trillion of foreign exchange from tourists from China.

This year, the tourism sector is predicted to shrink by 25%, in line with travel restrictions imposed by many countries due to COVID-19 (WTTC, 2020). The global aviation industry suffered losses of up to US$ 133 billion. The Indonesian Hotel and Restaurant Association (2020) also stated a decline in the occupancy rate at 6,000 hotels in Indonesia. This illustrates that the tourism sector and related businesses have experienced a decline in income and sales.

Over the past decade, the Indonesian government has encouraged the tourism industry to have an essential role in increasing business activity, foreign currency earnings, and job creation. However, the tourism industry tends to be very sensitive to natural disasters (Haksamaet al., 2018), social conflict, war, economic crisis (Kim et al., 2018), acts of terrorism, and against pandemics (Zhang et al., 2020). Muryani et al., (2020) identified that the Tsunami 2004, the global financial crisis 2008), and the terrorist attacks in 2002 and 2005 had dampened tourism activity in Indonesia. The bombing in 2002 caused a decline in real GDP, employment, export prices, and the consumer price index in Bali. Tourist arrivals fell by 50% after the 2002 bomb attacks. Purwomarwanto and Ramachandran (2015) found a decline in tourism arrivals in 2008, with recovery just a year after that.

The impact of the COVID-19 pandemic on the tourism sector in Indonesia has been carried out in several studies. Atmojo and Fridayani (2021) has analyzed the impact of COVID-19 on the tourism sector, especially on MSMEs. Using a qualitative research type with content analysis, they saw the impact of the COVID-19 pandemic on the decline in tourists in Bali and Yogyakarta, which affected the loss of MSMEs that provide travel and hotels souvenirs, regional crafts, and food and beverage at tourist attractions. Laksito and Yudiarta (2021) also researched the financial impact of the tourism sector in Bali due to COVID-19. The results show that COVID-19 had significantly impacted a very severe decline in Bali's inbound tourism in 2020. Other research shows that the impact of COVID-19 on the tourism sector is measured only through the air transport and hotel accommodation sectors using Ordinary Least Square, which shows a significant negative influence from the COVID-19 pandemic on the tourism sector (Purba et al., 2021). Through qualitative research, Kristiana et al. (2021) saw the impact of COVID-19 on the tourism sector in Tanjung Puting, Indonesia. They saw the impact of tourism in general that the tourism industry experienced dormancy, tourism stakeholders lost income, and tourism sector workers shifted to other sectors.

Based on the previous explanation, the purpose of this research is to estimate the losses of tourism-related sectors and businesses so that recovery steps can be taken through the dissemination of policies and strategic directions. The research gaps found are that: (1) most of the research on the impact of COVID-19 on the tourism sector in Indonesia uses qualitative research; (2) research using empirical testing was carried out in Indonesia but was limited to only a few sectors and region such as air transport and hotel accommodation or Bali and Yogyakarta (3) the tourism impact which is analyzed in general terms and does not show how much impact the tourism sector receives as a definite measure. Based on the research gap found above, this research has novelties including (1) this study uses empirical research to see how much loss has been received by the tourism sector due to COVID-19 by showing the amount or value (2) this research also shows losses in all business sectors related to tourism and national aggregate (all province or region).

METHODS

In order to get the value of losses for the tourism sector, secondary data is used in the form of time series for the period January-2009 to August-2020. This data includes the number of tourist visits, tourist spending, and the percentage of tourist spending for each business field. Data on expenditure is average expenditure per foreign tourist based on 2019 data (Tourist Expenditure Statistics, BPS). In line with Joo et al. (2019), the Seasonal Autoregressive Integrated Moving Average (SARIMA) estimation technique is used to calculate losses in the tourism sector. The SARIMA is used in this study because tourism data has a seasonal trend. This is influenced by tourist visits which have an increasing trend during year-end holidays. Dynamic SARIMA can be estimated directly because it can produce forecasting for more than one period. Static SARIMA can only produce forecasting for one period. Dynamic and static SARIMA forecasting will produce predictions of the number of foreign tourist visits if it is assumed that there is no COVID-19 pandemic. The difference between the actual and predicted values of SARIMA will result in a loss of tourism revenue. The percentage of businesses in related fields, namely transportation, accommodation, food and drink, shopping, tour packages, and others, will be multiplied by the loss of tourism revenue so that the losses for each of these sectors will be known.

SARIMA estimation begins with identifying whether there is a seasonal pattern in the data. After knowing that there is a seasonal pattern, a unit root test is carried out on the data. Unit root test was performed using Augmented Dickey-Fuller (ADF). If the data is stationary, seasonal and non-seasonal models are identified using ACF (Auto Correlation Function) and PACF (Partial Auto Correlation Function). The next step is to test the significance of the parameters of the models that have been identified. The selected model is a model that has low AIC (Akaike Information Criterion) and BIC (Schwarz Bayesian Information Criterion) values. The selected model does not mean the best model, so it is necessary to carry out a diagnostic test in the form of a normality test using Jarque-Berra and White Noise using Q-Statistics.

