



الكلية الحديثة للبحوث والتجارة والعلوم
MODERN COLLEGE
OF BUSINESS & SCIENCE



الأكاديمية العربية للعلوم والتكنولوجيا والنقل البحري
Arab Academy for Science, Technology & Maritime Transport

PROCEEDINGS
OF
THE 1ST BUSINESS AND
ENTREPRENEURSHIP INTERNATIONAL
CONFERENCE
CURRENT PRACTICES, CHALLENGES AND
FUTURE TRENDS PERTAINING TO BUSINESS
AND ENTREPRENEURSHIP

31st March- 1st April 2021

Alexandria, Egypt – Muscat, Sultanate of Oman

HYBRID CONFERENCE

Editor

Dr. Sandra Haddad

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Current Practices, Challenges and Future Trends Pertaining to Business and Entrepreneurship

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AASTMT has expanded inside and outside Egypt by establishing headquarters and branches in Alexandria, Cairo, Aswan, Port Said, Latakia (Syrian Arab Republic), in addition to its new branches in Sharjah, UAE and in New Alamein City, Egypt. Thus, AASTMT manages 8 campuses with 13 colleges, in addition to a number of higher education institutes, training centers and different specialized units.



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Foreword

The 1st Business and Entrepreneurship International Conference, organized by Modern College of Business and Science “MCBS” and College of International Transport and Logistics -Arab Academy for Science, Technology and Maritime Transport “AASTMT”, is an excellent opportunity in providing a platform for researchers, academicians, entrepreneurs, business owners, industrial professionals and students to share their research findings, best practices, innovation, expert opinions and challenges experienced with possible solutions in relation to business and entrepreneurship. The international conference provides a platform for exchanging the new ideas, research collaboration, and publishing opportunities. The conference scientific committee accepted 34 scientific papers from 15 different countries, 27 authors chose to publish their papers in in the conference affiliated international journal “**Global Business and Management Research**” and 7 authors published their papers in this conference proceedings. The conference scientific committee originally received 67 abstracts and screened them to select the highest quality papers.

Business and Entrepreneurship Conference Objectives:

- To provide academicians, researchers, practitioners, entrepreneurs, business owners, and students a platform to share knowledge and best practices in business and entrepreneurship
- To discuss current practices, challenges and future trends pertaining to business and entrepreneurship
- To identify contemporary development in business and entrepreneurship that may lead to organizational excellence, sustainable development and economic growth

Business and Entrepreneurship Conference Tracks:

- TRACK 1: BUSINESS MANAGEMENT
- TRACK 2: ENTREPRENEURSHIP, CREATIVITY AND INNOVATION
- TRACK 3: ORGANIZATIONAL EXCELLENCE AND SUSTAINABILITY

We would like to thank all the participants, reviewers, speakers and different committees’ members who made this scientific event possible. BEICOM conference has been successful because of you and looking forward to working with all of you again in our next BEICOM conference 2023.

Conference Scientific Committee

Message from the Conference Chair

I would like to welcome you to the proceedings of the 1st Business and Entrepreneurship international Conference, 2021, organized by Modern College of Business and Science “MCBS”, Oman, and College of International Transport and Logistics - Arab Academy for Science, Technology and Maritime Transport “AASTMT”, Egypt. Due to the COVID-19 pandemic, the conference was held as a virtual event. Despite the challenges, the Organizing Committee and volunteers worked very hard to finalize the conference program, uphold the quality of presentations, and meet authors’ expectations. The main themes of the conference were categorized into three areas namely Track 1 focused on Business Management and related aspects, while Track 2 revolved around topics discussing Entrepreneurship, Creativity, and Innovation. Track 3 emphasized on areas related to Organizational Excellence and Sustainability. Emerging application fields such as logistics, intermodal transportation systems, sustainable healthcare systems, and green automation were also included. The international scientific committee performed a rigorous peer review process and accepted 34 papers to appear in the conference proceedings and the affiliated conference International Journal.

The conference commenced on Wednesday, 31st March 2021 with welcome speeches by H.E. Dr Saif Al Haddabi, The Undersecretary of Scientific Research and Innovation Ministry of Higher Education, Research and Innovation, Sultanate of Oman and H.E. Prof. Mahmoud Sakr, President of the Academy of Scientific Research and Technology, Egypt. The 3-day program included three keynote talks and multiple scientific sessions tracks. The keynote addresses on Day 1 were delivered by Prof. Mohamed Abdel Kader Salem, Former Minister of Communications and Information Technology, Egypt and Dr Patrick A. Bennett, Vice President for Academic, Quality and Planning, and Dean, School of Education, Franklin University, Ohio, USA. Day 2 witnessed keynote addresses by Prof. Adel Mohamed Abd-El Halim Zayed, Former Qalyubia Governor, Egypt, and Prof. Zahir Irani, Pro-Vice-Chancellor, University of Bradford, Bradford, England, United Kingdom.

On this occasion, I would like to express my sincere appreciation for the talented and dedicated program co-chairs, session chairs, committee members, and reviewers for their valuable contributions to the paper selection process and for maintaining the high quality of the conference publications. I would like to extend my sincere gratitude to the keynote speakers, authors, and presenters of submitted and accepted papers for making this event a huge success.

Hesham Magd, PhD

1st Business and Entrepreneurship international Conference Chair

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Dr. Ishaka Shitu	Plymouth Business School, UK

Keynote Speakers

Prof. Mohamed Abdel Kader Salem

- Former Minister of Communications and Information Technology, Egypt.
- Communications and Information Technology Senior Consultant.
- Former CEO of Telecom Egypt Company.
- Former Chairman of the Information Technology Institute (ITI).
- President Senior Consultant, Arab Academy for Science, Technology and Maritime Transport.

Prof. Adel Mohamed Abd-El Halim Zayed

- Former Qalyubia Governor, Egypt.
- Former president, University of Modern Sciences, Dubai, UAE.
- Professor of Business Administration Department, Faculty of Commerce, Cairo University, Egypt.

Prof. Zahir Irani

- Pro-Vice-Chancellor, University of Bradford.
- Chairperson of Bradford Economic CV-19 Recovery Board at Bradford Metropolitan District Council, Bradford, England, United Kingdom.

Dr. Patrick A. Bennett

- Vice President for Academic Quality and Planning.
- Dean, School of Education at Franklin University, Lewis Centre, Ohio, United States of America.

BEIC in Numbers:

47	International Reviewers
67	Abstracts' Submissions
15	Different nationalities (Egyptian, Omani, British, Indian, Filipino, Ukrainian, Ugandan, Slovenian, Seri Lankan, Nigerian, Chinese, Nepalese, Italian, French and Iraqi)
48	Full Papers' Submissions
14	Papers submitted for Conference Proceedings Track
7	Papers accepted for Conference Proceedings Track
34	Papers for Intr. Journal Track (GBMR)
27	Papers accepted for Inter. Journal Track (GBMR)
290	Zoom Total Registration
90	Official & Opening Sessions Attendance
260	Scientific Sessions Attendance
7	Nominations for Best Paper Award

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Reverse Supply Chain Practices in Egypt

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Abstract

Purpose: Service Supply Chain Management contains precisely Global Supply Chain Management that emphasizes on environmental topics linked to supply, design, manufacturing, distribution, and transportation. GSCM intentions to answer difficulties of product end of life cycle, recycling, and retrieval through RL practices. The Reverse Supply Chain deals through merchandises inveterate to the producer or third parties. Returns may be essential because of a diversity of reasons. The purpose of a merchandise in the RSC be contingent on numerous aspects. RSCs frequently contain basics of salvage, recycling and second markets. Research on how corporations in developing countries implement RSC practices is still developing.

Originality/value the purpose of this paper is to inspect two features of RSC practices introduced by the Egyptian companies: the kinds of RSC inventiveness executed and the problem to RSC practices Egypt is an appropriate ground for research because of the improvements commenced by the government in logistics area, with its geographical location and political solidity. Subsequently, our determination is to discover out if RSC matters are engaged in the attention of companies in Egypt

Design/methodology/approach: Therefore, two research questions are addressed: How do corporations in Egypt instigate RSC practices? & What sort of difficulties obstructs RSC initiatives by the Egyptian companies? a qualitative approach was implemented, based on the analysis of case studies accompanied for this purpose.

Findings: this research makes innovative assistances to the field by providing a perception into the realities of implementing RSC ingenuities in a developing country in Africa which is regularly ignored in literature. our research provides complete RSC framework that has theoretical and managerial consequences.

Keywords: SSCM, Reverse Logistics, Reverse Supply chain, Egypt Reverse Practices

Introduction

Lately accumulative pressures from mutually inside and past corporations have directed to a rising concentration in assessing typical supply chains in relationships to sustainability, which contains economical, ecological and social characteristics (Svensson, 2007). Ciliberti et al., (2008) described sustainable supply chain management (SSCM) as the “management of supply chains were all the three dimensions of sustainability, namely, the economic, environmental, and social ones, are taken into

account”. SSCM contains precisely green supply chain management (GSCM) that emphasizes on environmental topics linked to supply, design, manufacturing, distribution and transportation (Vachon and Klassen, 2006). GSCM intentions to answer difficulties of product end of life cycle, recycling and retrieval through reverse logistics (RL) practices (Srivastava, 2008).

RL concerns the situations mainly with the transportation and storage of supplies (Guide and Van Wassenhove, 2002); However reverse supply chain (RSC) management takes a broader and more general perception. Prahinska and Kocabasoglu (2006) compromise a description of RSC management that involves harmonization with customers (of the typical supply chain) and consequent activities past the transportation and storage of materials such as material recovery or recycling. They describe it as “the effective and efficient management of the series of activities required retrieving a product from a customer and either dispose of it to recover the value”. The RSC deals through merchandises inveterate to the producer or third parties. Returns may be essential because of a diversity of reasons including:

- (1) New Products: various items were ordered, or mistakenly delivered. Stock becoming outdated.
- (2) Second hand or damaged merchandise: industrial errors, or rip and harm happening through shipment or merchandise lifetime, necessitating mending or refurbish.
- (3) Merchandises at their lifecycle end: no longer suitable or needed.

The purpose of a merchandise in the RSC be contingent on numerous aspects including the lasting worthiness (harm, magnitude, and material), the simplicity of ingathering or take to pieces, the potentials for reprocess or recycling, the number of merchandises imminent, and their quality (Prahinska and Kocabasoglu, 2006). RSCs frequently contain basics of salvage, recycling, and second markets (Alvarez-Gil et al., 2007; Shi et al., 2012; Sarkis et al., 2010; Talbot et al., 2007). Together in forward and reverse supply chains, inputs and outputs can be touchable or untouchable (He et al., 2016), therefore proposing numerous occasions for refunding resources to circle of worthiness. Concerning developing countries, numerous studies have been directed at RSC management in the framework of evolving economies such as India, Germany and Switzerland (Zhu et al., 2005, 2007; Zhu and Sarkis, 2006; Erol et al., 2010). Yet, research on how corporations in developing countries implement RSC practices is still developing (Erol et al., 2010; Drohomerski et al., 2014).

A study in this research is essential. Therefore, the purpose of this paper is to inspect two features of RSC practices introduced by the Egyptian companies: the kinds of RSC inventiveness executed and the problem with RSC practices. Egypt is an appropriate ground for research because of the improvements commenced by the government in logistics area, in addition to the current determinations to stimulate environmental practices in private segment companies. Additionally, with its geographical location and political solidity, Egypt has attracted numerous foreign shareholders belonging to international manufacturing corporations. Subsequently, our determination is to discover out if RSC matters are engaged in the attention of companies in Egypt, therefore two research questions are addressed:

Q1. How do corporations in Egypt instigate RSC practices?

Q2. What sort of difficulties obstructs RSC initiatives by the Egyptian companies?

To respond to these research questions, a qualitative approach was implemented, based on the analysis of case studies accompanied for this purpose. In doing so, this research makes innovative assistances to the field by providing a perception into the realities of implementing RSC ingenuities in a developing country in Africa which is regularly ignored in literature. Additionally, our research provides a complete RSC framework that has theoretical and managerial consequences. In the next section, literature on RSC practices is reviewed. Section 3 describes the methodology used for the case study

analysis. Next, the main outcomes of the case study investigation are presented in Section 4. Finally, conclusions and allegations plagiaristic from the study are discussed.

Literature review

The following subcategories present a synopsis of RSC practices, obstacles as well as cracks linked to their solicitation in developing countries.

RSC practices a literature review

Difrancesco and Huchzermeier (2016) review pronouncements models for closed-loop supply chains. Their categorization categorizes RSC models as: location-allocation returns gathering, inventory control of returns, returns grading and performance management of closed-loop supply chains.

A classic RSC may involve five main procedures: product acquisition, tests, inventories, reprocessing and remarketing (Banomyong et al., 2008), although an RL system may contain four: gatekeeping, collection, sorting and disposal (Rogers and Tibben-Lembke, 2001; Stock et al., 2006; Lambert et al., 2011). Merely limited researchers have lectured the issue of expansion of a general framework for RSC (Sajan and Sridharan, 2015). Generally, researchers give the impression to separate regarding the types of RSC practices (Blackburn et al., 2004; Jayaraman and Luo, 2007; Huang et al., 2013; Mafakheri and Nasiri, 2013; Chuang et al., 2014). Nonetheless, constructed on existent literature RSC practices can be classified as taking an operational or strategic approach (Wang et al. 2017; Govindan and Soleimani, 2017).

Research on operational matters understands processes connected to product returns, reuse, recycle, disposal, repair, remanufacturing and resale (Carter and Ellram, 1998; Rogers and Tibben-Lembke, 2001; Stock, 1998). A variety of country-specific and application-specific RSC conformations have been designated. For instance, Gonzalez-Torrea et al., (2004) examined Spanish and Belgian bottling/packaging firms' performs in relative to their RSC maneuvers encompassing their suppliers (mainly bottle/jar manufacturers) and their consumers (end consumers of the packaged or bottled products). Chan and Chan (2008) investigated the observes of RL in the mobile phone manufacturing in Hong Kong. Numerous establishments and governments' procedure the three Rs of diminishing, reuse and recycle to reassure end customers modification their comportment and diminish disposal to landfills (Kumar and Yamaoka, 2007).

Research concentrated on strategic characteristics examine RL value, network design and RL's boundaries with other management areas (e.g. Kumar et al., 2016; Rubio et al., 2008; Georgiadis and Besiou, 2010; Adenso-Diaz et al., 2012; Carter and Easton, 2011; Mollenkopf et al., 2011). Research in this area implements a supply chain perception and highlights accomplishments to conform to sustaining necessities (Russo and Cardinali, 2012). Practically, product recovery and materials reprocess can alleviate the destructive effects on the environment, concluded diminishing waste disposal and different types of emissions related to transportation and raw materials processing. For occurrence, Zhu et al. (2007) targeted GSCM initiatives of several Chinese manufacturers dedicated in power generating, chemical/ petroleum, electrical/electronic and automobile, investigating the impacts of GSCM initiatives on the performance of companies. Shaharudin et al. (2017) examined the inspirations of Malaysian manufacturers to implement closed-loop supply chain accomplishments that encouragement the effectiveness of RSCs, emphasizing the necessity to intensification participation of manufacturers in merchandise returns processes in RSC practices success.

RSCs enthusiasms and hindrances

Literature has beleaguered the motivations behind RSC procedures and strategies instigated by companies in several countries (Murphy and Poist, 2003; Sahay et al., 2006; Zhu and Sarkis, 2006; Zhu et al., 2007; Lee, 2008). There are three key drivers for instigating RSC: economic, corporate citizenship and legislation (Alvarez-Gil et al., 2007). Economic drivers for RSC relate to cost minimization and revenues engendered by remanufacturing, reuse of materials and product redecoration (Stock et al., 2006; Alvarez-Gil et al., 2007). Companies might be concerned in RSC due to their consciousness of their corporate citizenship and they will to pledge gladly maintainable methodologies bestowing to environmental and societal philosophies (De Brito and Dekker, 2004). The legislature motorists mention to the standards and authorized responsibilities of a well-founded concerning sustainability (Alvarez-Gil et al., 2007). For example, the manufacturers in Europe are liable for their merchandise throughout their complete lifecycle as a consequence of the instruction on waste electrical and electronic equipment.

Literature on RSC obstacles has emphasized the animation of two different types of inhibitors: peripheral barriers and interior (organizational) barriers. Examples of external barriers contain unsuitable environmental procedures (Hillary, 2004; Zilahy, 2004), improbability concerning attained results (Ravi and Shankar, 2005; Roy and Vézina, 2001) and nonexistence of associate consciousness regarding RL (Ravi and Shankar, 2005). Internal barriers, communicate to complications that an organization may know-how internally such as privation of exercise and prerequisite of workers (Hillary, 2004; Ravi and Shankar, 2005), nonexistence of management's obligation (Ravi and Shankar, 2005; Zhu et al., 2008; Zilahy, 2004) and privation of information and technological systems (Ravi and Shankar, 2005).

Barve and Muduli (2013) reconnoitred green supply chain rehearses (which may include RSC elements) in Indian mining industries. They found 11 barriers: underprivileged superiority of human resources; insufficient pressure from society; poor law making; lack of direct encouragements; financial restraints; technical constraints; resistance to change and implementation; lack of top management pledge, lack of employee pledge; poor environmental consciousness; unsuitable approach to implementation. RSC typically shares furthestmost of these problems, and are likely to face extra, more particular challenges. To our knowledge, Barve and Muduli (2013) are among the rare researches aiming specifically barriers to green supply chains in developing countries. Those barriers to RSC found as a result of the research we conducted are discussed in Section 5.

RSC practices in developed and developing countries

Although numerous models have been established to designate RSCs (Fleischmann, 2001; Dekker et al., 2003; Srivastava, 2007), research in the context of developing countries remains scarce (Erol et al., 2010). Further rmost of the studies were supported out in developed and emerging economies (Vijayvargy et al., 2017), while countries in the African continent were mostly ignored (Govindan and Soleimani, 2017). Several developing countries have a huge and rising market for electrical and electronic equipment, automobiles and other industries (Sajan and Sridharan, 2015). China in precise has legislation Pours companies to practice greener manufacturing and supply chain practices, but there is also burdened from customers, suppliers and the public (Huang et al., 2015).

Few researchers have investigated the factors affecting RSC practices in emerging economies (China, India and Brazil), namely, drivers and obstacles to RSC (Lau and Wang, 2009; Erol et al., 2010; Drohomerski et al., 2014; Sajan and Sridharan, 2015). That is why numerous authors call for

additional research on factors prompting RSC practices in developing countries and emerging economies because conceptual models applied in developed countries (the USA, Europe and Japan) are inadequate to illustrate firms' attitudes towards RSC in developing countries (Lau and Wang, 2009; Erol et al., 2010; Sajan and Sridharan, 2015).

Table 1: The summary of the empirical work

Product Return Or Retrieved			
Original Manufacturer	Other Organization		
Sorting/Disassembly			
Remanufacture	Repair	Raw	Scrap
Refurbish	Refurbish	Materials	
Return To Forward Supply Chain			

Additionally, it seems that the key barriers to RL implementation in developing countries are frequently external factors (lack of regulations and directives) and are macro in perception (e.g. the research of Lau and Wang (2009) on Chinese manufacturers, the survey of Erol et al. (2010) on Turkish manufacturers and Drohomerski et al. (2014) on Brazilian companies). There is presently a deficiency of generalized conclusions concerning the obstacles to RSC in developing countries, and this paper will effort to deliver additional perspective. Egypt is particularly interesting because of its central position in the European, Asian and African markets and its vigorous participation in environmental initiatives, particularly after the organization of the 14th meeting of the Conference of the Parties to the Convention on Biological Diversity - COP 14 in Sharm El-Sheikh.

Since then, Egypt has implemented numerous environmental ingenuities in its prerogative and has stimulated private sector companies to contrivance environmental practices (Egyptian Ministry of the Environment, 2019). Egypt has also experienced a number of structural reforms that have improved its rank in the Logistics Performance Index of the World Bank: from 97th in 2007 to 67th in 2018 (The World Bank, 2007/2018). Furthermore, Egypt presently receives a huge percent of its direct investments from the multinational firms that have rotated towards North Africa and has determined free trade agreements with the USA, the European Union, Turkey and Canada, all of which seems to designate that this country is increasingly being assimilated into global supply chains.

Methodology

Based on the original model by Frei et al. (2015) in addition to unswerving interface with industry, we recommend a rationalized generic model for RSCs (Figure 1) that portrays the emblematic processes implicated in RSC. The processes to the left (remanufacturing, refurbishing) have the utmost value maintenance rate and are consequently the majority advantageous, whereas those to the right maintain the least value and should be forestalled if possible. To respond our two research questions, we implemented a qualitative approach based on case study analysis. The use of a qualitative methodology in this research is aggravated by numerous factors. First, qualitative studies can be a foundation of well-grounded, rich metaphors and clarifications of processes happening in local contexts (Lee and Tan, 2011). Second, the case study method is an efficient means of gathering in-depth information (Voss et al., 2002) and materializes predominantly suitable for exploring and understanding

unambiguous topics (Yin, 2003). Finally, qualitative approach tolerates researcher contact to profoundly feel but infrequently uttered beliefs through the interviews (Aastrup and Halldórsson, 2008; Seuring, 2008). Based on the five steps proposed by statute. (2002), a summary of the empirical work is provided in Table I. The case study analysis was divided into the following four steps: case study selection and classification, interview protocol, data collection, and analysis and interpretation.

Case study selection

As recommended by Flyvbjerg (2001), to make the most of the information possible from small samples, cases need to be preferred on the foundation of opportunity of their information content. Consequently, a preliminary sample was shaped using a governmental database containing information about Egyptian companies, according to sector, size and activities. From a preceding research on green practices of Egyptian companies we registered additional data. Based on this information, our preferred companies that had instigated green initiatives, including green design, certified environmental management system and green disposal. The majority of these companies fit in to numerous key industrial sectors such as the automotive industry, and chemicals recognized for their apprehension about environmental issues and smaller quantity belong to services such as retailing, freight and logistics. We consulted secondary sources such as company websites, company reports and articles in industry magazines to assess such initiatives. A preliminary sample of 30 companies was selected at harvest of this phase. Consequently, we contacted these firms by phone to decide their willingness to participate in the study and to authenticate some information associated with their environmental sustainability initiatives. Finally, four companies were found appropriate and agreed to be involved in this research.

