International Journal of Engineering & Technology, 7 (4.35) (2018) 414-423

International Journal of Engineering & Technology

Website: www.sciencepubco.com/index.php/IJET

Research paper



The Mediating Effect of Eco-Innovation between Motivation and Organization Performance in Jordan Industrial Estates Company in Jordan

Waleed Mohammad Kayed Alhyasat[1*], Zainon Mat Sharif[2], Khaled Mohammad Alhyasat[3]

[1] College of Graduate Studies, Universiti Tenaga Nasional
[2] Institute of Energy Infrastructure, Universiti Tenaga Nasional
[3] Faculty of Managerial and Financial Sciences, Aqaba University of Technology
**Corresponding author E-mail: w_heyasat@yahoo.com*

Abstract

The main aim of this paper is to evaluate the effect of motivation on organization performance in Jordan Industrial Estate Company (JIEC) in Jordan, the mediating role of eco-innovation. Resource Based View theory (RBV) highlighted the role of Motivation in achieving the high organization performance. A quantitative approach and simple random sampling were used to obtain data via questionnaire from 381 employees from different level of JIEC, the response rate was 74.8%. SEM was employed to analyses the study variables. The results shows that the direct effect of motivation and eco-innovation on organization performance are significant at a p-value 0.050 and 0.000 for motivation and eco-innovation respectively and eco-innovation mediates the relationship between motivation and organization performance, with a partial mediating effect. This paper contribute to theory by filling the gap of eco-innovation literature in developing countries, validate eco-innovation as a mediator variable between motivation and organization performance. This study recommended for further studies about eco-innovation in developing countries particularly in Jordan, and repeat the same study to ensure the validate the study model.

Keywords: *Eco-Innovation; Organization Performance; Motivation; Jordan Industrial Estate Company*.

1. Introduction

Jordan is a developing, small Middle Eastern country located in southwest Asia. In total, there are 9,531,712 people in Jordan, most of whom live in the capital, Amman [1]; 6,6135,835 are Jordanian citizens and approximately 3 million are refugees from the Syrian conflict [1]. The Jordanian government has taken vital steps to attract foreign investment to Jordan by developing a market-based, outward-oriented, and internationally competitive economy [2]. The service sector is the main source of gross domestic product (GDP) in Jordan (67.4%), followed by the industrial sector (27.3%) and then agriculture (5.3%) [3], [4].

Decreasing the unemployment rate in Jordan is one of the issues that must be addressed, not only by the Jordanian government but by all the alternative sectors in Jordan [5]. The main role of government in relation to this issue is to facilitate national and international investment in Jordan, primarily by establishing a tax-free industrial zone to provide an appropriate climate for investment [6]. Additionally, foreigners' direct investment (FDI) increases GDP, facilitates the transfer of technology to the Jordanian market, and enhances production capabilities [6].

The Jordan Industrial Estate Company declared that the investment climate, particularly investors' confidence in the business environment in Jordan, is the main reason why foreigners and Jordanian investors are encouraged to invest in the country [7]. Moreover, the long-term plan of the JIEC is to open several new branches throughout Jordan, which may substantially contribute to decreasing the rate of unemployment by offering new jobs in these branches, in turn increasing GDP [3], [7].

2. Background of the Study

The Jordan Industrial Estates Company (JIEC) is a semi-governmental corporation that was established in 1980 to support the Jordanian industrial sector. JIEC manages five industrial estates distributed geographically across five governments that covered the main city in Jordan [7].

These five industrial estates contribute substantially to GDP [3], [8]–[10]. Moreover, JIEC was established to attract foreign investment and accommodate it within these industrial estates to develop and manage the Jordanian industry, and to decrease the high rate of unemployment [6], [11]. JIEC employs around 45339 employees working in 792 companies [7]. Table 1.1 shows the number of JIEC employees in each estate for the years 2012-2016.

Despite the many challenges affecting its performance, the Jordanian economy was stable throughout 2016 and its performance was generally robust [7]. However, real growth in gross domestic product continues to be below the target level [3], [7]. Furthermore, the unemployment rate increased to 15.3% in 2016, its highest level in 10 years [5]. This is the main reason for the recent regional turmoil within the Mideast countries, a crisis caused by the transfer of refugees to Jordan, which resulted in the closure of Syria and Iraq borders and paralyzed trade between these coun-

Copyright © 2018 Authors. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

tries [7].Tables 1.1 and 1.2 shows the number of companies and workforce in Jordan Industrial Estate Company.

Table 1.1: Number of Companies in JIEC (2012 - 2016)

JIEC Workforce (2012 - 2016)					
Name of Industrial Estate	2012	2013	2014	2015	2016
Abdullah II Industry Estate	14260	16000	17473	14765	14765
Al-Hassan Industry Estate	14056	17493	21292	22978	22449
Al-Hussein bin Abdullah II Industry Estate	2657	2947	3843	4010	3964
Aqaba Industry Estate	-*	950	1000	1070	1450
Al-Muwaqar Industry Estate	1460	2068	4880	1634	2711
Total	32433	39458	48488	44457**	45339

*Notes: * Aqaba Industry Estate established in 2103. ** The total number of companies decreased when 141 companies on the Abdullah II Industry Estate ceased operations in 2015.*
Source: [7], [12]–[15]

Table 1.2: Number of JIEC Companies (2012-2016)

JIEC Companies (2012 - 2016)					
Name of Industrial Estate	2012	2013	2014	2015	2016
Abdullah II Industry Estate	382	412	454	413	443
Al-Hassan Industry Estate	114	124	137	140	143
Al-Hussein bin Abdullah II industry Estate	22	22	23	24	32
Aqaba Industry Estate	-*	38	80	90	105
Al-Muwaqar Industry Estate	13	21	49	56	69
Total	531	617	743	723**	792

*Notes: * Aqaba Industry Estate established in 2103. **The total number of all employees decreased when 141 companies on the Abdullah II Industry Estate ceased operations in 2015.*
Source: [7], [12]–[15]

The increasing number of industrial companies in Jordan has not only increased GDP and decreased unemployment, it has also been harmful to the environment [16], [17]. Table 1.2 shows the number of industrial companies in Jordan from 2012-2016. Although the number of companies in the Abdullah II Industry Estate decreased by 41 in 2015, the overall number of JIEC companies has increased by 35.4% from 512 to 792. To ensure a highly competitive market, organizations must increase their level of performance [18]. Moreover, strategic leadership within each industrial organization must not only increase performance, it must also protect the environment from the bad effects arising from their operation [19]. Consequently, laws and regulations have been developed by both the JIEC and Jordanian Ministry of Environment (JME) to protect the environment, especially in industrial sectors [7], [17]. Leaders in both industrial organizations and the government must therefore adhere to and apply all of these instructions and regulations to protect the environment which, in the long-run, will enhance the operation of industrial organizations as well as creating a more attractive investment environment [7], [16], [17], [20].

The protection of the environment has now become an important issue for countries and organizations, especially those which are industrial in nature [21]. Many countries have therefore established regulations and rules to protect the environment from pollution [17], all of which affect the operation of organizations and thus are an essential consideration [22]. Moreover, both governments and organizations have attempted find solutions to these issues by engaging and including eco-innovation in the planning and operation of organizations, which is then reflected in both the processes adopted and their products [23].

Eco-innovation has been defined in different ways, the most common of which is "production, application or exploitation of a good, service, production process, organizational structure, or management or business method that is novel to the firm or user and which results, throughout its lifecycle, in a reduction of environmental risk, pollution and the negative impacts of resources use (including energy use) compared to relevant alternatives" [24]. This definition is the primary one drawn upon by researchers, for ex. [23], [25]–[27]. It therefore refers to any innovation of a product/service, process, organization, or management that influences and contributes significantly to decreasing negative environmental impacts. Eco-innovation (EI) is now widely applied in business, both in practical terms and in the literature, due to pressure and demand from customers [21]. It is therefore a relatively new challenge faced by organizations [28], who therefore need to adjust and develop their structures and activities to facilitate and support eco-innovation [21], [29]–[33].

However, there is a paucity of research on eco-innovation in both developed and developing countries [23], [34]–[37]. When research has been conducted, it is still at an embryonic stage and further studies are required to understand the relationship eco-innovation has with other variables and its effect upon them (e.g. strategic leadership and organizational performance), particularly in developing countries like Jordan [23], [25], [36].

