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## The Impact of Strategic Orientations on Supply Chain Performance: The Mediating Role of Organizational Ambidexterity at Jordanian Extractive and Mining Companies

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### Abstract

This study explored the impact of strategic orientations (SO) on supply chain performance (SCP) in Jordanian extractive and mining companies. mediated by organizational ambidexterity (OA). A stratified random sample of 200 A questionnaire hand-delivered to managers at the senior and middle management was taken. testing the hypotheses with PLS-SEM4. The study results indicated a significant impact of SO (market orientation and learning orientation, further digital orientation, and entrepreneurial orientation) on supply chain performance (operational dimensions, economic dimensions, environmental dimensions, and social dimensions). Also, the result indicated that OA mediated the relationship between the SO and SCP among the Jordanian extractive and mining companies' managers.

According to the current study, one of the most crucial suggestions to Jordanian extractive and mining companies should be aware of the importance of SO on improving SCP. Finally, to increase the impact of SO on SCP, they must make sure that organizational ambidexterity practices are in companies.

**Keywords:** Strategic Orientations (SO), Supply Chain Performance (SCP), Organizational Ambidexterity (OA), Jordanian Extractive and Mining Companies.

### Introduction

Today, business organizations are facing unprecedented events in their environment, rapid technological developments, and a huge accumulation of knowledge, which called organizations to face these challenges, which vary between opportunities and threats, in order to survive and continue to search for administrative tools, methods and strategies that will be the basis for them in the process of development and improvement.

With the increasing competition in the business environment, many organizations are increasingly realizing that their innovative capabilities in developing the performance of their supply chains and their partners have become integral to strategic success and long-term survival (Rashwan, 2022). The significance of supply chains is rooted in the fact that they are a crucial component of the majority of businesses, whether commercial, industrial, or service-

based, and they are crucial for the success of organisations and achieving beneficiary satisfaction in addition to lowering operational costs and enhancing the financial position of the organisation.

Business organizations have become imperative to face the pressures and challenges in their environment with the means and tools available to them, and one of these management methods is the so-called strategic orientations, which have received wide attention by researchers and business organizations alike. New dimensions of strategic orientations, such as entrepreneurial orientation, technical orientation, learning orientation, and market-orientation, have emerged as a result of the expansion of study area on these dimensions (Uzoamaka et al., 2020; Lee et al., 2014), the most agreed strategic orientations among researchers are (market-orientedness, entrepreneurial orientation, and technology orientation) (Narver & Slater, 1990). Some studies used other dimensions of strategic trends such as customer orientations and competitor orientations (Minović et al., 2016; Zhou et al., 2009). Recently, the digital trend has emerged (Kindermann et al., 2020; Quinton et al., 2018).

Organisational ambidexterity points to the desire to exploit existing resources and to improve their competitiveness. Business organisations must make internal changes to their organisational capabilities and structures in order to keep up with changes in the external environment. This cannot be done without having organisational ambidexterity.

Tuan (2016a) confirmed the great role of organizational ambidexterity in supply chain agility, and there are many studies that dealt with the pivotal significance of organizational ambidexterity in supply chain performance, strategic orientations, in addition to competitive advantage, despite that, organizational ambidexterity is still one of the research fields that need more research and study to complete all its aspects.

The mining sector is one of the largest industrial sectors, where phosphate and potash are the most important natural resources of Jordan, and this sector consists of large industries in terms of the volume of investments, which contribute significantly to the employment of local labor and cover the market need of primary, intermediate and final products, this sector is characterized by using the latest scientific methods to extract and mine natural resources and convert them into products for export or local consumption. According to the certificates of origin issued by the local chambers of industry during the year 2019, the mining industries sector accounted for 20.1 %of the total industrial exports, ranking second in export volume (Jordan Chamber of Industry, 2022).

## **Literature Review**

### **Strategic Orientations**

The strategic orientations of business organizations have received considerable attention from scholars and researchers in management, marketing, and entrepreneurship (Alshawabkeh et al., 2020). Since it embodies an organisational philosophy that reflects the organization's ambition to achieve outstanding performance in accordance with a set of values and beliefs that are consistent with its culture, the strategic orientation is one of the management concepts that has an impact on the performance and excellence of organisations (Gatignon & Xuereb, 1997). Strategically oriented organizations are undoubtedly more competitive in their industry, responding accurately and quickly to customer needs and desires.

Although the first beginnings of the use of the term strategic orientation were in the Miles and Snow model (1978) and the Porter model (1980), which are important frameworks for strategic orientation (Slater et al., 2006). However, Venkatraman (1989) was the first to

use the term strategic orientation in his study, which was a tool for evaluating and measuring the main dimensions of strategy at the business level, through which he presented six dimensions of strategic orientation, which are as follows: orientation through strategic aggressiveness, analytical orientation, defensive orientation, future orientation, proactiveness orientation, and orientation through risk-taking (Yadav et al., 2019).

Cadogan (2012) argues that the term orientation refers to the tendency to adopt specific values in the organization and to agree on specific norms and work to practice them in certain ways and methods. The process through which an organisation adjusts to its external environment is known as strategic orientation (Ashal et al., 2021). Hynes (2009) defined strategic orientation as the long-term goals and objectives of an organization and subsequent actions, behaviors, and values related to it.

The strategic orientation derives its importance from the nature of its components, and that the organization's general path, future organizational identity, competitive strategy and strategic plan all constitute the strategic orientation and the general framework of the organization's path. Therefore, determining the strategic orientation of business organizations is the main and first task of senior management in those organizations because determining it falls within the organization's corporate strategy.

### **Market Orientation**

Organizations seek to gain a sustainable competitive advantage and to achieve this they must adopt a strategic orientation (Abuzid & Abbas, 2017). Although market-oriented involves the efforts of almost all departments in an organization, the marketing department usually has a larger role by virtue of its contact with customers and the market (Kohli & Jaworski, 1990).

Many researchers have found that market-oriented organizations achieve superior performance and greater market share, as a result of their ability to understand the customers needs and desires (Kotler & Keller, 2006). The culture of the company that is thought to be most successful at fostering the required behaviours is the market orientation, in order to create superior and distinct value for customers, and to achieve outstanding and continuous performance in the business environment (Shahsiah & Sepahvand, 2016), while Uzoamaka et al (2020) is seen as the deep knowledge of customers and competitors. Day (1994) developed another concept of market orientation by developing the capabilities and capabilities of the organization, sensing the market of any changes in the market and how it responds to them, and linking capabilities to customers, which includes the skills, capabilities and processes necessary to communicate with the customer.

Three behavioural ingredients are included in market orientation, according to Narver and Slater (1990) competitor orientation, customer orientation, add to cross-functional coordination. These behaviours are focused on gathering customer and competitor information in respect of create added value for the customer.

### **Orientation Learning**

There is no doubt that learning has a great impact on diagnosing and modifying organizational behavior, so it is difficult not to have a person or organization that is not affected by the learning process because humanity since the first creation is relies on learning. The notion of learning refers to the change in behavior (Muro & Jeffrey, 2008). The concept of organizational learning has aroused the interest of scientists for decades, and the concepts associated with it have attracted widespread attention.

The study of Alerasoul et al (2021) provided a theoretical review of these interrelated concepts, and that organizational learning is a fundamental result of effective human resource management. In contrast, the literature of a learning organization revolves around an organization that practices behavior change constantly.

The concept of learning orientation indicates to the set of organizational values that influence the degree to which proactive learning occurs (Sinkula et al., 1997). It is also described as a collection of organisational principles and implicit beliefs that support ongoing learning about important environmental factors in order to advance core competencies and capabilities to a differentiated competitive position (Gray & Wert-Gray, 2012), can improve performance at the individual and organisational levels (Hakim & Wijaya, 2022).

### **Digital Orientation**

The environment for organisations and marketing has been significantly altered by digital technologies, creating threats and opportunities (Quinton et al., 2018). Supply chains are increasingly benefiting from digital business transformations (Belhadi et al., 2021).

The effect of strategic orientation on performance is still not fully understood theoretically or empirically until this time (Wang, 2022). The study of Kindermann et al. (2020) was one of the early studies in adopting a new strategic orientation, what is known as the digital orientation.

Comprehensible for digital orientation refers to combination of market, education, and entrepreneurial trends to take advantage of the opportunities provided by digital technologies to cultivate attitudes and actions that encourage creativity, initiative, and openness to new ideas (Quinton et al., 2018). Digital orientation is the guiding principle that directs an organisation in pursuing opportunities backed by digital technology in order to achieve competitive advantage, according to (Kindermann et al., 2020).