The selected SARIMA model is a model that passes the diagnostic test. After forecasting is done, the next step is to check the MAPE (Mean Absolute Percent Error) value with the following conditions:

- MAPE < 10% indicates that the forecasting results have a high level of accuracy;

- MAPE = 10% - 20% indicates that the forecasting results have a good level of accuracy;

- MAPE = 20% - 50% indicates that the forecasting results have a reasonable level of accuracy (reasonable);

- MAPE > 50% indicates that the forecasting results are not accurate.

RESULTS AND DISCUSSION

Based on the pattern analysis, it can be seen that the peak of foreign tourist visits is in the 12th month (December), just before the Christmas and New Year holidays. Based on this information, the seasonal pattern of the number of foreign tourist visits is every 12 months. In figure 1, it can also be seen that there is an upward and repeated trend in a certain period which indicates a seasonal element. This uptrend indicates that the data is not stationary at the mean, and there is a difference in variance so that the data is not stationary in the mean and variance. Table 1 shows that the data is not stationary and has a unit root problem. The probability is 0.9989 > 0.05. This result accepts the null hypothesis that there is a unit root problem in the data.

Figure 1. Seasonal Patterns of International Tourist Visits
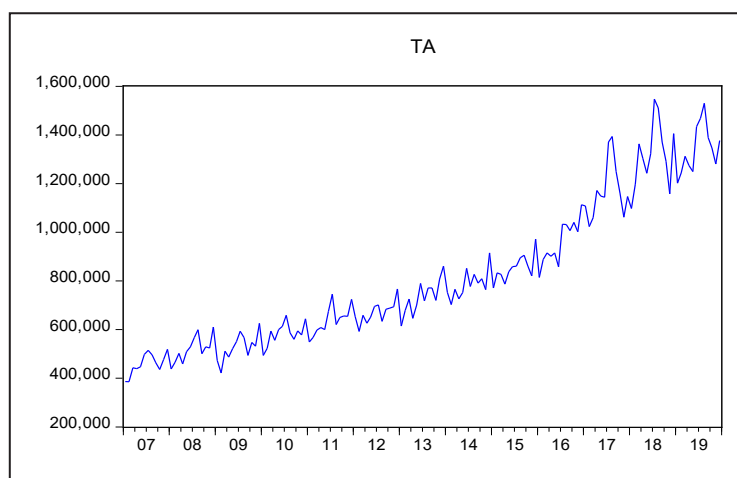
Source: Central Bureau of Statistics (2020); Eviews 9, processed (2021).

Table 1. Unit Root Test

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistics		1.371642	0.9989
Test critical values:	1% level	-3.476472	
	5% level	-2.881685	
	10% level	-2.577591	

*MacKinnon (1996) one-sided p-values. Lag Length: 12
Source: Central Bureau of Statistics (2020), Eviews 9, processed (2021)

Table 2. Unit Root Test after Transformation to Natural Logarithm

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistics		0.387459	0.9818
Test critical values:	1% level	-3.476472	
	5% level	-2.881685	
	10% level	-2.577591	

*MacKinnon (1996) one-sided p-values. Lag Length: 12
Source: Central Bureau of Statistics (2020), Eviews 9, processed (2021)

Table 3. Unit Root Test after Differencing

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistics		-5.773118	0.0000
Test critical values:	1% level	-3.476472	
	5% level	-2.881685	
	10% level	-2.577591	

*MacKinnon (1996) one-sided p-values. Lag Length: 11
Source: Central Bureau of Statistics (2020), Eviews 9, processed (2021).

Figure 2. ACF and PACF

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	-0.575	-0.575	51.982	0.000
		2	-0.016	-0.519	52.025	0.000
		3	0.165	-0.302	56.376	0.000
		4	-0.125	-0.319	58.888	0.000
		5	0.098	-0.166	60.432	0.000
		6	-0.087	-0.219	61.660	0.000
		7	0.079	-0.097	62.674	0.000
		8	-0.103	-0.252	64.423	0.000
		9	0.182	0.050	69.917	0.000
		10	-0.147	0.069	73.512	0.000
		11	-0.236	-0.585	82.838	0.000
		12	0.579	-0.213	139.62	0.000
		13	-0.377	-0.061	163.82	0.000
		14	0.028	0.090	163.96	0.000
		15	0.046	-0.023	164.32	0.000
		16	-0.024	-0.001	164.42	0.000
		17	0.057	0.061	165.00	0.000
		18	-0.097	0.013	166.65	0.000
		19	0.088	0.016	168.04	0.000
		20	-0.069	0.072	168.88	0.000
		21	0.118	0.054	171.39	0.000
		22	-0.142	0.038	175.06	0.000
		23	-0.108	-0.115	177.21	0.000
		24	0.386	-0.070	204.74	0.000
		25	-0.262	-0.017	217.54	0.000
		26	0.008	-0.053	217.55	0.000
		27	0.054	0.053	218.11	0.000
		28	-0.028	0.070	218.26	0.000
		29	0.028	0.029	218.41	0.000
		30	-0.074	-0.077	219.48	0.000
		31	0.105	0.004	221.63	0.000
		32	-0.100	-0.080	223.59	0.000
		33	0.123	-0.108	226.57	0.000
		34	-0.100	0.061	228.58	0.000
		35	-0.107	0.084	230.88	0.000
		36	0.283	-0.029	247.20	0.000