Interview protocol

Based on literature review and preceding research (Eroletal. 2010; Drohomeretskietal. 2014), a research survey protocol was elaborated. Following the survey protocol, an interview guide was developed to conduct semi-structured interviews. The data collection guide was comprised of open questions on: (1) general company information; (2) explanation of RSC initiatives implemented; and (3) obstacles to RSC initiatives.

Data collection

To modify the interview guide, a pilot test was originally carried out in one of the case companies studied (case company A). This research procedure validation process throughout the pilot test was essential to illuminate questions and to normalize the interview guide to be used in the other interviews with the case companies. Interviews were carried out from June 2019 to August 2019. The majority of the respondents were interviewed in face-to-face meetings at the company site. Case companies are identified with letters from A to G in the tables. On average, each interview lasted for about 30 minutes and was recorded and transcribed. All of the records and observations have been additional to the information obtained from other sources (e.g. company reports and websites, articles published in industry magazines) and stored in a case study database as suggested by Yin (2003).

Table 2: Research Method

Stage 1. Research question	<ul style="list-style-type: none"> • How do Egyptian companies implement RSC practices? • What type of obstacles hinders RSC initiatives of the Egyptian companies
Stage 2. Instrument development	<ul style="list-style-type: none"> • Case study of companies in Egypt
Stage 3. Data gathering	<ul style="list-style-type: none"> • Semi-structured interviews <ul style="list-style-type: none"> • Company report • Articles in press and websites
Stage 4. Data analysis	<ul style="list-style-type: none"> • Cross-case analysis
Stage 5 Dissemination	<ul style="list-style-type: none"> • Construct validity • External validity and reliability

Table 3: Structure of the research protocol

<i>Objective</i>	<ol style="list-style-type: none"> 1. <i>General company information</i> 2. <i>Identification of respondents RSC initiatives</i> 3. <i>RSC obstacles</i>
<i>Main Questions</i>	<ol style="list-style-type: none"> 1. <i>Company name, number of employees, sector, size of plant, average production, sales market</i> 2. <i>Name, e-mail, position, education, experience</i> 3. <i>What are the main RSC initiatives implemented by the company? What are the main obstacles to RSC implemented by the company?</i>
<i>Data collection instrument</i>	<ol style="list-style-type: none"> 1. <i>Website, interview, company's annual reports if available, articles in press Interview</i> 2. <i>Interview, articles in press, website Interview, articles in press, website</i>
<i>Data analysis</i>	<ol style="list-style-type: none"> 1. <i>Comparison of company information</i> 2. <i>Evaluating the respondents' relevance and experience</i> 3. <i>Evaluating the RSC initiatives, recycling, remanufacturing, the presence of performance indicators, earnings from RSC. Comparison between case studies (similarities and differences) Analyzing the obstacles to RSC by type (costs, lack of stakeholders' involvement, etc.). Comparison between case studies (similarities and differences)</i>

Data analysis:

In this section of the analysis, a content analysis perspective was adopted as guided by Easter by-Smith et al., (2012). Case-based analysis, especially involves validity and responsibility problems as mentioned by Yin (2003) and Ellram (1996). The selected companies were chosen according to the scope of research to achieve consistency and enhancing the results with a variety of services and characteristics. Meanwhile, interviews we tend to take the time to elucidate the analysis objectives and its target RSC practices. We tend to explain the distinction between RL and RSC to avoid any misunderstanding and promiscuity of concepts. Moreover, the context and reports of case study were noted in the methods of verification as the way to make sure construct validity (Yin, 2003; Bryman and Bell, 2007). The interviewed persons were then given the chance to regulate and approve the results. Diverse sources of information (company websites, interviews, press articles) and the verification of the results by the interviewees and questionnaire verify construct validity. Responsibility is connected onto the reputability of the interviewee and questionnaires and whether or not replication by different researches is probable. In our analysis, consistency is ensured by Mentioning method of research method of assortment and analysis. Also, as recommended by many researchers (Yin, 2003; Easter by-Smith et al., 2012), a case study results were made for more support of the consistency. The main characteristics of the companies interviewed are presented in Table III. Company size was assessed according to the definition of SMEs by the European Commission (2005). Therefore, the sample interviewed companies include two medium companies (employing less than 250 people) and five large firms (employing more than 250 people). The sample is composed of four companies that belong to multinational groups (A, B, C and D), while the three remaining companies (E, F and G) are national firms. The selected companies operate in the leading industries in Egypt.

Findings & Discussion

Company A: A Medium size subsidiary of an American group of IT localized in Egypt since 2001. The company plays the role of a facilitator for technological outsourcing projects of the American group's

Company B: A Large size recently created holding owned by an international high-tech group and leading supplier in the fields of security. The group has presently 3 plants in Egypt with more than 2,000 employees.

Company C: A Medium size subsidiary of a global automotive industry that started its activity in 1996 in Cairo. The assembly plant in Egypt has assembled more than 50000 vehicles in 2018 and its annual capacity is about 60000 vehicles

Company D: A Large Auto industry subsidiary of a Japanese manufacturer for automobiles which has 2 factories in Egypt. The company has invested 15 million Euros in its projects in Egypt

Company E: A large Egyptian manufacturer of furniture. Launched in 1980, the company has 37 stores localized throughout Egypt. The company is also present in other African countries such as Uganda, Sudan, and Libya

Company F: An Egyptian retailer founded in 1984 owning 20 supermarkets and 10 hypermarkets in Egypt

Company G: A Large Chemicals company belonging to a large Egyptian Holding. The company is Egypt's leader in the distribution of petroleum gas. The company holds more than 38 % of the national market share, with revenues amounting to hundreds of millions of dollars in 2016.

Table 4: RSCs initiatives of case studies

	RSC Initiatives	RSC performance measurement
Company A	Return of defective products to suppliers Resale of recycled packaging materials Remanufacturing and repair Most returned products and components have to be destroyed Disposal of waste packaging	Stock movement
Company B	Return of defective products to suppliers Disposal of waste packaging	Inventory turnover
Company C	Return of defective product, repair and maintenance if conditions allow it Recycling of packaging materials Disposal of waste materials	Inventory turnover
Company D	Return of defective products to plant for repair	Inventory turnover
Company E	Return of defective product, maintenance recycling, reuse Returned products by customers have to be repaired and recovered to be resold Disposal of waste materials	carrying cost of inventory
Company F	Return of expired products to suppliers Disposal of expired products	carrying cost of inventory
Company G	Recycling cardboard and packaging materials to be re-used Disposal of expired product	carrying cost of inventory

Table 5: Obstacles to RSCs adoption

Obstacles	A	B	C	D	E	F	G
Costs	*		*		*		*
Lack of capabilities			*	*	*		
Lack of the employees' experience	*				*		*
Difficulty to connect forward and reverse logistics		*		*			
Lack of stakeholders' involvement		*	*	*	*	*	
Lack of well-defined regulations	*				*		*

Conclusion

This paper provides insights into RSC initiatives of Egyptian companies and the main obstacles to them. Numerous researchers affirm that literature on RSC could advantage from developing frameworks for theoretical models (Daugherty et al., 2002; Guide and Van Wassenhove, 2002; Lambert et al., 2011). Consequently, our research has engendered theoretical repercussions that ought to have to be investigated further. We developed a conceptual model to scrutinize further RSC initiatives of companies and the main obstacles to such initiatives. The involvement in the study of existing literature is twofold: first, we respond to the call for additional research on RSC in the circumstance of developing countries and our highlight obstacles obstructing them. Our findings propose some way a likeness in obstacles to RSC developing countries such as China, Turkey, morocco and Brazil. Second, we present a RSC model that encompasses remanufacturing, refurbishing and disposal processes. We think that this model establishes a useful basis for further research. Third, we suggest that companies in developing countries with fundamental RSC practices struggle more with obstacles, whereas those companies developing a striving RSC practice is more hindered by obstacles. This observation deserves to be analyzed further through additional research in developing countries. It would be interesting to enlarge the line of research involving stakeholders' roles and influences on RSC actions. Also, further research should discover how firms might use their RSC initiatives as a source of competitive advantage. Our findings extend on the extant literature investigating RSC practices in developing countries by representing that resale processes can produce earnings and that firms belonging to other sectors might be interested in RSC practices. The results of this paper could be helpful to companies in Egypt as sustainability will soon become part of more aggressive requirements that only the most competent players will be able to conform to.

Regarding managerial implications of our research, the findings can represent a motivation for other firms belonging to manufacturing sectors to implement RSC in Egypt as the results demonstrate that there is potential for firms to produce earnings from their RSC practices while representing their fulfillment with sustainability requirements from their stakeholders and regulations. This study has some limitations that provides future research opportunities. To determine whether and how far these findings can be generalized, statistical support is required to complete our qualitative data. Also, the RSC that we explored may change across countries because RSC activities may be bound by cultural possibilities. We Therefore encourage research in other countries to test this hypothesis. Indeed, studies in developing countries other than Egypt would increase the external validity of the results. Also, a field study on a larger sample of Egyptian companies to scrutinize recovery and RL processes and how they affect the organization's performance would bring further approaching to our research.

References

- Aastrup, J. and Halldórsson, Á. (2008), "Epistemological role of case studies in logistics: a critical realist perspective", *International Journal of Physical Distribution & Logistics Management*, Vol.38.
- Adenso-Diaz, B., Moreno, P., Gutiérrez, E. and Lozano, S. (2012), "An analysis of the main factors affecting bullwhip in reverse supply chains", *International Journal of Production Economics*, Vol. 135 No. 2, pp. 917-928.
- Alvarez-Gil, M.J., Perrone, B., Husillos, J. and Lado, N. (2007), "Reverse logistics, stakeholder's influence, organizational slack, and manager's posture", *Journal of Business Research*, Vol. 60 No. 5, pp. 463-473
- Banomyong, R., Veerakachen, V. and Supatn, N. (2008), "Implementing leagility in reverse logistics channels", *International Journal of Logistics Research and Applications*, Vol. 11 No. 1, pp. 31-47.

- Barve, A. and Muduli, K. (2013), “Modelling the challenges of green supply chain management practices in Indian mining industries”, *Journal of Manufacturing Technology Management*, Vol. 24 No. 8, pp. 1102-1122.
- Blackburn, J.D., Guide, V.D.R., Souza, G.C. and Van Wassenhove, L.N. (2004), “Reverse supply chains for commercial returns”, *California Management Review*, Vol. 46 No. 2, pp. 6-22.
- Bryman, A. and Bell, E. (2007), *Business Research Methods*, Oxford University Press, New York, NY.
- Carter, C. and Easton, P. (2011), “Sustainable supply chain management: evolution and future directions”, *International Journal of Physical Distribution & Logistics Management*, Vol. 41 No. 1, pp. 46-62.
- Chan, F.T.S. and Chan, S.K. (2008), “A survey on reverse logistics system of mobile phone industry in Hong Kong”, *Management Decision*, Vol. 46 No. 5, pp. 702-708.
- Chan, F.T.S. and Chan, S.K. (2008), “A survey on reverse logistics system of mobile phone industry in Hong Kong”, *Management Decision*, Vol. 46 No. 5, pp. 702-708.
- Chuang, C.-H., Wang, C.X. and Zhao, Y. (2014), “Closed-loop supply chain models for a high-tech product under alternative reverse channel and collection cost structures”, *International Journal of Production Economics*, Vol. 156, pp. 108-123.
- Ciliberti, F., Pontrandolfo, P. and Scozzi, B. (2008), “Investigating corporate social responsibility in supply chains: a SME perspective”, *Journal of Cleaner Production*, Vol. 16 No. 15, pp. 1579-1588.
- Daugherty, P.J., Myers, M.B. and Richey, R.G. (2002), “Information support for reverse logistics: the influence of relationship commitment”, *Journal of Business Logistics*, Vol. 23, pp. 85-106.
- De Brito, M.P. and Dekker, R. (2004), “A framework for reverse logistics”, in Dekker, R., Fleischmann, M., Inderfurth, K. and VanWassenhove, L. (Eds), *Reverse Logistics. Quantitative Models for Closed Loop Supply Chains*, Springer, Berlin, pp. 3-27.
- Dekker, R., Fleischmann, M., Inderfurth, K. and Van Wassenhove, L.N. (Eds) (2003), *Reverse Logistics: Quantitative Models for Closed-Loop Supply Chains*, Springer Verlag, Berlin.
- Difrancesco, R. and Huchzermeier, A. (2016), “Closed-loop supply chains: a guide to theory and practice”, *International Journal of Logistics Research and Applications*, Vol. 19 No. 5, pp. 443-464, doi: 10.1080/13675567.2015.1116503.
- Drohomeretski, E., Da Costa, S. and De Lima, E. (2014), “Green supply chain management: drivers, barriers and practices within the Brazilian automotive industry”, *Journal of Manufacturing Technology Management*, Vol. 25 No. 8, pp. 1105-1134.
- Easterby-Smith, M., Thorpe, R. and Jackson, P. (2012), *Management Research*, 4th ed., Sage Publications Ltd, London.
- Ellram, L.M. (1996), “The use of case study method in logistics research”, *Journal of Business Logistics*, Vol. 17 No. 2, pp. 93-138.
- Erol, İ., Velioglu, N., Şerifoğlu, F., Büyüközkan, G., Aras, N., Çakar, N. and Korugan, A. (2010), “Exploring reverse supply chain management practices in Turkey”, *Supply Chain Management: An International Journal*, Vol. 15 No. 1, pp. 43-54.
- European Commission (2005), *The New SME Definition. User Guide and Model Declaration*, European Commission, DG Enterprise and Industry, Bruxelles.
- Fleischmann, M. (2001), *Quantitative Models for Reverse Logistics*, Springer Verlag, Berlin.
- Flyvbjerg, B. (2001), *Making Social Science Matter*, Cambridge University Press, Cambridge.
- Frei, R., Lothian, I., Bines, A., Butar Butar, M. and Da Gama, L. (2015), “Performance in reverse supply chains”, *Logistics Research Network Annual Conference (LRN)*, Derby, 9-11 September.
- Georgiadis, P. and Besiou, M. (2010), “Environmental and economical sustainability of WEEE closed-loop supply chains with recycling: a system dynamics analysis”, *International Journal of Advanced Manufacturing Technology*, Vol. 47 Nos 5-8, pp. 475-493.

- Gonzalez-Torrea, P.L., Adenso-Diaz, B. and Artiba, H. (2004), “Environmental and reverse logistics policies in European bottling and packaging firms”, *International Journal of Production Economics*, Vol. 88 No. 1, pp. 95-104.
- Govindan, K. and Soleimani, H. (2017), “A review of reverse logistics and closed-loop supply chains: a journal of cleaner production focus”, *Journal of Cleaner Production*, Vol. 142, Part 1, pp. 371-384.
- Guide, V.D. and Van Wassenhove, L. (2002), “The reverse supply chain”, *Harvard Business Review*, Vol. 80 No. 2, pp. 25-26.
- Hauser, W. and Lund, R. (2008), *Remanufacturing: Operating Practices and Strategies*, Boston University, Boston, MA.
- He, Q., Ghobadian, A., Gallear, D., Beh, L.S. and O’Regan, N. (2016), “Towards conceptualizing reverse service supply chains”, *Supply Chain Management: An International Journal*, Vol. 21 No. 2, pp. 166-179.
- Hillary, R. (2004), “Environmental management systems and the smaller enterprise”, *Journal of Cleaner Production*, Vol. 12 No. 6, pp. 561-569.
- Huang, M., Song, M., Lee, L.H. and Ching, W.K. (2013), “Analysis for strategy of closed-loop supply chain with dual recycling channel”, *International Journal of Production Economics*, Vol. 144 No. 2, pp. 510-520.
- Huang, X., Tan, B.L. and Ding, X. (2015), “An exploratory survey of green supply chain management in Chinese manufacturing small and medium-sized enterprises: pressures and drivers”, *Journal of Manufacturing Technology Management*, Vol. 26 No. 1, pp. 80-103.
- Jayaraman, V. and Luo, Y. (2007), “Creating competitive advantages through new value creation: a reverse logistics perspective”, *Academy of Management Perspectives*, Vol. 21 No. 2, pp. 56-73.
- Kumar, S. and Yamaoka, T. (2007), “System dynamics study of the Japanese automotive industry closed loop supply chain”, *Journal of Manufacturing Technology Management*, Vol. 18 No. 2, pp. 115-138.
- Kumar, V., Amorim, M., Bhattacharya, A. and Garza-Reyes, J.A. (2016), “Managing reverse exchanges in service supply chains”, *Supply Chain Management: An International Journal*, Vol. 21 No. 2, pp. 157-165.
- Lambert, S., Riopel, D. and Abdul-Kader, W. (2011), “A reverse logistics decisions conceptual framework”, *Computers & Industrial Engineering*, Vol. 61 No. 3, pp. 561-581.
- Lau, K. and Wang, Y. (2009), “Reverse logistics in the electronic industry of China: a case study”, *Supply Chain Management: An International Journal*, Vol. 14 No. 6, pp. 447-465.
- Lee, J. and Tan, F. (2011), “Growth of Chinese family enterprises in Singapore”, *Family Business Review*, Vol. 14 No. 1, pp. 49-74.
- Lee, S. (2008), “Drivers for the participation of small and medium-sized suppliers in green supply chain initiatives”, *Supply Chain Management*, Vol. 13 No. 3, pp. 185-198.
- Mafakheri, F. and Nasiri, F. (2013), “Revenue sharing coordination in reverse logistics”, *Journal of Cleaner Production*, Vol. 59, pp. 185-196.
- Mollenkopf, D., Frankel, R. and Russo, I. (2011), “Creating value through returns management: exploring the marketing-operations interface”, *Journal of Operations Management*, Vol. 29 No. 5, pp. 391-403.
- Murphy, P.R. and Poist, R.F. (2003), “Green perspectives and practices: a “comparative logistics” study”, *Supply Chain Management: An International Journal*, Vol. 8 No. 2, pp. 122-131.
- Prahinska, C. and Kocabasoglu, C. (2006), “Empirical research opportunities in reverse supply chains”, *The International Journal of Management Science*, Vol. 34 No. 6, pp. 519-532.
- Ravi, V. and Shankar, R. (2005), “Analysis of interactions among the barriers of reverse logistics”, *Technological Forecasting and Social Change*, Vol. 72, pp. 1011-1029.
- Rogers, D.S. and Tibben-Lembke, R.S. (2001), “An examination of reverse logistics practices”, *Journal of Business Logistics*, Vol. 22 No. 2, pp. 129-148.

- Roy, M.J. and Vézina, R. (2001), “Environmental performance as a basis of competitive strategy: opportunities and threats”, *Corporate Environmental Strategy*, Vol. 8 No. 4, pp. 339-347.
- Rubio, S., Chamorro, A. and Miranda, F.J. (2008), “Characteristics of the research on reverse logistics (1995-2005)”, *International Journal of Production Research*, Vol. 46 No. 4, pp. 1099-1120.
- Russo, I. and Cardinali, S. (2012), “Product returns and customer value: a footwear industry case”, in Jodlbauer, H., Olhager, J. and Schonberger, R.J. (Eds), *Modelling Value, Contributions to Management Science, Part 2*, Springer, Berlin, pp. 79-97.
- Sahay, B.S., Gupta, J.N.D. and Mohan, R. (2006), “Managing supply chains for competitiveness: the Indian scenario”, *Supply Chain Management: An International Journal*, Vol. 11 No. 1, pp. 15-24.
- Sajan, J. and Sridharan, R. (2015), “Modelling and analysis of network design for a reverse supply chain”, *Journal of Manufacturing Technology Management*, Vol. 26 No. 6, pp. 853-867.
- Sarkis, J., Helms, M. and Hervani, A. (2010), “Reverse logistics and social sustainability”, *Corporate Social Responsibility and Environmental Management*, Vol. 17 No. 6, pp. 337-354.
- Seuring, A.S. (2008), “Assessing the rigor of case study research in supply chain management”, *Supply Chain Management: An International Journal*, Vol. 13 No. 2, pp. 128-137.
- Shaharudin, M., Govindan, K., Zailani, S., Tan, K. and Iranmanesh, M. (2017), “Product return management: linking product returns, closed-loop supply chain activities and the effectiveness of the reverse supply chains”, *Journal of Cleaner Production*, Vol. 149, pp. 1144-1156.
- Shi, X., Li, L.X., Yang, L., Li, Z. and Choi, J.Y. (2012), “Information flow in reverse logistics: an industrial information integration study”, *Information Technology and Management*, Vol. 13 No. 4, pp. 217-232.
- Srivastava, S.K. (2007), “Green supply-chain management: a state-of-the-art literature review”, *International Journal of Management Reviews*, Vol. 9 No. 1, pp. 53-80.
- Srivastava, S.K. (2008), “Network design for reverse logistics”, *Omega*, Vol. 36 No. 4, pp. 535-548.
- Stock, J., Speh, T. and Shear, H. (2006), “Managing product returns for competitive advantage”, *MIT Sloan Management Review*, Vol. 48 No. 1, pp. 57-62.
- Stock, J.R. (1998), *Development and Implementation of Reverse Logistics Programs*, Council of Logistics Management, Oak Brook, IL.
- Stuart, I., Mccutcheon, D., Handfield, R., Mclachlin, R. and Samson, D. (2002), “Effective case research in operations management: a process perspective”, *Journal of Operations Management*, Vol. 20 No. 5, pp. 419-433.
- Svensson, G. (2007), “Aspects of sustainable supply chain management (SSCM): conceptual framework and empirical example”, *Supply Chain Management: An International Journal*, Vol. 12 No. 4, pp. 262-266.
- Talbot, S., Lefebvre, E. and Lefebvre, L. (2007), “Closed-loop supply chain activities and derived benefits in manufacturing SMEs”, *Journal of Manufacturing Technology Management*, Vol. 18 No. 6, pp. 627-658.
- The World Bank (2007/2012), “Connecting to compete, trade logistics in the global economy, the logistics performance and its indicators”, available at: www.worldbank.org/lpi.
- Vachon, S. and Klassen, R.D. (2006), “Green project partnership in the supply chain: the case of the package printing industry”, *Journal of Cleaner Production*, Vol. 14 Nos 6/7, pp. 661-671.
- Van Hoek, R. (1999), “From reversed logistics to green supply chains”, *Supply Chain Management: An International Journal*, Vol. 4 No. 3, pp. 129-135.
- Vijayvargy, L., Thakkar, J. and Agarwal, G. (2017), “Green supply chain management practices and performance: the role of firm-size for emerging economies”, *Journal of Manufacturing Technology Management*, Vol. 28 No. 3, pp. 299-323.
- Voss, C., Tsikriktsis, N. and Frohlich, M. (2002), “Case research in operations management”, *International Journal of Operations & Production Management*, Vol. 22 No. 2, pp. 195-219.