### **Entrepreneurial Orientation**

One of the most famous and widely-accepted themes in the current literature on entrepreneurship in organisations is entrepreneurial orientation (Wales et al., 2013; Covin et al., 2006). Numerous meanings of "entrepreneurship" can be found in the literature, but they are all related to the essence of innovation, and hardly two people disagree that innovation and entrepreneurship are the main drivers of an organization's long-term success (Al-Najjar & Al-Ali, 2019, 29; Brem, 2011) defined entrepreneurship as the process by which an individual or group makes an organized effort behind opportunities that add value and meet needs and desires through creativity and uniqueness. Additionally, Barringer and Ireland (2019, 32) argue that entrepreneurship is the process how people go after opportunities regardless of their resources.

Miller (1983) is credited with being the first to clearly introduce the term of entrepreneurial orientation (Sultan & Othman, 2021, 158). He identified its three dimensions: innovation, risk taking, and proactiveness.

### **Supply Chain Performance**

Today, supply chains have become an important aspect of competitiveness; Due to this, business organisations now pay more attention to assessing and monitoring the performance of their supply chains in order to prevent failure or weakness in attaining their strategic goals (Sosa et al., 2019, 69). Moreover, organizations use performance measurement to determine whether tasks or activities have achieved their objectives. In short, performance is a measure

of the failure and success of all tasks, including productivity and profitability (Lee et al., 2022). The consequences of the supply chain's capacity to satisfy end-consumer demands and effectively express those desires are referred to as supply chain performance (Hong et al., 2019). The supply chain's performance measure is crucial for the control and effectiveness of operations since it focuses on managing processes both inside and outside the organisation (Olugu & Wong, 2009). In order for there to be continuous monitoring by the organization and ensure the safety and performance of its supply chains, performance must be measured (Chan, 2003).

The fundamentals of performance measurement have been the subject of numerous studies (Gunasekaran et al., 2001; 2004; Agami et al., 2012; Sillanp & Kess, 2012). Adams et al. (1995) mentioned a set of necessary requirements in measuring performance:

- Measures should be derived in line with the organization's strategy.
- The ability of a performance measurement system to communicate strategy clearly throughout the organization is a critical factor in determining business success.
- Performance measures respond to development in business activities and processes.
- Performance measures should be dynamic.

The study of Gunasekaran et al. (2004) emphasized that performance measurement should capture the essence of organizational performance, and that the performance measurement system should balance financial and non-financial indicators.

Lee and Billington (1992) stated that supply chain performance is difficult to measure and that no measure is perfect, due to the multiplicity of evaluation indicators adopted by institutions (Kouachi, 2015). As well as the multiplicity of parties interested in this matter (shareholders, workers, customers, suppliers) (Beamon, 1998).

Researchers differed in their view of the dimensions of measuring supply chain performance, some of them split them into qualitative indicators (quality, flexibility, visibility) and quantitative indicators (innovation, costs, and use of resources) (Beamon, 1998; Chan, 2003). A few studies use effectiveness and efficiency as a way to measure supply chain performance (Abu Nimeh et al., 2018; Abdallah et al., 2014), and there are those who categorized them into financial measures (productivity and cost of production) and non-financial measures (flexibility, time, and quality) (Toni & Tonchia, 2001). Eight criteria were used to measure performance in the study by Abdallah et al (2021): quality, cost, flexibility, shipping, response, waiting time, and market access. Abu-Difallah and Al-Sha'ar (2017) used four dimensions in measuring supply chain performance (response and cooperation, economic cost, consumer satisfaction, and relationship with suppliers).

Based on the previous studies (Hijawi, 2022; Azfar et al., 2014; Tajbakhsh & Hassini, 2013; Hassini et al., 2012; Azevedo et al., 2011b; Miguel & Brito, 2011; Zhu & Sarkis, 2004), presented a framework of supply chain performance included five components (operational dimension, economic dimension, environmental dimension, and social dimension).

### **Organizational Ambidexterity**

The etymology of the word Ambidexterity consists of two syllables: the first (Ambi) which means two-sided or duality, and the second (dexterity) which means mastery and skill (Torbatjoo, 2018) and both sides imply exploration and exploitation (Duwe, 2022, 24). In the management literature, Duncan (1976) was the first to use the phrase "organisational ambidexterity".

According to March (1991), organisational ambidexterity refers to a company's ability to simultaneously explore and exploit new opportunities. The main challenge facing

organizations lies in manage conflicting components, such as between of exploration with exploitation, alignment with adaptation, efficiency with effectiveness, and radical innovation with continuous innovation (Gibson & Birkinshaw, 2004).

The researchers differed in determining the dimensions of organizational ambidexterity, depending on their different philosophy and outlook on it. After reviewing many studies and scientific writings, it became clear to the researcher that organizational ambidexterity is limited to two main dimensions: exploration and exploitation (Hurtado et al., 2022; Tariq et al., 2022; Ibrahim, 2022; Al-Mahamadi and Al-Qurashi, 2022; Jad Al-Rub et al., 2021; Shenshen & Al-Najjar, 2020; Al-Shawabkeh, 2018; Radi and Qasim, 2018; Tuan, 2016b; March, 1991). There are those who have added a third dimension to organizational ambidexterity, which is the flexible organizational structure (Al-Baghili & Al-Khawaldeh, 2021; Ibrahim, 2021; Sweiss & Abdeen, 2019).

### **Hypothesis Development**

#### **Strategic Orientations (SO) and Supply Chain Performance (SCP)**

There are several studies that have looked into how aspects of strategy and performance relate in the management literature (Morgan & Strong, 2003).

By adopting organizational behaviours and practices that help the organization achieve its goals, which are reflected in supply chains' overall performance, strategic orientations play a significant role in enhancing supply chain performance (Mandal & Saravanan, 2019; Okello et al., 2018).

Several research' findings indicated that strategic orientations enhance supply chains' efficiency and performance (Phorncharoen, 2020; Abd Alsalam et al., 2019; Al shaar & Al Tarawneh 2016; Tukamuhabwa et al., 2011; Nadeem & Siddiqui, 2017). Based on those findings we declare our first research hypothesis

H.1: SO direct impact on SCP.

#### **Strategic Orientations (SO) and Organizational Ambidexterity (OA)**

Strategic orientation is a tool for coordinating all efforts at all different administrative levels in the organization by drawing a basic axis to achieve effective communication between administrative levels, as represents the outline for organizational strategies (Radi & Qasim, 2018). The relevance of strategic orientations and their relationship to organisational ambidexterity were recognised by (Shenshen and Al-Najjar, 2020). They noted that they constitute the cornerstone of any organization's success.

According to the findings of the Tuan study (2016b), there is a correlation between organisational ambidexterity and entrepreneurial orientation. This is supported by the findings of Radi and Qasim (2018) study, which found that organisational ambidexterity, has positive impacts on strategic orientations. While the study of Al-Sayed and Al-Basous (2021) concluded an important conclusion that organizational ambidexterity that lead the organization to the corner of excellence and strategic success and exploit opportunities to face the dynamic business environment, and this will not be without its harmony with the general orientation of the organization (strategic orientation). Close to that Kortmann (2014) [88] found that strategic orientations are mediate the relationship between ambidexterity-oriented decisions and innovative ambidexterity. Subsequently, the study assumes the following hypotheses

H.2: SO direct impact on OA.

### **Organizational Ambidexterity (OA) and Supply Chain Performance (SCP)**

Organizational ambidexterity helps improve performance levels in business organizations of all kinds, by increasing their efficiency and effectiveness, and maintaining their survival and growth. In addition to its role in increasing the firms ability to adapt to various environmental variations ,by managing complex and conflicting components at the same time such as exploration and exploitation, efficiency, effectiveness, radical innovation, harmonization and adaptation (Al-Khawaldeh & Al-Baghili, 2021).

Organisational ambidexterity has a direct impact on supply chain performance, according to a study by Belhadi et al (2021), and it is crucial for attaining sustainable supply chain performance. The results of Tuan (2016a) indicated that there is a positive relationship between the speed of the supply chain and the organizational ambidexterity.

Seimon and Endagamage (2022) showed that organisational ambidexterity influences the relationship between environmental dynamics and supply chain resilience. As a result, the following hypotheses are presented based on the preceding discussion:

H.3: OA direct impact on SCP.

H.4: OA has mediated the impact of SO on SCP.

## **Methodology**

### **Problem statement**

The SCP is the issue that this study is trying to address, in Jordanian extractive and mining companies ,which are now facing a complex environment with intense competition, and growing environmental uncertainty. Organizations are no longer the basis of competition but have expanded to become competition between supply chains. The extractive companies sector recorded a contraction for 2020 by %2.3 and a decline in the number of new companies registered with the relevant ministry by %20.3 as a result of the Corona pandemic's effects (Central Bank of Jordan, 2020) this decline and contraction due to the decline in exports of extractive industries, and this is closely related to the performance of supply chains and their structural imbalances, which highlights their importance in mitigating the effects of crises and unprecedented events, and organizations will not be able to deal with these challenges without the use of modern management methods and strategies, and at the forefront of these methods are strategic orientations that determine the general strategic orientation of organizations.