Source: Central Bureau of Statistics (2020), Eviews 9, processed (2021).

The non-stationary data is converted into a natural logarithm form to make the stationary data invariance, but not necessarily stationary in the mean. Table 2 shows that the data is still not stationary after being transformed to natural logarithms. Thus, differencing was performed once to make the data stationary in both the mean and variance. Table 3 shows that the probability is less than 0.05, so that it rejects the null hypothesis, then the data is stationary. Based on the ACF and PACF images and the low AIC and BIC values, the selected model is AR (12) I (1) MA(12) SMA(12). The results show that the SARIMA parameter coefficients are all signed with a significance level of 5%. These results are shown in Figure 2.

Table 4. SARIMA Parameter Test Results

| Variable	Coefficient	Std. Error	t-Statistic	Prob.
AR(12)	0.410836	0.179841	2.284439	0.0242
MA(1)	-0.687754	0.063711	-10,79491	0.0000
high school(12)	-0.886070	0.249929	-3.545285	0.0006
SIGMASQ	0.003327	0.000547	6.086285	0.0000
R-squared	0.470102	Mean dependent var		-0.000531
Adjusted R-squared	0.456278	SD dependent var		0.079572
SE of regression	0.058674	Akaike info criterion		-2.717960
Sum squared resid	0.395909	Schwarz criterion		-2.624544
Likelihood logs	165.7186	Hannan Quinn Criter.		-2.680027
Durbin-Watson stat	1.843616			
Method: ARMA Maximum Likelihood (OPG – BHHH)				
Included observations: 119				

The diagnostic test also shows that the model has a normally distributed residual, namely the Jarque-Berra probability of 0.803345 > 0.05. This means accepting the null hypothesis that the residuals are normally distributed. If the residuals are white noise, it can be ascertained that the model is suitable because there is no correlation between the residuals, the residuals are homogeneous, and there is no pattern in the residuals. Figure 7 shows the white noise test. The probability for each lag shows that the probability value is more than 5% alpha, thus accepting the null hypothesis that the residual is white noise. Based on the forecasting results, the MAPE value is 6.86% (dynamic) and 4.56% (static), so it can be stated that the forecasting results have a high level of accuracy (Figures 5 and 5).