- Wang, J., Chen, H., Rogers, D., Ellram, L. and Grawe, S. (2017), “A bibliometric analysis of reverse logistics research (1992-2015) and opportunities for future research”, *International Journal of Physical Distribution & Logistics Management*, Vol. 47 No. 8, pp. 666-687.
- Yin, R. (2003), *Case Study Research: Design and Methods*, 3rd ed., Sage, Beverly Hills, CA.
- Zhu, Q., Sarkis, J. and Geng, Y. (2005), “Green supply chain management in China: pressures, practices and performance”, *International Journal of Operations & Production Management*, Vol. 25 Nos 5-6, pp. 449-468.
- Zhu, Q., Sarkis, J. and Lai, K.-H. (2007), “Initiatives and outcomes of green supply chain management implementation by Chinese manufacturers”, *Journal of Environmental Management*, Vol. 85 No. 1, pp. 179-189.
- Zhu, Q.A. and Sarkis, J. (2006), “An inter-sectoral comparison of green supply chain management in China: drivers and practices”, *Journal of Cleaner Production*, Vol. 14 No. 5, pp. 472-486.
- Zhu, Q.A., Sarkis, J. and Lai, K. (2008), “Confirmation of a measurement model for green supply chain management practices implementation”, *International Journal of Production Economics*, Vol. 111, pp. 261-273.
- Zilahy, G. (2004), “Organizational factors determining the implementation of cleaner production measures in the corporate sector”, *Journal of Cleaner Production*, Vol. 12 No. 4, pp. 311-319.

The Effect of The Global Entrepreneurship Index on The Economic Growth in The Arab Countries

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Abstract:

Purpose: Entrepreneurship has become a vital factor to be considered in the process of economic development, especially for developing countries. Developing countries should adopt policies to improve the entrepreneurial ecosystem in order to increase the level of entrepreneurial activities and startups. This study aims at analyzing the impact of the Global Entrepreneurship Index-GEI on economic growth and development in 13 Arab countries.

Design/methodology/approach: The study is a conceptual study analyzing the relationship between GEI and economic growth and development through analyzing the following indices: Global Competitiveness Index, Ease of Doing Business Index, Logistics Performance Index, Human Development Index and Global Innovation Index. Followed by qualitative research analysis through conducting focus groups with stakeholders to identify the main obstacles and challenges; up on which the study concluded with suggestions and recommendations to strengthen GEI and its impact on economic growth and development.

Findings: The study concludes that there is a relationship between GEI and the selected indices. In addition, the study highlights that policies aim at improvement in entrepreneurial ecosystem will be reflected as an enhancement in several pillars of the selected indices and thus achieving economic development and growth.

Originality/value: The paper provides evidence-based results of the connection between GEI and economic growth and development. It assists policy makers by demonstrating which combinations of regulatory policies can provide the best results in achieving economic progress through enhancements in entrepreneurial ecosystem.

Keywords: Global Entrepreneurship Index, Entrepreneurial Ecosystem, Economic Growth, Economic Development.

Introduction

Entrepreneurship is recognized as the catalyst for development and addressing sustainable development challenges, mainly that concerned with eliminating poverty, amplifying employment opportunities as well as economic participation and empowerment of socially disadvantaged groups such as women and youth (UNCTAD, 2012; UNCTAD, 2014; UNCTAD, 2018). According to International Labor Organization (ILO), the strong economic growth in developing countries has been

described by being “jobless growth” as it was marked by insufficient job creation to meet labor market’s needs (ILO, 2013; ILO, 2015). In addition, the failure of reducing poverty rates of non-Asian least developed countries - in spite of their rapid economic growth- necessitates the call for new priorities that promote sustainable and inclusive economic growth (UNCTAD, 2014). It is indicated by the broad consensus of economic researchers that entrepreneurship stimulates economic development and economic growth (Thurik, 2001; Audretsch, 2005; Acs, 2005; Erken, 2008; Justin Doran, 2018; Sanchita Bansal, et al., 2019). Furthermore, Global Entrepreneurship Index (GEI) for the year 2018 estimated that the 3% improve in global GEI between 2017 and 2018 would add approximately 7 trillion USD to global GDP (GEI, 2018).

Recently, global economic unrest and recession expectations are escalating due to: The United States-China trade war, the withdrawal of the United Kingdom from the European Union (Brexit), macroeconomic stress in Argentina and Turkey, and interruption to auto industry in Germany. Consequently, the global growth -which peaked at close to 4% in 2017- diminished to 3.6% in 2018, and it is anticipated to deteriorate further to 3.3% at the end of 2019 (IMF, 2019). As a result, developed and developing countries started to promote and enhance the ecosystem of entrepreneurship to uplift their economic growth rates as well as employment rates (Dejardin, 2000; Anokhin, 2008).

Entrepreneurship ecosystem is referring to the factors and policies that affect the entrepreneur. The term ecosystem was originally created by James Moore who claimed that businesses do not evolve in a ‘vacuum’ and that they are affected by and interact with the environment they work in (Moore, 1993). Additionally, it is argued that in dynamic and efficient ecosystems new firms have better opportunities to grow, and create employment (Rosted, 2012). Entrepreneurship ecosystem consists of six main domains that are vital for any entrepreneur to grow, namely; policy, finance, culture, market, human capital and support (Spigel, 2016).

During the last decade, the Arab countries’ economies went through serious political instability which affected the economic conditions badly (Ianchovichina, 2018). Adoption of entrepreneurship in governmental agendas of the Arab countries is an escape path towards the improvement of the economic performance and crucial for curing fundamental problems such as poverty, unemployment. The aim of this research is to measure the effect of the GEI with its 14 pillars on the economic growth of the Arab countries and explore the strengths and weaknesses to propose recommendations for the improvement in the Arab countries' entrepreneurship ecosystem.

Literature Review

Entrepreneurship has become an interesting area in policy discussions in recent years (Martin, 2007). Recently, it is widely accepted that entrepreneurship is a driving force of development, innovation and economic growth (Audretsch, 2006; Wennekers, 2006; Acs, 2009, 2017). Entrepreneurship has several definitions and diverse means of measurement (Pittaway, 2005; Sander Wennekers, 2005; Van Stel, 2005). Casson (1982) identified the entrepreneur as someone who has special skills that enable him to take decisions about the coordination of limited resources under uncertain conditions. Another definition for the entrepreneur is proposed by Global Entrepreneurship Index (GEI); “a person with the vision to see an innovation and the ability to bring it to market. Venkataraman (2000) defined entrepreneurship as the process in which the entrepreneur discovers, evaluates, and exploits opportunities to create future goods and services.

For a long period of time, entrepreneurship was measured by the rate of self-employment or the number of new firms created (Acs, 2010). Audretsch (2002); Acs (2004); Hessels (2011) and Mariet Ocasio

(2016) quantified entrepreneurship activities using the number of newly created firms as a proxy. This approach is not a comprehensive measure, as entrepreneurship is not limited to new startups, it can arise within existing institutions, and it is not restricted to the need to exploit a new idea (Baliamoune-Lutz, 2015; Doran, 2016). The justification for the usage of the number of firms as a measure of economic activities is that it is suitable for econometric analysis which can be modelled with other measures such as; economic growth, GDP, wealth, productivity, etc. (Wong, 2005). In fact, while measuring entrepreneurship, it is important to make a distinction between measurements that focus on quantitative aspects and measurements that focus on qualitative aspects (Páger, 2016).

Doran (2016) noticed that number of new initiated firms is not suitable and a more accurate measure of entrepreneurship could be utilized to provide a more detailed analysis of the impact of entrepreneurship on economic growth. Consequently, major entrepreneurship indicators such as the Global Entrepreneurship Monitor's (GEM), Total Early-Stage Entrepreneurial Activity (TEA) index were created and became the most commonly used in calculating and measuring entrepreneurship activities. However, entrepreneurship is complex and multi-dimensional and using new firms' creation or TEA, are not sufficient in apprehend the full impact of entrepreneurship (Acs, 2010). Acs (2017) recommended that the entrepreneurship activities of a country are fundamentally a quality rather than a quantity phenomenon. The Global Entrepreneurship and Development Institute (GEDI) has established an index to measure entrepreneurship activities, called the Global Entrepreneurship Index (GEI).

The GEI is developed with the purpose of measuring entrepreneurship ecosystem. Acs (2010; 2012; 2014) identified entrepreneurial ecosystem as the “dynamic, institutionally embedded interaction between entrepreneurial attitudes, abilities, and aspirations, by individuals, which drives the allocation of resources through the creation and operation of new ventures”. The GEI identifies entrepreneurial ecosystem as “a new way to contextualize the increasingly complex and interdependent social systems being created”.

The GEI is a composition of indicators of the health of the entrepreneurship ecosystem in a given country or region. It measures both the quality of entrepreneurship and the extent and depth of the supporting entrepreneurial ecosystem. It is divided into 14 components as shown in table 1 (Zoltán J. Ács, 2018). The GEI is designed to support policy makers to explore possible ways to promote entrepreneurship to achieve sustainable economic development (Acs Zoltan, 2017). Moreover, each of the 14 pillars contains two measures representing the micro- and macro-level. Analyzing the 14 pillars including the institutional (macro) and individual (micro) variables can provide a detailed analysis of a country's entrepreneurial ecosystem and its strengths and weaknesses (Acs Zoltan, 2017).

Table 1: Description of the GEI pillars

Pillars	Description
1. Opportunity Perception	The entrepreneurial perception potential the freedom of the country and institutional environment.
2. Startup Skills	The perception of start-up skills and the quality of education.
3. Risk Acceptance	The prohibitive effect of the population’s fear of failure and a measure of the country’s risk.
4. Networking	It has two aspects: (1) Accessibility to opportunities and resources. (2) Accessibility of entrepreneurs to each other.
5. Cultural Support	How does the country view entrepreneurs? And if there is any corruption in the system.
6. Opportunity Startup	The motivation by opportunity rather than by the necessity, and the government facilitation to encourage entrepreneurs’ existence.
7. Technology Absorption	The size of the technological sector and the absorptive capacity of businesses towards new technologies.
8. Human Capital	Level of education of entrepreneurs, training and labor market conditions.
9. Competition	Can entrepreneurs compete in the market?
10. Product Innovation	Can entrepreneurs create new products and does the country’s technology support that?
11. Process Innovation	Are the system supports the adoption of new technologies? And are entrepreneurs able to access high quality human capital?
12. High Growth	Rate of growth of businesses and their strategic capacity.
13. Internationalization	Can entrepreneurs access the global market?
14. Risk Capital	The level of risk associated with acquiring capital.

Source: GEI, 2018. Global Entrepreneurship Index

Recently, researchers have recognized the important capability and capacities of entrepreneurial activity in innovation and growth, and the momentous contribution of it to prosperity and economic welfare (Acs, 2006; Audretsch, 2007). Researchers have concluded that although there is a lack of a general theory that links economic development outcomes with entrepreneurship, but progress has been made in the understanding of the importance of entrepreneurship in economic development” (Naudé, 2010). It is particularly important to know that the level of development of a country affects the natural rate of entrepreneurial dynamics. It is detected that the level of entrepreneurship takes a U-shaped relationship with economic development which means that, as a country develops economically, its entrepreneurial activities and new business start-ups are likely to decline until a recovery occurs at a suitable level of economic development that encourages and support entrepreneurship (Audretsch, 1994; Wennekers, 2005; Carree, 2010).

Arab countries are an important source of global economic stability due to their reserves of petroleum and natural gas. However, they suffer from high rates of poverty and unemployment. The inordinate poverty levels in the Arab region exceeds its expectations previously thought, with some two-thirds of

citizens falling into the categories of poor or susceptible (Arab Monetary Fund, 2019). In addition, the overall unemployment rate in Arab countries is around 10% in 2018, which is considered among the highest in the world, it almost doubles the global average which is 4.5%, the shrinking employment rate in Arab region is due to economic and political instability, low preference for private sector, as well as delimited employment opportunities in a confrontation of the rapid growth of the labor force (Khouri, 2019).

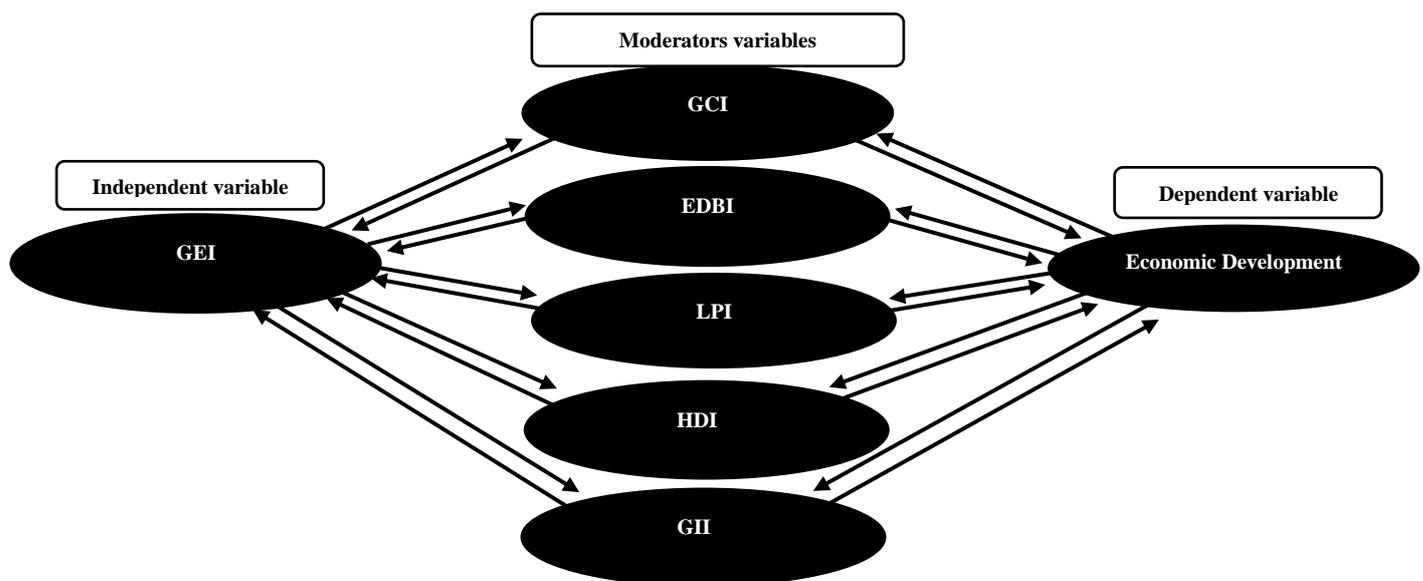
Furthermore, university curriculums in Arab countries are not fully aligned to labor market requirements, and there are 56% of Arab graduates realize themselves to be unprepared to join the market (Deloitte, 2017). On average almost three quarters of people in the region see entrepreneurship as a good career choice, especially in MENA region (Acs Zoltan, 2017).

The following sections will analyze the effect of entrepreneurship on Arabic economic growth and economic development with in depth analysis of the 14 pillars of the GEI for each of the Arab countries, upon which a conclusion will be drawn about what is the possible ways to enhance entrepreneurial activities in the Arab countries and the role of all parties in the economies.

Methodology

To investigate the relationship between the GEI and the economic growth of the Arab countries, this research paper will build an association between the GEI and other indices that are responsible for measuring economic development for 13 Arab countries namely; Algeria, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Tunisia and United Arab Emirates. The selected indices are considered a prerequisite to any investor who wants to invest in a given country. The indices used in this study are Global Competitiveness Index (GCI), Ease of Doing Business Index (EDBI), Human Development Index (HDI), Logistics Performance Index (LPI) and Global Innovation Index (GII). Those indices are meant for assessing the economic performance, the business environment as well as the available resources in the country. The following figure shows the proposed research methodology to build an association between the GEI and economic development through the selected indices.

Figure (1): The relationship between GEI and Economic Development:



According to United Nations Development Program, economic development is more inclusive than economic growth as it focusses not only on raising GDP levels which is the case of economic growth but also includes improvements in human, material, financial and environmental factors (UNDP, 2018). The selected indices are of important effect on the economic attractiveness for investments whether domestic or foreign investments and they represent a measure of the level of economic and human development. The following table shows the selected indices with their sub-categories and pillars.

Table (2): Selected economic development indices:

<i>Index</i>	<i>Sub-index</i>	<i>Pillars</i>
<i>Global Competitiveness Index</i>	Enabling Environment	1. Institutions 3. Infrastructure stability
	Human Capital	1. Health 2. Skills
	Markets	1. Product market 3. Financial system
	Innovation Ecosystem	1. Business dynamism 2. Innovation capability
<i>Ease of Doing Business Index</i>	Starting a business	
	Labor market regulation	
	Dealing with construction permits	
	Getting electricity	
	Registering property	
	Getting credit	
	Protecting minority investors	
	Trading across borders	
	Paying taxes	
	Enforcing contracts	
Resolving insolvency		
<i>Logistics Performance Index</i>	Customs	
	Infrastructure	
	Ease of arranging shipments	
	Quality of logistic services	
	Tracking and tracing	
	Timeliness	
<i>Human Development Index</i>	Health	Life expectancy at birth
	Education	1. Expected years of schooling 2. Mean years of schooling
	Standard of living	Gross national income per person
<i>Global Innovation Index</i>	Institution	1. Policy environment 2. Business environment 3. Regulatory environment

Human capital and research	1. Education development 3. Tertiary education	2. Research and
Infrastructure	1. ICTs 3. General infrastructure	2. Ecological sustainability
Market sophistication	1. Credit market scale 3. Investment	2. Trade, competition &
Business sophistication	1. Knowledge workers 3. Innovation linkages	2. Knowledge absorption
Knowledge and technology outputs	1. Knowledge creation 3. Knowledge diffusion	2. Knowledge impact
Creative outputs	1. Intangible assets 3. Creative goods and services	2. Online creativity

Sources: HDI, 2018. Human Development Index - GII, 2018. Global Innovation Index - GCI, 2018. Global Competitiveness Index - EDBI, 2018. Ease of Doing Business Index - LPI, 2018, Logistics Performance Index.

Table 2 presents the components and pillars of each index. Although each index has different purpose and different pillars and measures, they are introduced in this study for comprehensive purpose as they all reflect the economic situation of a country and its potential growth. The following section will explain the association between the GEI and the selected indices.

1. GCI & GEI:

The GCI is concerned with measuring and evaluate the factors that collectively ascertain the level of a country’s productivity, which is considered the major contributor to the improvement of the standards of living. The enabling environment category is meant for measuring the supporting environment for the establishment of any business or startups. It evaluates the legal system, the role of government, the quality and extension of the infrastructure, the information and communication technology infrastructure as well as the macroeconomic performance of a country.

The Human Capital category focuses on the assessment of mental and physical conditions and the level of education and skills of the population. The Market category deals with the market mechanism, competition, the availability of skilled labor force, the ability of the firms to acquire funds in addition to the market size whether the domestic one or the accessed foreign ones. The Innovation Ecosystem is concerned with the capability of the firms to adopt new technologies, the quality and quantity of research and development and the levels of encouragement for collaboration and creativity (Schwab, 2018). The aspects measured and evaluated by the GCI are considered part of the ecosystem pillars assessed by the GEI. As a result, any improvement in the entrepreneurial ecosystem pillars will be reflected in the categories of the competitiveness index and then will improve the economic performance of the country.

2. EDBI & GEI:

The EDBI measures the aspects of business regulations and the effectiveness of the business environment under the adopted government policies. It exhibits the role of government and policy makers in regulating the market mechanism and correcting or eliminating any market deficiencies. Consequently, the EDBI affects the entrepreneurial activities heavily as it involves the decisions and regulations issued by the government and evaluate the effectiveness and efficiency of the business environment.

3. LPI & GEI:

The LPI presents evaluation on trade logistics performance across more than 160 countries. This index is produced every two years. It is based on quantitative techniques to measure the transport and logistic performance (Jean-François Arvis, 2018). Therefore, the LPI affects the entrepreneurial activities to large extent as it associates the market logistics performance with the performance of the business firms which is considered one of the main elements of the entrepreneurship ecosystem.

4. HDI & GEI:

The HDI is a compound index with three basic dimensions of human development namely; health measured by life expectancy at birth, education assessed by mean years of schooling and expected years of schooling in addition to the standard of living which is measured by per capita gross national income UNDP, 2018). The HDI is focused on evaluating the level of human development with a special attention given to inequalities measures which in turn is affecting the potentiality of having large number of successful entrepreneurs and hence affecting GEI to a great extent.

5. GII & GEI:

The GII helps to evaluate innovation in the business environment. The GII aims to detect and evaluate a country's innovation as well as providing guidance for policy makers on how to upscale innovation levels and have a highly productive, creative and innovative population. It provides tools that is directly affecting the capabilities of the population to become successful entrepreneurs and being productive in their startup businesses (Soumitra Dutta, 2018). As a result, it affects entrepreneurship ecosystem pillars directly and hence the country's GEI score.

6. GEI and Economic Development:

The pillars of GEI reflect the previously mentioned five indices and hence any change in them will affect the economic performance of a country and the level of its economic development. As a result, any improvement in one of the GEI pillars for a country will be reflected in one or more of the pillars of the indices and will be of effect on the overall performance of the country. Additionally, an improvement of any of the five indicators will affect the economic performance and then will be reflected as an improvement in score of GEI as well as the remaining indices (UNDP, 2018). Consequently, the arrows in Figure 1 have two directions which indicates a bilateral relation between GEI, the five indices and economic development.