Despite the great research efforts in SO and the performance of supply chains, there is a research gap in the relationship between them, and this gap is widened by the presence of OA as an intermediate variable, which has become the focus of organizations' attention, stemming from the significant role of OA in the speed with which they explore and exploit opportunities to become today an academic and research field.

This study came as an attempt to narrow this gap, and this in itself constitutes a fundamental motivation for its preparation. Therefore, the study aimed to investigate the impact of SO on SCP taking into consideration OA as a moderator. Figure 1 depicts the suggested study model, additionally the hypotheses to be investigated.



Figure 1. Study model

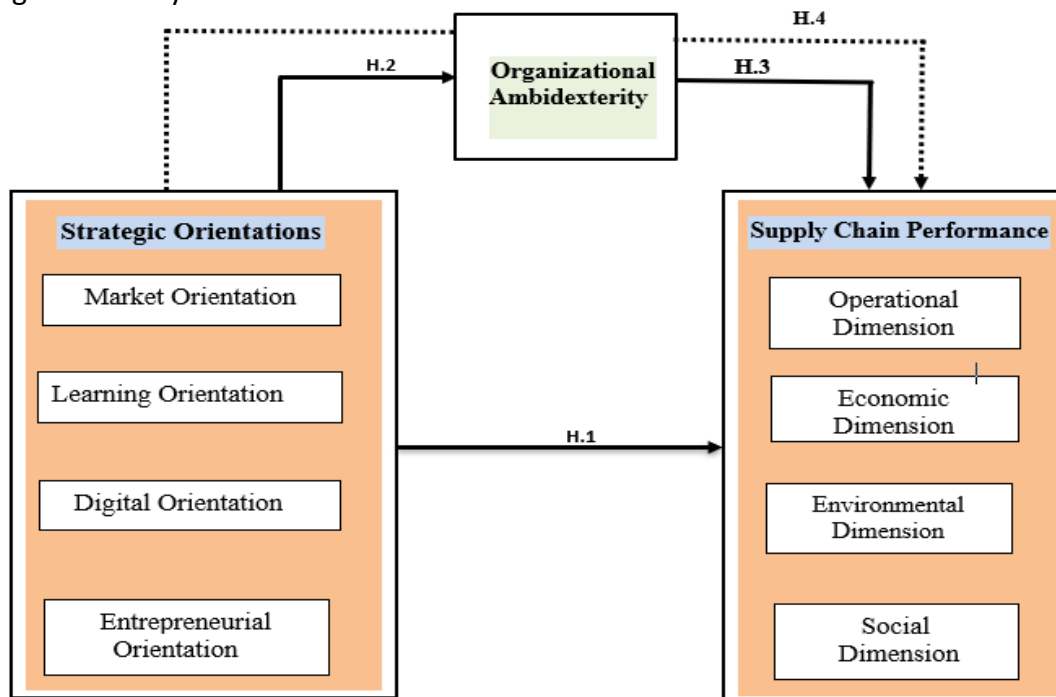


Figure 1. Study model

### Study Population and Sample

The 11 Jordanian companies that are listed on the Amman Stock Exchange in the extractive and mining industries consisted the study's sample. Targeting managers at the senior and middle management level. 200 questionnaires were distributed hand delivered; 181 with complete data were returned, and 174 were statistically valid. Table 1 illustrates respondents' demographic characteristics.

Table 1  
 Demographic characteristics

Description	Characteristic	Amount	Percentage
Gender	Male	151	86.8%
	Female	23	13.2%
Age (in years)	Less than 30	41	23.6%
	30- less than 40	57	32.8%
	40- less than 50	49	28.2%
	50 and above	27	15.5%
Academic qualification	Diploma or less	33	19.0%
	Bachelor	98	56.3%
	Master	34	19.5%
	PhD	9	5.2%
Experience (in years)	Less than 5	31	17.8%
	5-less than 10	36	20.7%
	10-less than 15	34	19.5%
	15 and more	73	42.0%
Total		174	100%

### Study Instrument

The questionnaire included four sections. The respondents' information was contained in the first section of questionnaire (gender and age, as well as education and experience). The second section dealt with measured independent variables called SO, which had 20 items. The SCP, which consists of 20 items, was the dependent variable that was measured in the third section. The final section, which included 10 items, measured mediating variables named OA. The scale of the responses was based on Likert's (5-point scale) from 1 (strongly disagree) to 5 (strongly agree).

Based on the literature review, the research constructs and items were developed. As shown in the table 2 questionnaire items and references

Table 2

#### *Research Constructs measures*

Construct	Items number	References
Strategic Orientations (SO)	20	Karina & Astuti, 2022; Al-Hiassat & Al-Shawabkeh, 2021; Khin & Theresa, 2018; Nasution & Mavondo, 2008.
Supply Chain Performance (SCP)	20	al-Samman, 2022; Shee et al., 2018; Giovanni, 2012; Zailani et al., 2012.
Organizational Ambidexterity (OA)	10	Lin et al., 2016; Kristal et al., 2010; Lubatkin et al., 2006; He & Wong, 2004.

### Research Objectives

The purpose of this study is to examine the role of strategic orientations on supply chain performance at Jordanian extractive and mining companies. Additionally, the sub-objectives are listed below:

- 1) To examine the impact of strategic orientations on supply chain performance.
- 2) To investigate the mediating role of organizational ambidexterity between strategic orientations and supply chain performance.
- 3 - To provide the decision maker with some recommendation according to the study results.

### Data Analysis

This section discusses the various statistical techniques used to assess the proposed model. The data and suggested research model were analyzed using Smart PLS 4 based on structural least squares equations modelling (PLS-SEM). The adoption of this program is due to ability to handle small and large sample sizes (Hair et al., 2017; Wong, 2013), is capable of evaluating both structural (inner model) and measurement (outer model) at the same time (Garson, 2016, 11), allows for the investigation of direct, indirect, and spurious interactions by taking into account all path coefficients concurrently (Birkinshaw et al., 1995), can handle models of formative and reflective measurement (Henseler et al., 2009), permits researchers to use more complicated study models (Lee et al., 2011).

Lastly, several studies indicate that PLS is the preferred program (Sarstedt et al., 2016). In the next part, the study deals with measurement model and Structural model (Sarstedt et al, 2017, 3; Wong, 2013; Henseler et al., 2009).

### Measurement Model

There are two forms of major epistemic interactions that are relevant to causal modelling: reflecting indicators and formative indicators. In the first case, indicators (measures) are thought to represent the underlying, unobserved construct, with the construct causing the observable measurements. As opposed to this, formative indicators help to identify the construct. A linear combination of the indicators for a defined construct yields its final determination (Hair et al., 2019; Coltman et al., 2008; Bagozzi, 2007; Hulland, 1999). The direction of the relationship might be either from the measurements to the construct (formative measurement) or from the construct to the measurements (reflective measurement) (Diamantopoulos et al., 2008), (see figure 2).

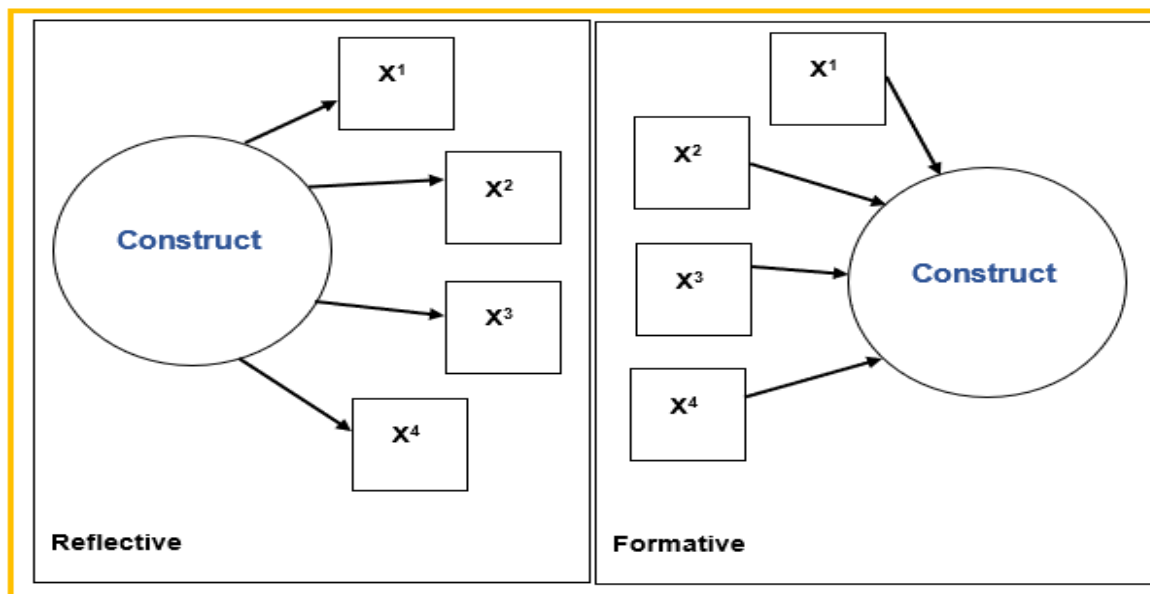


Figure 2. Causal structures

One of the most commonly used models in SEM among researchers is reflective measurement (Crocetta et al., 2021), reflective measurement is a compelling and adaptable data analysis technique (Zhang et al., 2021). It is still up for dispute whether to use a formative or reflective approach (Simonetto, 2012). The majority of management science academics believe that a reflective measurement approach is the most appropriate one (Simonetto, 2012; Coltman et al., 2008). While economics and sociology frequently use a formative perspective (Coltman et al., 2008). Nowadays, it is widely employed in management and organisational studies (Zhang et al., 2021).

The findings of Hardin et al (2008) revealed a preference for the use of reflective indicators that is consistent with classical test theory. As well as enables the insertion or exclusion of indications from measures based on accurate and trustworthy reliability metrics without changing the concept's meaning. lastly but not least, Howell et al (2007) argues that when compared to reflective measurement, formative measurement is not as appealing alternative. Based on the prior discussion all measures in this study were reflective reflective.

At this point, the researcher determined convergent validity using loadings, composite reliability (CR), and average variance extracted (AVE), with AVE cut off values of 0.5 and CR cut off values of 0.7 or above (Bagozzi & Yi, 1988). Ratings range from 0.70 to 0.90 for "satisfactory to good". Levels of 0.95 and above offer a problem since they imply item repetition, which reduces construct validity because they measure the same phenomenon

(Hair et al., 2020; Diamantopoulos et al., 2012). Table 3 shows that the AVE All measurements had values more than the permissible limit of 0.5. Factor loadings, as shown in table 3, are standardised regression weights of variables with their items. While loadings above 0.70 are regarded good, loadings above 0.60 are also acceptable (Hair et al. 2010). all Cronbach's alpha values surpassed 0.70 in this study. Table 3. Factor loadings, Composite Reliability (C.R.) and Average Variance Extracted (AVE)

Table 3  
*Measurement model*

Constructs	Item	Factor loading	Cronbach's alpha	CR	AVE
Market orientation (MO)	MarkO1	0.792	0.876	0.910	0.669
	MarkO2	0.864			
	MarkO3	0.857			
	MarkO4	0.816			
	MarkO5	0.757			
Learning orientation (LO)	EduO1	0.887	0.906	0.931	0.730
	EduO2	0.875			
	EduO3	0.891			
	EduO4	0.748			
	EduO5	0.863			
Digital orientation (DO)	DigO1	0.877	0.915	0.937	0.747
	DigO2	0.9			
	DigO3	0.89			
	DigO4	0.808			
	DigO5	0.843			
Entrepreneurial orientation (EO)	EntreO1	0.851	0.847	0.897	0.686
	EntreO2	0.835			
	EntreO3	0.604			
	EntreO4	0.841			
	EntreO5	0.748			
Operational Dimension (OD)	Opere1	0.797	0.870	0.906	0.659
	Opere2	0.839			
	Opere3	0.837			
	Opere4	0.81			
	Opere5	0.773			
Economic dimension (ECD)	Econ1	0.82	0.896	0.923	0.707
	Econ2	0.837			
	Econ3	0.84			
	Econ4	0.873			
	Econ5	0.833			
Environmental dimension (END)	Envir1	0.811	0.896	0.923	0.707
	Envir2	0.85			
	Envir3	0.858			
	Envir4	0.859			
	Envir5	0.825			

Social dimension (SD)	Soci1	0.818	0.890	0.919	0.695
	Soci2	0.848			
	Soci3	0.864			
	Soci4	0.823			
	Soci5	0.814			
Organizational ambidexterity (OA)	Ambidx1	0.825	0.944	0.952	0.664
	Ambidx2	0.761			
	Ambidx3	0.835			
	Ambidx4	0.848			
	Ambidx5	0.83			
	Ambidx6	0.841			
	Ambidx7	0.805			
	Ambidx8	0.798			
	Ambidx9	0.783			
	Ambidx10	0.816			

The Heterotrait-Monotrait (HTMT) ratio and the Fornell-Larcker criterion tests were then performed. According to Hair et al. (2019), the HTMT ratio values did not surpass the specified cut-off point of 0.85 (see table 4). On the other hand, the Fornell – Larcker criterion test, the square root of AVE for each latent variable should be more than the correlations between latent variables (Fornell & Larcker, 1981; Garson, 2016) (see table 5). In sum, the outcomes examination indicates that the discriminant validity was entirely discriminatory in this study.

Table 4

*Heterotrait-monotrait ratio (HTMT) - Matrix*

Variable	(MO)	(LO)	(DO)	(EO)	(OD)	(ECD)	(END)	(SD)	(OA)
(MO)									
(LO)	<b>0.737</b>								
(DO)	<b>0.689</b>	<b>0.848</b>							
(EO)	<b>0.643</b>	<b>0.783</b>	<b>0.804</b>						
(OD)	<b>0.726</b>	<b>0.611</b>	<b>0.591</b>	<b>0.696</b>					
(ECD)	<b>0.667</b>	<b>0.704</b>	<b>0.672</b>	<b>0.644</b>	<b>0.729</b>				
(END)	<b>0.608</b>	<b>0.639</b>	<b>0.689</b>	<b>0.697</b>	<b>0.584</b>	<b>0.712</b>			
(SD)	<b>0.631</b>	<b>0.774</b>	<b>0.765</b>	<b>0.725</b>	<b>0.636</b>	<b>0.720</b>	<b>0.811</b>		
(OA)	<b>0.693</b>	<b>0.602</b>	<b>0.594</b>	<b>0.680</b>	<b>0.699</b>	<b>0.709</b>	<b>0.608</b>	<b>0.725</b>	

Table 5

Fornell-Larcker criterion

Variable	(MO)	(LO)	(DO)	(EO)	(OD)	(ECD)	(END)	(SD)	(OA)
(MO)	<b>0.818</b>								
(LO)	0.659	<b>0.854</b>							
(DO)	0.620	0.774	<b>0.865</b>						
(EO)	0.568	0.695	0.718	<b>0.782</b>					
(OD)	0.634	0.543	0.528	0.606	<b>0.811</b>				
(ECD)	0.594	0.637	0.613	0.572	0.643	<b>0.841</b>			
(END)	0.542	0.575	0.624	0.613	0.521	0.642	<b>0.841</b>		
(SD)	0.562	0.696	0.690	0.637	0.564	0.653	0.727	<b>0.833</b>	
(OA)	0.633	0.561	0.557	0.619	0.634	0.656	0.566	0.669	<b>0.815</b>

**Structural Model**

The structural model evaluation (Figure 3) was reviewed for the purpose of testing hypotheses after establishing that the measurement model had acceptable convergent and discriminant validity. To ensure that the model has a suitable goodness of fit (GoF). According to Hair et al. (2014), an R<sup>2</sup> value of at least 0.10 is required to ensure a decent model fit to the data. As a consequence, R<sup>2</sup> values for the endogenous variables SCP and OA, respectively, are 0.738 and 0.457, confirming that the provided model adequately fits the data. This result indicates that SO may explain 74% of the variance in SCP, whilst 46% of the variance in OA.