Figure 3. Normality test
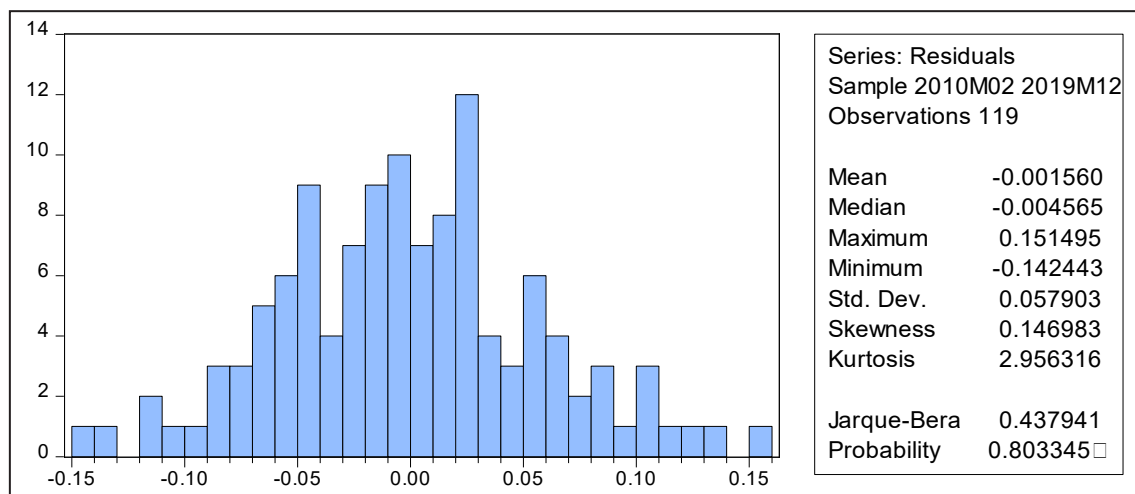
Source: Central Bureau of Statistics (2020), Eviews 9, processed (2021).
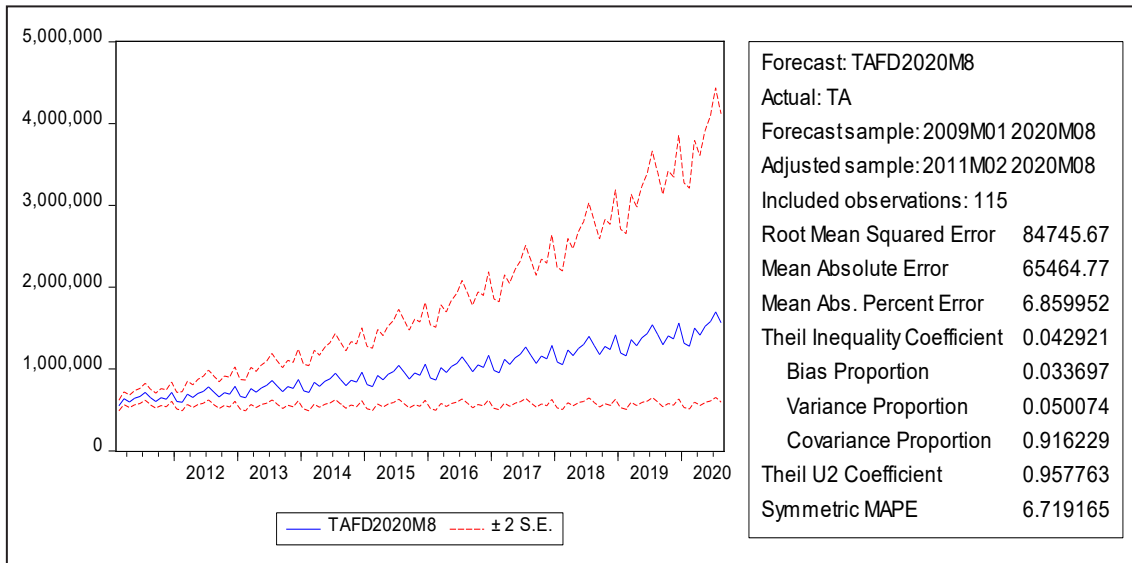
Figure 4. Dynamic Forecasting Results

Forecast: TAFD2020M8	
Actual: TA	
Forecast sample: 2009M01 2020M08	
Adjusted sample: 2011M02 2020M08	
Included observations: 115	
Root Mean Squared Error	84745.67
Mean Absolute Error	65464.77
Mean Abs. Percent Error	6.859952
Theil Inequality Coefficient	0.042921
Bias Proportion	0.033697
Variance Proportion	0.050074
Covariance Proportion	0.916229
Theil U2 Coefficient	0.957763
Symmetric MAPE	6.719165

Figure 5. Static Forecasting Results

Forecast: TAFS2020M8	
Actual: TA	
Forecast sample: 2009M01 2020M08	
Adjusted sample: 2011M02 2020M08	
Included observations: 115	
Root Mean Squared Error	58508.16
Mean Absolute Error	43486.23
Mean Abs. Percent Error	4.560024
Theil Inequality Coefficient	0.028901
Bias Proportion	0.000619
Variance Proportion	0.001022
Covariance Proportion	0.998359
Theil U2 Coefficient	0.683323
Symmetric MAPE	4.549265

Source: Eviews 9 (2021).

Based on the estimation results of Table 5, it can be seen that the tourism sector has suffered heavy losses due to this pandemic. The average percentage of losses in the tourism sector from January to August 2020 was 67.92% to 69.07%. The worst losses occurred in July when foreign tourist visits reached 9.29%-10.24% of tourist visits that would have been if there was no pandemic. The pandemic reduced foreign tourist arrivals significantly, in line with the results in Lu et al. (2018), Rehman et al. (2020), and Mair et al. (2016).

Figure 7. White Noise Test

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	0.050	0.050	0.3011	
		2	-0.003	-0.005	0.3020	
		3	-0.001	-0.001	0.3021	
		4	-0.121	-0.121	2.1308	0.144
		5	-0.016	-0.004	2.1638	0.339
		6	0.048	0.049	2.4614	0.482
		7	-0.036	-0.042	2.6311	0.621
		8	-0.101	-0.114	3.9458	0.557
		9	0.048	0.058	4.2472	0.643
		10	-0.110	-0.106	5.8474	0.558
		11	0.087	0.094	6.8450	0.553
		12	-0.030	-0.075	6.9638	0.641
		13	-0.060	-0.039	7.4523	0.682
		14	0.031	0.021	7.5859	0.750
		15	-0.036	-0.034	7.7669	0.803
		16	0.036	0.035	7.9502	0.847
		17	0.067	0.047	8.5756	0.857
		18	0.010	-0.011	8.5895	0.898
		19	0.024	0.055	8.6749	0.926
		20	0.073	0.040	9.4603	0.925
		21	-0.182	-0.168	14.343	0.706
		22	-0.101	-0.092	15.843	0.668
		23	0.192	0.218	21.380	0.375
		24	0.058	0.082	21.891	0.406
		25	-0.046	-0.133	22.211	0.447
		26	-0.068	-0.101	22.926	0.465
		27	-0.074	0.029	23.782	0.474
		28	-0.041	-0.002	24.048	0.517
		29	0.002	-0.079	24.049	0.573
		30	-0.050	-0.079	24.460	0.605
		31	0.029	0.074	24.600	0.650
		32	-0.156	-0.168	28.627	0.485
		33	-0.079	-0.082	29.672	0.483
		34	-0.085	-0.172	30.909	0.471
		35	0.050	0.101	31.344	0.500
		36	0.030	0.007	31.504	0.542