Findings and Discussion:

The following table indicates the scores of the selected Arab countries in the GEI pillars, their scores in the sub-pillars as well as their overall scores ranked from top to down according to the overall score:

Table (3): Arab countries scores in GEI and its 14 pillars:

	Opportunity Perception	Start-up Skills	Risk Acceptance	Networking	Cultural Support	Opportunity Start-up	Technology Absorption	Human Capital	Competition	Product Innovation	Process Innovation	High Growth	Internationalization	Risk Capital	Overall Score
Qatar	0.68	0.20	0.44	0.74	0.74	0.75	0.34	0.88	0.60	0.86	0.52	1.00	0.53	0.96	0.55
United Arab Emirates	0.35	0.29	0.32	1.00	0.84	0.60	0.18	0.87	0.47	1.00	0.63	0.90	0.90	0.98	0.53
Oman	0.58	0.26	0.62	0.46	0.45	0.64	0.29	0.74	0.25	0.56	0.27	0.89	0.43	0.90	0.47
Bahrain	0.64	0.54	0.29	0.56	0.41	0.59	0.31	0.87	0.43	0.72	0.10	1.00	0.45	0.91	0.45
Kuwait	0.46	0.22	0.62	0.53	0.38	0.57	0.28	0.61	0.21	0.46	0.30	0.84	0.48	0.70	0.43
Tunisia	0.46	0.42	0.20	0.46	0.33	0.48	0.65	0.57	0.25	0.66	0.57	0.56	0.22	0.70	0.42
Saudi Arabia	0.61	0.93	0.44	1.00	0.48	0.80	0.11	0.36	0.19	0.42	0.14	0.14	0.70	0.79	0.40
Jordan	0.36	0.43	0.12	0.40	0.49	0.42	0.45	0.36	0.37	0.86	0.47	0.29	0.33	0.41	0.37
Lebanon	0.22	0.73	0.02	0.60	0.22	0.35	0.16	0.37	0.43	0.63	0.63	0.19	0.67	0.36	0.32
Morocco	0.33	0.25	0.34	0.34	0.24	0.42	0.30	0.13	0.11	0.79	0.64	0.28	0.16	0.29	0.29
Egypt	0.23	0.17	0.07	0.07	0.30	0.20	0.22	0.34	0.25	0.49	0.50	0.43	0.24	0.59	0.26
Algeria	0.27	0.31	0.39	0.50	0.30	0.17	0.27	0.29	0.16	0.31	0.10	0.20	0.19	0.27	0.25
Libya	0.12	0.48	0.02	0.12	0.07	0.26	0.31	0.56	0.11	0.17	0.09	0.27	0.23	0.12	0.19

Source: GEI, 2018. Global Entrepreneurship Index

The analysis shows that Gulf countries take the lead in the GEI among the rest of the Arab countries listed in the index. It is noticeable that almost all of the Arab countries suffer the most from the following pillars: technological absorption, competition, cultural support, start-up skills, risk acceptance, startup perception and internationalization. While they have good scores in pillars such as: product innovation, risk capital and human capital. As illustrated in table 4, Qatar leads the Arab countries followed by the United Arab Emirates and Oman. It is observed that the top three countries lead due to their scores in risk capital, high growth human capital and product innovation pillars. However, they suffer in the in pillars such as startup skills, rick acceptance and technology absorption similar to the rest of the listed Arab countries.

To link the results of GEI index to economic development in the Arab countries, the following section will show the results of the Arab countries in the 5 examined indices:

1. GCI:

The following table shows the performance of the Arab countries measured by the GCI. It is clear that the Gulf countries lead in this index as well. It is obvious that all of the Arab countries suffer in the pillar of innovation capacity followed by the labor market and business dynamism pillars.

Table (4): Arab countries scores in GCI and its 12 pillars

GCI	Institutions	Infrastructure	ICT adoption	Macroeconomic stability	Health	Skills	Product market	Labor market	Financial system	Market size	Business dynamism	Innovation capability	Overall Score	Global Rank
United Arab Emirates	72	86	84	100	78	68	69	63	71	71	67	51	73	27
Qatar	64	80	82	97	88	71	64	61	70	60	66	50	71	30
Saudi Arabia	62	76	60	100	82	73	63	53	66	76	51	47	68	39
Oman	63	82	57	85	82	72	63	56	63	56	63	33	64	47
Bahrain	61	78	67	65	79	74	63	63	70	46	62	36	64	50
Kuwait	56	69	57	100	88	60	56	50	65	60	54	31	62	54
Jordan	58	67	52	70	78	64	54	56	71	49	54	39	59	73
Morocco	57	72	44	90	75	45	55	50	66	60	54	34	59	75
Lebanon	45	59	57	68	88	64	51	54	67	49	52	39	58	80
Tunisia	52	63	45	66	83	61	52	46	56	53	58	33	56	87
Algeria	44	61	47	69	82	57	45	44	48	66	51	30	54	92
Egypt	48	71	41	51	69	53	48	46	52	73	54	38	54	94
Libya	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sources: GCI, 2018. Global Competitiveness Index

2. LPI:

The following table shows the performance of the Arab countries measured by the LPI. It is obvious that United Arab Emirates leads the Arab countries again in this index. Additionally, most of the countries show weak performance concerning customs pillar followed by quality of logistics services, while having good results concerning timeliness pillar followed by ease of arranging shipments and tracking and tracing pillars.

Table (5): Arab countries scores in LPI and its 6 pillars

LPI	Customs	Infrastructure	Ease of arranging shipments	Quality of logistics services	Tracking and tracing	Timeliness	Overall Score	Rank
United Arab Emirates	4	4	4	4	4	4	4	11
Qatar	3	3	4	3	4	4	3	30
Oman	3	3	3	3	3	4	3	43
Saudi Arabia	3	3	3	3	3	3	3	55
Bahrain	3	3	3	3	3	3	3	59
Kuwait	3	3	3	3	3	3	3	63
Egypt	3	3	3	3	3	3	3	67
Lebanon	2	3	3	2	3	3	3	79
Jordan	2	3	2	3	3	3	3	84
Tunisia	2	2	3	2	3	3	3	105
Morocco	2	2	3	2	3	3	3	109
Algeria	2	2	2	2	3	3	2	117
Libya	2	2	2	2	2	3	2	154

Sources: LPI, 2018, Logistics Performance Index

3. EDBI:

Table 6 exhibits the scores of the Arab countries in EDBI. United Arab Emirates shows great performance in this index, but it shows a weak performance concerning getting credit and resolving insolvency pillars. Qatar fell in this index mainly due to protecting minority investors followed by getting credit pillar and resolving insolvency.

Table (6): Arab countries scores in EDBI and its 11 pillars

EDBI	Starting a business	Dealing with construction permits	Getting electricity	Registering property	Getting credit	Protecting minority investors	Paying taxes	Trading across borders	Enforcing contracts	Resolving insolvency	Overall Score	Rank
United Arab Emirates	91	86	100	90	50	75	99	72	74	50	79	21
Bahrain	88	74	75	81	45	50	94	76	55	44	68	66
Morocco	92	80	77	64	45	58	86	81	62	34	68	69

Oman	93	72	79	74	35	47	91	79	60	42	67	71
Qatar	86	79	79	81	35	27	99	72	53	38	65	83
Tunisia	85	67	82	63	45	48	60	71	59	55	64	88
Saudi Arabia	80	76	80	81	50	75	75	50	59	0	63	92
Kuwait	77	62	70	68	35	55	92	54	60	39	61	96
Jordan	84	66	83	66	25	40	71	86	54	31	61	103
Egypt	85	71	71	56	50	55	51	42	43	39	56	128
Lebanon	78	60	60	60	40	42	68	60	50	29	55	133
Algeria	77	59	61	44	10	33	54	24	55	49	47	166
Libya	72	0	59	0	0	25	64	65	48	0	33	185

Sources: EDBI, 2018. Ease of Doing Business Index

4. HDI:

The following table shows the performance of the Arab countries in HDI. It is clear that United Arab Emirates, Qatar and Saudi Arabia lead with good scores mainly in gross national income and mean years of schooling.

Table (7): Arab countries scores in HDI and its 4 components

HDI	Life expectancy at birth	Expected years of schooling	Mean years of schooling	Gross national income PPP USD	Overall Score	Rank
United Arab Emirates	77	14	11	67,805	0.9	34
Qatar	78	13	10	116,818	0.9	37
Saudi Arabia	75	17	10	49,680	0.9	39
Bahrain	77	16	9	41,580	0.8	43
Oman	124	14	10	36,290	0.8	48
Kuwait	75	14	7	70,524	0.8	56
Lebanon	80	13	9	13,378	0.8	80
Algeria	76	14	8	13,802	0.8	85
Jordan	75	13	10	8,288	0.7	95
Tunisia	76	15	7	10,275	0.7	95
Libya	72	13	7	11,100	0.7	108
Egypt	72	13	7	10,355	0.7	115
Morocco	76	12	6	7,340	0.7	123

Sources: HDI, 2018. Human Development Index

5. GII:

Table 8 shows the scores of the Arab countries measured by the GII. Again, it is clear that the Gulf countries lead in this index. However, all the Arab countries suffer from weak performance in creative output and knowledge & technology outputs followed by human capital and research pillars then, business and market sophistication pillars.

Table (8): Arab countries scores in GII and its 7 pillars

GII	Institutions	Human Capital and Research	Infrastructure	Market Sophistication	Business Sophistication	Knowledge & Technology outputs	Creative outputs	Rank
United Arab Emirates	78	47	57	54	48	26	31	38
Qatar	68	36	58	44	27	24	29	51
Kuwait	54	26	50	47	21	30	29	60
Saudi Arabia	52	48	49	52	33	20	23	61
Tunisia	56	43	43	37	22	23	28	66
Oman	62	40	48	45	22	16	28	69
Bahrain	51	28	54	46	27	21	24	72
Morocco	57	25	50	42	20	20	27	76
Jordan	61	31	40	36	19	19	30	79
Lebanon	49	27	39	45	30	14	23	90
Egypt	44	23	38	39	20	21	22	95
Algeria	50	26	40	33	20	13	15	110
Libya	-	-	-	-	-	-	-	-

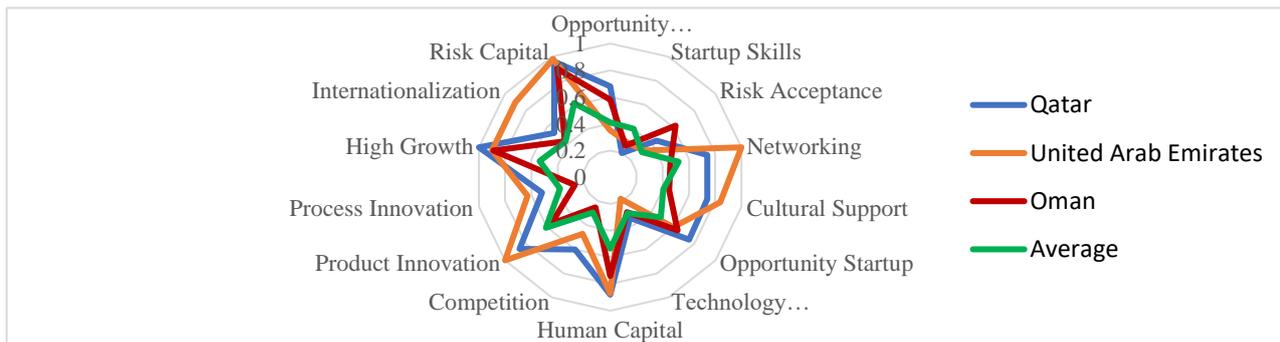
Sources: GII, 2018. Global Innovation Index

Conclusion and Recommendations

The results indicate that the GEI is affected by the indices used in the analysis and also influences them. Accordingly, any improvement occurs to one of GEI pillars or any enhancement in GEI ecosystem will affect the country’s score in one or more of the five indices used in this study and will lead to economic development.

The following figure shows the average results of the selected Arab countries in the 12 pillars of the GEI with the top 3 Arab countries namely, Qatar, United Arab Emirates and Oman:

Figure (2): The GEI scores for top Arab countries



Source: GEI, 2018. Global Entrepreneurship Index

It is observed from the figure that most of the Arab countries suffer from bad scores in risk acceptance, startup risk, technology absorption as well as competition. As a result, the government role is to target weak areas through policies aiming for a better performance in the selected five indices and will improve the scores and rankings of them and hence contribute to economic growth and economic development.

This section provides policy recommendations to develop and improve GEI pillars and how it would affect the selected indices. Firstly, concerning opportunity perception pillar, the government can enhance it by encouraging entrepreneurs through tax facilitations, launching initiatives to promote startups and entrepreneurial success stories. This will be reflected in enhancement in Institution pillar of the GCI, starting a business & paying taxes of the EDBI as well as institutions pillar of GII.

Secondly, referring to startup skills & human capital pillars, the government can adopt policies aiming at the enrichment of the education system through offering tax credits for educational purposes and policies limiting child labor. Additionally, it can enforce policies for making high school mandatory in addition to supporting the student entrepreneur. As a result, it will affect skills and labor market in the GCI, education pillar in the HDI, human capital and research pillar in the GII.

Thirdly, regarding risk acceptance, opportunity startup, and culture support pillars, the country can improve institutional and regulatory stability, remove conflicts and corruption, and partnership with corporation to support entrepreneurs. Such improvements will be of great effect on macroeconomic stability of the GCI, registering property, dealing with construction permits, enforcing contracts, protecting minority investors, and resolving insolvency pillars of the EDBI, customs pillar of the LPI, business and regulatory environment pillars of the GII.

Fourthly, for networking, technology absorption and process innovation pillars, they can be targeted through encouraging and sponsoring entrepreneurs in public events, initiating incubation spaces, providing leading technologies, in addition to improving the quality of scientific institutions. That would affect business dynamism, innovation capability and ICT adoption of the GCI, knowledge creation, impact & diffusion, and ICTs of the GII, tracking and tracing of the LPI.

Fifthly, regarding competition and product innovation pillars, the government can improve them through fostering collaboration between universities and industries, protecting property rights as well as removing market inefficiencies and ensure fair competitive practices. The mentioned policies will

be of effect on product market and market size of the GCI, Investment, trade, competition, and market scale as well as creative goods and services of the GII.

Lastly, considering high growth, internationalization and risk capital pillars, the government can improve those pillars by reducing barriers to obtain equity finance, facilitates complex networks to make products and provide venture capital and private equity finance. Those actions will be reflected positively on financial system pillar of the GCI, getting credit pillar of the EDBI, standard of living pillar of the HDI, credit pillar of the GII.

This research study laid down some principles of the effect of GEI on economic development through affecting top development indices, the future study can work on quantifying the effect of GEI on GDP and economic development stage of the Arab countries. Consequently, the paper provides a roadmap for Arab countries governments on how to tackle and improve its economic performance and enhance its level of economic development through improving GEI pillars which would be reflected as improvement in some of the other five indices and help in achieving economic growth and economic development.

References

- Acs Zoltan, L. S. (2017). The global entrepreneurship index. In Global Entrepreneurship and Development Index 2016. *SpringerBriefs in Economics*, 19-38.
- Acs, Z. a. (2004). Employment growth and entrepreneurial activity in cities. *Regional Studies*, 38(8), 911-927.
- Acs, Z. B. (2009). The knowledge spillover theory of entrepreneurship. *Small business economics*, 32(1), 15-30.
- Acs, Z. D. (2005). Growth and Entrepreneurship: An Empirical Assessment. *Centre for Economic Policy Research*.
- Acs, Z. J. (2006). *Entrepreneurship, Geography, and American*. Cambridge University Press.
- Acs, Z. J. (2010). *Global entrepreneurship and the United States*. WASHINGTON DC: SMALL BUSINESS ADMINISTRATION .
- Ács, Z. J. (2012). . *Global entrepreneurship and development index 2012*. Edward Elgar Publishing.
- Acs, Z. J. (2014). National systems of entrepreneurship: Measurement issues and policy implications. *Research Policy*, 43(3), 476-494.
- Aminova, M. (2019). *Entrepreneurship and Innovation Ecosystem in 22 Arab countries: the Status Quo, Impediments and the Ways Forward*. ITU.
- Anokhin, S. G. (2008). The Journey from Novice to Serial Entrepreneurship in China and Germany: Are the drivers the same? *Managing Global Transitions*.
- Arab Monetary Fund. (2019). *تقرير آفاق الاقتصاد العربي*. Arab Monetary Fund.
- Audretsch, D. a. (2005). Entrepreneurship Capital and Regional Growth. *The Annals of Regional Science*, 39.
- Audretsch, D. B. (1994). Entrepreneurial activity, innovation and macroeconomic fluctuations. *Innovation in technology, industries and institutions*, 173-183.
- Audretsch, D. B. (2002). Growth regimes over time and space. *Regional Studies*, 36(2), 113-124.
- Audretsch, D. B. (2006). Entrepreneurship and economic growth. *Oxford University Press*.
- Audretsch, D. B. (2007). Entrepreneurship capital and economic growth. *Oxford Review of Economic Policy*, 23(1), 63-78.
- Balioune-Lutz, M. (2015). Taxes and entrepreneurship in OECD countries. *Contemporary Economic Policy*, 33(2), 369-380.
- Carree, M. A. (2010). The impact of entrepreneurship on economic growth. *Springer*, 557-594.

- Casson, M. (1982). *The entrepreneur: An economic theory* (Barner and Noble, Totowa, NJ. *Barner and Noble, Totowa, NJ*).
- Dejardin, M. (2000). *Entrepreneurship and economic growth: An obvious conjunction. The Institute for Development Strategies, Indiana University.*
- Deloitte. (2017). *Opportunities for Arab youth employment in the hospitality, technology and media industries in the MENA region.*
- Doran, J. N. (2016). Entrepreneurship and employment growth across European regions. *Regional Studies, Regional Science*, 3(1), 121-128.
- Erken, H. P. (2008). "Total Factor Productivity and the Role of Entrepreneurship. *Friedrich Schiller University and the Max Planck Institute of Economics.*
- GEI. (2018). *Global Entrepreneurship Index*. Washington, D.C., USA: The Global Entrepreneurship and Development Institute.
- Hessels, J. a. (2011). Entrepreneurship, export orientation, and economic growth. *Small business economics*, 37(2), 255-268.
- Ianchovichina, E. (2018). *Eruptions of Popular Anger, The Economics of the Arab Spring and Its Aftermath*. International Bank for Reconstruction and Development / The World Bank.
- ILO. (2013). *Global Employment Trends for Youth. A generation at risk*. Geneva: ILO.
- ILO. (2015). *World Employment and Social Outlook - Trends 2015*. Geneva: ILO.
- IMF. (2019). *World Economic Outlook*. Washington, DC 20090, USA: IMF.
- Jean-François Arvis, L. O. (2018). *Logistics Performance Index "Connecting to Compete 2018_Trade Logistics in the Global Economy"*. Washington, DC: The World Bank.
- Justin Doran, N. M. (2018). The role of entrepreneurship in stimulating economic growth in developed and developing countries. *Cogent Economics and Finance*.
- Khoury, R. (2019). Poverty, inequality and the structural threat to the Arab region. *Shifting Global Politics and the Middle East*.
- Mariet Ocasio, V. (2016). Financing village enterprises in rural Bangladesh: What determines non-farm revenue growth? *International Journal of Development*, 15(1), 76-94.
- Martin, R. &. (2007). Social entrepreneurship: The case for definition. *Stanford Social Innovation Review*, 28-29.
- Moore, J. (1993). Predators and Prey: A New Ecology of Competition. *Harvard Business Review*.
- Naudé, W. (2010). Entrepreneurship, developing countries, and development economics: new approaches and insights. *Small business economics*, 34(1), 1.
- Páger, B. L. (2016). Measuring entrepreneurship and optimizing entrepreneurship policy efforts in the European Union. *CESifo DICE Report*, 14(3), 8-23.
- Pittaway, L. (2005). Philosophies in entrepreneurship: a focus on economic theories. *International Journal of Entrepreneurial Behavior & Research*, 11(3), 201-221.
- Rosted, J. (2012). Understanding Business Ecosystems. *FORA Group*.
- Sanchita Bansal, I. G. (2019). Social Entrepreneurship as a Path for Social Change and Driver of Sustainable Development: A Systematic Review and Research Agenda. *Sustainability*, 11(1091), 28.
- Sander Wenekers, A. V. (2005). Nascent entrepreneurship and the level of economic development. *Small business economics*, 24(3), 293-309.
- Schwab, K. (2018). *The Global Competitiveness Report*. World Economic Forum.
- Soumitra Dutta, B. L.-V. (2018). *Global innovation Index "Energize the world with innovation"*. INSEAD and WIPO.
- Spigel, E. S. (2016). *Entrepreneurial Ecosystems*. Utrecht School of Economics, Tjalling C. Koopmans Research Institute.
- The world bank . (2018). *Ease of Doing Business Index*. Washington DC : The world bank .
- Thurik, A. D. (2001). "Linking Entrepreneurship to Growth", *OECD Science, Technology and Industry Working Papers*, 2001/2. Paris: OECD.

- UNCTAD. (2012). *Entrepreneurship Policy Framework and Implementation Guidance*. UNCTAD.
- UNCTAD. (2014). *Empowering Women Entrepreneurs through Information and Communications Technologies*. UNCTAD.
- UNCTAD. (2014). *The Least Developed Countries Report 2014. Growth with Structural Transformation: A post-2015 development agenda*. UNCTAD.
- UNCTAD. (2018). *Promoting Entrepreneurship for Sustainable Development: A Selection Of Business Cases from the Empretec Network*. Geneva: UNCTAD.
- United Nations Development Programme. (2018). *Human Development Index*. New York: UNDP.
- Van Stel, A. M. (2005). The effect of entrepreneurial activity on national economic growth. *Small business economics*, 24(3), 311-321.
- Venkataraman, S. S. (2000). The promise of entrepreneurship as a field of research. 217-226.
- Wennekers, S. A. (2005). Nascent entrepreneurship and the level of economic development. *Small business economics*, 24(3), 293-309.
- Wennekers, S. A. (2006). *Entrepreneurship at country level: economic and non-economic determinants*. Erasmus University Rotterdam , Erasmus Research Institute of Management.
- Wong, P. K. (2005). Entrepreneurship, innovation and economic growth: Evidence from GEM data. *Small business economics*, 24(3), 335-350.
- Zoltán J. Ács, L. S. (2018). *The Global Entrepreneurship Index 2018*. Washington, D.C.: The Global Entrepreneurship and Development Institute.