Over time, organizations have come to understand that the adoption of eco-innovation is not only a cost they must bear, it can be presented as a new business opportunity or the utilization of a niche market [37]. Thus, the development of eco-innovation could be a feature of eco-industries that can offer new business opportunities, reduce costs, and enhance the public image of organizations [38]. Consequently, eco-innovation is urgently needed in industrial manufacturing, which is responsible for a large proportion of the consumption of global resources, the generation of waste, and almost a third of the energy used [39]. Nevertheless, manufacturing sectors can take the lead in creating a sustainable world by developing and implementing services, goods, and other practices that promote eco-performance [39].

Eco-innovation has therefore been studied by many researchers to address any ambiguity relating to its practice. For instance, [32] found that all features of eco-innovation directly and indirectly affect organizational performance in the Taiwanese industry sector. Moreover, [23] found that eco-innovation has a significant effect on organizational performance. These results show that eco-innovation can positively enhance the performance of industrial organizations. Therefore, leadership is one of the most important factors that facilitates eco-innovation in industrial organizations [40].

The Jordan industrial estate company (JIEC) scientifically analyzes and reviews its strategic plan yearly to evaluate and improve the performance of estates in line with the vision of the JIEC. A review of JIEC annual reports from 2012-2016 shows that there were 30470 employees in 2012, 48488 in 2014, and 45339 in 2016. The main reason for the decrease in employees is that 114 companies ceased operating in the Abdullah II Bin Al-Hussein Industrial Estate (AIE) in 2015. However, although the number of employees and companies decreased in AIE, the overall number of companies increased from 531 in 2012 to 792 in 2016. Nevertheless, the rate of unemployment in Jordan has increased. Furthermore, the negative effects on the environment have also increased due to expansion in the number of operating companies. Moreover, the JIEC's future strategic vision is to open new industrial estates under a different Jordanian government to develop the Jordanian economy, increase GDP, and decrease the unemployment rate [7]. This implies there will be further negative effects in the future that will be hazardous to the Jordanian environment see figure 1.1.

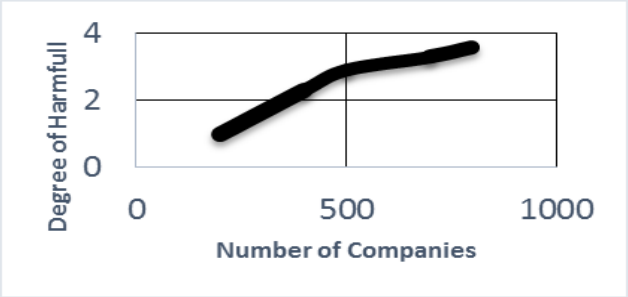


Figure 1.1: Number of Company and Environment Harmful

Jordan also faces several additional environmental issues and challenges. Foremost amongst these is the rise of pollution caused by the increasing number of in industrial companies working in Jordan, particularly in JIEC [17], [41]. Eco-innovation has therefore emerged to resolve environmental pollution issues through the adoption of eco-innovation in JIEC companies, encompassing eco-processes, eco-products, and eco-organizations. Such eco-innovations may help to protect the environment and enhance organizational performance [36], [42]–[44].

The challenge of adopting eco-innovations in companies lies in the need to generate high demand among customers and stakeholders across the world [23], [27], [34]. Therefore, the aims of adopting eco-innovation are to enhance organizational performance, protect the environment in line with international laws and regulations, and generate international demand among customers and nations [23]. [27] Stated that Jordan was ranked 97 out of 163 countries included in the World Environmental Performance Index (WEPI) compiled by Yale University in the United States of America (USA) in 2010. The index ranking was based on the application of eco-systems and the public health environment [45]. Moreover, JUEC exports most of its products to USA and Europe. It must therefore adhere to the eco-innovation related rules and regulations laid down by these countries [3], [7], [46].

Eco-innovation is a managerial mainstream that continues to require further research, analysis, and investigation [47]–[50]. At the same time, it has increasingly became a priority for decision-makers, academics, and practitioners [49]. In particular, there is insufficient research in developing countries on the practice of eco-innovation alongside sustainable organizational performance [36]. [32] Claimed there have been few recent literature reviews in the field of eco-innovation research. They also concluded that there were three key types of eco-innovation (eco-processes, eco-products, and eco-organizational innovations) that could be identified for further research [51]. Additionally, eco-innovation modifies operational processes and systems within organizations, decreases the unit costs of production, produces new or considerably improved eco-products, and reduces the negative environmental impact [52].

Strategic leadership of an industrial organization must not only increase organizational performance, it must also protect the environment from the negative effects of operations [19]. Moreover, the laws and regulations of both the JIEC and Jordanian Ministry of Environment (JME) have been developed to protect the environment in Jordan [7], [17]. The role of leadership in both the industrial organization and government is to adhere to these regulations to protect the environment, which will help sustain industrial organizations in the long-term [7], [16], [17], [20]. The role of strategic leadership along with eco-innovation will therefore be evaluated to determine their role in helping to keep the environment clean and enhancing the long-term sustainability of companies.

Specifically, the role of leadership in enhancing organizational performance in the JIEC requires further investigation [53], [54]. While previous studies have revealed that leadership is one of the key factors that influence organizational innovation [55], [56] found that the role of leadership in achieving organizational performance has a different outcome. However, researchers have generally agreed that leadership is important in improving organizational performance [57]–[61]. Hence, the role in leadership on JIEC organizations will be the focus of this research.

Organizational performance in this industrial estate should be examined in terms of its relationship with eco-innovation and leadership for three reasons. First, although the three aspects of eco-innovation (eco-processes, eco-products, and eco-organization) have been studied individually, their inter-relationships have never been properly examined in a holistic manner [62], [63]. Regarding this aspect, [32] suggested that the relationship between eco-innovation and organizational performance in developing countries is critical and requires further study. Second, the role of leadership in adopting and developing eco-innovation is very important in developing countries, thus it is important to explore this relationship through an empirical study in this field [64]. Third, there has been an increase in international customers and stakeholder attention toward eco-products, most of which JIEC companies export to the USA and Europe [7]. They must therefore adhere to strict international eco-innovation regulations when engaging in various eco-innovation programs [7], [65], [66].

Eco-innovation as a mediating variable is rarely investigated, particularly in developing countries. [34], [67]. A review of literature on eco-innovation shows that very few studies have used eco-innovation and its associated constructs of eco-process, eco-product, and eco-organization as a mediator variable to explore the relationship between strategic leadership and organizational performance, particularly in developing countries like Jordan. Therefore, further studies are required to clarify its role as a mediator.

Therefore, to address these research gaps, this study will evaluate the effect of strategic leadership on organizational performance, and the mediating effect of eco-innovation in the Jordan Industrial Estate Company.

3. Literature Review

3.1 Organizational Performance

Organizational performance (OP) has been widely discussed in the literature over the past few decades due to its importance in achieving organizational goals. Based on different theories it has often been featured and evaluated in the management literature as a main dependent variable, ex. [20], [61], [68]–[70]. The primary and most important aim of organizational performance is to enhance the effectiveness with which organizational goals are achieved and to ensure that long-term objectives are reached and the organization survives [68], [71].

Moreover, organizational performance is still a vital concept for scholars, researchers, and practitioners due to its significant influence on improving the economy and decreasing the unemployment rate [72], [73]. Therefore, many researchers have evaluated organizational performance in both developed and developing countries [74]–[77], some specifically in Jordan [23], [68], [78].

Organizational performance is one of the most important measures of the success of an organization. It is defined as achieving certain outcomes by transforming inputs into outputs. An organization's leader therefore seeks to achieve the highest level of organizational performance [56] to meet the needs of a competitive market [18].

According to [79] organizational performance is the result of employee's work and the researchers identified an association between the strategic objectives and goals of an organization, economic contribution, and also customer satisfaction. [80] Stated that increasing an organization's performance by increasing the performance of employees is critical if organizations are to remain competitive in a rapidly changing economy. Thus, overall organizational performance is based on the performance of employees [81].