Source: Central Bureau of Statistics (2020), Eviews 9, processed (2021).

Table 5. Estimated Losses in the Tourism Sector Due to the COVID-19 Pandemic

Period	current	Loss Percentage		Tourist Expenditure Loss (million USD)	
		Dynamic	Static	Dynamic	Static
January	1.272.083	3.39%	0.12%	54.40	1.92
February	863,960	32.44%	33.02%	506.17	519.58
March	470.970	68.59%	65.86%	1,254.99	1108.45
April	160,042	88.69%	88.05%	1,531.51	1,438.71
May	163.646	89.25%	87.81%	1,657.18	1,438.34
June	158,256	89.98%	89.29%	1,734.66	1610.64
July	157,939	90.71%	89.76%	1,880.69	1,690.75
August	164.970	89.47%	89.41%	1,709.21	1,699.77
Total	3,411,866	69.07%	67.92%	10,328.81	9,508.16

Source: Central Bureau of Statistics (2020), Eviews 9, processed (2021)

If accumulated, Indonesia experienced a loss of foreign tourist arrivals of 9,508.16 million USD to 10,328.81 million USD as of January to August 2020 (Table 5). Dynamically the worst losses occurred in July, and statically the most significant losses occurred in August. This considerable loss, of course, also dramatically impacts tourism-related businesses (Donthu & Gustafsson, 2020). The average tourist spending the most

on accommodation is 31.32% (Figure 1). The second line of business most purchased by tourists is food and beverages with 18.39%. The shopping business sector is the third sector that encourages tourists to spend the most money, 16.10%.

Figure 8. Percentage of Tourist Spending on Business in the Tourism Sector
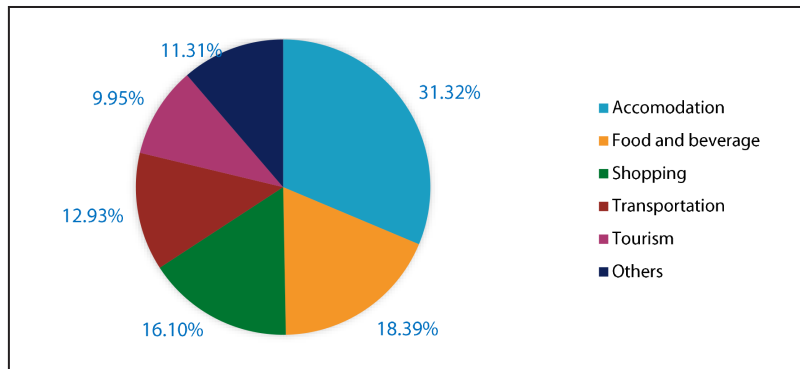
Source: Central Bureau of Statistics, 2020.

Business losses in the accommodation sector are estimated at USD 2,977.95 million to USD 3,234.98 million (Table 6). This loss is in line with the decline in the Room Occupancy Rate (TPK) of hotels in Indonesia. The ROR for hotels in Indonesia in 2018 was around 60% for 2-5 star hotels. In 2019 the TPK of hotels was in the range of 50%-60% for 2-5 star hotels. In January 2020, TPK for hotels was 49.17%, and in August 2020, TPK for hotels was 32.93%(Central Bureau of Statistics, 2020). Losses in the food and beverage sector are estimated at 1,748.54 million USD to 1,899.45 million USD. This result is in line with Amar et al. (2021) and Laksito and Yudiarta (2021) that COVID-19 has had a tremendous impact on the decline in the tourism sector. This impact is felt very deeply by business actors, especially MSMEs engaged in the tourism sector (Amar et al., 2021; Laksito & Yudiarta, 2021; Nursjanti & Amaliawati, 2021).

Table 6. Estimated Business Losses in the Tourism Sector Due to the COVID-19

Period	Accommodation		Food and Drink		Shopping	
	Dynamic	**Static**	**Dynamic**	**Static**	**Dynamic**	**Static**
January	17.04	0.599	10.00	0.352	8.76	0.308
February	158.53	162.73	93.09	95.55	81.49	83.65
March	393.07	347,17	230.79	203.84	202.05	178.46
April	479.67	450.60	281.64	264.58	246.57	231.63
May	519.03	450.49	304.75	264.51	266.81	231.57
June	543.29	504.45	319.00	296.19	279.28	259.31
July	589.03	529.54	345.86	310.93	302.79	272.21
August	535.32	532.37	314.32	312.59	275.18	273.66
Total	3,234.98	2,977.95	1,899.45	1,748.54	1,662.93	1,530.79

Description: in a million USD
Source: Eviews 9, processed (2021).

Figure 9. Percentage of Factors Inhibiting Tourism Recovery
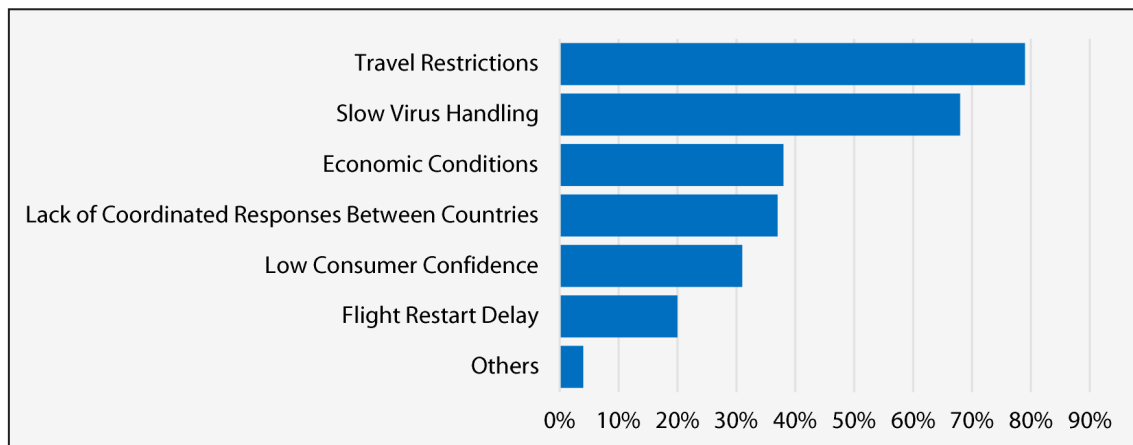
Source: UNWTO (2021).

This is natural because Indonesia anticipates the spread of COVID-19 with a lockdown or Large-Scale Social Restrictions/PSBB. The PSBB resulted in a decrease in the community's mobility as a whole. Unusual tourist arrivals reduce the income of various food and beverage businesses, especially restaurants. The restaurant business is closed for an indefinite period. Along with the new normal era, some restaurants are starting to reopen with health protocols. Restaurant visitor capacity could be cut by 50% to comply with health protocols (Gursoy & Chi, 2020).

During the pandemic, the decline in tourists has stopped the wheels of business in the shopping sector, especially souvenirs, which MSMEs mainly own. Estimated losses experienced by businesses in the shopping sector are 1,530.79 million USD to 1,662.93 million USD. MSMEs in this field has been hit hard by the COVID-19 pandemic. Furthermore, Laksito and Yudiarta (2021) said that MSMEs need to adapt to COVID-19 through several mechanisms, such as changing the advertisement paradigm, developing new business models, and improving quality control.

Globally, tourism is predicted to start to recover in 2023. Based on the report UNWTO (2021), several things affect the slowdown in tourism recovery, namely 1) travel restrictions; 2) slow virus handling; 3) economic conditions; 4) lack of coordinated government response, especially between countries; 5) low consumer confidence; 6) slow resumption of flight (Figure 9). Several studies have stated that government policies are urgently needed to accelerate tourism recovery (Yeh, 2020; Sharma et al., 2021; Zhang et al., 2021; Mair et al., 2016).

Government policies that need to be prioritized in the recovery and transition period must be coordinated to support an uncertain tourism sector so that workers, businesses, and destinations are ready when recovery arrives. Among other things, efforts are needed to 1) restore tourist confidence and support tourism businesses to adapt and survive; 2) maintain domestic tourism and support the safe return of international tourism; 3) provide clear information regarding security and health conditions; 4) start building more resilient and sustainable tourism. Similar policies are shown in various countries

worldwide (OECD, 2020). One of the policies issued by the Indonesian government is fiscal stimulus. The government provides a budget of IDR. 686.20 Trillion for handling COVID-19, and IDR. 123.46 Trillion to be given to MSMEs with details of an interest subsidy of IDR. 35.28 Trillion; placement of funds for restructuring of IDR. 78.78 trillion; spending on loan fees for working capital of IDR. 1 Trillion; DPT MSME financial PPH IDR 2.4 Trillion; investment financing to cooperatives through LPDB KUMKM IDR 1 Trillion.

Several countries issued various policies to save the business in the tourism sector. The Estonian government has budgeted EUR 26 million for business assistance in tourism which is valid until December 2020. The Icelandic government has suspended the accommodation tax from April 1, 2020, to December 2021, and for the payment of taxes from January 1 to March 31, 2020, it is deferred until February 5, 2022. The Peruvian government provides funds support for SMEs and provides credit guarantees to meet the capital needs of SMEs. The United States government provides a USD 2.2 trillion aid package, including grants and loans to the travel and tourism industry and broader business assistance(OECD, 2020). To improve the tourism sector during the recovery period due to the COVID-19 pandemic, efforts are focused on improving hygiene, health, and safety service protocols, the Cleanliness, Health, Safety, Environment Sustainability (CHSE) certification program, designing a covid-free tourist application through the eHAC application which is to perform tracing if there are tourists who are affected by COVID-19.

Adhering to health protocols is a step to guide safe business operations during the COVID-19 pandemic. Several world organizations also gave examples of the application of health protocols. Cruise Lines International Association (CLIA) implements and improves health protocols as an initial form of starting passenger operations. The World Travel and Tourism Council (WTTC) also restores 100 million jobs by opening up mobility by aligning health protocols. WTTC also launched safe travels in May 2020 to increase tourist confidence in health and safety protocols. In addition to certification and application of health protocols, completeness of information, especially for accommodation businesses. This information includes information about the identity of tourists, health conditions, where tourists come from, information on how assistance can be provided, information on how tourists can be contacted in times of distress, emergencies, or dangers, and how they are repatriated. (OECD, 2020; UNWTO, 2020). The Indonesian government has also reactivated the domestic tourist market and developed 5 Super Priority Destinations. The government has reopened tourism destinations in several places. The opening of Bali Tourism Destinations starts July 31, 2020. Based on input from tourism players, Bali is reopened with strict health protocols. Business actors must follow the provisions of Large-Scale Social Restrictions from each Regional Government and follow the provisions of the Health Protocol in places and public facilities (Decree of the Minister of Health Number 382/2020).

Several countries have also reactivated tourism markets to restore tourist confidence and boost demand. Chile has reactivated its domestic tourism and Taste Chile booking

program with a particular budget of CLP 83 million. Denmark is launching summer packages for domestic residents with free public transport for eight days and half-price tickets. Japan has also begun to reactivate the domestic tourism market by providing discounts and vouchers to consumers for tourism, transportation, food, and events businesses(OECD, 2020). Food and beverage and shopping businesses, most of which are still in the form of MSMEs, can take advantage of the fiscal stimulus provided by the government. MSMEs can receive from the government business assistance and credit interest subsidies. MSMEs can improve health protocols in the production and distribution process. In addition, MSMEs with products whose demand is low or even non-existent can produce and modify their production goods with goods in high demand by society today. Innovation is the key to the survival of MSMEs (Romão, 2020). Businesses in the accommodation, food, beverage, and shopping sectors can take advantage of the policies issued by the government with the right strategy.

Efforts can be made by adapting the business model, such as offering take-away food services, more flexible marketing conditions, price adjustments, changing operating hours, offering products and experiences digitally, and creating new products and packages. Businesses in the accommodation sector can also meet new market needs so that business operations can continue, namely by providing accommodation for students and alternative workspaces for long distances (Gursoy and Chi, 2020; Liguori and Pittz, 2020; OECD, 2020; Pasquinelli et al., 2021). Efforts that can be made to support businesses in the recovery process are to increase access to digital technology. Digital technology can simplify communication and increase time efficiency. In addition, digital technology can also reduce transaction costs and help provide complete information to minimize the occurrence of asymmetric information problems (Esquivias et al., 2020a). Financial services can also support businesses in the recovery process, one of which is by increasing financial inclusion. Financial inclusion is a condition where every community member has access to quality, timely, smooth, and secure legal, financial services at affordable costs according to their individual needs and interests. Based on this explanation, financial inclusion can positively affect company performance and support company competitiveness. One of the roles of financial inclusion is to facilitate access to credit for companies so that financial inclusion has an essential role in helping the recovery process (Esquivias et al., 2020b).

Marketing innovation includes the product, price, place, and promotion innovation. Changes in demand due to the pandemic require MSMEs to innovate their marketing mix. MSMEs took marketing mix actions in Norrbotten to survive during a crisis, such as facilitating reservations, ease of payment (by e-wallet, for example), and discounting, reorienting promotions for a long-term focus (safety and health certification). Other companies in Europe are implementing successful innovation efforts that MSMEs can replicate in Indonesia (Gössling et al., 2020). Some hotels in Denmark rent rooms to students to meet the shortage of student housing (dormitory). In Slovakia, the Bratislava Tourism and Hospitality Business Agency created a promotional campaign to extend the length of stay of tourists (free third-night stay, OECD, 2020).

Governments in various countries have also supported innovation for businesses in the tourism sector. Businesses in the accommodation, food, beverage, and shopping sectors must certify health protocols to ensure consumer safety. The Finnish government grants companies new products or innovative production solutions (usually covering new accommodation or business development). The Icelandic government provides funds for technology development to encourage investment. The Lithuanian government seeks to restore tourism by transforming tourism promoting innovation and digital technology through developing tourism services and products, for example, through company workers and innovation (OECD, 2020).

Certification of health protocols to ensure consumer safety can increase consumer demand because they feel safe during the pandemic. This certification is provided free of charge by the Ministry of Tourism and Creative Economy of Indonesia. Over time, consumers will be willing to pay more, for example, for hotel accommodation, with standard health and hygiene protocols (Qiu et al., 2020; Zhang et al., 2020). A study in China conducted by Qiu et al. (2020) found that most respondents are willing to pay more to reduce their risk due to COVID-19. The study also explained that youth showed higher responsiveness and motivation to service. This indicates that local governments must involve the younger generation in recovering from the crisis caused by COVID-19. Gursoy and Chi (2020) prove that easing travel restrictions does not immediately restore consumers' willingness to return to eating at restaurants or staying at hotels. Around 18% of consumers will eat at a restaurant or stay at a hotel when the destination has relatively low COVID-19 cases. In addition, they will go to a restaurant or hotel with suitable health protocols (there is a hand sanitizer area, staff wear masks and gloves, apply social distancing, limit the number of consumers served, strict public area cleaning, health, and safety protocol training for employees). Consumers' demands to maintain their health and safety encourage consumers to pay better at restaurants and hotels. Surveys show that 40% of consumers agree to pay more for their health and safety.

This is in line with the study conducted by Fong et al. (2021) that during the pandemic period, the government should prioritize health protocols to prevent the spread of COVID-19 compared to intervening to create a perception of tourism recovery. This is because the population will form a positive outlook if the government controls the spread of COVID-19 during the pandemic. If the government prioritizes this control, it will ultimately increase trust in tourism. The strengthening of its tourism image can impact the development of domestic tourism, essential for a faster economic recovery (Jiang et al., 2019).

People's consumption patterns that change from face-to-face to online must be put to good use by these three business actors (Pasquinelli et al., 2021). Hotels can promote their products through digital platforms by providing discounts and guaranteeing health protocol standards through digital platforms such as Traveloka, Tiket.com, and OYO. Food and beverage businesses have also started to put their products on digital platforms. Typical foods that are usually used as souvenirs for tourists can also be sold through digital platforms and businesses in the shopping sector.

CONCLUSION

The purpose of this study is to estimate the losses of the tourism sector and business actors in related fields from January to August 2020 so that steps can be taken to save business actors in the tourism sector so that they can survive during the pandemic. Our findings show that tourism experienced a loss of revenue of USD 9,508.16 million to USD 10,328.81 million, with a decrease in tourist arrivals by an average of 67%-69% as of January to August 2020. Businesses in the tourism sector also experienced losses, namely accommodation (2,977 ,95-3,234.98 million USD); food and beverage (1,748.54-1,899.45 million USD); and shopping (1,530.79-1,662.93 million USD).

The following strategies can be implemented for the implications of government policies in helping the difficulties faced by MSMEs during the COVID-19 pandemic, including (1) MSMEs in the food and beverage and shopping sectors must develop innovations. One form of innovation is the marketing mix carried out by MSMEs in Norrbotten to survive during the crisis, such as facilitating reservations, facilitating payments and providing discounts, reorienting promotions for a long-term focus. (2) Food and beverage and shopping businesses can adapt business models, such as offering take-away food services, more flexible marketing conditions, price adjustments, changing operating hours, and digitally offering products and experiences, creating new products and packages. (3) The strategy that can be done for the accommodation business is to meet the needs of new markets so that business operations can continue, namely by providing accommodation for students and alternative workspaces. (4) The strategy that needs to be applied for business actors in the accommodation, food, beverage, and shops is the application of standard health protocols.

Acknowledgement

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Etikonomi is being accredited in First Tier (Sinta 1) by Ministry of Education, Culture, Research & Technology No. 158/E/KPT 2021 (Valid from Vol. 20(1), 2021 until Vol. 24(2), 2025) Renewal of Accreditation No. 051/E/KPT/2017 Since December 4, 2017.

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Table 1. The Growth of Third Party Fund, Financing and Asset (Billion rupiah)

	2012	2013	2014	2015	2016	2017
Fundraising	52.271	76.036	115.415	147.512	174.018	186.608
Financing	46.886	68.181	102.655	147.505	179.284	187.886
Asset	66.090	97.519	145.467	195.018	229.557	244.197

Source: Islamic banking statistics, Bank of Indonesia

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