A Preliminary Research on Purchasing Relief Supplies in Disasters Response

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Abstract

Purpose: The immediate provision of adequate relief supplies is critical for the effective and efficient disaster relief operation. Procurement of relief supplies is a fundamental and complex element of DROs that facilitates the provision of the necessary relief supplies. Unpredictable and uncertain disasters increase the complexity of relief supply procurement in DROs. This study presents a state-of-the-art and organized insights into the most recent literature on procurement of relief supplies in DROs.

Methodology: The study adopted a systematic method for the identification and analysis of existing literature in disaster relief supplies procurement.

Findings: There is increasing scholarly research in the field. A good number of studies have focused on the primary activities of procurement. The study reveals the need for more empirical studies focused on procurement support activities in disaster relief operations.

Research Implications/limitation: The study provides a better understanding of the relevance of procurement in disaster relief. Only refereed articles published in English language is within the boundary of this review. Other works such as Conference papers, book chapters were out of scope

Originality/Value: The study contributes to the growing literature and provides the groundwork for supplementary theoretical analysis of relief procurement.

Keywords: Procurement, Disaster, Disaster relief, Relief chain, Review.

Introduction

The world has been impacted by diverse disasters that resulted through either natural occurrences or Human induced activities. These disasters often occur suddenly and the importance of effective disaster relief operations (DRO) remains unquestionable. The immediate provision of relief supplies following the aftermath of disasters is imperative. Expenditure related to procuring relief supplies has been estimated to account for about 65% of the total expenditure in DROs (Falasca and Zobel, 2011). Procurement of relief supplies is a fundamental and complex element of DRO that facilitates the availability of adequate relief supplies (Abreu et al., 2019; Ertem et al., 2010). The complexity of relief supplies procurement increases in the presence of unpredictable disasters, inadequate resources, donor expectations, distinct stakeholders (Ertem et al., 2012). DROs is dependent on the effectiveness of relief supplies procurement. Accordingly, researchers and practitioners are paying more attention to the field, seeking new ways to solve problems for the improvement of the entire procurement process in DROs. This paper aims to provide an up-to-date study on disaster relief procurement. To begin, the

review methodology is described (section 2). Next, the main findings and discussion from the review analysis is presented (Section 3). This paper presents its conclusion in section 4.

Literature Review Methodology

Reviewing relevant literature is a fundamental part of any research. The literature review encompasses all the pre-existing studies completed and published in the field and functions as a foundation that holds the present research (Banomyong et al., 2019). Qualitative and quantitative analysis is applied in this study. Both methods of analysis complement each other in research. Seuring et al., (2005) explained that the application of qualitative and quantitative methods is an imperative means to conduct structured literature reviews. Figure 1 depicts the steps that provide practical guidance in this literature review.

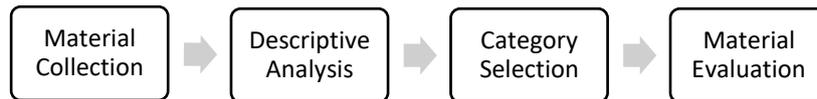


Figure 1: Literature review guideline

Source: Seuring et al., (2005)

To begin with, the objective of the review was defined. Subsequently, the search was conducted in Web of Science and Scopus. The choice of database was dependent on the presence of compiled data in relation to abstracts, books and conference proceedings. Relevant keywords (emergency, humanitarian, disaster, relief, procur*, purchas*, buy, sourcing) for the search were selected based on previous research articles in the field and were applied in the “Title”, “Abstract”, “Keywords” fields. Only refereed articles authored in English from 2008-2021 were taken into account.

To assess the publication trends and position this study in the dynamic context of the field, formal aspects of articles collected were evaluated to assess the amount of publications per year and papers per journal. Mayring, (2000) highlighted that the content analysis approach is dependent on a framework that encompasses different dimensions and categories drawn from the adoption of a deductive-inductive approach. Table 1 presents the dimensions of this literature review, its respective categories and sub-categories. The adoption of these categories is dependent on previous literature (Galindo & Batta, 2013; Moshtari et al., 2021; Seifert et al., 2018).

Table 1: Dimensions and Categories adopted for review analysis

Dimension	Categories
Research Focus	1. Primary activity 1.1. Cost analysis 1.2. procurement strategy 1.3. Supplier selection 1.4. Contracts

2. Supporting activity
 - 2.1. Procurement organization
 - 2.2. Procurement objectives
 - 2.3. Procurement process
 - 2.4. Inter-organisational relationship

Research Approach

1. Simulation and Modelling
2. Conceptual and Literature review
3. Case study
4. Survey

Firstly, articles were grouped based on the research focus. This category dimension has been adopted in previous literature reviews (Seifert et al., 2018). This grouping is used for quantitative analysis to pinpoint if research in this field rather concentrates on primary activities or support activities. The sub-categories of this dimension will be relevant for qualitative content analysis (see section 3.3). Research approach is the second dimension utilized in this study. Articles are grouped into simulation and modelling, empirical and conceptual and review studies. Previous studies (Kunz & Reiner, 2012) has applied this category to draw conclusions on neglected methods in the research field. Finally, the study presents the evaluation and categorization of the article sample.

Results and Discussions

In this section, we utilize various methods to present and discuss the key findings from our analysis.

Descriptive Results

Relevant articles were collected and analyzed based on the review methodology (section 2). These studies were documented between 2008 and 2020. Figure 2. shows that the amount of literature continues to increase yearly. However, the previous year saw a very limited number of paper. This validates the necessity for an up-to-date literature review as well as a need for academia to pay more attention to the field. In 2011, there was a significant increase in the number publications, mainly due to the introduction of a new journal; Journal of Humanitarian Logistics and Supply Chain Management (JHLSCM) in relation to disaster relief operations. This trend demonstrates that the field of procurement in disaster relief has been attracting increasing interest in the recent decade. Table 2 shows the number of papers published in the top 10 journals. Different journals contain several published articles.

Quantitative content analysis

Results along the lines of the dimensions will be presented in this section. For “Research Focus”, the analysis reveals that most studies (31) focus on the primary activities (61%). The dimension “secondary

activities” contains 20 studies, which is approximately 39% of the entire sample. From further analysis of studies on primary activities and its sub- categories, majority of the studies focused on the supplier selection (39%) and 9 studies (29%) were concerned with contract. Only 5 studies (16%) were based on cost-analysis and procurement strategy respectively (See Figure 4).

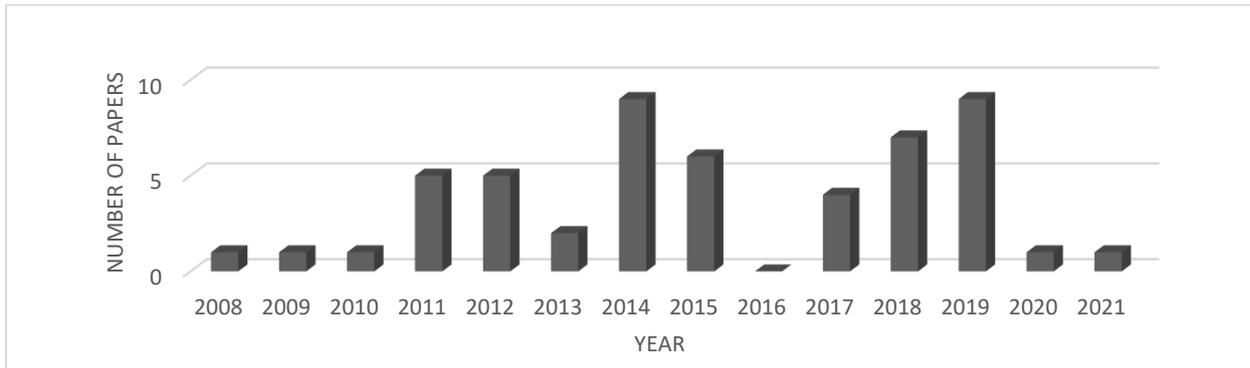


Figure 2: Distribution of selected articles by publication year

Table 2: Number of research publication per Journal

Journal name	Number of papers
Journal of Humanitarian Logistics and supply chain management	11
Computers and Industrial Engineering	3
International Journal of Disaster Risk Reduction	3
International Journal of Physical Distribution and Logistics Management	3
Journal of Public Procurement	3
Production and Operations Management	3
Annals of Operation Research	2
European Journal of Operational Research	2
International Journal of Procurement Management	2
International Journal of Production Economics	2

Concerning the sub-categories of secondary activities, studies focused mainly on procurement process (40%). Only 10% of the studies focused on the procurement organization as depicted on Figure 5. The distribution of the selected literature with respect to the research approach is presented in Figure 6. Most of the studies adopted the simulation and modelling (23 studies), this is in line with previous

literature reviews (Altay and Green, 2006; Kunz and Reiner, 2012; Leiras et al., 2014). Empirical studies follow with a total number of 21 articles, which reflects an improvement from other studies (Natarajarathinam et al., 2009). However, in line with previous literature, more studies should adopt empirical research methods which will provide more support and knowledge in the field (Pedraza Martinez et al., 2011). Only 8 published works made up the conceptual research in the field.

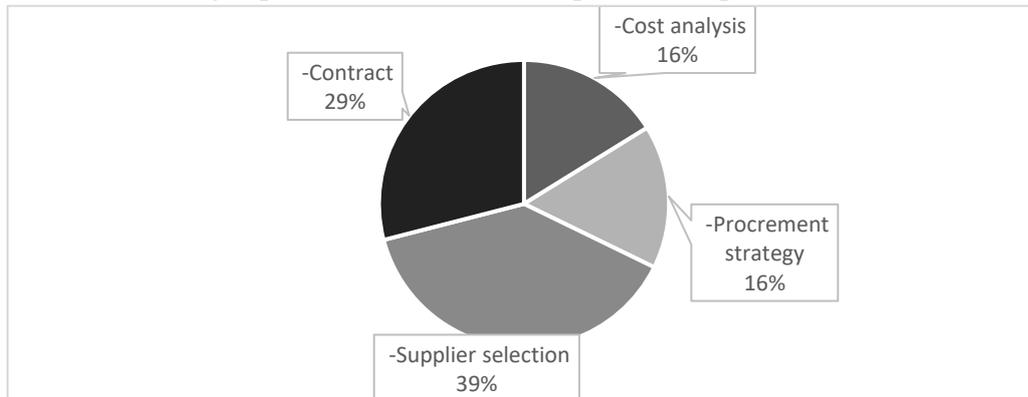


Figure 3: Distribution of Primary activities studies

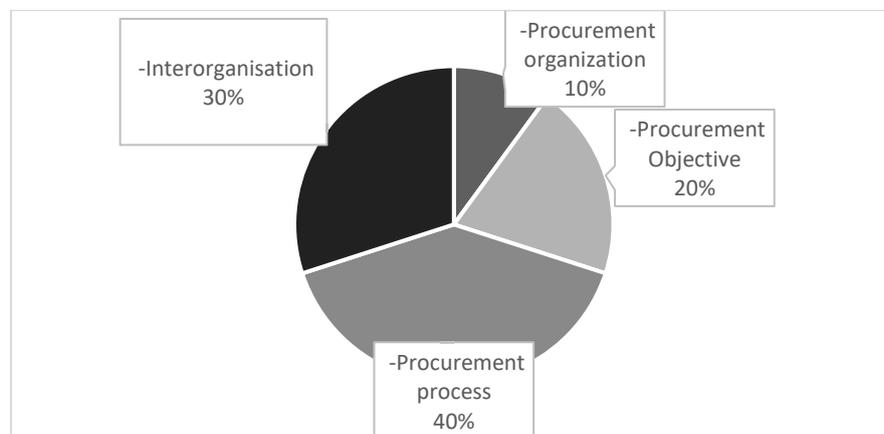


Figure 4: Distribution of supporting activities studies

Qualitative content analysis

The analysis has been conducted according to the main contributions of the studies as summarized below. The category “primary activity” in relief supply procurement encompasses four sub-categories; cost analysis, procurement strategy, supplier selection and contracts.

For cost analysis, Moshtari et al., (2021) discussed that relief organizations collect, cleanse, classify and analyze its expenditure data along the lines of why a particular amount of fund is spent? How often it is spent; what the funds is spent on? To check that the organization cost goals are met. For development programs, Eftekhari et al., (2014) analyzed the attributes of optimal procurement policies in disaster relief operations. To highlight the importance of adopting economical practices in fleet management, they utilized linear programming and quadratic control models to categorize the best policies that have been adopted in vehicle procurement for DROs. In DROs, procurement from local and regional sources is often claimed to be immediate and cost-effective when compared to the international counterparts. Lentz et al., (2013) investigated the US-funded local and regional relief purchasing activities in nine of their host countries against the international procurement activities to the same countries during the different periods to produce estimates of immediate response and cost-effectiveness. From analysis, cost-effectiveness is considerably dependent on the type of relief supply

procured. Özpolat et al., (2015) theoretically and empirically analyzed procurement of food aid by likening approaches practiced by the United States (US) with those of the United Nations (UN) and the European Union (EU). The US approach is referred to as the “donor country approach” (DCA) and the UN/EU approach as the “recipient country approach”. The study reveals that none of the aforementioned approaches is more efficient and a more agile mixed-strategy approach was developed. In relation to procurement strategies, the sourcing of disaster relief supplies is influenced by the market complexity and the related relief organization (Kraljic, 1983). To aid and optimize procurement in DROs, Falasca and Zobel, (2011) presented a two-stage stochastic programming model to guide decision makers in the development of more efficient and effective plans in DROs. The model considered diverse relief uncertainties, different logistics constraints and other operational constraints.

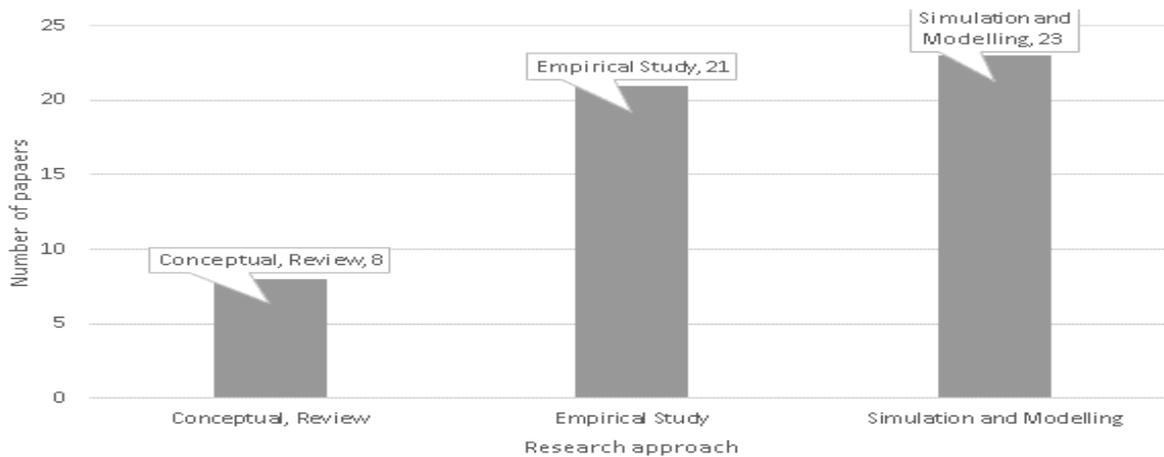


Figure 6: Distribution of selected papers by research approach

By adopting the emergency/dual procurement strategy, Iakovou et al., (2014) explored the possible advancement of DROs performance. Precisely, a discrete event simulation (DES) was developed to aid stakeholders define the relevance of alternative suppliers. Celentano et al., (2019) investigated how procurement strategies impacted the speed of relief supplies procurement. The 2015 Nepal earthquake was applied as a case-study.

The complexity of DROs separate supplier choice in DROs from those in the business settings. Deciding on the choice of suppliers in DROs is a strategic issue for stakeholders. To advance knowledge, Venkatesh et al., (2019) developed a fuzzy AHP-TOPSIS analytical framework to support stakeholders in selecting supply partners in DROs. Supply partner selection criteria for procuring relief supplies such as logistics performance, legal and governance, sustainable operations, responsiveness, partnership strategy and operational factors were presented. Along the same line, Balciik & Ak, (2014) examined the challenge a relief organisation that plans to adopt framework agreements (quantity flexibility contract) with diverse relief suppliers, encounters in supplier selection for immediate and economical relief procurement. They argue that the utilisation of the quantity flexibility contract supports relief organisations to ensure the procurement process for relief supplies is effective. Emphasising that the impacts of disasters overwhelms the available local capacity, Kim et al., (2019) explored the collaboration between relief organisations and the private sector, precisely with collaborating logistics service provider (CLSP). They adopted multi-criteria decision making (MCDM) methods and suggested a set of factors for ranking and selecting the appropriate LSPs. The study revealed that the quantity framework agreement supports relief organizations planning to restructure their procurement process and enables efficient and effective post-disaster procurement. Mustafa A.

Ertem et al., (2012) explored the bidding process in relief supplier selection for effective procurement process. They argue that announcement options are more effective to relief suppliers along with the auctioneer.

For contract, the buyers requirements and beneficiaries influences the contract structure of relief organisations with their suppliers. Hu et al., (2019) examined the involvement of the government authority in procuring relief supplies. Taking into account the interest of the suppliers, they argued that the adoption of put option contract will aid in the reduction of inventory risk in relief supply procurement. Wang et al., (2015) investigated the gains of option contracts. Considering, the presence of risk, they underlined that there is a balance in profit sharing between the relief supplier and the buyer. Option contracts enables relief supply chain coordination. Relief organisations utilise framework agreements to collaborate with suppliers for prepositioning of relief items. Wang et al., (2019) explored the fixed framework agreement that enables a platform for government authorities to secure relief supplies from supplier pre-disaster. Based on analysis, they argue that relief suppliers are not triggered to optimise their services by the nature the fixed framework agreements. Regardless of its predetermined terms. The integration of bonus contracts into fixed framework agreement is proposed. Taking into account uncertainty in relief demands, resource wastage and cost-efficiency, Zhang et al., (2019) proposed the commitment contract that involves the procuring government and relief suppliers. The contract complements both Procurement and inventory decisions of perishables.

The category “support activity” consists of four sub-categories; procurement organisation, procurement strategy, procurement objective and inter-organisational relationship. Concerning procurement organisation, Kunz et al., (2015) examined and proposed a framework for fleet management that is dependent on a longitudinal case study with United Nations High Commissioner for Refugees (UNHCR). The study revealed that procurement of relief supplies (vehicles) is dependent on the available funding. Charles et al., (2016) highlighted the need for further analysis into the pros and cons of encouraging local capacity against support emerging economies in relation to relief procurement. Kovács et al., (2012) proposed a conceptual framework for analyzing the relevant knowledge, logisticians in disaster relief operations should possess.

In relation to Procurement objectives, van Kempen et al., (2017) conducted an analysis on life-cycle sustainability for sourcing scenarios in a disaster relief chain. They suggested that relief organisations can utilise this analysis to identify impacts (environmental, social and economic) on their network. Wild and Zhou, (2011) propose a conceptual framework for collaborative ethical procurement in disaster relief operations. In relation to the relationships between DROs and donors, they underlined that ethical risk in disaster relief operations is different from that of the business settings.

For procurement processes, Siawsh et al., (2019) utilised socio-technical systems to investigate the effect of power as a human factor on decision-making in procurement process. The study revealed fundamental elements that acts as impediments to the effectiveness of the procurement process. Following hurricane katrina, Atkinson and Sapat, (2012) conducted a survey to investigate the function of organisational practices that supports or limits active and responsible behaviour in procurement process. Findings suggest that the effectiveness and efficiency of the procurement process is dependent on the behaviour. Exploring the bottlenecks in the preparedness of disaster relief operations, Buddas, (2014) utilises the theory of constraints and develops a theoretical bottleneck analysis framework. They highlight the need for long-term planning of relief supply procurement along with relief organisation commitment to tackle the bottlenecks in the procurement process. Procurement processes in disaster relief operations are disrupted by diverse risk factors. In this way, Jahre, (2017) explores risk mitigation strategies adopted by relief organisation to optimise the relief operation and proposes a framework.

The study reveals that mitigation strategies that is connected to relief sourcing and procurement, specifically, in relation to relief supplier relationships has not attracted much interest from academia. Pontré et al., (2011) developed a methodology for managing relief supplies procurement risks in 26 countries.

Taking into account, inter-organizational relationships, Pazirandeh & Herlin, (2014) investigated the influence of cooperative purchasing on the buyers' purchasing power. Findings suggest that all sources of power are dependent on cooperative purchasing. Relief supply buyers that are interested in cooperative purchasing must take account of its effects and structure processes to minimise the effects of its impact. Vaillancourt, (2017) investigated the role of UNICEF Supply Division in group purchasing. The study suggests that the supply division employs its practical and business experience, supplier affiliation programs and e-procurement in the procurement process. Abreu et al., (2019) adopts the proposed Kraljic's framework to the DROs to analyze relevant supplier relationships. J. Zhang et al., (2015) highlighted the relevance of public-private-people partnership (4P) approach for the improvement sustainability and value of money in post-disaster scenarios

Conclusion

In this study, a review of the literature on disaster relief procurement was conducted. Relevant research articles published from 2008-2021 were identified, classified and evaluated. The review enabled the identification of research trends and conclusions for future studies. The main conclusions are the need for more studies in the field. There have been increasing interest from academia however, in the previous year, very limited research was conducted. Research on the support activity of relief procurement should receive more attention, precisely, exploring procurement objectives in disaster relief operations. This research also reveals that most studies have applied real-world cases to support results. However, suggestions are that more case study and survey methodologies are employed studies to present more knowledge of real-world problems. Contrary to claims that purchasing relief supplies from local and regional sources is cost-effective when compared to international sources, the study reveals that cost-effectiveness in procurement is dependent on the type of relief supplies purchased. Purchasing relief supplies is dependent on market complexity and the procuring relief organization. Only research studies collected from peer-reviewed journals were included in this study, the inclusion of relevant practitioner studies is suggested as an extension for future studies.