3.2 Eco-Innovation

Eco-innovation is defined by [24], [48] as the "production, application or exploitation of a good, service, production process, organizational structure, or management or business method that is novel to the firm or user and which results, throughout its lifecycle, in a reduction of environmental risk, pollution and the negative impacts of resources use (including energy use) compared to relevant alternatives". Thus, eco-innovation encompasses every innovation in an organization that contributes to reducing the negative effect on the environment. This definition is still widely used by many researchers [21], [23], [28], [32], [82]–[84].

Eco-innovation is also described by [85] as "product, process, marketing, and organizational innovations, leading to a noticeable reduction in environmental problems". This definition is clearly focused on the negative effects of manufacturing organizations that do not employ eco-innovation. All definitions of eco-innovation include reference to the environment, reflecting the fact that eco-innovation decreases the negative effect on the environment and the effectiveness of useful resources. Moreover, investment in and the development of eco-innovation in industrial sectors could provide new business opportunities, reduce the costs of production, and heighten the image of companies among stakeholders [38].

Eco-innovation refers to both green and environmental innovation [25]. A review of literature on eco-innovation shows that scholars and practitioners have recently focused on eco-innovation as an area of research due to the scarcity of research in both developed and developing countries [23], [25], [32]. Eco-innovation is now a hot area of research, not only for its effect on reducing negative impacts on the environment [85] but also due to the intense pressure exerted by governments, stakeholders, and customers on manufacturing organizations to produce eco-products [25]. Moreover, eco-innovation in the European Union is a prominent strategy utilized by manufacturing organizations in Europe to reduce the price of materials as well as products [86]. Consequently, eco-innovation has helped Europe to become very competitive in international markets [25].

3.3 Motivation

[87] Studied the effect of motivation on employees' performance at Pakistan universities. The data was collected from 118 employees working in different Pakistani universities. The result showed that motivation was used to encourage employees and increase their performance. Additionally, [88] conducted a study on the effect financial rewards have on employee motivation with 186 employees working in the Pakistani pharmaceutical sector. The results showed there was a positive effect of financial rewards on employee's motivation and satisfaction levels.

[89] Investigated the relationship between academic motivation, achievement goals, mastery goals, and metacognition among Jordanian students. An analysis of data collected from 143 students at Hashemite University showed that mastery goals and metacognition had an equally significant effect on academic motivation. Self-efficacy, however, failed to have a significant effect on academic motivation.

[90] Stated that motivation and job satisfaction have a positive effect on organizational success which means that the objectives and goals of an organization can be achieved through motivation and increased job satisfaction. Content theory was used to measure motivation among employees in relation to internal issues and its effect on many variables such as organizational performance [91], [92]. [93], for instance, found that leadership of a chemical organization in Saudi Arabia has a high effect on employees' motivation. Further research on the motivation of human and social capital is recommended by [94].

3.4 Research Framework

Figure 1.2 shows the developing of research framework that will be used in this research.

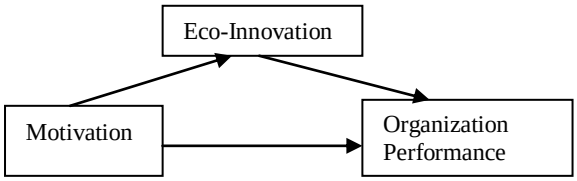


Figure 1.2: Research Framework

3.5 Underlying Theory

Resource-based view theory (RBV) was developed by [95] and has subsequently been used by many researchers, for e.g. [32], [96]–[98]. RBV focuses on two main characteristics, the resources and capabilities of organizations [99], [100].

Motivation is one of the main organizations resources that can be used to motivate employees [101]. [102] employed RBV theory to study the relationship between innovation and eco-innovation (as one of the organization's resources) in Spanish food and beverage organizations. Also [22] used RBV as a foundation for his research on eco-innovation and performance in the United Arab Emirates (UAE).

3.6 Research Questions and Objectives

The questions of this paper are: (1) what is the effect of motivation on organizational performance? (2) What is the effect of eco-innovation on organizational performance? (3) Does eco-innovation mediate the effect of motivation on organizational performance?

To answer the research questions, three research objectives will be addressed. These are as follows: To evaluate the effect of motivation on organizational performance. To explain the effect of eco-innovation on organizational performance. To analyze the mediating effect of eco-innovation on the relationship between motivation and organizational performance.

3.7 Hypotheses Development

Motivation is a key instrument employed in strategic leadership to enhance employees' performance. Given its major role in achieving organizational objectives, the effect of motivation on employees' performance has been investigated by many researchers [93], [103]. [104] found that many factors have a direct effect on motivation which leads to increased employee satisfaction and a higher level of performance. Employees have different characteristics and they are motivated by different factors, for example, some are motivated by working conditions and others by the rewards that will accrue through work. However, [105] found that employees' motivation has a weak significant effect on organizational performance due to the absence of effective motivational system to enhance employees' performance. Therefore, the following hypothesis was developed:

H1: There is a significant effect of motivation on organizational performance in the Jordan Industrial Estate Company.

Eco-innovation directly and indirectly affects and enhances organizational performance [32]. This repudiates the belief of some managers and leaders that eco-innovation will decrease the financial performance of organizations [106]. On the contrary, [35] found that organizational performance is significantly and positively affected by green (eco) product innovation. Moreover, the adoption of any new eco-innovation by an organization not only reduces any negative environmental impact, it also elevates the organization to a higher position relative to its competitors [20], [106]. [23] Confirmed the positive effect of green innovation on

organizational performance in Jordan. Therefore, it is hypothesized that:

H2: There is a significant effect of eco-innovation on organizational performance in the Jordan Industrial Estate company.

Motivation is one of the key leadership instruments used to enhance employees' performance. The positive effect of motivation on organizational performance has been confirmed by many research studies [103], [107], [108]. Eco-innovation, as mentioned in hypotheses two (H2), has a positive effect on organizational performance. The employment of eco-innovation as a mediator variable has rarely been seen in the literature [22], [109]. However, [110] proofed that if there are a significant direct relationship between three variables means that one variable may mediate the relationship between the others. This study therefore hypothesizes that:

H3: There is a significant effect of eco-innovation as a mediator on the relationship between motivation and organizational performance in the Jordan Industrial Estate Company.

4. Methodology

This research employs the exploratory and descriptive design with quantitative approach. Random simple sampling is used to collect data through self –administrated questionnaires. The questionnaire is adopted from [111] for strategic leadership, Motivation is adapted from [112], [113], and from [114] for the organization performance. The questionnaire was translated to Arabic because the respondents language is Arabic, and then it translated to English by employing the process of "back to back translation" as suggested by [115]. Sample size was 381, and the response rate was 285, which represents 74.8%. Likert of 5 points scale were used to measure the variables items. The collected data was analyzed through Structural Equation Modeling (SEM) using AMOS version 21.0 to examine the effects of the variables and the relationships.

5. Results and Discussions

The outliers and missing data was checked after the coding and entering the data in SPSS software. All items in this study follow the normal distribution curve.

5.1 Measurement Model

The results of CFA model for all variables showed that the first-order of factor loading for all items ranged from 0.625 to 0.904. All of factor loading were higher than the cut-off of 0.600. Therefore, all items were accepted to the next stage of analysis as recommended by [116].

5.1.1 Goodness of Fit Indices for the Overall Items in the Measurement Model

CFA results for the overall model show that all the measurements fitted except for GIF. The Chi-square fitted with a value of 818.846, degrees of freedom (df) = 448, and p-value = 0.000. However, the GFI did not fit as it had a value of 0.786, which was less than the cut-off value of 0.900 as recommended by [117]. Additionally, the baseline result showed that the CFI, TLI, and IFI were 0.932, 0.926, and 0.933 respectively, and were higher than the cut-off value of 0.90 [116], [118]. The value of RMSEA was 0.064 < 0.080, an acceptable value that fits the model. Moreover, the result of relative CMIN/df was 2.168 which also fitted as it was less than the cut-off of 5.00suggested by [118].

Hence, the results above showed that more than four indices fit the model (Chi-square, AGFI, CFA, TLI, IFI, and RMSEA). [119] suggests that three to four indices is sufficient for the model to be declared fit. Therefore, the different results showed that the overall measurement model fits the data sufficiently well, obviating the requirement for further adjustments.