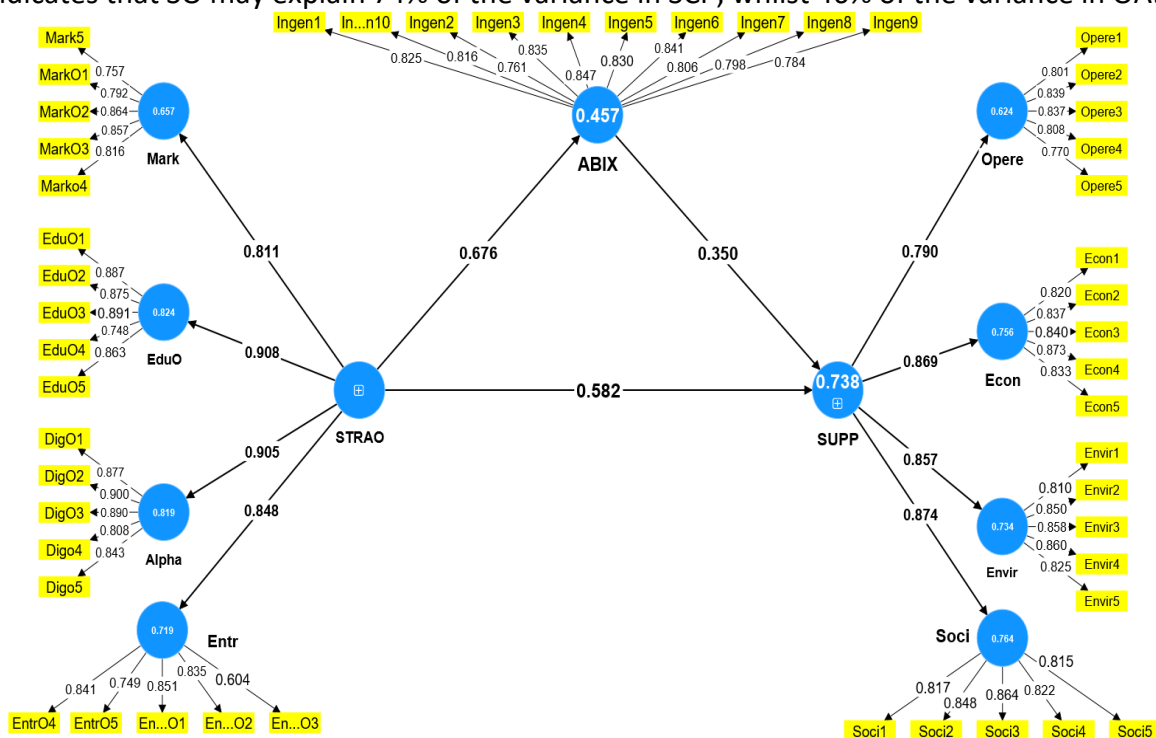


Figure 2. The study Structural and measurement model

Table 6

*Direct effect*

H	Path shape	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Decision
H1	SO → SCP	0.585	0.582	0.063	9.312	0.000	Supported
H2	SO → OA	0.676	0.678	0.047	14.313	0.000	Supported
H3	OA → SCP	0.343	0.346	0.067	5.113	0.000	Supported

The measurement item used is said to be significant if the p-value is less than 5% and the T-statistic value exceeded 1.96 at the 5% significance level, the result is considered significant (Hair et al., 2011). The hypothesis test, according to table 6, reveals that all hypotheses have a positive direct effect and are accepted. The first hypothesis of the study is on the relationship between SO and SCP. The above table of path coefficient evaluations shows that the hypothesis given above was determined to be positive and significant at a level of significance of 5%. The t-value = 9.312 and p-value = 0.000, hence Hypothesis H1 was supported. Similarly, the second hypothesis of the study concerns the link between SO and OA. The above table of path coefficient evaluations shows that the above-mentioned hypothesis was found to be positive and significant at a level of significance of 5%. Hypothesis H2 was supported with a t-value of 14.313 and a p-value of 0.000. Ultimately, the third hypothesis H3 proved a positive significant relationship between OA and SCP where t-value = 5.113; p-value = 0.000. therefore, hypothesis H3 was confirmed.

Table 7

*Outcomes of mediating effects*

H	Path shape	Path (a)	Path (b)	Path (c)	T-value	P values	VAF	Result
H4	SO → OA → SCP	0.676	0.35	0.582	4.991	0.000	.29	Partial mediation

Notice: Paths a and b connects the independent variable to the mediator variable; the mediator variable to the dependent variable, respectively. Whilst the independent variable's indirect influence on the dependent variable namely path c. The Variance Accounting For (VAF) method is used to test the proportion of mediation using the formula below:

$$VAF = (Pa * pb)/(pa * Pb)+pc=$$

$$= (0.676*.0.35)/ (0.676*.0.35) + 0.582= .29$$

If the VAF is less 20%, there is almost no mediation, according to the rule of thumb for this parameter. A VAF of more than 20% but lower than 80% implies that partial mediation is used, and if a VAF exceeds the 80% threshold indicates a full mediation (Nitzl et al. (2016). According to the findings, as shown in table 6 and 7, the VAF value is more than 20% but lower than 80%, indicating that OA partially mediates the relationship between SO and SCP.

**Discussion**

The purpose of this study was to examine the relationship between strategic orientations and supply chain performance, In addition to the moderating role of organizational

ambidexterity in Jordan's mining sector. The results indicated that SO has a significant and positive effect on SCP. Our findings consistent with prior research (Abd AlSalam et al., 2019; Ashari et al., 2018; Nadeem & Siddiqui., 2017; Al Shaar & Al Tarawneh 2016; Tukamuhabwa et al., 2011) which confirmed the link of SO to supply chain performance. These findings indicate that SO namely: (market orientation and learning orientation, as well as digital orientation, and entrepreneurial orientation) are effective in minimizing environmental and operational costs, and improvement quality, flexibility, delivery, market share, and inventory level. Additionally, the results showed that ability of supply chains in Jordanian extractive and mining companies to minimize the effects of their activities, products and operations on the company's environment and support them to preserve the environment and reduce environmental pollution through reduction of waste, and environmental violations. contribute to the reduction of excess material consumption and the production of reusable objects that reduce inventory levels and associated expenses. Nonetheless, the outcomes of the digital orientation on SCP are regarded as a novel contribution to the field of SO and SCP. In this context, the study also finds a positive effect of SO on OA. This explains that SO and OA in the mining sector in Jordan are successfully addressed and implemented. The findings are in line with prior studies (e.g. Al-Barakat et al., 2023; AlSayed & Al-Basous, 2021; Belhadi et al, 2021). This confirms that the relationship between SO and OA is causal, that is, building the latter depends on a strategic direction adopted by the organization and supported by its senior management. Today's business environment is dynamic and sometimes unstable. This itself poses challenges and creates opportunities and threats.

SCP was found to be significantly influenced by OA. Our outcomes support some past research (e.g. Shenshen & Al-Najjar, 2020; Radi & Qasim, 2018; Kortmann, 2014; Tuan, 2016a). According to the findings, the company's possession of OA through the exploitation and exploration of opportunities and capabilities leads to increased SCP. Meet customer demands and expectations, sales are increased, market share and profitability are improved, quality is better, and flexibility is increased, all of which contribute to improved SCP. Furthermore, OA partially mediate the relation amongst strategic orientations and supply chain performance in the Jordanian extractive and mining sector. In this regard, the whole positive and significant effect of SO on SCP is partially related to improvements in OA implementation, which, in turn, improve SC. The study's findings provide a novel contribution to measuring the impact of SO on SCP.

## **Conclusion**

This paper studied into the relationship between SO and SCP as it is mediated by OA in Jordanian extractive and mining companies. In this study, the constructed model's empirical results approved the proposed hypotheses and empirically bridged the gaps between the studied variables. The current research provides managers with new information about the relationship between SO, SCP, and OA. Future research's are recommended to test more SO dimensions. Also, the study recommends that companies use measures of supply chain performance that take into consideration financial and non-financial aspects. Furthermore, the current study only included one mediator in the model; we recommend include additional variables to identify the association between SO and SCP. Last but not least, the study recommends selecting and examining others intermediate variables such as strategic synergy or strategic vigilance in the same model.



### Research Limitations

Some shortcomings of this study present potential for future investigation. To begin, this study assessed SO along four major orientations often employed by Jordanian manufacturers. However, various perspectives exist, particularly in the context of other countries. Second, the study's real application was limited to Jordanian extractive and mining industries, restricting the study's generalizability to other industries in the economy. Future research can generalize the current study model by applying it to additional industrial sectors.

Finally, moreover, this study was able to obtain data collected by a questionnaire prepared in the form of a set of closed questions. In order to create a more comprehensive perception, it is essential to rely on management methods to collect qualitative data - interviews or focus groups - are used to provide a more in-depth and comprehensive understanding of the studied phenomenon.