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References

- Abreu, A., Lamenza, S., Fontainha, T. C., & Leiras, A. (2019). Purchasing strategies for relief items in humanitarian operations. *Journal of Humanitarian Logistics and Supply Chain Management*, 9(2), 151–171. <https://doi.org/10.1108/JHLSCM-09-2018-0060>
- Altay, N., & Green, W. G. (2006). OR/MS research in disaster operations management. *European Journal of Operational Research*, 175(1), 475–493. <https://doi.org/10.1016/j.ejor.2005.05.016>
- Atkinson, C. L., & Sapat, A. K. (2012). After Katrina: Comparisons of Post-disaster Public Procurement Approaches and Outcomes in the New Orleans Area. In *Journal of Public Procurement*

(Vol. 12).

- Balcik, B., & Ak, D. (2014). Supplier Selection for Framework Agreements in Humanitarian Relief. *Production and Operations Management*, 23(6), 1028–1041. <https://doi.org/10.1111/poms.12098>
- Banomyong, R., Varadejsatitwong, P., & Oloruntoba, R. (2019). A systematic review of humanitarian operations, humanitarian logistics and humanitarian supply chain performance literature 2005 to 2016. In *Annals of Operations Research* (Vol. 283, Issues 1–2, pp. 71–86). Springer. <https://doi.org/10.1007/s10479-017-2549-5>
- Buddas, H. (2014). A bottleneck analysis in the IFRC supply chain. *Journal of Humanitarian Logistics and Supply Chain Management*, 4(2), 222–244. <https://doi.org/10.1108/JHLSCM-10-2013-0036>
- Celentano, G., Escamilla, E. Z., Göswein, V., & Habert, G. (2019). A matter of speed: The impact of material choice in post-disaster reconstruction. *International Journal of Disaster Risk Reduction*, 34(November 2018), 34–44. <https://doi.org/10.1016/j.ijdr.2018.10.026>
- Charles, A., Lauras, M., Van Wassenhove, L. N., & Dupont, L. (2016). Designing an efficient humanitarian supply network. *Journal of Operations Management*, 1, 58–70. <https://doi.org/10.1016/j.jom.2016.05.012i>
- Eftekhari, M., Masini, A., Robotis, A., & Van Wassenhove, L. N. (2014). Vehicle procurement policy for humanitarian development programs. *Production and Operations Management*, 23(6), 951–964. <https://doi.org/10.1111/poms.12108>
- Ertem, M. A., Buyurgan, N., & Pohl, E. A. (2012). Using announcement options in the bid construction phase for disaster relief procurement. *Socio-Economic Planning Sciences*, 46(4), 306–314. <https://doi.org/10.1016/j.seps.2012.03.004>
- Ertem, M. A., Buyurgan, N., & Rossetti, M. D. (2010). Multiple-buyer procurement auctions framework for humanitarian supply chain management. *International Journal of Physical Distribution and Logistics Management*, 40(3), 202–227. <https://doi.org/10.1108/09600031011035092>
- Falasca, M., & Zobel, C. W. (2011). A two-stage procurement model for humanitarian relief supply chains. *Journal of Humanitarian Logistics and Supply Chain Management*, 1(2), 151–169. <https://doi.org/10.1108/20426741111188329>
- Galindo, G., & Batta, R. (2013). Review of recent developments in OR/MS research in disaster operations management. *European Journal of Operational Research*, 230(2), 201–211. <https://doi.org/10.1016/j.ejor.2013.01.039>
- Hu, Z., Tian, J., & Feng, G. (2019). A relief supplies purchasing model based on a put option contract. *Computers and Industrial Engineering*, 127, 253–262. <https://doi.org/10.1016/j.cie.2018.12.015>
- Iakovou, E., Vlachos, D., Keramydas, C., & Partsch, D. (2014). Dual sourcing for mitigating humanitarian supply chain disruptions. *Journal of Humanitarian Logistics and Supply Chain Management*, 4(2), 245–264. <https://doi.org/10.1108/JHLSCM-03-2013-0008>
- Jahre, M. (2017). Humanitarian supply chain strategies – a review of how actors mitigate supply chain risks. *Journal of Humanitarian Logistics and Supply Chain Management*, 7(2), 82–101. <https://doi.org/10.1108/JHLSCM-12-2016-0043>
- Kim, S., Ramkumar, M., & Subramanian, N. (2019). Logistics service provider selection for disaster preparation: a socio-technical systems perspective. *Annals of Operations Research*, 283(1–2), 1259–1282. <https://doi.org/10.1007/s10479-018-03129-3>
- Kovács, G., Tatham, P., & Larson, P. D. (2012). What skills are needed to be a humanitarian logistician? *Journal of Business Logistics*, 33(3), 245–258. <https://doi.org/10.1111/j.2158-1592.2012.01054.x>
- Kraljic, P. (1983). *Purchasing Must Become Supply Management* Peter Kraljic.
- Kunz, N., & Reiner, G. (2012). A meta-analysis of humanitarian logistics research. *Journal of Humanitarian Logistics and Supply Chain Management*, 2(2), 116–147. <https://doi.org/10.1108/20426741211260723>
- Kunz, N., Van Wassenhove, L. N., Mcconnell, R., & Hov, K. (2015). Centralized vehicle leasing in

- humanitarian fleet management: the UNHCR case. *Journal of Humanitarian Logistics*, 5(3), 387–404. <https://doi.org/10.1108/JHLSCM-07-2015-0034>
- Leiras, A., de Brito, I., Queiroz Peres, E., Rejane Bertazzo, T., & Tsugunobu Yoshida Yoshizaki, H. (2014). Literature review of humanitarian logistics research: trends and challenges. *Journal of Humanitarian Logistics and Supply Chain Management*, 4(1), 95–130. <https://doi.org/10.1108/JHLSCM-04-2012-0008>
- Lentz, E. C., Passarelli, S., & Barrett, C. B. (2013). The Timeliness and Cost-Effectiveness of the Local and Regional Procurement of Food Aid. *World Development*, 49, 9–18. <https://doi.org/10.1016/j.worlddev.2013.01.017>
- Mayring, P. (2000). Qualitative Content Analysis. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 1(2), 1–10.
- Moshtari, M., Altay, N., Heikkilä, J., & Gonçalves, P. (2021). Procurement in Humanitarian Organizations: Body of Knowledge and Practitioner’s Challenges. *International Journal of Production Economics*, 108017. <https://doi.org/10.1016/j.ijpe.2020.108017>
- Natarajarathinam, M., Capar, I., & Narayanan, A. (2009). Managing supply chains in times of crisis: a review of literature and insights. *International Journal of Physical Distribution & Logistics Management*, 39(7), 535–573. <https://doi.org/10.1108/09600030910996251>
- Özpolat, K., Ribbink, D., Hales, D. N., & Windle, R. J. (2015). Food aid procurement and transportation decision-making in governmental agencies: The United Nations/European Union versus the United States approach. *Transportation Journal*, 54(2), 159–185. <https://doi.org/10.5325/transportationj.54.2.0159>
- Pazirandeh, A., & Herlin, H. (2014). Unfruitful cooperative purchasing A case of humanitarian purchasing power. *Journal of Humanitarian Logistics and Supply Chain Management*, 4(1), 24–42. <https://doi.org/10.1108/JHLSCM-06-2013-0020>
- Pedraza Martinez, A. J., Stapleton, O., & Van Wassenhove, L. N. (2011). Field vehicle fleet management in humanitarian operations: A case-based approach. *Journal of Operations Management*, 29(5), 404–421. <https://doi.org/10.1016/j.jom.2010.11.013>
- Pontré, J., Welter, V., & Malta, J. N. V. (2011). Risk management in humanitarian procurement and supply chain. In *Journal of Public Procurement* (Vol. 11).
- Seifert, L., Kunz, N., & Gold, S. (2018). Humanitarian supply chain management responding to refugees: a literature review. In *Journal of Humanitarian Logistics and Supply Chain Management* (Vol. 8, Issue 3, pp. 398–426). Emerald Group Publishing Ltd. <https://doi.org/10.1108/JHLSCM-07-2017-0029>
- Seuring, S., Müller, M., Westhaus, M., & Morana, R. (2005). Conducting a literature review-The example of sustainability in supply chains. *Research Methodologies in Supply Chain Management: In Collaboration with Magnus Westhaus*, 91–106. https://doi.org/10.1007/3-7908-1636-1_7
- Siauwsh, N., Peszynski, K., Young, L., & Vo-Tran, H. (2019). Exploring the role of power on procurement and supply chain management systems in a humanitarian organisation: a socio-technical systems view. *International Journal of Production Research*. <https://doi.org/10.1080/00207543.2019.1634293>
- Vaillancourt, A. (2017). Procurement consolidation in humanitarian supply chains: A case study. *International Journal of Procurement Management*, 10(2), 178–193. <https://doi.org/10.1504/IJPM.2017.082786>
- van Kempen, E. A., Spiliotopoulou, E., Stojanovski, G., & de Leeuw, S. (2017). Using life cycle sustainability assessment to trade off sourcing strategies for humanitarian relief items. *International Journal of Life Cycle Assessment*, 22(11), 1718–1730. <https://doi.org/10.1007/s11367-016-1245-z>
- Venkatesh, V. G., Zhang, A., Deakins, E., Luthra, S., & Mangla, S. (2019). A fuzzy AHP-TOPSIS approach to supply partner selection in continuous aid humanitarian supply chains. *Annals of Operations Research*, 283(1–2), 1517–1550. <https://doi.org/10.1007/s10479-018-2981-1>

- Wang, X., Fan, Y., Liang, L., De Vries, H., & Van Wassenhove, L. N. (2019). Augmenting Fixed Framework Agreements in Humanitarian Logistics with a Bonus Contract. *Production and Operations Management*, 28(8), 1921–1938. <https://doi.org/10.1111/poms.13024>
- Wang, X., Li, F., Liang, L., Huang, Z., & Ashley, A. (2015). Pre-purchasing with option contract and coordination in a relief supply chain. *International Journal of Production Economics*, 167, 170–176. <https://doi.org/10.1016/j.ijpe.2015.05.031>
- Wild, N., & Zhou, L. (2011). Ethical procurement strategies for International Aid Non-Government Organisations. *Supply Chain Management: An International Journal*, 16(2), 110–127. <https://doi.org/10.1108/13598541111115365>
- Zhang, J., Zou, W., & Kumaraswamy, M. (2015). Developing public private people partnership (4P) for post disaster infrastructure procurement. *International Journal of Disaster Resilience in the Built Environment*, 6(4), 468–484. <https://doi.org/10.1108/IJDRBE-06-2014-0040>
- Zhang, L., Tian, J., Fung, R. Y. K., & Dang, C. (2019). Materials procurement and reserves policies for humanitarian logistics with recycling and replenishment mechanisms. *Computers and Industrial Engineering*, 127, 709–721. <https://doi.org/10.1016/j.cie.2018.11.013>.

Utilization of Convenience Food as a Trend Among Fine-Dining Restaurants in Muscat

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Abstract

Purpose: This study aimed to investigate the trends and utilization of convenience foods among the fine-dining restaurants around Muscat City, Oman.

Design/methodology/approach: This research study employed a survey or descriptive research design or structure. Also, it employed a quantitative approach to address the inquiries and the questions that were presented. This study also employed the qualitative approach to validate the quantitative data of the responses by drawing answers to open-ended questions in the survey questionnaire.

Findings: The results indicate that most of the fine dining restaurants in Muscat, Oman, utilize 'Ready to Cook' convenience foods. On the restaurants' side, these trends, factors, and criteria are considered because they signify their services and products' quality to optimize productivity. Based on the 'High' acceptability of convenience foods among fine dining restaurants and their consumers, it is conclusive that these stakeholders are liberal enough to innovate to cope with the continuously evolving food industry. The consumers and the fine dining restaurants are also welcoming to using other convenience items as long as the standards and required quality are maintained. Results further revealed that the consumers' level of satisfaction with food served among fine dining restaurants is 'High.'

Originality/value: COVID-19 increased the requirement for convenience foods because it is an effective remedy to support the immediate need of the people. It can also be one way that the restaurant operators can sustain their businesses and avoid shutting their establishments due to the halting of supply chain.

Keywords: Convenience food, Fine-Dining Restaurants, Utilization, Trends

Introduction

Food is a cultural thing because it represents the people, the country, and their way of life. People go out with friends, family, or even alone to enjoy a meal either in fast food or fancy restaurants. Food also has social and economic considerations affecting the consumer's preferences, expectations, and satisfaction. Some people consider the budget over quality food, but most of the time, they also consider both. According to Willcox et al. (2009), a healthy lifestyle can be focused on careful intake of food. However, the fast-life pace and heavy media exploration have led to a pivotal change in

consumers' lifestyles. To some extent, education and sufficient information regarding quality and cost have influenced food purchasing decisions.

Ozturk et al. (2016) mentioned that the three-meals pattern had been altered along with the continuing versatility in the populace's lifestyles. The frequent moving out of the people from their home has made the traditional family gathering during supperless incessant. As a retort to this, people sort out convenience foods intentionally designed for less preparation time. Convenience foods vary and can be in the form of ready-to-eat dishes: pre-cooked, frozen, or processed food products. These foods may include sweets, soft drinks, processed meats and cheeses, pasta, and soup dishes. Convenience foods are often used as raw materials for fast food items and may include nuts, fruits, and vegetables as ingredients to enhance quality and appear healthy (Sharkey, Dean & Nalty, 2012). Ozturk et al. (2016) also explained that the term "convenience" refers to the customer's amenity or comfort experience. This definition is not limited to the inherent characteristics of the product itself, but rather it includes the convenient purchase of easy-to-prepare food products and in general. Alexi et al. (2008) added that the Oxford Dictionary of English defined convenience food as " a food, typically a complete meal, that has been pre-prepared commercially and requires minimum further preparation by the consumer."

Ross (2015) reported that this food segment contributes around 7% of the global food market revenue in 2018, amounting to US \$235 billion. This report provides a clear international forecast for this segment in the incoming years, which is expected an increase 3.8 % or US\$262 billion in 2020. Part of this revenue for the convenience food segment can be generated from the United States, which is expected to reach US\$73 Billion in 2020, which is noted to be at least a 4.5% increase on average every year. This amount is expected to reach US\$293 billion by 2023.

This trend has been explained by the New York University's Department of Nutrition and Food Studies. The said agency emphasized that as people move away from frozen dinner, they are alternatively getting the convenience food options that are recently prepared to retain the essence of "convenience" (Bentley, 2014).

Buckley, Cowan & McCarthy (2007) said that convenience foods offer a more efficient way of preparation by shortening cooking time and requiring minimal human resources. Convenience foods also increase the variety of foods in the market, essential for both the business owners and the customers. Convenience foods have a longer shelf life, and unlike fresh foods, most are non-perishable (Alexy et al. 2008). Convenience foods are also a remedy to seasonality issues, which provides an advantage to some restaurants that use seasonal raw materials like fruits, for example, strawberries and mangos. Additionally, Hindman (2018) said the people's lifestyle in particular of the buyer is evolving into a more relaxed manner, wherein instead of going home to cook, they engaged for recreation. Anent to this, the utilization of convenience foods reduces buying time and food costs. Convenience foods also require lesser space and preparation area. These vital points regarding convenient foods are clear, making it a reason that such is very popular now a day. The popularity of convenient foods has increased and triggered interest among fine-dining restaurants. In this regard, this study was conducted to investigate the trends and factors that affect the utilization of convenient foods among Muscat's fine-dining restaurants. To analyze both customers' and the food industry's viewpoint, this study also opted to investigate the customer's level of satisfaction with the food served among the fine dining restaurants in Muscat.

Objectives of the Study

The present study was pursued to investigate the trends and utilization of convenience food among the fine-dining restaurants around Muscat City, Oman. More specifically, this study aims to achieve the following objectives:

1. To identify the most common convenience foods categories served among fine dining restaurants?
2. To determine the different trends of utilizing convenience food in fine dining restaurants
3. To investigate the utilization of convenience food by the fine dining restaurants in Muscat City
4. To analyze the customers' level of satisfaction with the food served by the restaurants' understudy

Literature Review

Convenience Foods

Gofton (2015) clarified that convenience food is another conventionally used concept opposing healthy or proper nutrition. Convenience food was characterized by either entirely or partially prepared food sources wherein long planning and preparation, culinary skills, and complicated inputs were made simple (Traub, 2013). Pothoff (2014), on the other hand, emphasized that convenience is relatively similar to comfort and clarified that for food to be helpful, it needs to fit into the available example of temporary practices. In other words, he implied that convenience tends to more than time spent on cooking and remembers the quest for comfort for different stages in the temporary procedure, such as preparing the setup, purchasing, planning, cooking, serving, eating, bussing out, and tidying up. Gofton (2015) also emphasized that comfort is not associated with quality but instead with its utilization.

Categories of Convenience Food in the Fine-Dining Restaurant

Siong (2014) stated that there is an assortment of convenience foods, either hot or cold, or food that requires minimal or no effort in preparation. These foods can also be categorized according to how they are prepared or planned. Specifically, these categories of convenience foods used in fine dining restaurants are limited to the following ready to eat food, ready to use food, ready to cook food, and beverages. Siong (2014) characterized ready-to-eat (RTE) convenience food as palatable foods that require either minimal thermal procedures and freezing to eliminate or inhibit pathogens and make the food safe for consumption. Scholliers (2015) added that the ready to eat convenience foods could be directly consumed right after purchase, now without cooking, defrosting, or any complicated preparations. Jackson and Viehoff (2016) emphasized that Ready-to-Use (RTU) food needs minimal cooking preparations frying, steaming, and reconstitution before consumption. Ready to use items that are utilized among fine-dining restaurants include Masalas and fresh-cut vegetables. Cook and Polgar (2013) stated that Ready-to-Cook (RTC) products are an item that requires no further preliminary procedures before cooking. RTCs retain their palatability with minimal thermal procedures and freezing, which is needed to eliminate and inhibit pathogens for safer consumption. RTCs are already partly cooked items wherein procedures are indicated in the package to guide the consumers before eating such. Among these products, noodles; beans; curried blend; vegetable mixes; basmati rice; whole legumes; vegetable curry mixes; potato curry mix; omelets and scrambled egg mix powder; dried vegetables; 1 instant green leafy vegetables; meat, chicken, and mutton soup powder are common among fine-dining restaurants (Antun & Gustafson, 2005).

Trends and Factors in Selecting Convenience Food in Fine-Dining Restaurants

Fine-Dining Restaurants must settle on various choices on which the food they prepare and serve can satisfy their customers, hence the food they purchased (Tillotson, 2004). As the fine-dining restaurants improve sales, the requirement or demand for raw materials also increases. It also becomes busier and needs more people to do the task. At some point, the business owners may remedy the continuous increase of demand and sort out many possibilities to augment their production process. Some fine dining restaurants consider the utilization of convenience foods, if not entirely, part of the production process. Mallinson, Russell, and Barker (2016) said that numerous food suppliers offer a wide assortment of convenience products in response to even fine dining restaurants' immediate needs. Among others are ingredients for the served meals and dishes such as cut fruit, sliced cheese, or processed meats like ham, bacon, and many more. These convenience items add to the efficiency in operation and promote the finished products' consistent quality. In selecting convenience foods, fine dining restaurant owners also settle for products that require less complicated operational logistics, such as those related to the timing of requests, frequency of request, and the period of usability of different items. Also, fine-dining restaurants consider various reasons to choose and favor a few distinct suppliers to manage at their own pace and convenience. This procedure can accumulate additional cost as part of its overhead and be controlled and held constant accordingly (Jackson & Viehoff, 2016). On the other hand, Integrisok (2016) said convenience foods have many adverse effects on people's health, such as weight increase, hypertension, and heart illness, and many. Shove (2003) noted that it is expected because convenience foods contain higher calories, fats, sugars, and other preserving additives to prolong their shelf life. However, Shove also stated that there are various criteria for selecting convenience foods by fine dining restaurants to ensure that they serve the more beneficial convenience foods. These criteria can be the chemical compounds present in the food item such as sodium content and sugars; package and label; sensory quality; and other criteria that may affect the consumers' preferences.

Methodology

This descriptive research utilized a research made survey questionnaire to identify the different trends of using convenience food and determine the factors that affect the utilization of convenience food among the recognized fine dining restaurants. The study employed a quantitative approach to provide a detailed conversation of analysis, processes, and facts; as such, two methods were used to collect the data, the survey technique using the survey questionnaire and the interview to validate the research survey transcripts. The latter was used by the researcher to contextualize the inquiries and to offer a more appropriate approach to the problems that had been hurled. The former such as the interview schedules was used to gather in-depth information for a more thorough analysis of the study variables. There are two survey questionnaires designed to collect data, namely questionnaires for the staff and employees and questionnaires.

The study was conducted inside Muscat, Oman, wherein the four identified fine-dining restaurants had been deliberately classified more precisely as respondents' sources. Purposive sampling was employed. The first group of respondents was the staff in four different fine dining restaurants based in Muscat. The sample size from among the selected restaurants was set to 15 employees to sum up 60 samples. The respondents were categorized according to their job profile, like waiters, chefs, and F&B supervisors. These target populations helped the researcher achieve the research objectives by identifying the various categories of convenience food in the fine-dining restaurants, identifying the trends on the utilization of convenience food in the fine-dining restaurants, and finding out the factors that affect the utilization of convenience foods. Meanwhile, the second group of respondents is the

customers who are eating in the selected restaurants—these groups aided in evaluating food quality by measuring their satisfaction level with their food under study. The number of customer respondents was set to 60 as well. The other method used for collecting the data is using the literature reviews, which are considered support studies for an in-depth discussion of the study subject. The related literature was also utilized as the basis for interpreting the results of the present study. The results can also be corroborated with the previous research theories, facts, studies, wherein similarities and differences were cited along with their respective authors. This study utilized quantitative procedures of analysis. The quantitative data analysis employed descriptive statistics such as percentages, frequencies, mean, and standard deviation to provide numerical values on the study's quantifiable variables. Further, the tabular and textual presentations, analysis of the results, and findings were provided. The data also gave the second-level analysis by considering the practical implications of the results. The third level analysis was generated using the theories and related literature corroborated with the study's obtained findings.