5.1.2 Reliability and Convergent Validity for the Overall Model

After checking uni-dimensionality, the reliability and validity for each construct was assessed, Cronbach's Alpha results for the overall measurement model and convergent validity are presented in Table 1.3.

Table 1.3: Overall CFA Model: Convergent Validity and Cronbach's Alpha Results

2nd Order Const.	1st Order Const.	Alpha	1st Factor Loading	Convergent Validity	
				(AVE)a	(CR)b
M	M8	0.770	0.631	0.650	0.840
	M6		0.707		
	M5		0.735		
	M4		0.824		
	M3		0.742		
EI	EPS	0.810	0.668	0.620	0.830
	EPD		0.858		
	EOR		0.805		
OP	OP6	0.920	0.751	0.630	0.920
	OP7		0.829		
	OP9		0.834		
	OP10		0.850		
	OP11		0.812		
	OP12		0.841		
	OP13		0.635		

Notes: (a) AVE =$\sum\lambda^2$ /n; λ = Standardized Factor Loading; n = Number of Items in a Model

(b) CR = $(\sum k)^2$ /[$(\sum k)^2$ + $(\sum 1\text{-}k2)$] where k^2 = Factor Loading of every Item

As Table 1.3 shows, the value of AVE for the model is much higher than 0.500 for all second order constructs, which is the cut-off AVE value recommended by [120]. The construct values ranged from 0.620 to 0.650. Moreover, the composite reliability values were higher than the recommended value of 0.700 for all constructs as suggested by [116], [121]. The composite values ranged from 0.830 to 0.920. Finally, the Cronbach's alpha values ranged from 0.770 to 0.920, all of which were higher than the cut-off 0.700 suggested by [116], [121], [122]. Therefore, the Cronbach's alpha for all constructs indicates they are sufficiently error-free.

5.1.3 Discriminant Validity for the Overall Model

The test of discriminant validity was then conducted for the overall model. The acceptable value for discriminant validity is 0.850 or less, as a value higher than 0.850 can indicate multicollinearity [123]. The result of overall model discriminant validity was less than 0.850 which is an acceptable value [123]. Table 1.4 presents the results of the discriminant validity test for the overall model.

Table 1.4: Discriminant Validity of Overall CFA Model

	M	EI	OP
Motivation (M)	0.800		
Eco-Innovation (EI)	0.830	0.790	
Organization Performance (OP)	0.820	0.760	0.790

Note: Diagonals represent the square root of average variance extracted while the others represent the correlations.

5.2 Structural Model and Hypotheses Testing

Maximum likelihood estimates and the regression technique were employed to estimate the structural model. These assessments performed the critical analysis of the study hypotheses. Within the structural model, the relationship between the variables of motiva-

tion (M), eco-innovation (EI), and organizational performance (OP) were therefore evaluated.
The estimation of coefficient parameters was subsequently evaluated to find the hypothesized direct effect for the study variables. Standard regression weights along with the hypothesized direct effects are presented in Table 1.5.

Table 1.5: Direct Effects of the Variables

Path	Un-stand. Estim.		Stand. Estim.	C.R.	P-value	Hyp. Res.
	Estim.	S. E	Beta			
M → P	0.150	0.075	0.16*	2.050	0.040	H1 sig.
EI → OP	0.600	0.152	0.390***	3.970	0.000	H2 sig.

*Notes: *Sig. at p< 0.050; *** Sig. at p< 0.001. (Two-tailed)*

The results in Table 1.5 clearly show that all the direct paths in the structural model were significant with different p-values. Hypotheses H1 and H2 are significant at a p-value of 0.050, while H2 and is significant at a p-value 0.000.
As shown in Table 1.5, the CR and p-values of motivation (M) in predicting organizational performance (OP) were 2.050 and 0.040, respectively. This means that the likelihood of obtaining a vital magnitude ratio as great as 2.050 in definite value was 0.040. The regression weight of motivation (M) in predicting organizational performance (OP) was therefore significantly different from zero at the 0.050 level (two-tailed). Thus, H1 was supported. Moreover, the standardized estimate of Beta was 0.160, indicating a positive relationship. This means that when motivation (M) increases by one standard deviation, organizational performance increases by 0.160 standard deviations.
Moreover, Table 1.5 shows, the result of CR was 3.970 with a p-value of 0.000 for eco-innovation (EI) in predicting organizational performance (OP). This means that the likelihood of obtaining a vital magnitude ratio as large as 3.970 in definite value was 0.000. The regression weight of eco-innovation (EI) in predicting organizational performance (OP) was significantly different from zero at the 0.001 level (two-tailed). Thus, H2 was supported. Moreover, the standardized estimate of Beta was 0.390, indicating a positive relationship. Therefore, when eco-innovation increases by one standard deviation, organizational performance increases by 0.390 standard deviations.
The indirect and total effect of motivation (M) was calculated and the results are presented in Table 1.6.

Table 1.6: Direct, Indirect, and Total Effects of Independent Variable

M= Motivation DV = Organizational Performance (OP) EI = Eco-Innovation (Mediator)	Standardized Effect
Direct Effect of M on DV	0.156
Direct Effect of M on EI	0.537
Indirect Effect of M on DV	0.208
Total Effect of M on DV	0.364

An analysis of the mediating effects of eco-innovation (EI) was conducted to examine the effect of eco-innovation (EI) as a mediator of the relationship between the effects of Motivation (M) on the dependent variable (Organizational Performance (OP). Hypotheses (H3) was developed to determine the mediating effects of eco-innovation (EI) on the relationship between independent variable (motivation) and the dependent variable (organizational performance).
The first step in the procedure is to ensure that the model fits the data through goodness-of-fit indices. The results from the structural model shows that the model fitted the data with x2 = 978.010, df = 418, p- value = 0.000, CFI = 0.910, IFI = 0.911, TLI = 0.900, RMSEA = 0.069 and x2 / df = 2.340. Moreover, R2 = 0.560 for eco-innovation (EI) and 0.500 for organizational performance (OP). The results of the multiple square correlation were higher than the cut off value of 0.300 as recommended by [124].
The following sections present the results of examining the parameter estimation to determine whether the mediation effect of eco-innovation accrued (or not) between motivation (M) and the dependent variable (OP). The hypothesis (H3) was therefore assessed and the output is presented in Table 1.7.

Table 1.7: Mediating Effect of Eco-Innovation Results

DV = Organizational Performance (OP) ME = Eco-Innovation (EI)	Independent variable Motivation (MO)
Total Effect of IV on DV without ME	0.290*** (0.001)
Direct Effect of IV on DV with ME	0.156* (0.011)
Effect of IV on M	0.537*** (0.001)
Effect of M on DV	0.390*** (0.001)
Indirect Effect of IV on DV through ME	0.208*** (0.001)
Mediation Effect	Yes
Degree of Mediation	Partial
Hypothesis Result	Supported (H3)

*Notes: * = Sig. at p < 0.05; *** = Sig. at p < 0.001, (two-tailed).*

As shown in Table 1.7, there was a significant statistical relationship between motivation (M) and organizational performance (OP) without the mediating effect of eco-innovation (EI). The total standardized effect was 0.290 at a p-value of 0.000. Therefore, the standardized total effect of motivation (M) on organizational performance (OP) without the effect of eco-innovation (EI) as a mediator was statistically significant. Moreover, the direct effect of motivation (M) on organizational performance (OP) with the effect of eco-innovation (EI) as a mediator was also significant at a p-value of 0.050 and with a standardized direct effect of 0.156. Thus, the direct effect between motivation (M) and organizational performance (OP) with the effect of eco-innovation (EI) as a mediator was also significant. Additionally, the effect of motivation (M) on eco-innovation as a mediator was statistically significant at a p-value of 0.000 and with a standardized effect of 0.537. The effect of eco-innovation (EI) as a mediator on organizational performance (OP) was also significant at a p-value of 0.000 and with a standardized effect of 0.359.
Table 1.7 also shows that the standardized direct effect of motivation (M) on organization performance (OP) with the effect of eco-innovation (EI) as a mediator decreased, and all the paths were statistically significant. Therefore, eco-innovation mediates the effect of motivation (M) on organizational performance (OP). Moreover, the degree of mediation effect was partial. This result supported hypothesis H3.
Finally, motivation (M) has a positive indirect effect on organizational performance (OP) through eco-innovation (EI). The value of indirect effect was 0.208, which was significant at a p-value 0.000.

6. Conclusions and Discussions

6.1 Discussion

The results will be discussed by objectives. A comparison between the findings and previous research will be conducted to ascertain whether they are commensurate with one another.
The first objective is: To Evaluate the Effect of Motivation on Organizational Performance.
The first hypothesis (H1) was developed to ascertain whether there was an effect of motivation on organizational performance in the JIEC. The results showed that there was a positive and significant effect of motivation on organizational performance (β = 0.160, CR = 2.050, P = 0.040, p<0.05). Thus, the first hypothesis (H1) is supported and the first objective was achieved.
Numerous research studies have explored the relationship between motivation and organizational performance e.g. [87], [107], [108], [125]. All have found that motivation has a vital and significant effect on organizational performance. Moreover, the effect of

employees' motivation on organizational performance was significant irrespective of the sector in which they were conducted, e.g. banking, education, and so on. Therefore, the current findings were consistent with those of previous research.

The second objective is: To Explain the Effect of Eco-Innovation on Organizational Performance.

The second hypothesis (H2) was developed to ascertain whether there was an effect of eco-innovation on organizational performance in the JIEC. The results showed there was a positive and significant effect of eco-innovation on organizational performance ($\beta = 0.390$, CR = 3.970, P = 0.000, $p<0.001$). Therefore, the second hypothesis was supported and the second objective was achieved.

[36] Found that different kinds of eco-innovation influence organizational performance significantly and directly appears to be clearly incontestable. Moreover, eco-innovation and its constructs of eco-products, eco-organizations, and eco-processes have an important effect on organizational performance, both directly and indirectly [32]. [35] Also found that green/eco-products have a positive and significant effect on organizational performance.

Activities relating to green/eco-innovation therefore have an important and vital contribution to make in enhancing environmental performance and can help organizations become competitive. Green/eco-innovation facilities within organizations enhance their performance and help to address other environmental issues [20]. Furthermore, environmental/eco-innovation practices have a vital impact on the environmental performance of an organization [106]. The effect of eco-innovation on the financial performance of organizations is, however, mixed, although most studies have found that eco-innovation has a positive effect on financial performance [126].

Therefore, hypothesis four (H4) was accepted. Moreover, the effect of eco-innovation on organizational performance is consistent with previous research findings

The third objective is: To Determine the Mediating Effect of Eco-Innovation on the Relationship between Motivation and Organizational Performance.

The third hypothesis (H3) was developed to determine whether there was a mediating effect of eco-innovation on the relationship between motivation and organizational performance. The results (see Table 1.7) showed clearly that eco-innovation mediates the effect of motivation on organizational performance, and the mediating effect was partial. In addition, the results indicated a significant and positive indirect effect of motivation on organizational performance through eco-innovation, with a standardized indirect effect of 0.208 at p-value of 0.000 ($p<0.001$).

The results also showed a significant and statistical effect of motivation on organizational performance (OP) without the mediating effect of eco-innovation (EI). The total standardized effect was 0.290 which was significant at p-value = 0.000. Therefore, the standardized total effect of motivation (M) on organizational performance (OP), without the mediating effect of eco-innovation (EI) was statistically significant. This relation was still significant even after eco-innovation was employed as a mediator between motivation and organizational performance, as the standardized direct effect was 0.156 at a p-value of 0.011 ($p<0.05$).

The discussion above shows that the standardized direct effect between motivation and organizational performance with eco-innovation as a mediator decreased to 0.156, and that the standardized direct effect of the same relationship in the absence of the mediator was 0.290. This indicated that the mediation was partial. Thus, this result supported hypothesis three (H3). Moreover, the indirect effect between motivation and organizational performance through eco-innovation as a mediator was both positive and significant with a standardized indirect effect of 0.208 at a p-value of 0.000 ($p<0.001$).

Few studies have employed eco-innovation and its three dimensions of eco-processes, eco-products and eco-organizations as a mediator variable between motivation and its effect on organizational performance. The mediating effect of eco-innovation between motivation and organization performance is therefore perhaps a new relationship. The results indicated that motivation has a significant and direct positive effect on organizational performance. Motivation also has a direct effect on eco-innovation and this effect was also significant, as was the effect of eco-innovation on organizational performance. No previous empirical research studies have examined the mediating effect of eco-innovation on the relationship between motivation and organizational performance. The justification for this investigation was clearly highlighted by [110] who suggested that if the direct relationships between three variables are significant, then one of them might mediate the relationship between the others. The results therefore show that eco-innovation has a vital mediation effect on the relationship between motivation and organizational performance and the degree of mediation was partial. Therefore, hypothesis three (H3) was supported. Additionally, the results were clearly relevant to those of previous studies. Finally, this is a vital and very important contribution to the theoretical literature, as it indicates a new direction for research on eco-innovation.

6.2 Theoretical Contributions

The current study fills the gaps within the current literature regarding a comprehensive understanding of the relationships between motivation, organizational performance, and eco-innovation. It also significantly contributes to supporting the research-based view (RBV) theory by supporting the links between motivation, organization performance, and eco-innovation.

The present study provides many theoretical contributions to the literature on eco-innovation, one of which is to validate the research framework applied to the Jordan Industrial Estate Company. Moreover, this research supports the application of eco-innovation in industrial organizations in Jordan, particularly in the Jordan Industrial Estate Company. The literature proposed the adoption and validation of eco-innovation in numerous countries to boost its variability [32]. This study highlights the relevance of eco-innovation in Jordan which was one of the existing gaps in research. Moreover, this study may be one of the first study to evaluate the mediating effect of eco-innovation (with its three constructs of eco-processes, eco-products, and eco-organization) on the relationship between motivation and organization performance in Jordan Industrial Estate Company. Moreover, the results endorse the mediating effect of eco-innovation on the relationship between independent variable (motivation) and a dependent variable (organizational performance) which is another gap addressed by this research.

Most studies in the industrial sector have evaluated eco-innovation in terms of technological issues, information, policy regulation and rules, skills, and eco-products [96], [127], [128].

6.3 Practical Contributions and Managerial Implications

The results show that motivation appeared as an important construct that facilitates the application of eco-innovation in JIEC. Thus, organization leaders should concentrate on increasing employee's motivation by increasing the compensation system rather than the punishment system and ensuring employees develop trust in the leadership. Internal and external training could also help employees understand the advantages of eco-innovation, and to learn the steps involved in applying eco-innovation in their companies.

As mentioned previously, this study sheds lights on the role of eco-innovation as a mediator variable on the relationship between motivation and organizational performance. The findings therefore contribute to the leadership of JIEC companies in numerous ways. First, they show that the motivating employees will lead to high organizational performance. Second, they repudiate the beliefs held by some leaders that eco-innovation will decrease organiza-

tional performance. This may be the most vital and important result that JIEC leaders should pay attention to in strategic planning and when considering the application of eco-innovation.

References

[1] D. of J. Statistics, "Census 2015, Population and Housing," Amman, Jordan, 2016.

[2] D. of investment/united State, "Investment Climate Statement in Jordan," 2014.

[3] W. Bank, "World Bank Annual Report," 2017.

[4] ASE, "Amman Stock Exchange," p. 1, 2017.

[5] minstry of J. Labor, "minstry of Jordan Labor report," Amman, 2016.

[6] Z. M. F. . S. E. D. T. W. R. O. S. R. M. Al-Zu'b, "Investigating the Effect of Foreign Direct Investment Technology Transfer on Mass Customization Capability in Jordan's Manufacturing Sector," Int. Res. J. Financ. Econ., no. 94, 2012.

[7] JIEC, "Jordan Industrial Estate Company (JIEC) Annual Report 2016," 2016.

[8] A. Yacoub and A. Mahmoud, "Jordan industrial estates corporation (JIEC) the Hashemite Kingdom of Jordan," J. Econ. Coop., vol. 20, no. 4, pp. 107–110, 1999.

[9] H. A. A. Qdais, "Techno-economic assessment of municipal solid waste management in Jordan," vol. 27, no. 2007, pp. 1666–1672, 2010.

[10] 2016 Central Bank of Jordan Report, "Central Bank of Jordan Report 2016," Amman, 2016.

[11] J. P. Gaffney, "Jordan ' s Qualified Industrial Zones : A Qualified Success ?," 2005.

[12] JIEC, "JIEC Annual report," 2015.

[13] JIEC, "JIEC Annual Report 014," 2014.

[14] JIEC, "JIEC Annual Report 2013," 2013.

[15] JIEC, "JIEC 2012," 2012.

[16] A. A. Saleh and M. D. Mubaideen, "The Administrative Leadership between the Exchange and the Transfer and its Impact on the Implementation of the Strategic Objectives of Jordanian Environment Minstry Field study in large Industrial Companies," Manag. Sceince J., vol. 40, no. 1, pp. 488–489, 2013.

[17] J. M. of Environment, "Jordan Minstry of Evvironment Report," Amman, Jordan, 2016.

[18] A. Arslan and S. Staub, "Theory X and Theory Y Type Leadership Behavior and its Impact on Organizational Performance: Small Business Owners in the Şishane Lighting and Chandelier District," Procedia - Soc. Behav. Sci., vol. 75, pp. 102–111, 2013.

[19] Jordan. Ministry of Environment, "A National Green Growth Plan for Jordan," Amman, Jordan, 2017.

[20] M. T. Küçükoğlu and R. İ. Pınar, "Positive Influences of Green Innovation on Company Performance.pdf," Soc. Behav. Sci., vol. 195, pp. 1232–1237, 2015.

[21] J. Hojnik and M. Ruzzier, "What drives eco-innovation A review of an emerging literature," Environ. Innov. Soc. Transitions, vol. 19, pp. 31–41, 2015.

[22] M. Aboelmaged, "Direct and indirect effects of eco-innovation, environmental orientation and supplier collaboration on hotel performance: An empirical study," J. Clean. Prod., vol. 184, pp. 537–549, 2018.

[23] A. Y. Alhadid and A. H. Abu-Rumman, "The Impact of Green Innovation on Organizational Performance, Environmental Management Behavior as a Moderate Variable: An Analytical Study on Nuqul Group in Jordan," Int. J. Bus. Manag., vol. 9, no. 7, pp. 51–58, 2014.

[24] R. Kemp and P. Pearson, "Final report MEI project about measuring eco-innovation," Eur. Environ., p. 120, 2007.

[25] N. Eryigit and G. Özcüre, "Eco-Innovation as Modern Era Strategy of Companies in Developing Countries : Comparison Between Turkey And European Union," Procedia - Soc. Behav. Sci., vol. 195, pp. 1216–1225, 2015.

[26] B. Sezen and S. Y. Çankaya, "Effects of green manufacturing and eco-innovation on sustainability performance," Procedia - Soc. Behav. Sci., vol. 99, pp. 154–163, 2013.

[27] Z. M. F. Al-Zu'bi, H. Al-Dmour, M. Al-Shami, and R. Nimri, "Integrated Green Purchase Model: An Empirical Analysis on Jordan," Int. J. Oper. Logist. Manag., vol. 4, no. 2, pp. 139–151, 2015.

[28] M. B. Bossle, M. Dutra de Barcellos, L. M. Vieira, and L. Sauvée, "The drivers for adoption of eco-innovation," J. Clean. Prod., vol. 113, pp. 861–872, 2015.

[29] A. Lam, Organizational innovation. In J. Fagerberg, D. Mowery, & R.Nelson (Eds.), 2005.

[30] Q. Zhu, Y. Geng, and K. hung Lai, "Circular economy practices among Chinese manufacturers varying in environmental-oriented supply chain cooperation and the performance implications," J. Environ. Manage., vol. 91, no. 6, pp. 1324–1331, 2010.

[31] E. G. Hansen, A. C. Bullinger, and R. Reichwald, "Sustainability innovation contests: evaluating contributions with an eco impact-innovativeness typology," Int. J. Innov. Sustain. Dev., vol. 5, no. 2/3, p. 221, 2011.

[32] C. C. J. Cheng, C. L. Yang, and C. Sheu, "The link between eco-innovation and business performance: A Taiwanese industry context," J. Clean. Prod., vol. 64, pp. 81–90, 2014.

[33] M. V. de Oliveira Brasil, M. C. Sá de Abreu, J. C. L. da Silva Filho, and A. L. Leocádio, "Relationship between eco-innovations and the impact on business performance: an empirical survey research on the Brazilian textile industry," Rev. Adm., vol. 51, no. 3, pp. 276–287, 2016.

[34] T. Y. Chiou, H. K. Chan, F. Lettice, and S. H. Chung, "The influence of greening the suppliers and green innovation on environmental performance and competitive advantage in Taiwan," Transp. Res. Part E Logist. Transp. Rev., vol. 47, no. 6, pp. 822–836, 2011.

[35] I. M. Ar, "The impact of green product innovation on firm performance and competitive capability : the moderating role of managerial environmental concern," vol. 62, pp. 854–864, 2012.

[36] Y. Dong, X. Wang, J. Jin, Y. Qiao, and L. Shi, "Effects of eco-innovation typology on its performance: Empirical evidence from Chinese enterprises," J. Eng. Technol. Manag. - JET-M, vol. 34, pp. 78–98, 2014.

[37] J. Hojnik and M. Ruzzier, "The driving forces of process eco-innovation and its impact on performance: Insights from Slovenia," J. Clean. Prod., vol. 133, pp. 812–825, 2016.

[38] A. Doranova, G. van der Veen, and C. Hinojosa, "Thematic Programme Capitalisation: Analysis report on Creative Industries," 2013.

[39] Organisation for Economic Cooperation and Development, "Sustainable Manufacturing and Eco-Innovation: Framework, Practices and Measurement," Oecd, p. 38, 2009.

[40] C.-Y. Chen, Hsian-Lan, Wen-Tsung & Chang, "Independent Directors Human Capital and Social Capital, Firm Internationalization and Performance Implications: An Intergrated Agency-Resource Dependendence View.," Int. Bus. Rev., vol. 30, no. Human Capital, 2015.

[41] M. Haddad, A. Jayousi, S. Abu Hantash, and S. A. Hantash, "Applicability Of WEAP As Water Management Decision Support System Tool On Localized Area Of Watershed Scales: Tulkarem District In Palestine As Case Study," Elev. Int. Water Technol. Conf. Sharm El-Sheikh, Egypt, pp. 811–825, 2007.

[42] E. Loucanova, J. Parobek, M. Kalamarova, H. Palus, and J. Lenoch, "Eco-innovation performance of Slovakia," Procedia Econ. Financ., vol. 26, no. 0, pp. 920–924, 2015.

[43] V. Costantini, F. Crespi, G. Marin, and E. Paglialunga, "Eco-innovation, sustainable supply chains and environmental performance in European industries," J. Clean. Prod. Eur. Ind. J. Clean. Prod., pp. 1–14, 2016.

[44] J. Doran and G. Ryan, "Regulation and Firm Perception , Eco-Innovation and Firm Performance," Eur. J. Innov. Manag., vol. 15, no. 4, pp. 421–441, 2012.

[45] W. M. Lim, "Antecedents and consequences of e-shopping: an integrated model," Internet Res., vol. 25, no. 2, 2015.

[46] F. Ding, D. Li, and J. F. George, "Investigating the effects of is strategic leadership on organizational benefits from the perspective of CIO strategic roles," Inf. Manag., vol. 51, no. 7, pp. 865–879, 2014.

[47] U. Tamayo-Orbegozo, M.-A. Vicente-Molina, and O. Villarreal-Larrinaga, "Eco-innovation strategic model. A multiple-case study from a highly eco-innovative European region," J. Clean. Prod., vol. 142, pp. 1347–1367, 2016.

[48] R. Kemp, "Eco-innovation : Definition , Measurement and Open Research Issues," Econ. Polit. https//www.researchgate.net/publication/227430692, no. December, 2010.

[49] C. Díaz-García, Á. González-Moreno, F. J., and Sáez-Martínez, "Eco-innovation: Insights from a literature review," Innov. Manag. Policy Pract., vol. 17, no. 1, pp. 6–23, 2015.

[50] D. A. de Jesus Pacheco, C. S. ten Caten, C. F. Jung, J. L. D. Ribeiro,

H. V. G. Navas, and V. A. Cruz-Machado, "Eco-innovation determinants in manufacturing SMEs: Systematic review and research directions," J. Clean. Prod., vol. 142, 2016.
[51] A. Triguero, L. Moreno-Mondéjar, and M. A. Davia, "Drivers of different types of eco-innovation in European SMEs," Ecol. Econ., vol. 92, pp. 25–33, 2013.
[52] S. Negny, J. P. Belaud, G. Cortes Robles, E. Roldan Reyes, and J. B. Ferrer, "Toward an eco-innovative method based on a better use of resources: Application to chemical process preliminary design," J. Clean. Prod., vol. 32, pp. 101–113, 2012.
[53] L. Raymond and A. Croteau, "The Strategic Role of IT : An Empirical Study of its Impact on IT Performance in Manufacturing SMEs," no. c, pp. 89–97, 2011.
[54] J. J. Serfontein, "THE IMPACT OF STRATEGIC LEADERSHIP ON THE OPERATIONAL STRATEGY AND PERFORMANCE OF BUSINESS ORGANISATIONS IN SOUTH AFRICA," UNIVERSITY OF STELLENBOSCH PROMOTER:, 2010.
[55] A. . Fallis, "The Effect of Transformational Leadership on Organizational Innovation," 2013.
[56] A. U. Karamat, "Impact of Leadership on Organizational Performance," Univecity of Applied Scence, 2013.
[57] M. D. Mumford, E. M. Todd, C. Higgs, and T. McIntosh, "Cognitive skills and leadership performance: The nine critical skills," Leadersh. Q., 2016.
[58] G. B. Graen, "Overview of Future Research Directions for Team Leadership," Rsearch Gate, no. January 2013, 2013.
[59] M. Chiniara and K. Bentein, "Linking servant leadership to individual performance: Differentiating the mediating role of autonomy, competence and relatedness need satisfaction," Leadersh. Q., vol. 27, no. 1, pp. 124–141, 2016.
[60] D. V. Day, J. W. Fleenor, L. E. Atwater, R. E. Sturm, and R. A. McKee, "Advances in leader and leadership development: A review of 25 years of research and theory," Leadersh. Q., vol. 25, no. 1, pp. 63–82, 2014.
[61] E. K. Nthini, "EFFECT OF STRATEGIC LEADERSHIP ON THE PERFORMANCE OF COMMERCIAL AND FINANCIAL STATE CORPORATIONS IN KENYA EVELYN," University of Nairobi, 2013.
[62] S. I. Hallstedt, A. W. Thompson, and P. Lindahl, "Key elements for implementing a strategic sustainability perspective in the product innovation process," J. Clean. Prod., vol. 51, pp. 277–288, 2013.
[63] R. Lozano, "A holistic perspective on corporate sustainability drivers," Corp. Soc. Responsib. Environ. Manag., vol. 22, no. 1, pp. 32–44, 2015.
[64] M. S. Yadav, K. De Valck, T. Hennig-thurau, D. L. Hoffman, and M. Spann, "ScienceDirect Social Commerce : A Contingency Framework for Assessing Marketing Potential," J. Interact. Mark., vol. 27, no. 4, pp. 311–323, 2013.
[65] A. Tung and H. Wan, "Chinese Electronics Export ; Taiwanese Contract Manufacturing – The Win – Win Outcome along the Evolving Global Value Chain," 2013.
[66] C. Yang and C. Sheu, "The effects of environmental regulations on green supply chains," vol. 5, no. 26, pp. 10601–10614, 2011.
[67] H. Hassan and S. Daud, "Fostering Corporate Sustainability Performance through Integrated Knowledge Management Strategy and Eco-Innovation in Halal Pharmaceutical Companies: A Malaysia Case," World J. Islam. Hist. Civilization. https//www.researchgate.net/publication/319122947; Foster., vol. 7, no. 2, pp. 23–29, 2017.
[68] T. T. Y. S. Y. T. R. Alabdullah;, "Corporate Governance Mechanisms and Jordanian Companies ' Financial Performance," Asian Soc. Sci., no. January 2016, 2014.
[69] C. T. Funda Özera, "Effect of Strategic Leadership Styles on Firm Performance A Study in a Turkish SME," Procedia - Soc. Behav. Sci., vol. 150, pp. 778–784, 2014.
[70] H. Wang, A. S. Tsui, and K. R. Xin, "CEO leadership behaviors, organizational performance, and employees' attitudes," Leadersh. Q., vol. 22, no. 1, pp. 92–105, 2011.
[71] C. Zehir, E. Altindag, and A. Z. Acar, "The Effects of Relationship Orientation through Innovation Orientation on Firm Performance : An Empirical Study on Turkish Family-Owned Firms," Procedia - Soc. Behav. Sci., vol. 24, pp. 896–908, 2011.
[72] D. Palacios-marque, D. Vale, and M. Peris-ortiz, "The Effect of Knowledge Transfer on Firm Performance among Employees in Public Sector in Istanul: Examining the Moderating Role of Emotional Intelligence," Manag. Decis., vol. 51, no. 5, pp. 973–985, 2013.
[73] F. L. Cooke, "Human Resource Strategy to Improve Organizational Performance: A Route for Firms in Britain?," Int. J. Manag. Rev., vol. 3, no. 4, pp. 321–339, 2001.
[74] D. S. and R. H. W. Martin Clarke, "Intellectual Capital and Firm Performance in Australia," J. Intellect. Cap., no. February, 2011.
[75] U. Garay and M. González, "Corporate Governance and Firm Value : The Case of Venezuela," J. Compil., vol. 16, no. 3, pp. 194–209, 2008.
[76] H. Hiraki, T., Inoue, H., Ito, A., Kuroki, F., & Masuda, "Corporate governance and firm value in Japan: Evidence from 1985 to 1998," ALSEVIER, vol. 11, no. 3, 2003.
[77] E. Mazzanti, M., Pini, P., & Tortia, "Organizational innovations, human resources and firm performance: The Emilia-Romagna food sector," J. Socio. Econ., vol. 35, no. 1, pp. 123–141, 2006.
[78] F. J. Al-Haddad, W., Alzurqan, S. T., & Al-Sufy, "The effect of corporate governance on the performance of Jordanian industrial companies: An empirical study on Amman Stock Exchange," Int. J. Humanit. Soc. Sci., vol. 1, no. 4, pp. 55–69, 2011.
[79] D. S. Sukirno and S. Siengthai, "Does Participative Decision making affect lecturer performance in higher education ?," nternational J. Educ. Manag., vol. 25, 2011.
[80] E. B. Ugur Yozgat, Serra Yurkoru, "Job stress and job performance among employees in public sector in Istanbul : examining the moderating role of emotional intelligence," Soc. Behav. Sci., vol. 75, pp. 518–524, 2013.
[81] M. G. B. and A. Ergeneli, "The Role of Psychological Capital and Trust in Individual Performance and Job Satisfaction Relationship : A Test of Multiple Mediation Model," Int. Strateg. Manag. Conf. Ltd, vol. 99, pp. 173–179, 2013.
[82] P. A. Freire, "Enhancing innovation through behavioral stimulation: The use of behavioral determinants of innovation in the implementation of eco-innovation processes in industrial sectors and companies," J. Clean. Prod., vol. 170, pp. 1677–1687, 2018.
[83] S. Scarpellini, J. Valero-Gil, and P. Portillo-Tarragona, "The 'economic-finance interface' for eco-innovation projects," Int. J. Proj. Manag., vol. 34, no. 6, pp. 1012–1025, 2016.
[84] N. Özaralli, "Linking Empowering Leader to Creativity: The Moderating Role of Psychological (Felt) Empowerment," Procedia - Soc. Behav. Sci., vol. 181, pp. 366–376, 2015.
[85] J. Horbach, C. Rammer, and K. Rennings, "Determinants of eco-innovations by type of environmental impact - The role of regulatory push/pull, technology push and market pull," Ecol. Econ., vol. 78, pp. 112–122, 2012.
[86] B. (ed). Galgoczi, Greening industries and creating jobs. Brussels: European Trade Union Institute (ETUI), 2012.
[87] M. Asim, "Impact of Motivation on Employee Performance with Effect of Training: Specific to Education Sector of Pakistan," Int. J. Sci. Res. Publ., vol. 3, no. 9, pp. 1–9, 2013.
[88] A. Ali and N. M. Akram, "Impact Of Financial Rewards On Employee's Motivation And Satisfaction In Pharmaceutical Industry, Pakistan," Glob. J. Manag. Bus. Res., vol. 12, no. 17, pp. 44–50, 2012.
[89] G. AL-Baddareen, S. Ghaith, and M. Akour, "Self-Efficacy, Achievement Goals, and Metacognition as Predicators of Academic Motivation," Procedia - Soc. Behav. Sci., vol. 191, pp. 2068–2073, 2015.
[90] S. K. Tan, W. F. W. Yusoff, and S. Rajah, "Job Satisfaction and Motivation: What Are the Difference Among These Two?," Eur. J. Bus. Soc. Sci., vol. 3, no. 2, pp. 94–102, 2014.
[91] W. Lynne, "Raising Performance through Motivation Part One:Content Theories," Michael Heath Consult., 2012.
[92] R. Lin, K. Tan, and Y. Geng, "Market demand , green product innovation , and fi rm performance : evidence from Vietnam motorcycle industry," J. Clean. Prod., vol. 40, pp. 101–107, 2013.
[93] A. M. Alghazo and M. Al-Anazi, "The Impact of Leadership Style on Employee's Motivation," Int. J. Econ. Bus. Adm., vol. 2, no. 5, pp. 37–44, 2016.
[94] D. A. Basuil and D. K. Datta, "Value creation in cross-border acquisitions : The role of outside directors ' human and social capital," J. Bus. Res., vol. 80, no. July, pp. 35–44, 2017.
[95] J. Barney, "Firm Resources and Sustained Competitive Advantage," Journal of Management, vol. 17, no. 1. pp. 99–120, 1991.
[96] K. Lee and B. Min, "Green R & D for eco-innovation and its impact on carbon emissions and firm performance," J. Clean. Prod., vol. 108, no. May, pp. 534–542, 2015.
[97] I. V. Kozlenkova, S. A. Samaha, and R. W. Palmatier, "Resource-based theory in marketing," J. Acad. Mark. Sci., vol. 42, no. 1, pp. 1–21, 2014.

[98] A. A. Palladan, A. K. Kadzrina, and W. C. Yen, "Effects of Strategic Leadership, Organizational Innovativeness and Information Technology Capability on Effective Strategy Implementation," Int. J. Organ. Bus. Excell., vol. 1, no. 2, pp. 1–18, 2016.
[99] T. El Shafeey and P. Trott, "Resource-based competition: three schools of thought and thirteen criticisms," Eur. Bus. Rev., vol. 26, no. 2, pp. 122–148, Feb. 2014.
[100] J. B. Barney, "Resource-based theories of competitive advantage : A ten- year retrospective on the resource-based view," vol. 27, pp. 643–650, 2001.
[101] R. J. Reichard, R. E. Riggio, D. W. Guerin, P. H. Oliver, A. W. Gottfried, and A. E. Gottfried, "A longitudinal analysis of relationships between adolescent personality and intelligence with adult leader emergence and transformational leadership," Leadersh. Q., vol. 22, no. 3, pp. 471–481, 2011.
[102] A. Triguero, S. Fernández, and F. J. Sáez-martinez, "Inbound open innovative strategies and eco-innovation in the Spanish food and beverage industry," Sustain. Prod. Consum., vol. 16, pp. 1–16, 2018.
[103] A. M. Dahie, M. M. Jim'ale, and A. Y. S. Ali, "Employee Motivation and Organizational Performance: Empirical Evidence from Secondary Schools in Mogadishu-Somalia," Acad. Res. Int., vol. 6, no. 5, pp. 69–83, 2015.
[104] O. Dobre, "Employee motivation and organizational performance," Rev. Appl. socio-economic Res., vol. 5, no. 1, pp. 53–60, 2013.
[105] E. Kiruja and E. Mukuru, "Effect of Motivation on Employee Performance In Public Middle Level Technical Training Institutions In Kenya," Managementjournal.Info, vol. 2, no. 4, pp. 73–82, 2013.
[106] Yina Li, "Environmental innovation practices and performance moderating effect of resource commitment.pdf," J. Clean. Prod., vol. 66, pp. 450–458, 2014.
[107] A. Dar, M. Bashir, F. Ghazanfar, and M. Abrar, "Mediating Role of Employee Motivation in Relationship to Post-Selection HRM Practices and Organizational Performance," Int. Rev. …, vol. 4, no. 3, pp. 224–238, 2014.
[108] M. T. Lee and R. L. Raschke, "Understanding employee motivation and organizational performance: Arguments for a set-theoretic approach," J. Innov. Knowl., vol. 1, no. 3, pp. 162–169, 2016.
[109] S. Daud, "The Antecedents of Corporate Sustainability Performance," Proc. Int. Acad. Conf. 2704927, Int. Inst. Soc. Econ. Sci., 2015.
[110] R. M. Baron and and D. A. Kenny, "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations." 1986.
[111] M. A. Hitt and R. D. Ireland, "The essence of strategic leadership : Managing human and social capital," 2002.
[112] B. Palmer, "Leaders Questionnarire—empowerment motivation for employees—walking the tal—empowerment motivation for employees—walking the talk," p. 2004, 2004.
[113] B. Palmer, "Create individualized motivation strategies, Strategic HR Review," vol. 4, no. 3, 2005.
[114] S. Im and J. p. Workman, "Market orientation, creaeivity, and New Product Performance in," J. makieting, vol. 68, no. April, pp. 114–132, 2004.
[115] R. W. Brislin, Translation and Content Analysis of Oral and Written Material. Hc Traindis Ve JW Berry (Der). In Handbook of Cross-cultural Psycology (PP.389-444). Boston, MA: Allyan Press, 1980.
[116] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, Multivariate Data Analysis. 2010.
[117] R. H. Hoyle, Structural Equation Modeling, vol. 51, no. 2. 1995.
[118] R. P. Bagozzi and Y. Yi, "On the Evaluation of Structural Equation Models," Journal of the Academy of Marketing Science, vol. 16, no. 1. pp. 74–94, 1988.
[119] J. F. Hair, "Multivariate data analysis: a global perspective /cby." 2010.
[120] C. Fornell and D. F. Larcker, "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," J. Mark. Res., vol. 18, no. 1, p. 39, 1981.
[121] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, Multivariate Data Analysis, vol. 1, no. 6. 1998.
[122] J. Pallant, "SPSS survival manual," J. Adv. Nurs., vol. 36, no. 3, pp. 478–478, 2007.
[123] R. B. Kline, Principles and practice of structural equation modeling, vol. 156. 2011.
[124] Q. M. & H. G., "An Investigation into the Factors Influencing the Adoption of B2B Trading Exchanges in Small Businesses," Eur. J. Inf. Syst., vol. 16 (3), pp. 202–215, 2007.
[125] T. Jayaweera, "Impact of Work Environmental Factors on Job Performance, Mediating Role of Work Motivation: A Study of Hotel Sector in England," Int. J. Bus. Manag., vol. 10, no. 3, pp. 271–278, 2015.
[126] J. F. M.-A. E. C.-C. M. D. L.-G. J. J. Tarí, "Green management and financial performance: a literature review," Manag. Decis., vol. 47, no. 7, pp. 1080–1100, 2009.
[127] F. J. Sáez-martínez, Á. González-moreno, and T. Hogan, "The Role Of University In Eco-Entrepreneurship : Evidence From The Eurobarometer Survey On Attitudes Of European Entrepreneurs Towards Eco-Innovation," Vol. 13, no. 10, pp. 2541–2549, 2014.
[128] N. M. P. Bocken, M. Farracho, R. Bosworth, and R. Kemp, "The front-end of eco-innovation for eco- innovative small and medium sized companies," Journal of Engineering and Technology Management, vol. 31, no. March. pp. 43–57, 2014.