### References

- Rashwan, A. (2022). The impact of supply chain technology and the cooperation of its partners on its performance: An applied study on the pharmaceutical sector in Egypt. *Scientific Journal of Financial and Commercial Studies and Research*, 3(2), 851-885. <https://doi.org/10.21608/cfdj.2022.230420>
- Uzoamaka, N., Ifeoma, A., & Nosike, J. (2020). Strategic orientation dimensions: A critical review. *International Journal of Research and Innovation in Social Science*, 4(9), 609-612.
- Lee, D., Choi, S., & Kwak, W. (2014). The effects of four dimensions of strategic orientation on firm innovativeness and performance in emerging market small-and medium-size enterprises. *Emerging Markets Finance and Trade*, 50(5), 78-96. <http://dx.doi.org/10.2753/REE1540-496X500505>
- Narver, J., & Slater, S. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54(4), 20-35. doi:10.1177/002224299005400403
- Minovic, J., Lazarevic-Moravcevic, M., & Beraha, I. (2017). Strategic orientation of SMEs: Empirical research. *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies*, 21(81), 16-26. DOI: 10.7595/management.fon.2016.0026
- Zhou, K., Brown, J., & Dev, C. (2009). Market orientation, competitive advantage, and performance: A demand-based perspective. *Journal of business research*, 62(11), 1063-1070. doi:10.1016/j.jbusres.2008.10.001.
- Kindermann, B., Beutel, S., Lomana, G., Strese, S., Bendig, D., & Brettel, M. (2020). Digital orientation: Conceptualization and operationalization of a new strategic orientation. *European Management Journal*, 39(5), 645-657. <https://doi.org/10.1016/j.emj.2020.10.009>
- Quinton, S., Canhoto, A., Molinillo, S., Pera, R., & Budhathoki, T. (2018). Conceptualizing a digital orientation: antecedents of supporting SME performance in the digital economy. *Journal of Strategic Marketing*, 26(5), 427-439. DOI:10.1080/0965254X.2016.1258004
- Tuan, L. (2016). Organizational ambidexterity and supply chain agility: the mediating role of external knowledge sharing and moderating role of competitive intelligence. *International Journal of Logistics Research and Applications*, 19(6), 583-603. DOI: 10.1080/13675567.2015.1137278
- Jordan Chamber of Industry. (2022). Mining Industries Sector. <https://jci.org.jo>

- Alshawabkeh, R., Irtaimah, H., & Abeer, A. (2020). Strategic orientations and their impact on project success: The mediating role of intellectual capital: A field study at King Abdullah II design and development center (KADB). *Ramah Journal of Research and Studies*, 41.
- Gatignon, H., & Xuereb, J. (1997). Strategic orientation of the firm and new product performance. *Journal of marketing research*, 34(1), 77-90.
- Slater, S., Olson, E., & Hult, G. (2006). The moderating influence of strategic orientation on the strategy formation capability–performance relationship. *Strategic Management Journal*, 27(12), 1221-1231.
- Yadav, S., Tripathi, V., & Goel, G. (2019). Modelling strategic orientation dimensions and performance of small and medium enterprises: An application of interpretative structural modelling. *Journal of Modelling in Management*, 14(3), 754-772.
- Cadogan, J. (2012). International marketing, strategic orientations and business success: Reflections on the path ahead. *International Marketing Review*, 29(4), 340-348
- Ashal, N., Alshurideh, M., Obeidat, B., & Masadeh, R. (2021). The impact of strategic orientation on organizational performance: Examining the mediating role of learning culture in Jordanian telecommunication companies. *Academy of Strategic Management Journal*, 21(6), 1-29.
- Hynes, N. (2009). Corporate culture, strategic orientation, and business performance: New approaches to modeling complex relationships. *Technological Forecasting and Social Change*, 76(5), 644-651. doi:10.1016/j.techfore.2008.08.014
- Abuzid, F., & Abbas, M. (2017). Banks performance and impact of market orientation strategy: Do employee satisfaction and customer loyalty augment this relationship?" *International Review of Management and Marketing*, 7(2), 60-66.
- Kohli, A., & Jaworski, B. (1990). Market orientation: the construct, research propositions, and managerial implications. *Journal of marketing*, 54(2), 1-18.
- Kotler, P., & Keller, K. (2006). *Marketing Management* (12<sup>th</sup>ed.). Prentice Hall.
- Shahsiah, N., & Sepahvand, R. (2016). Studying the mediating role of knowledge sharing and market orientation to enhance the intellectual capital effect on the organizational innovation (supervision of insurance companies in Lorestan province). *International Business Management*, 10(20), 4776- 4782.
- Day, G. (1994). The capabilities of market driven organizations. *Journal of Marketing*, 58(4), 37-52. doi10.2307/1251915.
- Muro, M., & Jeffrey, P. (2008). A critical review of the theory and application of social learning in participatory natural resource management processes. *Journal of Environmental Planning and Management*, 51(3), 325-344. doi: 10.1080/09640560801977190
- Alerasoul, S. A., Afeltra, G., Hakala, H., Minelli, E., & Strozzi, F. (2021). Organisational learning, learning organization, and learning orientation: An integrative review and framework. *Human Resource Management Review*, 100854. <https://doi.org/10.1016/j.hrmr.2021.100854>
- Sinkula, J., Baker, W., & Noordewier, T. (1997). A framework for market-based organizational learning: Linking values, knowledge, and behavior. *Journal of the academy of Marketing Science*, 25(4), 305-318.
- Gray, G., & Gray, S. (2012). A contingency approach to marketing entrepreneurship: Impact of business strategies on the firm's marketing function. *International Journal of Business, Humanities & Technology*, 2(2), 184- 191.

- Hakim, N., & Wijaya, A. (2022). The Influence of market and learning orientation on MSME business performance mediated by innovation. *In Tenth International Conference on Entrepreneurship and Business Management 2021 (ICEBM 2021)*, 36-41, Atlantis Press.
- Belhadi, A., Kamble, S., Gunasekaran, A., & Mani, V. (2021). Analyzing the mediating role of organizational ambidexterity and digital business transformation on industry 4.0 capabilities and sustainable supply chain performance. *Supply Chain Management: An International Journal*. DOI 10.1108/SCM-04-2021-0152
- Wang, Y. (2022). The impact of digital strategic orientation on enterprise sustainable performance against the background of 2030 sustainable performance goal. *Mathematical Problems in Engineering*, 2022. <https://doi.org/10.1155/2022/2263222>.
- Wales, W., Gupta, V., & Mousa, F. (2013). Empirical research on entrepreneurial orientation: An assessment and suggestions for future research. *International small business journal*, 31(4), 357-383. <https://doi.org/10.1177/0266242611418261>
- Covin, J., Green, K., and Slevin, D. (2006). Strategic process effects on the entrepreneurial orientation - sales growth rate relationships. *Entrepreneurship Theory and Practice*, 30(1), 57-81. <https://doi.org/10.1111/j.1540-6520.2006.00110.x>
- Al-Najjar, F., & Al-Ali, A. (2019). *Entrepreneurship and small business management* (3<sup>ed</sup>ed.). Dar Al-Hamid for publication and distribution.
- Brem, A. (2011). Linking innovation and entrepreneurship—literature overview and introduction of a process-oriented framework. *International Journal of Entrepreneurship and Innovation Management*, 14(1), 6-35. <http://dx.doi.org/10.1504/IJEIM.2011.040820>
- Barringer, B., & Ireland, D. (2019). *Entrepreneurship: successfully launching new ventures*(6<sup>th</sup>ed.). Pearson Education.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management science*, 29(7), 770-791.
- Sultan, H., & Othman, M. (2021). *Leadership is a strategic perspective*. Dar Academicians and Sands for Publishing and Distribution.
- Sosa, L., Alcaraz, J., & Macías, A. (2019). *Evaluation of supply chain performance a manufacturing industry approach*. Springer International Publishing.
- Lee, K., Romzi, P., Hanaysha, J., Alzoubi, H., & Alshurideh, M. (2022). Investigating the impact of benefits and challenges of IOT adoption on supply chain performance and organizational performance: An empirical study in Malaysia. *Uncertain Supply Chain Management*, 10(2), 537-550.
- Hong, J., Liao, Y., Zhang, Y., & Yu, Z. (2019). The effect of supply chain quality management practices and capabilities on operational and innovation performance: Evidence from Chinese manufacturers. *International Journal of Production Economics*, 212, 227–235. <https://doi.org/10.1016/j.ijpe.2019.01.036>
- Olugu, E., & Wong, K. (2009). Supply chain performance evaluation: trends and challenges. *American J. of Engineering and Applied Sciences*, 2(1), 202-211. <https://doi.org/10.3844/ajeassp.2009.202.211>
- Chan, F. (2003). Performance measurement in a supply chain. *The international journal of advanced manufacturing technology*, 21(7), 534-548.
- Gunasekaran, A., Patel, C., & Tirtiroglu, E. (2001). Performance measures and metrics in a supply chain environment. *International journal of operations & production Management*, 21(1/2), 71-87.

- Gunasekaran, A., Patel, C., & McGaughey, R. (2004). A framework for supply chain performance measurement. *International journal of production economics*, 87(3), 333-347. doi:10.1016/j.ijpe.2003.08.003
- Agami, N., Saleh, M., & Rasmy, M. (2012). Supply chain performance measurement approaches: Review and classification. *Journal of Organizational Management Studies*, 1-20. DOI: 10.5171/2012.872753
- Sillanpaa, I., & Kess, P. (2012). The literature review of supply chain performance measurement in the manufacturing industry. *Management and Production Engineering Review*, 3, 79-88.
- Adams, S., Sarkis, J., & Liles, D. (1995). The development of strategic performance metrics. *Engineering Management Journal*, 7(1), 24-32. DOI: 10.1080/10429247.1995.11414823
- Lee, H., & Billington, C. (1992). Managing supply chain inventory: pitfalls and opportunities. *MIT Sloan Management Review*, 65-73.
- Kouachi, M. (2015). Problematic of differentiation between financial indicators and non-financial indicators for performance evaluation of enterprise. *Management Studies*, 8(15), 80-109.
- Beamon, B. (1998). Supply chain design and analysis: Models and methods. *International Journal of Production Economics*, 55(3), 281-294.
- Nimeh, H., Abdallah, A., & Sweis, R. (2018). Lean supply chain management practices and performance: empirical evidence from manufacturing companies. *International Journal of Supply Chain Management*, 7(1), 1-15.
- Abdallah, A., Obeidat, B., & Aqqad, N. (2014). The impact of supply chain management practices on supply chain performance in Jordan: The moderating effect of competitive intensity. *International Business Research*, 7(3), 13-27. <http://dx.doi.org/10.5539/ibr.v7n3p13>
- Toni, A., & Tonchia, S. (2001). Performance measurement systems - Models, characteristics and measures. *International Journal of Operations & Production Management*, 21(1/2), 46-71. doi:10.1108/01443570110358459
- Abdallah, A., Rawadiah, O., Al-Byati, W., & Alhyari, S. (2021). Supply chain integration and export performance: the mediating role of supply chain performance. *International Journal of Productivity and Performance Management*, 70(7), 1907- 1929. <https://doi.org/10.1108/IJPPM-02-2021-0076>.
- Abu-Difallah, M., & Al-Sha'ar, I. (2017). The impact of Enterprise Resource Planning (ERP) Systems on Supply Chain Performance: An Applied Study on the Jordanian Pharmaceutical Companies. *Jordan Journal of Business Administration*, 13(2), 281- 306.
- Hijjawi, G. (2022). Impact of green supply chain on supply chain performance. *Journal: WSEAS Transactions on Business and Economics*, 19, 442-452. DOI: 10.37394/23207.2022.19.40
- Azfar, K., Khan, N., & Gabriel, H. (2014). Performance measurement: A conceptual framework for supply chain practices. *Procedia-Social and Behavioral Sciences*, 150(1), 803-812. doi: 10.1016/j.sbspro.2014.09.089
- Tajbakhsh, A., & Hassini, E. (2015). Performance measurement of sustainable supply chains: a review and research questions. *International Journal of Productivity and Performance Management.*, 64(6), 744-783. DOI 10.1108/IJPPM-03-2013-0056
- Hassini, E., Surti, C., & Searcy, C. (2012). A literature review and a case study of sustainable supply chains with a focus on metrics. *International journal of production economics*, 140(1), 69-82. doi:10.1016/j.ijpe.2012.01.042.

- Azevedo, S., Carvalho, H., & Machado, V. (2011). The influence of green practices on supply chain performance: A case study approach. *Transportation research part E: logistics and transportation review*, 47(6), 850-871. doi:10.1016/j.tre.2011.05.017
- Miguel, P., & Brito, L. (2011). Supply chain management measurement and its influence on operational performance. *Journal of Operations and Supply Chain Management* 4 (2), 56 – 70.
- Zhu, Q., & Sarkis, J. (2004). Relationships between operational practices and performance among early adopters of green supply chain management practices in Chinese manufacturing enterprises. *Journal of operations management*, 22(3), 265-289. doi:10.1016/j.jom.2004.01.005
- Torbatjoo, S. (2018). Impact of human resources measures on organizational ambidexterity of smart city projects. *International Journal of Human Capital in Urban Management*, 3(4), 325-334. DOI:10.22034/IJHCUM.2018.04.06
- Duwe, J. (2022). *Ambidextrous leadership: How leaders unlock innovation through ambidexterity*. Springer Nature.
- Duncan, R. (1976). The ambidextrous organization: Designing dual structures for innovation. *The Management of Organization*, 1, 167-188.
- March, J. (1991). Exploration and exploitation in organizational learning. *Organization science*, 2(1), 71-87.
- Gibson, C., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of management Journal*, 47(2), 209-226.
- Hurtado, D., Devece, C., Saldaña, P., & Pantoja, M. (2022). Ambidexterity in entrepreneurial universities and performance measurement systems: A literature review. *International Entrepreneurship and Management Journal*, 1-22.
- Tariq, E., Alshurideh, M., Akour, I., & Al-Hawary, S. (2022). The effect of digital marketing capabilities on organizational ambidexterity of the information technology sector. *International Journal of Data and Network Science*, 6(2), 401-408. doi: 10.5267/j.ijdns.2021.12.014
- Ibrahim, M. (2022). The Impact of applying organizational ambidexterity on sustaining the competitive advantage of public organizations: A field study on governmental commercial banks in Egypt. *Journal of the Faculty of Economics and Political Science*, 23(2), 61-93.
- Al-Mahamadi, A., & Al-Qurashi, S. (2022). The role of knowledge management in achieving organizational ambidexterity – A Field study on the general directorate of education in Jeddah governorate –. *Journal of Economic, Administrative and Legal Sciences*, 6(14), 1-21.
- Jad Al-Rub, A., Sobh, N., & Abdulaziz., S. (2021). The impact of organizational prowess in achieving competitive advantage: an applied study on Egyptian commercial banks. *Journal of Contemporary Business Studies*, 7(11), 255-294.
- Shenshen, A., & Al-Najjar, F. (2020). The impact of organizational ambidexterity on strategic orientations: The mediating role of organizational innovation in private hospitals in Jordan. *European Journal of Scientific Research*, 156(1), 58 – 77.
- Al-Shawabkeh, K. (2018). Exploring the mediating role of knowledge sharing between human resource development and organizational ambidexterity (an Empirical study on Jordanian telecommunication companies). *European Journal of Scientific Research*, 149(3), 345–361.

- Radi, J., & Qasim, Z. (2018). Strategic orientation and its impact on achieving organizational ambidexterity. *Journal of Management and Economics*, 7(25), 105-139.
- Tuan, L. (2016b). Organizational ambidexterity, entrepreneurial orientation, and I-deals: the moderating role of CSR. *Journal of Business Ethics*, 135, 145-159. DOI 10.1007/s10551-014-2476-1
- Al-Baghili, F., & Al-Khawaldeh, K. (2021). The impact of organizational ambidexterity on the strategic performance of Zain Iraq Telecom. *Amman Arab University Journal for Research*, 6(1), 364-380.
- Ibrahim, B. (2021). The role of job engagement in achieving organizational ingenuity Analytical study in the Central Bank of Iraq / Department of Banking. *Journal of AL-Turath University College*, 1(31), 473-488. doi: 10.1016/j.sbspro.2014.09.089
- Sweiss, M., & Abdeen, I. (2019). The role of business intelligence systems in building organizational ambidexterity- applied on banks operating in Palestine. *IUG Journal of Economics and Business*, 27(1), 176-291.
- Morgan, R., & Strong, C. (2003). Business performance and dimensions of strategic orientation. *Journal of Business research*, 56(3), 163-176. [https://doi.org/10.1016/S0148-2963\(01\)00218-1](https://doi.org/10.1016/S0148-2963(01)00218-1)
- Mandal, S., & Saravanan, D. (2019). Exploring the influence of strategic orientations on tourism supply chain agility and resilience: an empirical investigation. *Tourism Planning & Development*, 16(6), 612-636. <https://doi.org/10.1080/21568316.2018.1561506>
- Okello, G., Ngugi, P., & Odhiambo, R. (2018). Influence of strategic orientation on the growth of micro and small furniture manufacturing enterprises in Kenya. *International Academic Journal of Innovation, Leadership and Entrepreneurship*, 4(1), 57-72
- Phorncharoen, I. (2020). Influence of market orientation, learning orientation, and innovativeness on operational performance of real estate business. *International Journal of Engineering Business Management*, 12(5), 1-11. 1847979020952672.
- Abd ALSalam, R., Abu Warda, S., & Al-Jazzar., A. (2016). The impact of the availability of sustainable supply chain dimensions on the effectiveness of the strategic Orientation : an applied study on iron and steel companies in the Arab Republic of Egypt. *Journal of Contemporary Business Studies*, 7,50-78.
- Al Shaar, H., & Al Tarawneh., S. (2016). The impact of strategic Orientation and operations strategies on the improvement of the supply chain in the Jordan Phosphate Company. *Scientific Journal of Economics and Commerce*, 4(46), 11-37.
- Tukamuhabwa, B., Eyaa, S., & Friday, D. (2011). Mediating variables in the relationship between market orientation and supply chain performance: A theoretical approach. *International Journal of Business and Social Science*, 2(22), 99-107.
- Nadeem, K., & Siddiqui, D. (2017). The effect of strategic orientation on green supply chain practices and performance: A case of manufacturing companies in Pakistan. *Asian Business Review*, 7(2), 59-70. <https://doi.org/10.18034/abr.v7i2.12>
- Al-Sayed, A., & Al-Basous, S. (2021). Mediating role of strategic orientation in the relationship between knowledge management operations and organizational ambidexterity: an applied study on Palestinian national organizations - Health Sector. *Arab Journal of Administrative Sciences*, 28(2), 177-213.
- Kortmann, S., Gelhard, C., Zimmermann, C., & Piller, F. (2014). Linking strategic flexibility and operational efficiency: The mediating role of ambidextrous operational capabilities. *Journal of Operations Management*, 32(7-8), 475-490. <http://dx.doi.org/10.1016/j.jom.2014.09.007>

- Seimon, A., & Endagamage, D. (2022). Is organizational ambidexterity a good booster to supply chain flexibility in the textile and apparel industry?. *International Journal of Multidisciplinary: Applied Business and Education Research*, 3(6), 1043-1059. <https://doi.org/10.11594/ijmaber.03.06.09>
- Central bank of Jordan. (2020). Annual Report. <https://www.cbj.gov.jo>
- Karina, A., & Astuti, R. (2022, July). The role of digital orientation, digital capability and digital innovation on the relationship of environmental dynamism towards FMCG SME's performance. In *Proceeding of the International Conference on Family Business and Entrepreneurship*, 3(1). 351-368.
- Al-Hiassat, S., & Al-Shawabkeh, K. (2021). The impact of strategic orientations on organizational excellence in Jordan customs department. *Global Journal of Economics and Business*, 11(3), 359-386. <https://doi.org/10.31559/GJEB2021.11.3.3>
- Khin, S., & Theresa, H. (2018). Digital technology, digital capability and organizational performance: A mediating role of digital innovation. *International Journal of Innovation Science*, 11(2), 177-195.
- Nasution, H., & Mavondo, F. (2008). Organizational capabilities: antecedents and implications for customer value. *European Journal of Marketing*, 42(3/4), 477-501. <https://doi.org/10.1108/03090560810853020>
- Al-Samman, A. (2022). The role of reverse supply chain operations in Egyptian seaports in raising the institutional performance of industrial organizations :a field study. *Scientific Journal of Business and Environmental Studies*, 3(13), 1090-1138.
- Shee, H., Miah, S., Fairfield, L., & Pujawan, N. (2018). The impact of cloud-enabled process integration on supply chain performance and firm sustainability: the moderating role of top management. *Supply Chain Management: An International Journal*, 23(6), 500-517. <http://dx.doi.org/10.1108/SCM-09-2017-0309>
- Giovanni, P. (2012). Do internal and external environmental management contribute to the triple bottom line?. *International Journal of Operations & Production Management*, 32(3), 265-290. DOI 10.1108/01443571211212574
- Zailani, S., Jeyaraman, K., Vengadasan, G., & Premkumar, R. (2012). Sustainable supply chain management (SSCM) in Malaysia: A survey. *International journal of production economics*, 140(1), 330-340. doi:10.1016/j.ijpe.2012.02.008
- Lin, H., McDonough III, E., Yang, J., & Wang, C. (2016). Aligning knowledge assets for exploitation, exploration, and ambidexterity: a study of companies in high-tech parks in China. *Journal of Product Innovation Management*, 34(2), 122-140.
- Kristal, M., Huang, X., & Roth, A. (2010). The effect of an ambidextrous supply chain strategy on combinative competitive capabilities and business performance. *Journal of Operations Management*, 28(5), 415-429. doi:10.1016/j.jom.2009.12.002
- Lubatkin, M., Simsek, Z., Ling, Y., & Veiga, J. (2006). Ambidexterity and performance in small-to medium-sized firms: The pivotal role of top management team behavioral integration. *Journal of management*, 32(5), 646-672. DOI: 10.1177/0149206306290712
- He, Z., & Wong, P. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization science*, 15(4), 481-494. doi 10.1287/orsc.1040.0078
- Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123.
- Wong, K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1-32.

- Garson, G. (2016). *Partial Least Squares: Regression and Structural Equation Models*. Statistical Associates Publishers.
- Birkinshaw, J., Morrison, A., & Hulland, J. (1995). *Structural and competitive determinants of a global integration strategy*. *Strategic Management Journal*, 16(8), 637–655. doi:10.1002/smj.4250160805
- Henseler, J., Ringle, C., Sinkovics, R. (2009). The use of partial least squares path modeling in international marketing. *Adv. Int. Mark.* 8 (20), 277–319.
- Lee, L., Petter, S., Fayard, D., & Robinson, S. (2011). On the use of partial least squares path modeling in accounting research. *International Journal of Accounting Information Systems*, 12(4), 305-328. [15] Cadogan, J. W. (2012). International marketing, strategic orientations and business success: Reflections on the path ahead. *International Marketing Review*, 29(4), 340-348. doi:10.1016/j.accinf.2011.05.002
- Sarstedt, M., Hair, J. F., Ringle, C. M., Thiele, K. O., & Gudergan, S. P. (2016). Estimation issues with PLS and CBSEM: Where the bias lies!. *Journal of business research*, 69(10), 3998-4010. DOI: 10.1016/j.jbusres.2016.06.007
- Sarstedt, M., Ringle, C., and Hair, J. (2017). *Partial least squares structural equation modeling*. in Homburg, C., Klarmann, M. and Vomberg, A. (Eds), *Handbook of Market Research*, Springer, Heidelberg.
- Hair, J., Risher, J., Sarstedt, M., & Ringle, C. (2019). When to use and how to report the results of PLS-SEM. *European business review*, 31(1), 2-24. doi.org/10.1108/EBR-11-2018-0203
- Coltman, T., Devinney, T., Midgley, D., & Venaik, S. (2008). Formative versus reflective measurement models: Two applications of formative measurement. *Journal of Business Research*, 61(12), 1250-1262. doi:10.1016/j.jbusres.2008.01.013
- Bagozzi, R. (2007). On the meaning of formative measurement and how it differs from reflective measurement: comment on Howell, Breivik, and Wilcox (2007). *Psychological Methods*, 12(2), 229–237. DOI: 10.1037/1082-989X.12.2.229
- Hulland, J. (1999) Use of Partial Least Squares (PLS) in Strategic Management Research: A Review of Four Recent Studies. *Strategic Management Journal*, 20, 195-204. [https://doi.org/10.1002/\(SICI\)1097-0266\(199902\)20:2<195::AID-SMJ13>3.0.CO;2-7](https://doi.org/10.1002/(SICI)1097-0266(199902)20:2<195::AID-SMJ13>3.0.CO;2-7)
- Diamantopoulos, A., Riefler, P., & Roth, K. (2008). Advancing formative measurement models. *Journal of business research*, 61(12), 1203-1218. doi.org/10.1016/j.jbusres.2008.01.009
- Crocetta, C., Antonucci, L., Cataldo, R., Galasso, R., Grassia, M., Lauro, C., & Marino, M. (2021). Higher-order PLS-PM approach for different types of constructs. *Social Indicators Research*, 154, 725-754. <https://doi.org/10.1007/s11205-020-02563-w>
- Zhang, M., Dawson, J., & Kline, R. (2021). Evaluating the use of covariance-based structural equation modelling with reflective measurement in organizational and management research: A review and recommendations for best practice. *British Journal of Management*, 32(2), 257-272. DOI: 10.1111/1467-8551.12415
- Simonetto, A. (2012). Formative and reflective models: state of the art. *Electronic Journal of Applied Statistical Analysis*, 5(3), 452-457. DOI 10.1285/i20705948v5n3p452
- Hardin, A., Chang, J., Fuller, M. (2008). Formative versus reflective measurement: Comment on Marakas, Johnson, and Clay (2007). *Journal of the Association for Information Systems*, 9(9), 519-535.
- Howell, R., Breivik, E., & Wilcox, J. (2007). Reconsidering formative measurement. *Psychological methods*, 12(2), 205.



- Bagozzi, R., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the academy of marketing science*, 16, 74-94
- Hair, J., Howard, M., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, 109, 101-110. <https://doi.org/10.1016/j.jbusres.2019.11.069>
- Diamantopoulos, A., Sarstedt, M., Fuchs, C., Wilczynski, P., & Kaiser, S. (2012). Guidelines for choosing between multi-item and single-item scales for construct measurement: a predictive validity perspective. *Journal of the Academy of Marketing Science*, 40, 434-449.
- Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data analysis*(7<sup>th</sup>ed.). Prentice Hall.
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. doi:10.1177/002224378101800104
- Hair, J., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European business review*, 26(2), 106-121.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139-152. doi.org/10.2753/MTP1069-6679190202
- Nitzl, C., Roldan, J., & Cepeda, G. (2016). Mediation analysis in partial least squares path modeling. *Industrial Management & Data Systems*, 116(9), 1849–1864. doi:10.1108/imds-07-2015-0302
- Ashari, H., Yusoff, Y., Zamani, S., Talib, A. (2018). A Study of the effect of market orientation on Malaysian automotive industry supply chain performance. *International Journal of Technology*, 9(8),1651-1657