Findings and Discussion

Category of Convenience Foods Utilized among Fine Dining Restaurants

Results in Table 1 indicate that majority (f=20) or 57.1 % of the fine dining restaurants in Muscat utilize the Ready-to-Cook (RTC) convenience foods, while 28.6 % (f=10) utilize Ready to Use (RTU) items. The remaining 14.3 % (f=5) of these restaurants utilize the Ready to Eat (RTE) items.

Table 1: Category of Convenience Foods

Category of Convenience Foods	Number	Percentage
Entire Group	35	100
Ready to Eat (RTE)	5	14.3
Ready to Use (RTU)	10	28.6
Ready to Cook (RTC)	20	57.1

The results showed that most fine-dining restaurants utilize Ready to Cook (RTC) convenience foods. However, the results also noted that some fine dining restaurants in Muscat operate Ready to Use (RTU) and Ready to Eat (RTE) items. These results imply that Muscat's fine dining restaurants still value the effort they exert in preparing their menus even though many available items are Ready to Cook and Ready to Eat. The concept of fine dining itself can model this, wherein food is meticulously prepared ahead of time, whether it is the main ingredient or just a mere condiment for the dish. This is compelled within the judgment that ready-to-eat items and ready-to-use ones were already being prepared. If used in fine dining restaurants, it may harm its quality, especially its sensory quality. Hence the Ready to Cook items were recommended because of the expectation that it is not cooked yet, and the experts still have the chance to remedy such to achieve their desired product quality. These results conformed with Jackson and Viehoff (2016), saying that Ready-to-Use (RTU) food needs minimal cooking preparations frying, steaming, and reconstitution before consumption, which means that the experts in fine dining restaurants still have the chance to adjust according to their standards and quality. Meanwhile, the fine-dining restaurants find it odd to use Ready to Eat items in their menus because they do not have the chance to adjust them according to their standards and quality. This implication is affirming Scholliers' (2015) statement saying that ready-to-eat convenience foods can be directly consumed right after purchase without cooking, defrosting, or any complicated preparations. This is

also true on Ready to Cook products, which is, according to Cook and Polgar (2013), requires no further preliminary procedures before cooking m hence eliminating the concept of fine dining.

Trends, Factors, and Criteria Used in Utilizing Convenience Foods

This section presents the fundamental trends, factors, and criteria for applying convenient foods among fine-dining restaurants. Table 2 findings indicate that the consumers' busy lifestyle has become the most prevailing trend (Rank 1), resulting in the utilization of convenience foods among Muscat's fine dining restaurants. This was agreed upon by 31 respondents from the restaurants. Following this reason (Rank 2) is the ease of preparing these convenience food items that it became popular among fine dining restaurants, which 28 respondents agreed. The origin of the food item, package, or label was voted respectively by 25, and 24 respondents were on the Ranks 3 and 4. Further, 20 respondents from these fine dining restaurants said that the combination of the mentioned reasons is considered trends by most consumers and end-users of convenience foods.

Table 2: Most common trends in the Utilization of Convenience Foods

Trends Utilizing Convenience Foods	Frequency	Rank
Busy Lifestyle of the consumers	31	1
Ease of Preparation	28	2
Origin of the Food	25	3
Package and Label	24	4
All Points are considered	20	5

Fine dining restaurants considered different factors before they decide to purchase a particular item. Table 3 revealed that respondents' convenience foods' sensory quality is the number one factor (Rank 1). This was shown in the frequency (35) of respondents who voted for such. Price and Brand were listed in the Ranks 2 and 3, respectively, agreed by 30 and 20 respondents.

Table 3: Factors Considered in Purchasing of Convenience foods

Factors considered in purchasing	Frequency	Rank
Sensory Qualities (Taste, Aroma, Color, texture)	35	1
Price	30	2
Brand	20	3

Further, Table 4 summarized the different criteria employed by fine dining restaurants before utilizing convenience foods to prepare their menus. It was revealed that the convenience food items' sensory qualities were the most prevailing (Rank 1), among others, wherein 35 or 100 % of the respondents agreed. Cost (Rank 2) was also considered, where 34 of the respondents agreed. Other criteria are Health considerations (Rank 3), Brand (Rank 4), the Source of the item (Rank 5), Packaging and Label (Rank 6), and Preparation Time (Rank 7).

Table 4: Criteria Used in the Utilization of Convenience Foods

Criteria	Frequency	Rank
Sensory Qualities	35	1
Cost (prices)	34	2
Health Considerations	30	3
Brand	25	4
Source	24	5
Packaging and Labelling	23	6
Preparation Time	20	7

Oman's busy lifestyles were considered the most prevailing trend nowadays, resulting in a higher percentage of dining outside. Even fine dining restaurants prefer to use convenience food items to make the preparation easier and cope with the consumers' demands. The ease of preparation of these convenience food items was also considered another trend for convenience food items that require less preparation time or even none because they can be readily incorporated into the menus and consumed right away. Convenience foods also appear in attractive packages and convincing labels; thus, the consumers and the operators of the fine dining restaurants are easily convinced to use them in their menus. While any one of these trends is considered based on utilization among fine dining restaurants, other establishments prefer to consider all these reasons when utilizing convenience foods. Partly, the use of convenience foods agrees with (Traub, 2013) emphasizing the notion that convenience food is characterized by either entirely or partially prepared food sources wherein long planning and preparation, culinary skills, and complicated inputs were made simple that suits the busy lifestyles of the people in Oman today.

This is also the same with Pothoff's (2014) claims, stating that convenience is relatively similar to comfort and clarified that for food to be helpful, it needs to be easy to prepare to maximize the production and meet the high demand among restaurants. Mallinson, Russell, and Barker (2016) said that numerous food suppliers offer a wide assortment of convenience products in response to even the fine dining restaurants' immediate needs. Thus, these convenience food items have to become attractive in such a way that they can compete between and among other suppliers of these items. Results revealed that sensory quality, price, and brand are the most considered factors by fine dining restaurants before utilizing convenience foods in their menu. It appears that the sensory quality, such as taste, aroma, color, and texture of the food serve among fine dining restaurants, is the main focus of the operators. It goes without saying because sensory quality determines the acceptability of the food before anything else. The food item is also standardized according to the sensory attributes; thus, the fine dining restaurant must conform with this agreeable fact. Results showed that the product's price and brand are considered to utilize fine dining restaurants' convenience foods. Simply because price determines productivity wherein firms have to watch out to maximize the profit. However, to ensure that quality is not jeopardized, the brand of the convenience food being utilized is also considered and given importance.

These results on sensory quality are considered by the fine dining restaurants confirmed with Edlong (2019); sensory qualities like taste are among the most criteria that fine dining restaurants are looking for in convenience foods. This is because many fine-dining restaurants search out reasonable extravagance so that convenience foods have to be healthy and delicious. Since fine-dining restaurants consider various reasons, they can choose and favor a few distinct suppliers to manage at their own pace and convenience. Jackson and Viehoff (2016) said that this procedure could accumulate additional cost as part of its overhead and be controlled and held constant accordingly; thus, the price must be watched over. Similarly, Manalili (2011) said that the brand and provides information regarding the product. This information allows the fine dining restaurant to settle on better decisions in the marketplace. Fine dining restaurants also employ specific criteria before utilizing convenience foods to prepare their menus. The results revealed that sensory qualities, cost, health considerations, brand, source of the item, packaging, label, and preparation time were the most prominent. Sensory attributes and expenses are usually considered in the use of any ingredient on the menu. As stated, sensory quality determines the acceptability of the menu, while cost determines the resulting profit. Other restaurants are even using flavor enhancers to attract more customers. On the other hand, health aspects were also considered because most consumers now are health conscious. They might have a negative impression on establishments that use convenience foods in their menus. However, brand, source of the item, packaging, label, and preparation time are part of a must-have product package. These criteria often contribute to the efficiency and higher productivity of fine dining restaurants and need to be considered.

These results conform with Kapanen, Kaarakainen, and Jallinoja (2017) that some establishments are looking for flavors that can hide the food source's original taste, such as those found in plant protein some enhancing. Srinivasan and Shende (2015) also confirm that convenience foods promote efficiency as they help save energy. For instance, essential stocks and sauces are accessible in got dried-out structures and thus inhibited the chefs from utilizing the traditional and straightforward processes that are very tedious. Like in the results, Nettle (2019) emphasizes that fine dining restaurants added a healthy convenience food concept to choose such. While the fine-dining restaurants are searching for less complicated and thoroughly prepared foods, they also vie for healthy food items. Somehow, those that appear natural and unsaturated products because of the belief that health is the key driver in making decisions and selecting food items. The product package and label are essential criteria and have confirmed the necessary rulings stated by Luangsaard, Siripatrawan, and Suppakul (2008). The author said that it provides data regarding the source or the brand, which is associated with the price, health benefits, nutrition facts, and much more information regarding the food item.

Level of Customer Satisfaction on Food Served Among Fine Dining Restaurants in Oman

The level of acceptability of convenience foods served among the fine dining restaurants has to be assessed to evaluate the customer's satisfaction with the fine dining restaurants' food. Table 5 Results indicated that the majority (f=19-) or 54.3 % of the respondents said these foods are highly acceptable. There are f=14, or 40 % of the consumers said that these foods were moderately acceptable. And only f=2 or 5.7 % said that it has low acceptability.

Table 5: Level of Acceptability of Convenience Food in the Menu

Level of Customer Acceptability on Convenience Foods	Frequency	Percentage
Low	2	5.7
Moderate	14	40
High	19	54.3

These results indicate that business establishment is starting to embrace the new trends and end to a very tedious and traditional food preparation manner to cope with the increasing customer demands. For as long as the food fits their palate, delicious, safe to eat, and affordable, the concept of using convenience food is very acceptable. Hence, this agreement with Ozturk et al. (2016) explains that using the term "convenience" refers to the customer's experience of amenity or comfort, which is also real convenience foods. To validate these scores on the acceptability level, customers' level of satisfaction on food served among fine dining restaurants was also evaluated based on specific criteria, as indicated in Table 6 it was revealed that the level of satisfaction of consumers on food served among fine dining restaurants is "Very High" in terms of variety of menu options and sensory quality. These were indicated in the respectively obtained mean values of 4.51 and 4.52. Meanwhile, consumers' satisfaction with food served was "High" in areas such as freshness of food, packaging, label, and price, as indicated in the obtained mean values, which fell between the range of 3.61-4.20. The overall satisfaction of customers on food served is "High," as shown in the obtained mean value of 4.09.

Table 6: Level of Satisfaction on Food Served among Fine Dining Restaurants

Criteria	Mean	Verbal Interpretation
Variety of Menu Options	4.51	Very High
Variety of healthy menu choices	3.91	High
Freshness of Foods	3.82	High
Packaging and Label	3.88	High
Price	3.89	High
Sensory Quality	4.52	Very High
Overall Satisfaction	4.09	High

Note: The level of satisfaction on food served among fine dining restaurants were measured using the following scale: 1:00-1.80 (Very Low); 1.81-2.40 (Low); 2.41-3.60 (Moderate); 3.61-4.20 (High); and 4.21-5.00 (Very High).

A survey revealed that the overall customer satisfaction of convenience foods among fine dining restaurants is "High." This is an implication that the customers enjoy the food served among these establishments. This is also an indication that there are various menu options with very satisfying sensory quality. These foods are secure and safe, fresh, have an attractive package, and, most of all, cost-efficient. These results agree with Patiencem's (2005), which claims that the use of convenience foods increases restaurants' capacity to offer many eating options and variations of menus. Similarly,

Carrigan, Szmigin, and Leek (2006) also stressed that using convenience foods augmented comfort among fine-dining restaurants and gourmet specialists to save time and cope with growing demands. The results were affirmed by Adams (2015), reiterating that convenience foods are less costly and easy to prepare.

Conclusion

The results have found out that most of the fine dining restaurants in Muscat, Oman, utilize Ready to Cook (RTC) convenience foods. Therefore, it is conclusive that these establishments positively accept the use of these items in their menus. However, it is apparent that these fine dining restaurants have some reservations and hesitations in the use of these items because they still prefer to make some preparations instead of using the Ready to Use (RTU) and Ready to Eat (RTE) ingredients. It was also found out that the people's fast pacing lifestyle is the most apparent trend resulting in the utilization of convenience foods. Conclusively, it appears that Muscat is adopting the citified lifestyle wherein people eat outside rather than dining in their homes. Nevertheless, they are still conscious of the sensory quality, price, health considerations, and branding of the food served in these establishments. On the restaurants' side, these trends, factors, and criteria are considered because they signify their services and products' quality and optimize productivity. Further, the "High" acceptability of convenience foods among fine dining restaurants and their consumers deduced that stakeholders are liberal enough to withstand the continuously evolving food industry. The consumers and the fine dining restaurants are also open to using other convenience items as long as it fits their standards and required quality. Consumers' high satisfaction with food served among fine dining restaurants again intruded consumers as the food served in these establishments because it tastes fair, affordable, safe, secure, and healthy.

List of References:

- Adams, R. (2015) 'Trends in the foodservice industry: convenience foods,' *Food and Nutrition Sciences* (5), 2100-2112
- Al Badi, H. (2020) Two cases of Coronavirus reported in Oman: MOH. Retrieved <https://www.omanobserver.om/two-cases-of-coronavirus-reported-in-oman-moh/> . Accessed January 4, 2021
- Alexy, U., Sichert-Hellert, W., Rode, T., and Kersting, M. (2008). Convenience food in the diet of children and adolescents: consumption and composition. *British Journal of Nutrition*, 99(2), 345-351.
- Antun, J. M., and Gustafson, C. (2005). Menu success: A menu analysis of awarded fine dining restaurants and private clubs. *Journal of Culinary Science & Technology*, 4(4), 51-66.
- Beery, D. (2004) Chilled Dairy Desserts A World of Opportunity. Retrieved <https://www.dairyfoods.com/articles/83288-chilled-dairy-desserts-a-world-of-opportunity>, Accessed January 6, 2021
- Bentley, A. (2014). *Inventing baby food: Taste, health, and the industrialization of the American diet* (Vol. 51). University of California Press.
- Bruso, J. (2018) The Disadvantages of Food Processing. Retrieved <https://healthyeating.sfgate.com/disadvantages-food-processing-10900.html>, Accessed January 10, 2021
- Buckley, M., Cowan, C., & McCarthy, M. (2007). The convenience food market in Great Britain: Convenience food lifestyle (CFL) segments. *Appetite*, 49(3), 600-617
- Carlsson, A., & Linden, A. (2001). Trends in food production and consumption: Swedish experiences from environmental and cultural impacts. *International Journal of Sustainable Development*, 4(4), 392-406

- Carrigan, M., Szmigin, I., & Leek, S. (2006). Managing routine food choices in UK families: The role of convenience consumption. *Appetite*, 47(3), 372-383
- Cook, A. M., & Polgar, J. M. (2013). *Cook and Hussey's Assistive Technologies-E-Book: Principles and Practice*. Elsevier Health Sciences
- Dallinger, I. (2013) Chefs' perceptions of convenience food products in university food service operations, pp. 11-25
- Dwyer, D. (2017) Snacks: Diving Into Extrusion. Retrieved <https://www.cspdailynews.com/snacks-candy/snacks-diving-extrusion>, Accessed January 5, 2021
- Edlong (2019) How to Meet the Delicious Demand for Healthy Food, Retrieved <https://www.edlong.com/how-to-meet-the-delicious-demand-for-healthy-food/>, Accessed January 29 2021
- Ellis, E. (2020) Processed Foods: What's OK and What to Avoid, Retrieved <https://www.eatright.org/food/nutrition/nutrition-facts-and-food-labels/processed-foods-whats-ok-and-what-to-avoid>, Accessed January 10, 2021
- Galotti, K. M. (2005). *Making decisions that matter: How people face important life choices*. Psychology Press
- Kearney, J. (2010). Food consumption trends and drivers. *Philosophical transactions of the royal society B: biological sciences*, 365(1554), 2793-2807.
- Gofton, M., (2015) Convenience and the moral status of consumer practices, In: , *Food choice and the consumer*. pp. 140-150
- Henry, M. (2004) 'Current Opinion in Allergy and Clinical Immunology', 4 (3), Retrieved <https://journals.lww.com/co-allergy/toc/2004/06000>, Accessed January 2021.
- Hindman, M. (2018). *The Internet trap: How the digital economy builds monopolies and undermines democracy*. Princeton University Press.
- Integrisok (2016) Your Guide to Choosing Healthier Convenience Foods, Retrieved <https://integrisok.com/resources/on-your-health/2016/december/your-guide-to-choosing-healthier-convenience-foods>, Accessed January 27, 2021.
- Jackson, P. and Viehoff, V. (2016) Reframing convenience food, pp. 10-14
- Kapanen, L., Kaarakainen, M. & Jallinoja, P. (2017) Acceptability of Convenience Food Among Older People, Retrieved at https://www.researchgate.net/publication/315514362_Acceptability_of_Convenience_Food_Among_Older_People, Accessed January 10, 2021
- Kearney, J. (2010). Food consumption trends and drivers. *Philosophical transactions of the royal society B: biological sciences*, Psychology Press. 365(1554), 2793-2807
- Luangsaard, N., Siripatrawan, U. & Suppakul, P. (2008) Packaging Strategies to Support Processed Food Export, Retrieved https://www.researchgate.net/publication/306040840_Packaging_Strategies_to_Support_Processed_Food_Export, Accessed January 8, 2021
- Mallinson, L. J., Russell, J. M., & Barker, M. E. (2016). Attitudes and behaviour towards convenience food and food waste in the United Kingdom. *Appetite*, 103, 17-28.
- Manalili, N. (2011) *Appropriate food packaging solutions for developing countries*, 1st edition, Rome, pp.14-19
- Margasahayam, A., & Balraj, Y. (2018). Properties of food ingredients during processing in a domestic mixer grinder and subsequent storage: A review. *Journal of Food Process Engineering*, 41(4), 12677.
- Martínez, G. & Bojnec, S. (2017) Novel Food Consumption, pp.30-35
- Minton, E. & Bobroff, L. (2013) *Healthy Eating: Improving Your Convenience Foods*, Retrieved <http://www.nmaging.state.nm.us/uploads/files/15%20Healthy%20Eating%20Improving%20Your%20Convenience%20Foods.pdf>, Accessed February 10, 2021.

- Nestle (2017) Enhancing quality of life and contributing to a healthier future, Retrieved https://www.nestle.com/sites/default/files/asset-library/documents/library/documents/annual_reports/2017-annual-review-en.pdf, Accessed February 10, 2021.
- Nettle,L. (2019) Convenience foods: serving consumer demands for efficiency, Retrieved <https://www.foodbev.com/news/convenience-foods-serving-consumer-demands-for-efficiency/>, Accessed 27 January 2021.
- Ozturk, A. , Bilgihan, A., Nusair, K., & Okumus, F. (2016). What keeps the mobile hotel booking users loyal? Investigating the roles of self-efficacy, compatibility, perceived ease of use, and perceived convenience. *International Journal of Information Management*, 36(6), 1350-1359.
- Pothoff, R. (2014) Convenience food for thought: Exploring young adolescents' views on convenience food practices, Retrieved <https://edepot.wur.nl/293710>, Accessed 27 January, 2021.
- Rimal, A. (2016). Purchasing Locally Produced Fresh Vegetables: National Franchise vs. Locally Owned and Operated Restaurants. *Journal of Food Distribution Research*, 47(856-2016-58219), 98-108.
- Ross, D. (2015).Customer Management. In *Distribution Planning and Control* Springer,New York, N. pp. 467-529).
- Schmidhuber, J., and Shetty, P. (2005). The nutrition transition to 2030. Why developing countries are likely to bear the major burden. *Acta agriculturae scand section c*, 2(3-4), 150-166.
- Scholliers, P. (2015) 'Convenience foods. What, why, and when', *Social and Cultural Food Studies journal*, vol 2.5, pp- 30-32
- Sharkey, R., Dean, W., & Nalty, C. (2012). Convenience stores and the marketing of foods and beverages through product assortment. *American journal of preventive medicine*, 43(3), S109-S115.
- Shove, R. (2003) 'Converging Conventions of Comfort, Cleanliness and Convenience', *Journal of Consumer Policy*, Vol. 27, No. 5, pp. 380-400
- Simelane, B. (2008) The acceptability and use of convenience foods by black women employed by government in Mpumalanga, Pretoria, pp.16-20
- Siong,T. (2014) How to choose processed food, Retrieved <https://www.thestar.com.my/lifestyle/health/2014/12/07/how-to-choose-processed-food>, Accessed 1st February, 2021.
- Speckbacher, G., Bischof, J., and Pfeiffer, T. (2003). A descriptive analysis on the implementation of balanced scorecards in German-speaking countries. *Management accounting research*, 14(4), 361-388.
- Srinivasan, S. and Shende, K. (2015). A study on the benefits of convenience foods to working women. *Atithya: A Journal of Hospitality*, 1(1), 56-63.
- Stolterfoht,B. and Störzer,M. (2006) ' Adjunct Cultures: Recent Developments and Potential Significance to the Cheese Industry' , *Journal of Dairy Science*, Vol. 83, No. 4, pp.609-610.
- Surasani,V. (2017) Application of Food Extrusion Process to Develop Fish Meat-Based Extruded Products, Retrieved https://www.researchgate.net/publication/305396995_Application_of_Food_Extrusion_Process_to_Develop_Fish_Meat-Based_Extruded_Products, Accessed 5th February 2021.
- Suria,S., Kumara,V., Prasada,R., Tanwarb,B., Goyalc,A., Kaura,S., Gata,Y. , Kumara,A., Kaura,J. and Singhd,D. (2019) 'Considerations for development of lactose-free food', *Journal of Nutrition & Intermediary Metabolism*, Vol 110, 15,pp. 29-30
- Tara,F. (2018) 3 THINGS TO LOOK FOR WHEN BUYING CONVENIENCE FOOD, Retrieved <https://tararochfordnutrition.com/3-things-to-look-for-when-buying-convenience-food/>, Accessed 27th January 2021

- Tillotson, E. (2004) CONVENIENCE FOODS, Retrieved <https://www.sciencedirect.com/topics/immunology-and-microbiology/convenience-food>, Accessed on 27th January, 2021.
- Tiwari, D. (2012) Convenience food: A convenient option, Retrieved <http://www.hospitalitybizindia.com/detailNews.aspx?aid=13127&sid=5>, Accessed on 8th February 2021.
- Traub, G. (2013) Convenience foods and home-prepared foods, p.15
- Warde, A. (2019), 'Convenience food: space and timing', *British Food Journal*, Vol. 121 No. 12, pp. 500-520.
- Willcox, C., Willcox, J., Todoriki, H., and Suzuki, M. (2009). The Okinawan diet: health implications of a low-calorie, nutrient-dense, antioxidant-rich dietary pattern low in glycemic load. *Journal of the American College of Nutrition*, 28(sup4), 500S-516S.

Investigating Consumers' Perception of Hybrid Cars in the Sultanate of Oman

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Abstract

Purpose: The overall objective of this study is to investigate the perception of Omanis car consumers on environmentally friendly hybrid cars.

Research Methodology: The study used a quantitative research method mainly a survey. A well-structured questionnaire was distributed to 100 respondents using a convenient sampling technique. A survey Monkey is used for data collection and analysis. Descriptive statistics are used mainly in the data analysis.

Findings: The findings reveal that most of the respondents owned emission cars and replaces their cars within two to five years. The majority of the respondents said regardless of the situation, they intend to own a hybrid car soon due to its efficiency and environmental friendliness. Most of the respondents were aware of the effects of car emissions on environmental sustainability. Hence, they believe that the way forward is to adopt environmentally friendly cars including hybrid and electric vehicles. Lastly, more than half of the respondents believe that, given the concern over climate change, key industry players and the government are keen to replace petrol/diesel vehicles with environmentally friendly cars sooner than expected once the obstacles related to hybrid and electric cars are addressed.

Originality/value: The study is among the first study to examine the perception of Omanis car consumers on hybrid cars and the effects of car pollution on the environment. Therefore, we argue the industry players should promote the use of hybrid cars and make them affordable to the general masses to save the environment since the future of electric cars is set at an infant stage with many obstacles.

Keywords: Investigating, Consumers Perception, Hybrid Cars, Oman.

Introduction

The auto industry has positioned itself in this modern civilization and transcended mankind's needs for transportation. Mass production of automobiles started in the early 1900s when Ford started mass production of its Model T. Today, the Ford Motor Company still ranks among the leading manufacturers of passenger cars, its most popular passenger light truck model being the Ford F-Series, which was also one of 2019's bestselling light vehicles worldwide (Wagner, 2021). In a real sense, the industry today is highly sophisticated providing the most basic features that most consumers need in the car such as greater gas mileage, user-friendly infotainment system, high reliability, and affordability (Jones, 2020). Indeed, it is estimated that there are over one billion and forty million cars on the roads, with some analysts saying the actual figure surpassed the estimate (Chesterton, 2018). In 2017, the global total revenue was over \$ 5 trillion, and it is expected that the auto sale revenue will increase to \$ 9 trillion by 2030 (Wagner, 2020). In Oman, the passion for cars of all kinds attracted world-leading auto brands in its market. The sales revenues for the Passenger car automatic market are expected to increase from USD 3.36 billion in 2017 to USD 4.23 billion by 2023 (Techsci research report, 2019). Therefore, the industry contributes significantly to the global GDP and employment.

Nevertheless, it is noteworthy to mention that the social costs created by this industry are enormous far exceeding the social benefits. The auto industry plays a significant role in the creation of greenhouses. Greenhouses such as carbon dioxide, methane, and nitrous oxide absorb some of the energy that goes out of the Earth and heats the atmosphere. This causes the imbalance of the Earth energy received by the Sun and the energy goes out of the Earth leading to climate change. In turn, climate change leads to significant socio-economic problems such as strong heatwave, flooding, increase risk of heat-related illnesses such as respiratory diseases, heart diseases, Asma, and cancer, etc. (Kandhakar, et.al. 2020). Realizing the seriousness and the urgency to address the problem of car emissions have created on the climate, the industry players are taking action to achieve carbon emission target. The players are shifting to the production of hybrid and electric cars that are environmentally friendly. China sold more than 1.3 million electric cars in 2020. Norway has the most per capita number of electric cars on the road. In the case of hybrid cars, Japan has the highest numbers in the world reaching up to 7.5 million hybrid cars on their road. While in other countries such as France, as of 2019 over 70% of French citizens are thinking of changing to either hybrid cars or electric cars (The Editorial Team, 2020).

Hybrid vehicles are designed for better fuel efficiency, more power, and minimum emissions. The overall hybrid vehicle market, by volume, is estimated to be 4,169 thousand units in 2018 and is projected to reach 7,593 thousand units by 2025. The demand for the hybrid vehicle market is rising due to stringent emission regulation standards and the growing demand for low or zero-emission vehicles. Furthermore, governments of various countries provide purchase grants and tax rebates for hybrid vehicles (Market and Market report, 2019). Many car companies offer hybrid models. For instance, Toyota has the Prius and Camry, Honda has Accord, Civic, Insight, and CR-Z, while Nissan has the Altima only (Williams, 2020).

According to Khandakar et.al. (2020), the adoption rate of environmentally friendly cars varies across the globe. This degree of adoption is affected by many factors among them include the vehicle price, total cost of owning cars, driving experience, the availability of Charging stations (CS), social influence, environmental awareness, and others. Surveys and focus groups have found a widespread lack of knowledge of the commercial availability of electric vehicles, purchase incentives, fuel and maintenance cost savings, charging options, and awareness of individuals' average daily driving distances (Lingzi and Slowik, 2017). She, et.al (2017) study showed that the Chinese consumers' interest in Battery Electric Vehicles is relatively low and a large proportion of the respondents have a

"wait and see" attitude. Consumers are unsure about BEVs' performance, with safety, reliability, and range per charge being the top three concerns. This may be true in Oman given the limited number of automakers currently selling electric vehicles in Oman. Moreover, Oman will not be immune to these fundamental changes in Electric Vehicles technology and economics, regardless of whether Oman implements clear EV policy targets. Yet, there is hardly any empirical study on the perception of Omanis car consumers on hybrid or electric cars. This study attempts to fill this research gap. Therefore, the objective of this study is to investigate the perception of Omanis car consumers on hybrid cars and their impact on the environment.

Literature Review

A hybrid car is a car that possesses two sources of power, a combustion engine, and a special electric batter (not the normal batter that every car uses) that act as a dual-functioning motor. The car functions based on two power sources and constantly rotates from one source to the other or in some cases they both functions simultaneously and work together, based on what the car needs the most. The ingenuity makes the hybrid car unique compared to other cars as it stores and uses its energy (Ryswick, 2019). In most modern hybrids, cars are powered by a combination of traditional gasoline power and the addition of an electric motor. In this sort of hybrid engine, the combustion engine is used at high speeds for long distances, such as the highway, and the electric engine at low speeds and short distances, such as in urban areas (Beliveau et.al. 2010). Hybrid technology turns the world's population into a more fuel-efficient and emissions-conscious society. The technology saves the environment as it increases efficiency in energy consumption (Hakim, 2005). By driving a car that is more fuel-efficient, an individual can reduce the amount of carbon dioxide released into the environment by about 2,500 pounds each year. Due to the steadily increasing gas prices, the popularity of hybrid vehicles has increased among car consumers. There are many reasons for purchasing these new technologically advanced automotive; however, one of the main reasons is the cost save on fuel. These new cars are advertised to achieve exceptional gas mileage when compared with conventional cars. It is said that even though they are typically more expensive initially, the amount that you save on gas eventually allows the purchaser to break even and save money (Ransom 2008).

Abu-Alkeir (2020) examines the factors that influence consumers' intention to purchase hybrid cars in the Arab region. Her findings revealed that there is a positive impact of price, reputation of manufacturer, fuel economy positively influenced consumers intention to purchase hybrid cars. It also indicated that there is a negative relationship between brand image, safety, and customer intention to purchase electric cars. Hence, she suggested that sales and marketing managers of electric & hybrid cars should emphasize on pricing and fuel efficiency of hybrid cars when marketing environmentally friendly cars in this region. Aman et al. (2012) stated that environmental knowledge and environmental concerns considerably affect consumers' intention to buy environmentally friendly products. According to Boztepe (2012) environmental awareness, green product features, green promotion activities, and green price have a positive effect on green purchase behavior. Dagher and Itani (2014) identified three variables that include the seriousness of the environmental problem, environmental responsibility, and self-image as factors that significantly affect consumers' decision to buy green products. Lu et al. (2014) analyzed the determinants of green purchase behavior, which are social influence, environmental concern, environmental attitude, perceived environmental problem, perceived environmental responsibility, perceived environmental behavior, concern for self-image, and role of Government.

Companies should focus on these determinants to enhance green purchase behavior and alter their strategies to develop and target the green market segment. Their study suggested that marketers should develop marketing tools that will increase the level of environmental concern and attitude because it has a significant impact on green behavior (Dagher et al., 2015). These findings are supported by Ahmad and Thyagaraj's (2015) study which indicated that environmental concern and self-expressive value benefits positively affect green purchase intention. Besides, environmental knowledge, environmental concern, and self-expressive benefits positively impact the attitude towards eco-brands which indicates a positive influence on purchase intention.

Hussain, et.al (2020) study the effects of green advertisement as a moderator on customers' green purchase behavior in Saudi Arabia. Their findings show that environmental concern, self-image, and social impact had a significant influence on green purchase behavior. Furthermore, environmental concern and self-image have a more substantial influence on green purchase behavior. The moderation results revealed that green advertisement has a positive and significant moderated relationship among environmental concern, self-image, social influence, and green purchase behavior. Karunanayake and Wanninayake (2015) found that price perception, social influence, and perceived risk had a significant impact on the purchase of hybrid vehicles. In contrast, knowledge and environmental attitude do not show a significant influence over buying intention of buying hybrid vehicles.

Research Methodology

This study used a survey to investigate the perception of Omanis car consumers on the hybrid car and its impact on the environment. A survey is a suitable method for collecting information about peoples' attitudes and opinions (Burns and Bush, 2000). According to Martin (2020), public opinion survey research is the most efficient method for collecting information about a large group of people. A researcher can collect the opinions, perceptions, and observations of a small, representative subset of a population to generalize to the whole. The questionnaire is adapted from Kandhakar, et.al. (2020) who are experts in this field. Extreme care was taken to ensure that the anonymity of the study and the confidentiality of respondents. The questionnaire was created, distributed, and analyzed using a survey monkey. The questionnaires were distributed to a sample of 100 car consumers in Oman using a convenient sampling technique. Convenience sampling is a type of nonprobability sampling in which people are sampled simply because they are "convenient" sources of data for researchers (Sekaran, 2003). Seventy questionnaires were returned as valid and complete. Therefore, the response rate was 70%. According to Roscoe's (1975) rule of thumb, the sample size that is larger than 30 and less than 500 is appropriate for most of the research. The questionnaire is divided into three parts that include the profile of the respondents, consumers' car choices, and the environmental impact of car emission. Descriptive statistics are statistical tools are used in data analysis.

Findings and Discussion

Demographic Profile of the Respondents

An overwhelming majority of the respondents (79%) were male and 21% were female. More than half of the respondents (52%) were age between 25-50 years old, 42% with age below 25 years old, and only 6% above 50 years old. Eighty-one percent (81%) of the respondents were Omanis and the

remaining were non-Omanis. Sixty-one percent of the respondents are graduates, 10% are postgraduate holders and the rest are diploma and senior high school certificate holders. Forty Percent (40%) of the respondents were unemployed, 37% were working in the private sector and the rest were working in the public sector and self-employed. The monthly income of the respondents was quite interesting. Despite having a high unemployment rate, each respondent had a monthly income which indicates allowances being distributed to those who are unemployed. The majority of the respondents (47%) earn below 500 R.O, 27% of the respondents earn 500 to 1000 R.O, 15% of the respondents earn between 1000 to 2000 R.O and only 10% earn above 2000 R.O.

Table 1: Demographic Profile of the Respondents

Demographic Information		Frequency n = 70	Percentage
Gender	Male	55	79
	Female	15	21
Age	Under 25	30	42
	25-50	37	52
	51+	3	6
Nationality	Omani National	52	81
	Non-Omani	13	19
Education	Highschool Degree	7	10
	Bachelor's Degree	50	71
	Master's Degree	7	10
	Doctorate	0	0
	Other	6	9
Current Job	Government Employee	9	13
	Private Sector	26	37
	Retired	1	1
	Self-employed	5	7
	Housewife	1	1
	Unemployed	28	40
	Income Per Month (OMR)	Under 500	33
	Between 500-1000	19	27
	Between 1000-2000	11	15
	Over 2000	7	10

Respondents Perception on the Choice of Cars

Respondents were asked what cars they currently owned and when their cars will likely be replaced. An overwhelming majority of the respondents (89%) owned petrol/ diesel cars implying a strong dominance of emission cars, while 7% of the respondents owned hybrid cars and 4% owned electric cars. Furthermore, more than half the respondents (51%) were likely to replace their cars within 2-5 years and only 39% of the respondents were willing to replace their cars over 5 years.

When the respondents were asked if they would consider a hybrid car should they decide to sell their current vehicles, 69% of the respondents were willing to change their cars to hybrids while the remainder did not want to change. Furthermore, a hypothetical question was added for those who wouldn't consider purchasing a hybrid as well as for those who are willing to buy one, what would be the most important factors to consider when choosing to buy a hybrid car. 46% of the respondents said that will consider buying a hybrid car because of its fuel efficiency, 34% of the respondents were more interested in the car's affordability, while 20% of the respondents would embrace it for its environmental benefits. Indeed, price is the main determinant factor consumers take into consideration when purchasing any product. Participants were asked if they were willing to pay extra for a hybrid car to protect the environment. Forty- four percent of the respondents were willing to pay extra while 56% of the respondents were unwilling to pay an added amount for a hybrid.

Table 2: Respondents Perception of the Choice of Cars

Car Choice Information		Frequency n = 70	Percentage
Current car owned	Petrol/ Diesel	60	89
	Hybrid Car	5	7
	Electric Car	3	4
Time till the car is replaced	1 year or less	7	10
	2-5 years	35	51
	Over 5 years	26	39
Considering hybrids as a replacement	Yes	47	69
	No	21	31
A most important feature about hybrids	Fuel efficiency	31	46
	Environmentally friend.	14	20
	Affordability	23	34
Paying extra for a hybrid	Yes	30	44
	No	38	56

Respondents Perception of Environmental Issues

The last part of the survey covers the environmental issues related to the auto industry. To establish whether participants were generally concerned about the environment or not, a simple yes or no question was given regarding their concerns about pollutions caused by cars. The majority of the respondents (77%) were concerned about pollution created from car emissions and only 23% of the respondents said they were not concerned about car pollution. Furthermore, when they asked if hybrid cars are more environmentally friendly compared to petrol/diesel cars, an overwhelming majority of the respondents (91%) believe them to be more eco-friendly than conventional vehicles. Finally, the respondents were asked whether soon petrol/diesel cars would be replaced with eco-friendly cars. Fifty-six percent (57%) of the respondents think that it is possible to replace emission cars soon with environmentally friendly cars while 35% of the respondents do not believe it to happen any time soon.

Table 3: Respondents Perception on Environmental Issues

Environmental Information		Frequency = 70	Percentage
Concerned regarding car pollution	Yes	50	77
	No	15	23
Hybrids are more environmentally friendly than other cars	Yes	59	91
	No	6	9
Will petrol/diesel cars replace with eco-friendly cars in the future	Yes	37	57
	No	23	35
	Maybe	5	8

Conclusion

Hybrid cars are one of the alternative technologies adopted by the auto industry to tackle the problem of global warming and making the industry sustainable. However, introducing new technology to the world is always a challenge as people resist change. Hybrid cars were invented almost two decades, but their demand is rising given their economic and environmental benefits as fuel-efficient and environmentally friendly cars. It is apparent that an overwhelming majority of respondents currently own petrol/ diesel cars. However, most of the participants were willing to change their current cars for hybrids. Unfortunately, based on the current economic situation, hybrid cars are out of reach to most consumers despite they are attracted to this model. Most of the consumers aim to upgrade to more futuristic technology for whatever reasons they have, but in the end, the argument boils down to price. In most cases, not just in Oman but on a global scale price is the deciding factor when buying anything. Nevertheless, the survey revealed that many of the respondents were willing to pay extra for a hybrid car for the sake of preserving the environment. This sheds light on the fact that hybrid cars should be affordable like their counterparts for mass-scale consumption. Indeed, the study cannot be generalized given the small sample size of the population. Henceforth, future studies should increase the sample size and the scope of the issues.

References

- Amith Khandakar, Annaufal Rizqullah , Anas Ashraf Abdou Berbar , Mohammad Rafi Ahmed , Atif Iqbal , Muhammad E. H. Chowdhury and S. M. Ashfaq Uz Zaman (2020). A Case Study to Identify the Hindrances to Widespread Adoption of Electric Vehicles in Qatar, *Energies*, Vol. 13. PP 1- 20. Online. www.mdpi.com/journal.energies.
- Ahmad, A. N. E. E. S., & Thyagaraj, K. S. (2015). Consumer's intention to purchase green brands: The roles of environmental concern, environmental knowledge, and self-expressive benefits. *Current World Environment*, 10 (3), pp 879-889.
- Aman, A. L., Harun, A., & Hussein, Z. (2012). The influence of environmental knowledge and concern on green purchase intention the role of attitude as a mediating variable. *British Journal of Arts and Social Sciences*, 7(2), 145-167.
- Burns, A.C., and Bush, R.F (2000). *Marketing Research*. London: Prentice-Hall.
- Boztepe, A. (2012). Green marketing and its impact on consumer buying behavior. *European Journal of Economic & Political Studies*, 5(1), 5-21.
- Chesterton, Andrew. (2018). How many cars are there in the world? Online. <https://www.carsguide.com.au/car-advice/how-many-cars-are-there-in-the-world-70629#:~:text=There%20is%20an%20estimated%201.4,at%20around%2018%20per%20cent>
- Courtney Jones (2020). 2018 Toyota Corolla Review. Online. <https://cars.usnews.com/cars-trucks/toyota/corolla/2018>
- Dagher, G., Itani, O., & Kassar, A. N. (2015). The impact of environment concern and attitude on green purchasing behavior: Gender as the moderator. *Contemporary Management Research*, 11(2).179-206.
- Hakim, Danny (2005). Hybrid-Car Tinkerers Scoff at No-Plug-In Rule. *The New York Times Business*. Online. http://www.nytimes.com/2005/04/02/business/02plug.html?_r=3&pagewanted=1.
- I. Wagner (Feb 5, 2021). Automotive industry worldwide - statistics & facts. Online. <https://www.statista.com/topics/1487/automotive-industry/>
- Jin, Lingzhi, and Peter Slowik (2017). Literature review of Electric Vehicles Consumers awareness and outreach activities. Online. https://www.theicct.org/sites/default/_les/publications/Consumer-EV-Awareness_ICCT_Workingpaper_23032017_v_F.pdf
- Lu, T. K., Majid, N. F. N., Harun, N. H., & Othman, N. (2014). Assessing the variables that influence the intention of green purchase. *Proceedings of the Social Sciences Research ICSSR*, 9-10.
- Michael Beliveau, James Rehberger, Jonathan Rowell, and Alyssa Xarras (2010). A Study on Hybrid Cars: Environmental Effects and Consumer Habits, unpublished thesis. Online. https://web.wpi.edu/Pubs/E-project/Available/E-project-042810-194328/unrestricted/Hybrid_Cars_IQP.pdf

- Markets and Markets report (2019). Hybrid Vehicle Market by Electric Powertrain (Parallel, Series), Degree of Hybridization (Full, Micro, and Mild), Propulsion (HEV, PHEV, and NGV), Vehicle Type (PC, CV), Component (Battery, Electric Motor, and Transmission), and Region - Global Forecast to 2025. Online. <https://www.marketsandmarkets.com/Market-Reports/hybrid-vehicle-market->
- Mellisa Martin (2020). Introduction to Survey Research. Online. <https://www.osba.org/-/media/Files/Event-Materials/BBB/2020/Presentations/Intro-Survey-Research---hand-out.pdf?la=en>
- Murthad Al-Rawahi (2020). Hybrid Cars Consumer Behavior Towards Hybrid Cars in Oman. Unpublished Undergraduate Project. Modern College of Business and Science, Muscat Oman.
- Nidal Ismail Abu-Alkeir (2020). Factors Influencing Consumers Buying Intentions Towards Electric Cars: The Arab Customers' Perspective, *International Journal of Marketing Studies*; Vol. 12, No. 2, pp 127 – 135.
- Riswick, J., 2019. What Is A Hybrid Car and How Do They Work? [online] Car and Driver. Available at: <https://www.caranddriver.com/features/a26390899/what-is-hybrid-car>
- Ransom, Kevin (2008). Reasons to buy a Hybrid – or not. CNN. Online. <http://www.cnn.com/2008/LIVING/wayoflife/01/28/buy.hybrid/index.html>
- She, Z.-Y.; Sun, Q.; Ma, J.-J.; Xie, B.-C. What are the barriers to the widespread adoption of battery electric vehicles? A survey of public perception in Tianjin, China. *Transport Policy*, 56, 29–40.
- Syed Asad Hussain, Mirza Amin Ul Haq, and Yasir Ali Soomro (2020). Factors Influencing Consumers Green Purchase Behavior: Green Advertising as Moderator. *Marketing and Management of Innovations*, Issue 4. Pp 144 – 153. Online. https://mmi.fem.sumdu.edu.ua/sites/default/files/A451-2020-11_Hussain%20et%20al.pdf
- The Editorial Team. (2020). The Top 5 countries for electric cars - Easy Electric Life. Online. <https://easyelectriclife.groupe.renault.com/en/outlook/lifestyle-en/electric-implantation>
- TechSci Research report (2019). