

**RELATIONSHIP BETWEEN SUSTAINABLE
DEVELOPMENT PRACTICES AND FINANCIAL
AND NON-FINANCIAL PERFORMANCE IN
JORDANIAN CONSTRUCTION INDUSTRY:
ROLE OF TRANSFORMATIONAL LEADERSHIP
AS A MODERATOR**

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JORDANIAN CONSTRUCTION INDUSTRY:
ROLE OF TRANSFORMATIONAL LEADERSHIP
AS A MODERATOR**

by

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LIST OF ABBREVIATIONS

AET	Affective events theory
BPM	Business Performance Measurement
CBJ	Central Bank of Jordan
CEO	Chief Executive Officer
CEP	Corporate Environment Performance
CFP	Corporate Financial Performance
CIB	International Council for Building
CSR	Corporate Social Responsibility
DEFRA	Department for Environment, Food and Rural Affairs
DOS	Department of statistics
ECs	Emerging contractor
EMP	Environment Management Practices
EMS	Environmental management system
EPA	Environmental Protection Agency
EPS	Earning Earnings Per Share
EQ	Emotional Intelligence
ESD	Environmental Supplier Development
FIPM	Financial Performance Measurements
FP	Financial Performance
GCEP	General Corporation for The Environment Protection
GDP	Gross domestic product
GRI	Global Reporting Initiative
HRM	Human Resources Management

HUDC	Housing and Urban Development Corporation
ICT	Information Communication Technology
ILO	International Labour Organisation
IRR	Internal rate of return
JCCA	Jordanian Construction Contractor Association
JD	Jordanian Dinar
JEA	Jordan Engineers Association
JHDA	Jordan Housing Developers Association
KMO	Kaiser-Meyer-Olkin
KPI	Key Performance Indicators
KPMG	"Klynveld Peat Marwick Goerdeler", one of the Big Four auditors
LC	Large Contractor
LCA	Life cycle assessment
MBV	Market-to-book value of equity
MPWH	Ministry of Public Works and Housing
NFPM	Non-financial performance measurements
NGO	Non-government organisations
NR	Which does Not Report
OBG	Oxford Business Group
OSHI	Occupational Safety and Health Institute
PCA	Principal component analysis
Ph.D.	Doctor of Philosophy
PM	Performance Measurement
PMI	Project Management Institute
PNA	Palestinian National Authority

PP&E	Property, Plant, and Equipment
R&D	Research and Development
R	Companies issuing non-financial Reports
ROA	Return on Assets
ROE	Returns on equity
ROI	Return on investment
ROS	Return on sales
SD	Sustainable development
SDPs	Sustainable development practices
SG	Sales Growth
SM	Sustainable Management
SME	Small and Medium Enterprises
SPM	Stakeholder Performance Measurement
SPSS	Statistical Package for the Social Sciences
SWOT	Strengths, Weaknesses, Opportunities and Threats
TOL	Tolerance
UAE	United Arab Emirates
UK	United Kingdom
USA	United State of America
USEPA	United States Environmental Protection Agency
VIF	Variance Inflation Factor
WCED	World Commission on Environment and Development
WMS	Waste Management Systems

**PERHUBUNGAN DI ANTARA AMALAN PEMBANGUNAN MAMPAN DAN
PRESTASI KEWANGAN DAN BUKAN KEWANGAN DALAM INDUSTRI
PEMBINAAN DI JORDAN: PERANAN KEPIMPINAN
TRANSFORMASIONAL SEBAGAI PENYEDERHANA**

ABSTRAK

Kajian ini memeriksa perhubungan langsung di antara amalan pembangunan mampan (SDPs) dan prestasi kewangan dan bukan kewangan. Ia juga mengkaji kesan penyederhana kepimpinan transformasional (TL) ke atas perhubungan di antara amalan pembangunan mampan dan prestasi kewangan dan bukan-kewangan. Dengan menggunakan sumber data primer, kajian ini memfokus kepada industri pembinaan di Jordan. Sejumlah 400 soal-selidik tinjauan telah diagihkan kepada responden di daerah zon tengah di Jordan. Daripada 400 soal-selidik yang diagihkan, hanya 290 soal-selidik dikembalikan. Namun demikian, hanya 253 soal-selidik telah digunakan untuk analisis lebih lanjut, mewakili kadar respon 72%. Hipotesis kajian telah diuji melalui analisis regresi pelbagai, dan hipotesis untuk kesan yang berinteraksi telah disahkan menggunakan analisis regresi pelbagai hirerarki. Dapatan menunjukkan bahawa aspek ekonomi mempunyai kesan yang positif ke atas prestasi ROA, sementara faktor-faktor bebas lain dengan ROI dan SG tidak meninggalkan sebarang impak, dan ia juga menunjukkan perhubungan yang positif di antara aspek persekitaran dan sosial dan prestasi bukan-kewangan (kepuasan pelanggan dan reputasi syarikat), sementara kepentingan negatif perhubungan di antara perspektif sosial dan komitmen pekerja; kepimpinan transformasional mempunyai kesan penyederhana ke atas perhubungan di antara SDP dan prestasi bukan-kewangan. Keputusan kajian menunjukkan bahawa

kesan-kesan ini adalah kukuh dalam pasaran firma pembinaan. Kajian ini menekankan lagi kesan SDP ke atas prestasi firma dan pengurus/pemilik perlu mempertimbangkan peranan penting kepimpinan transformasional sebagai peramal perhubungan di antara aspek SD dan prestasi firma. Kajian semasa ini menyumbang kepada literatur dengan menilai satu model sah yang menghuraikan perhubungan di antara kepimpinan transformasional ke atas SDP dan prestasi kewangan dan bukan-kewangan. Ini adalah kajian empirik pertama yang menjurus kepada prestasi syarikat pembinaan yang berkait dengan aspek-aspek SDP dan prestasi kewangan dalam ekonomi baru dengan kesan penyederhana kepimpinan transformasional. Pengkaji dan pengamal, terutama mereka dari negara-negara Timur Tengah, perlu mempertimbangkan dan mengambil iktibar dari dapatan-dapatan kajian ini. Apabila industri pembinaan di Jordan sama ciri-cirinya dengan industri pembinaan di negara-negara sedang membangun yang lain, dapatan kajian ini diharap menjadi daya penarik kepada ahli-ahli profesional dalam industri untuk cuba memulakan SDP melalui pengukuran prestasi yang efektif. Kajian ini menyediakan bukti teoretikal dan empirik bahawa kepimpinan transformasional adalah satu pembolehubah penting dalam konteks organisasi yang mampu mempromosikan pembangunan dan prestasi kewangan yang mampan. Oleh itu, kepimpinan transformasional adalah penting dalam mencipta satu iklim amalan pembangunan mampan yang akan membolehkan ahli-ahli kumpulan memperbaiki diri mereka dalam prestasi bukan-kewangan. Kajian akan datang perlu meneruskan penerokaan dan pengkajian ke atas kerangka kerja pada aras pengurusan strategik dalam industri pembinaan, dan juga di negara-negara lain yang mempunyai budaya yang berbeza atau keadaan dan situasi yang serupa.

**RELATIONSHIP BETWEEN SUSTAINABLE DEVELOPMENT
PRACTICES AND FINANCIAL AND NON-FINANCIAL PERFORMANCE
IN JORDANIAN CONSTRUCTION INDUSTRY: ROLE OF
TRANSFORMATIONAL LEADERSHIP AS A MODERATOR**

ABSTRACT

This study examines the direct relationship between sustainable development practices (SDPs) and financial and non-financial performance. The study also examines the moderating effect of transformational leadership (TL) on the relationship between sustainable development practices and financial and non-financial performance. With the use of primary data sources, this study focusses on the Jordanian construction industry. A total of 400 survey questionnaires are distributed to respondents in the Middle region in Jordan. Out of the 400 questionnaires distributed, only 290 questionnaires were returned. However, only 253 are usable questionnaires for further analysis, representing a response rate of 72%. Hypotheses of the study are tested via multiple regression analysis, and hypotheses for the interacting effect are tested using hierarchical multiple regression analysis as well. The findings show that economic aspects have a positive effect on ROA performance, while other independent factors with ROI and SG have no impact. The findings also show a positive relationship between the environmental and social aspects and non-financial performance (customer satisfaction and company reputation), whereas negative significant of the relationship between social perspective and the employee commitment, and the transformational leadership has a moderating effect on the relationship between SDP and non-financial performance. Moreover, the study's

results show that these effects are robust in the construction firms' marketplace. This study deepens the effect of SDP on firm performance where managers/owners should consider the vital role of transformational leadership as a predictor of the relationship between SD aspects and firm performance. This current study contributes to the literature by assessing a valid model that describes the relationships between transformational leadership on SDP and financial and non-financial performance concurrently. It is the first empirical study to focus on construction companies' performance concerning aspects of SDP and financial performance in an emerging economy with a moderated effect of transformational leadership. Researchers and practitioners, especially those in Middle Eastern countries, should pay attention and use the findings of the study. As the construction industry in Jordan shares characteristics with those in other developing economies, the findings of this study are expected to be of interest to professionals in the industry attempting to initiate SDPs through effective performance measurements. The study also provides theoretical and empirical pieces of evidence that transformational leadership is a key variable in organizational contexts that can promote sustainable development practices and financial performance. Therefore, transformational leadership is important in creating a climate of sustainable development practices that will enable team members to improve the non-financial performance. Future research should continue to explore and examine the framework at other strategic management levels in the construction industry, alongside other countries with different cultures or similar circumstances.

CHAPTER 1

INTRODUCTION

1.0 Introduction

Financial performance has gained enormous prominence among academics and practitioners over the past decade. A crucial element of the organization has always been the measurement of financial performance. Researchers typically use either accounting-based profitability measures such as return on asset (ROA), return on investment (ROI), return on equity (ROE) and return on sales (ROS), or stock market-based measures to evaluate financial performance (Jaskiewicz et al., 2017). While both accounting-based and market-based measures are widely accepted as an effective indicator of financial performance, there is the ongoing discussion of their relationship in organizational research especially as to how closely they are related (Jaskiewicz et al., 2017). At the beginning of the 20th century, most of the financial performance measures and methods commonly used today were developed (Manrique & Martí-Ballester, 2017).

Nevertheless, these traditional financial measures are now critical of historical financial results as lagging measures that describe the results of managerial actions and events after they occur. Now, to make better decisions, managers need more up-to-date, forward-looking information and mostly non-financial performance measures. Consequently, various models for measuring financial performance have been developed, using both financial and non-financial measures (Brooks & Oikonomou, 2018). These models are based on non-financial measures such as customer focus, leadership, corporate social responsibility, strategic planning, emphasis on the workforce, and process management. There is less focus on the analysis of ratios and

other financial measures. Theoretically, researchers typically conceptualize accounting measures that reflect historical or short-term financial performance, while market measures represent future or long-term financial performance (Hoskisson et al., 2017; Zellweger et al., 2012). Therefore, there is no harmony between past / short-term performance and future / long-term performance relationship.

The construction industry is, of course, predominantly project-oriented, relying more on project performance than organizational performance measurement (Bhuinyan et al., 2019). Projects have traditionally been assessed in terms of cost, quality, and time. Nonetheless, Larsen et al. (2015) thought these three criteria are inadequate and argued that there are some other variables such as profitability, productivity, safety, and project team members' satisfaction that will decide to some degree how successful a project is.

Over the last few years, the construction industry has been heavily criticized for its underachievement. Dziekoński et al. (2018) accused the construction industry of being inefficient, wasteful, unsuccessful, and having structural problems. The other outcome of the studies identified many areas that need improvement within the industry. In his study, Ofori (2012) stressed the need to improve efficiency and competitiveness in the construction industry by introducing a number of reforms and improvements across various disciplines such as quality tendering, contracting procedures, and management.

In a study conducted by Ham et al. (2020), it was found that several measures (i.e. quality control, cost on-time completion safety, dollars/unit and units/man-hour) were regularly perceived by management as highly significant in assessing the performance of construction companies at the project level. Several studies (Halim

et al., 2012; Hamzah et al., 2011; Ibn-Homaid & Tijani, 2015; Sweis et al., 2014a) mostly worried about the underachievement of the construction industry, low profitability and too little investment in capital, fragmentation, research, development and training, and too many consumers are dissatisfied with the performance of the industry. Such studies constantly focus on the value of achieving specific goals for improvement (i.e. benchmarks) in terms of quality, cost productivity profit safety, and performance of projects. Nonetheless, they stressed the importance of performance measurement in improving overall firm performance.

Financial performance is crucial to many stakeholders of the company, but it is not the only aspect of value that is significant to stakeholders. From the perspective of stakeholder theory, the fundamental concept of Freeman (1984) that organizations should serve multiple stakeholders could be described as the total value generated by organizations through their activities, which is the utility tool created for each legitimate stakeholder organization.

The success of the constructional project depends on interactions and relationships between stakeholders, particularly relationships between client and contractor. Therefore, insights gained from stakeholder theory where value is maximized by relationships with stakeholders and according to Walker et al. (2015) who argue that all contracts involve a relationship between stakeholders (i.e. transactional, cooperative, and collaborative) that affects value creation processes to maximize project value. Consequently, each group of organizational stakeholders will have a different view of organizational performance, the value is in the eye of the beholder that each organizational stakeholder will have a different view of what is "valuable" based on their organizational purpose (Carton & Hofer, 2010).

As a developing country, Jordan is one of the fastest-growing countries in the Arab region, and it has started promoting sustainable practices. Jordan officially participated in the World Summit for Environment and Development in Rio de Janeiro in 1992, where the country expressed its aim to achieve sustainable development for its positive effects on the development of social life, growth of the economy, and conservation of natural and environmental resources. However, attempts were not successfully completed due to the large growth of the population during the last decade as a result of forced migrations from neighbouring countries and a high natural growth rate. The increase in the population made achieving a balance between resources and population challenging and caused the deterioration of environmental content (Fakih & Ibrahim, 2016).

The concept of sustainable development has become common among various sectors, including the construction industry (Silvestre & Țîrcă, 2019; WCED, 1987). The importance of sustainable development in the construction industry comes from its great impacts on the environment. Besides, the construction industry is crucial to human society and economic institutions. Shurrab et al. (2019) stated that the construction industry contributes to achieving the following sustainable developments goals: 1) create buildings and structures that provide greater satisfaction, wellbeing, and added value to customers, 2) increase their profitability and competitiveness, 3) offer equitable respect and treatment for its stakeholders, 4) reduce its impact on energy consumption and natural resources, and 5) improve and better protect the natural environment. Construction companies must understand that they cause environmental degradation and should make tangible arrangements to address the consequences.

Construction companies should contribute to the improvement of the environment and progressive society (Shen et al., 2010). The principles of sustainable construction projects adhere to the definition of sustainable development, which is to protect the environment and enable all people to improve their lives by pursuing economic and social goals. Solaimani and Sedighi (2020) reported that these principles are 1) building using sustainable materials, 2) building for future generations to ensure that their environment is safe, and 3) building for the long term, i.e., constructing long-lasting buildings. Thus, sustainable construction is a process of interacting with the environment.

WCED (1987) reported that in addition to fulfilling environmental needs, the construction industry should look into the economic and social perspective of sustainability to avoid focusing on only technology enhancement to fulfil sustainability requirements. Willard (2012) argued that sustainability should change companies' perceptions of the natural environment and future generations. Since the Rio Earth summit in 1992, many governments, companies, and other organisations have implemented various policies and programs for sustainable development. In the later stages of their policy implementation, these organisations realised that the policies must be assessed. Thus, several researchers created frameworks for assessing sustainable development (Tseng et al., 2018; Yan et al., 2020). The sustainability of companies should be assessed using a combination of economic, environmental, and social factors

The implementation of the sustainability agenda demands a change of leadership. Therefore, The construction industry in particular needs transformational leadership (TL) more than any other industry. Several reasons support this argument and are

evident in the environment of constructional projects and the industry (Cannon & Hillebrandt, 2016). First, constructional projects are large and complex as they comprise a mixture of specialized skills. Therefore, teams are often multidisciplinary, and participants are from different organisations and sectors. Large projects nowadays are also multicultural. Second, constructional projects need a certain period that may be lengthened or shortened depending on circumstances, which can raise time-related risks, and the ways on how to deal with or control them. Third, most projects are expensive and represent a large proportion of an individual's savings, thus, the quality of the constructed product is the core. Finally, because projects seriously affect the health and safety of involved workers, as well as the general public, due care, diligence, and expertise are necessary protections (Cannon & Hillebrandt, 2016).

Leadership is a core element of success in any activity involving cooperation among groups. Compared with other industries, transformational leadership is even more essential in the construction industry as concluded in several studies (Ameh & Odusami, 2014; Maqbool et al., 2017). Wheelan et al. (2020) and Kundu and Lata (2017) highlighted a leader's importance in creating a supportive work environment for project members. Englund and Graham (2019) emphasised that the success or failure of a project highly depends on the project leader. Broman et al. (2017) found that the effective leadership of many stakeholders in constructional projects can facilitate in complementing their targets and avoiding conflict. Leadership is significant at all levels of the construction industry (Simmons et al., 2020). Therefore, developing countries need better leadership in the construction industry more than any other country. Developing countries encounter project performance inadequacies, such

as cost and time overruns, poor work quality, technical defects, poor durability, as well as inadequate attention to health, safety, and environmental issues (Ofori, 2019).

Gibberd (2014) described obstacles faced by developing countries toward achieving sustainable development in building and construction, such as strong social and economic problems, including low or poor levels of health, education, and employment and limited economic resources. Developing countries must adopt sustainable construction so they can improve environmental, social, and economic gains for the present and the future to enhance the quality of life for the current and coming generations. The traditional vision for a successful constructional project performance, which refers to the outcomes of constructional cost, operating time, and constructional quality will be ineffective if all success factors do not comply with sustainability performance (Mathern, 2019).

1.1 Background of the Study

Jordan, one of the developing countries in the Middle East, is located at the heart of a conflict-ridden and unstable region. Natural resources particularly water is scarce, a key issue in the business environment. Forced migration is one of the main demographics and political determinants with development implications. Being at the crossroads of two major areas of instability and prolonged conflicts, Jordan has become the destination for several waves of forced migrants, first from Palestine and lately from Iraq and Syria. Refugees continue to migrate to Jordan as the conflict in neighbouring countries has no foreseeable solution. Therefore, Jordan needs to substantially increase its infrastructure to accommodate the surge in its population. School infrastructure, hospital facilities, and increased housing are all required. These projects have the benefit of job creation (Alshoubaki & Harris, 2018; Plan, 2018).

According to a study by the Arab Bank (2019), Jordan suffers from inadequate financial and natural resources, a high unemployment rate, poverty, and high public debt, which, in turn, affects the implementation of sustainable development practices (SDPs). Jordan has faced many obstacles during the implementation. Companies rarely implement SDPs properly due to the lack of experience in implementation, observation, and evaluation of top management and quality departments in the Jordanian market, generally, and the construction sector, specifically.

In addition, the construction sector in Jordan has rapidly grown in the last few years. Many organisations have allegedly implemented SDPs, but the absence of studies and research on the SD area in Jordan and a non-existent quality control system has led these companies to operate locally without quality measurements by the government. According to the Jordanian Construction Contractors Association (JCCA, 2017), the increasing number of customer complaints has brought attention to the fact that quality levels in the Jordanian construction sector have suddenly dropped to the lowest level because contractors prioritize output over quality to fulfil the high demand in the market.

According to Sweis et al. (2014a) financial difficulties faced by the contractor, shortages of labor (skilled, semi-skilled, or unskilled labor), and excessive owner change orders are the main factors that directly affect the performance of the contractor in constructional projects. Changes in government regulations and laws, violations of safety rules by contractors, and changes in material specifications are considered. In addition, a number of factors influence the contractors' performance in the construction industry in Jordan. Often the performance of the contractor is responsible for any successful project which reflects strong contractor and site management skills or

failure which reflects the lack of experience of the contractor and poor communication skills and leadership among the workers (Sweis et al., 2014a).

The lack of SD research's in Jordan motivates this study to focus on understanding the implementation and examination of SDPs in the Jordanian construction sector to provide companies with recommendations that ensure proper application of the SDPs framework. Constructional works are mainly linked to the complexity and simplicity of constructional structure in the country's context. Jordan has dealt with simple structure constructions due to its small population and unavailable workers and raw materials.

One of the main pillars is the construction sector, which supports the business environment in Jordan. Khlaifat et al. (2019) seek to recognize the major factors and causes of the failure of constructional projects in Jordan. The study shows that major factors contributing to the failure of constructional projects are related to the system's internal hierarchy, particularly the contractors. Local companies have not undertaken massive or complex projects because they lack skills and workforce management. A number of local investment projects have built traditional architecture with low-quality fittings and designs (Bakr, 2019). Few major construction companies operate throughout the country, increasing their chances of monopolizing private constructional works, and this monopoly has eventually caused the constructional quality to drop substantially (JCCA, 2018) .

The Department of Statistics in 2018 reported that the Jordanian construction industry accounts for over 7.5% of the country's gross domestic product (GDP), ranking sixth. It also has an annual turnover of more than JD 1035.3 million (see Table 1.1) (DOS, 2018). The construction industry is one of the most competitive and unpredictable

industries in the Jordanian economy and has to combine diverse skills within geographically dispersed and short-term project environments, and is faced with wide-ranging demand cycles, project-specific product requirements (JCCA, 2017; Sweis et al., 2013). Moreover, this industry faces threats of global warming and environmental damage. Regulation and the industry itself are improving constructional practices to increase their contribution to sustainability in communities and the economy, in general. As the industry employs numerous people, uses large quantities of materials, and greatly affects the environment, measures that improve the utilization of people, assets, and materials exert significant effect on the profitability, efficiency, and reputation of construction businesses. Furthermore, constructional activities consume a significant amount of resources, such as materials and energy, and thus deplete natural resources with crucial implications on ecosystem (Ilhan & Yobas, 2019).

Constructional projects are considered the backbone of civilization in almost all countries, as well as the mirror that reflects how internal society is developed, lived, and distributed. The construction industry is a vital sector of any economy and has multiple linkages with other sectors, as this industry contributes significantly to socio-economic development and employment. Construction companies are the building blocks of the construction industry, and their success or failure significantly affects the industry and nearly 40 other linking industries, including building material industries, and investment and growth climate. These companies' success also helps reduce poverty by generating income opportunities for poor households (World Bank, 2017).

Over the last decade, researchers found that the construction industry experienced a paradigm shift that improved quality and sustainability while reducing lifecycle costs

through the effective collaboration and communication of stakeholders in constructional projects (Arayici et al., 2012).

Jordanian construction companies are considered dynamic and growing due to their high level of professionalism and organisation. This sector includes nearly 2000 Jordanian contractors classified by expertise and capabilities. Although, the concept of sustainable development practices remains unclear as the issue of sustainable building development is still relatively new and no proactive solutions have been adopted for the development of the construction sector, as well as the absence of general frameworks and indicators for sustainable construction industry (JCCA, 2019).

The Jordanian construction industry has rapidly grown during the boom that occurred in the past few years, encouraging investment in the construction sector and raising the importance of advancing management philosophies in this sector (Sweis et al., 2014a). Table 1.1 shows the types and values of the Jordanian construction sector.

Table 1.1 Output of the Jordanian construction sector

Type	Value (JD m)
	2019
Building	732.2
Roads	205.2
Electro-mechanical	31.4
Water & sewerage	48.2
Other	18.3
Total	1035.3

Source: JCCA Annual Report, (2019)

Table 1.2 presents the distribution of projects and of the Jordanian construction sector and their values by province.

Table 1.2 Distribution of projects by province

Province	No. of projects	Value (JD m)
AMMAN	3629	694.4
AQABA	262	50.8
IRBID	544	95.1
ZARQA	332	53.6
BALQA	214	23.4
MAFRAQ	132	39.6
MADABA	42	6.8
KARAK	281	19.8
MAAN	39	11.1
JERASH	42	10.5
TAFILA	23	18.4
AJLOUN	21	11.8
Total	5561	1035.3

Source: JCCA Annual Report, (2019)

However, Jordan is suffering from inadequate financial and natural resources, high unemployment rate, poverty, and high public debt, all of which strongly affect the adoption of sustainability practices. Moreover, attempts to adopt and implement sustainable practices in most sectors and specifically in the construction sector are not well received, although certain organisations show interest in sustainability. This phenomenon can be due to the lack of experience in sustainability practices implementation, observation, and evaluation by top management in the Jordanian market, particularly in the construction sector. Another reason can be the absence of studies on sustainability practices in Jordan, and non-existent sustainability has led these companies to operate locally without any sustainability measurements by the government. Increased client complaints caused sustainability practices to suddenly drop to the lowest level as a result of contractors focusing on output instead of sustainability to fulfil the high demands in the market (JCCA, 2018).

1.2 Problem Statement

According to statistics from the Jordanian Construction Contractor Association (JCCA), the financial performance of Jordanian construction companies declined by 40% in 2018, with an estimated decrease of more than JD 700 million from the total project volume in 2017, the value of projects offered in 2018 amounted to JD 1,100 billion for public and private sectors. The Jordanian construction industry's decline in performance in recent years has resulted in an urgent need for them to improve their operations to meet current and future challenges. JCCA argues that the Jordanian construction industry will aim to initiate an industry-driven process of change and reform that will make the industry more sustainable, deliver high-quality products and reliable services, and enhance its reputation (JCCA, 2018).

Different factors affect Jordan's construction industry's financial performance. Contractor performance is often responsible for either a successful project reflecting strong contractor and site management skills or a failure reflecting the contractor's lack of experience and poor communication skills among the employees (JCCA, 2018). The construction industry has been criticized for its low-performance improvements over the years, with the main problem being poor performance and the industry's special fragmented nature (Sarhan et al., 2018). Constructional projects also often suffer from poor performance in terms of cost overruns, delays in time, and quality deficiencies. In the construction industry, where many buildings were demolished, unskilled workers were the main cause of poor quality (Durdyev, 2020; Jayasuriya et al., 2019). To minimize the above-mentioned issues, it should be important to focus on human resource practices and their roles to improve the performance of construction companies.

Studies assessing and measuring the performance of construction companies in the construction industry have described a lack of financial performance as a consequence of company failure (Abdul-Rahman et al., 2011; Halim et al., 2010; Halim et al., 2012; Horta & Camanho, 2014; Mohamad et al., 2014). These studies have contributed to the evaluation of the performance of the construction company based on the profitability of the constructional project (Ibn-Homaid & Tijani, 2015), cash flow (Abdul-Rahman et al., 2011), high debt burden (Halim et al., 2012), inefficient asset management (Halim et al., 2010) and working capital (Mohamad et al., 2014). According to Enshassi et al. (2018), more than 50% of projects fail in the construction industry is due to unrealistic project margins. The main reasons for project failure are poor financial management and lack of funding (Halim et al., 2012).

In the same context, Bakr (2019) stated that, due to their lack of skills and workforce management, local Jordanian construction companies are not handling complex projects. A number of local investment projects have built traditional architecture with fittings and designs of low quality. Alsubeh (2013) highlighted the lack of integration of sustainability in construction in Jordan, which may cause construction to fail. If a country needs to be environmentally sustainable, Jordan's social-ecological, economic, and political background should also be considered by the construction industry and solutions suggested in response to these features. Unfortunately, the problem of sustainable housing development in Jordan is still a very new concept, and there have been no concrete solutions to improve the construction sector. There are no general frameworks and indicators for the construction industry and sustainable practices are lacking (JCCA, 2019).

Environmental dissatisfaction with constructional projects has frequently appeared in the media. Therefore, the King of Jordan Abdullah II and the government urged professional developers to adopt constructive solutions in their field to promote sustainable development and respond to the need for improved economic, environmental, and social protection “Jordan’s 2025”. Given the above weaknesses, a framework must be developed and used in the construction industry. In 2015, Jordan's government published and launched King Abdullah II's "Jordan's 2025" National Visions and Strategy, discussing the country's vision of ecologically sustainable. Sustainable development is one of the top 2025 issues, the 10-year (2017–2025) economic and social development program, which should have a robust sustainable development framework (Jordan's 2025, 2015).

Due to the decline in the performance of the Jordanian construction companies and the existence of several factors that led to this decline in performance, in addition to the lack of commitment of these companies to apply sustainable development practices that could improve the performance of these companies, it was necessary to use transformational leadership as a moderator to enhance and change the relationship among sustainable development practices and financial performance. Therefore, leadership skills are essential to the implementation of any constructional project, so the construction industry needs transformational leadership as concluded in several studies (Ameh & Odusami, 2014; McCormick et al., 2018), and Cannon and Hillebrandt (2016) reported that the construction industry needs more transformational leadership than any other industry to change leaders behaviour to better performance.

Saldanha (2018) stated that the manager is an important figure for all project participants in developing supportive work environment, Broman et al. (2017) found that the effective transformational leaders in constructional projects facilitate companies to complete their targets and avoid problems and conflicts among their members. Additionally, Engelen et al. (2015) reported that organizational performance results are higher when top management adheres to the highest possible level of transformational leadership behaviour. In another study, McCormick et al. (2018) said, that transformational leaders should inspire, motivate, and support employee behaviour; or innovation and flexibility that would create change and facilitate good working conditions, which will reflect finally on the performance of the company.

Consequently, The Jordanian government has recognized the importance of the construction industry in the country's economy's growth. This research can therefore make an effective contribution to understanding the ultimate way to plan for Jordan's successful construction industry. This research should also support scholars as well as practitioners in terms of ways to increase the level of firm performance among contractors. Literature researches reveal minimal empirical studies among contractors on the issues of sustainability practices on financial performance.

1.3 Research Objectives

The main purpose of this study is to examine the relationship between sustainable development practices and the financial and non-financial performances of construction companies in Jordan, as well as to examine the moderation effect of transformational leadership on the relationship between sustainable development practices and financial and non-financial performance of construction companies. The

discussion of the background of the study and problem statement has led to the following research objectives:

RO₁. To examine the relationship between sustainable development practices (environmental, social, and economic) and (financial and non-financial performance) of construction companies.

RO₂. To examine the moderation effect of transformational leadership on the relationship between sustainable development practices (environmental, social, and economic) and (financial and non-financial performance) of construction companies.

1.4 Research Questions

Based on the problems discussed above, the current study attempts to answer the following questions:

RQ₁. Is there a relationship between sustainable development practices (environmental, social, and economic) and (financial performance) of construction companies?

RQ₂. Is there a relationship between sustainable development practices (environmental, social, and economic) and (non-financial performance) of construction companies?

RQ₃. Does transformational leadership moderate the relationship between sustainable development practices (environmental, social, and economic) and (financial performance) of construction companies?

RQ₄. Does transformational leadership moderate the relationship between sustainable development practices (environmental, social, and economic) and (non-financial performance) of construction companies?

1.5 Significance of the Study

This study is important for developing a new framework assessment of sustainability in the Jordanian construction industry. A framework should be specifically designed for Jordan, a developing country with its own special characteristics. The developed framework can address numerous problems related to construction sustainability in Jordan. Even with the multiplicity of studies, to some extent, the studies noted different results on the roles of sustainable development practices and other factors in minimizing financial and non-financial performance. This difference is due to the fact that these studies reflect various experiences and expertise whether in developed or developing markets, where differences exist in the economic, social, cultural, and political situations of countries. Therefore, the scarcity of studies similar to experimental investigations or surveys that have been conducted in the Jordanian context may be due to the inability and limitations of the studies that were applied. Hence, the study provides several implications and contributions theoretically and practically.

1.5.1 Theoretical Significance

This study contributes to the existing literature and enhances the body of knowledge. Understanding of this study will be beneficial to offer a base for future research and to further generate extensive knowledge on issues relating to SDP and financial & non-financial performance. This study examined the moderating effect of TL on the relationship between SDP and financial & non-financial performance in the context that has not been well studied. Furthermore, this study specifically explores the extent to which the effects of SDP dimensions on financial & non-financial performance may depend upon the effect of TL in the context of stakeholder theory.

Second, this study expands SD and financial performance studies by stakeholder theory to explain the effectiveness of the managers in simultaneously achieving better performance. This scenario, in turn, will enhance the ability of managers to fulfil their responsibilities as they serve as coordinators between the company and the external environment. Therefore, managers acquire experience and knowledge and maintain their reputation to ensure continuity of communication with the external environment and to add value to their company.

However in the past, there are limited studies that focus on environmental perspective, economic perspective and social perspective, and financial and non-financial performance in the context of the constructions especially in the Jordanian setting, the findings generally indicated the validity of the SDPs model and support the stakeholder's theory as a basis in discussing the influence of environmental perspective, economic perspective and social perspective on constructions' financial performance. Thus, the validity of the environmental perspective, economic perspective and social perspective and its constructs in the context of the constructions, especially in the area of the construction industry in Jordan reflects the model's wide applicability in different industries contexts, as shown in prior studies (Alsubeh, 2013; Bakr, 2019; Gharaibeh et al., 2020; Tewfik & Ali, 2014).

Moreover, this study extends financial and non-financial performance studies by examining the relationship between SD practices and managers' competency as well as "managers' financial expertise, tenure, and multiple managerships," were very few studies addressed these relationships. A manager with more experience is more aware and able to make appropriate decisions, therefore improving their effective role (Berg & Karlsen, 2016). A such, limited empirical evidence exists, therefore, this study

attempts to fill the gap in the literature by considering the SD and investigate its relationship with performance - financial and non-financial. As in developing countries, especially in Arabian countries where obtaining sufficient frequency data is difficult because of the circumstances that have prevailed in the region in the last few decades. Thus, this work contributes to the increased comprehensive knowledge on the relationship between SD and financial performance in a relatively stable environment, such as Jordan, compared with other neighbouring countries.

This study expands the existing financial performance literature by examining the moderating effect of the pattern of the TL on the relationship between SDP and financial and non-financial performance. These effects depend on the views that attributed the differences in the results of prior studies to the dissimilarities in institutional settings where SDP is influenced by the TL. A number of studies have verified that SDP is affected by the TL (Al-Husseini & Elbeltagi, 2016; Kunze & Bruch, 2010; Nyachanchu, Bonuke, et al., 2017). Moreover, Yujie (2018) revealed that the TL is regarded as a moderator variable on the SD in research and development investment. Therefore, this study considered managerial TL in a different way compared with previous studies by investigating their individual roles as moderator variables in the relationship between SD and financial performance. To the best of the researcher's knowledge, such relationships have not been examined in previous studies.

1.5.2 Practically significance

Several parties including existing investors, lenders, researchers, potential investors, regulators, decision-makers, and professionals' bodies will be informed by the results of this study. Current investors will benefit from the results of this study in

understanding the situation of sustainability practices in construction and the degree of their implementation in their companies, which will ultimately determine the level of their company performance interrelated with the level of profits. Also, the results of this study would provide appropriate authorities with an opportunity to improve policies and design regulations to make them more suitable for the Jordanian constructions environment. To provide regulators and institutions with guidance (such as JCCA, National Construction Council) to include SDPs as a mandatory part and not as an additional option. This study may also require different standards of ethics and conduct for SDPs where SDPs are the standalone body and are not misperceived.

Furthermore, this study contributes practically by providing contractors with insights on implementing constructions sustainability practices, as well as tools to measure their construction companies' performance. The findings and recommendations from this study may be useful to the management of construction companies, particularly in evaluating the effectiveness and contribution of their sustainable activities, and to determine whether or not they have achieved the balance between their economic goals and their commitment to sustainability. Additionally, this study provides examples to other practitioners in the construction industry, such as architects, engineers, consultants, and suppliers, to help them to consider sustainable practices in developing constructional projects and designs and implementing them.

Understanding the role of transformational leadership enables leaders to improve the practical application. Organisations that aspire to foster transformational leadership styles might incorporate these insights into the selection and development processes for their future leaders. Transformational leaders need to exercise influence in a contextualized manner through an inherently interactive perspective. Social processes

are relevant in transformational leadership, and social skills are important for transformational leaders. Another benefit of this study is not only for environmental protection and social dimensions, but a combination of internal and external benefits for all stakeholders such as the firm, employees, owners, and investors. These benefits reflect social, economic, and environmental protection as well as maximise profits and minimise costs.

1.6 Scope of the study

The main focus of this study is to examine factors that might influence financial and non-financial performance among the Jordanian construction companies. Specifically, the study aims to identify whether factors like SDP (environmental, economic, and social) as have a direct relationship on financial and non-financial performance. Also, the study aims to determine whether transformational leadership moderates the relationship between SDP and financial and non-financial performance. This cross-sectional study involved a survey of 400 construction companies from selected private construction sector in Jordan. There are twelve districts in Jordan, distributed in three regions (North, Middle, and South). In this study, the Middle region (Amman) was chosen, this region was chosen as they have the greatest number of construction companies. Due to huge investment in real estate, with most of the constructional activities in the capital city (Amman). So, the construction sector is suitable to test the effect of SDPs on financial and non-financial performance. This research is based on the philosophy of positivism. According to Saunders et al. (2009), a research strategy is a framework adopted by a researcher to identify the most effective sources of information and to reliably and accurately collect it.

The purpose of this research design is to test the study hypotheses and to examine the relationships between SDPs and TL concerning financial and non-financial performance in Jordanian construction companies. This study is conducted in Jordan because of the lack of such studies in developing countries, particularly in Jordan. As Jordan has committed to the international sustainable development agenda in the Middle East, Jordanian construction companies are suitable in providing the relevant context for the application of SDPs.

1.7 Definitions of Key Terms

The primary terms employed in the whole study are the following:

Sustainable development: “A process that aims to provide a physical, social and psychological environment in which the behaviour of human beings is harmoniously adjusted to address the integration with, and dependency on nature to improve, and not to impact adversely, on present or future generation” (Brandon, 2012).

Environmental perspective: Is an element of an organization's activities, that can interact with the environment. Such as direct activities over which a company can be expected to have an effect and control. i.e., emissions from processes. And the other one is indirect actual or potential activities over which the organization can be expected to have an influence, but no control (i.e., customer-controlled, supply chain controlled, aspects managed elsewhere within the same company (Ganguly, 2013).

Economic perspective: This is based on the concept of efficient use of scarce resources to reach the satisfaction of individual needs, as well as justice for the current and future generations simultaneously. The aims of economic sustainability are focussed on the efficiency and effectiveness of employment and achieving acceptable levels of productivity, knowledge, and technology (Gibberd, 2014).

Social perspective: Social sustainability is the ability to improving the well-being of the community. which satisfaction of human needs and the distribution justice of future generations to maintain a healthy community (Spangenberg, 2016).

Financial Performance: Financial or economic performance is often expressed in terms of sales growth, return on assets, return on investment, turnover, employment, or stock prices (Yammeesri & Lodh, 2004).

Return on assets: "the return on assets (ROA) can be used as an indicator of the profitability of the company. Return on assets determines the amount of revenue generated from the assets of the company by connecting the net income to total assets." (Keown et al., 2008).

Return on investment: Return on investment (ROI) is a management tool that systematically measures both past performance and future investment decisions. In other words, it is a financial tool that measures historical and anticipated results (Kaske et al., 2012).

Sales growth: Sales growth (SG) shows the level of absorption of market demand by firms. The higher sales growth means firms can meet the demand of the market that accordingly firm sales will increase (Nugraha & Haryanto, 2015).

Non-financial performance: It can be defined as all organisation performance outcomes that are not monetary, such as (customer satisfaction, employee commitment, company reputation (Agrawal, 2012; Milost, 2013).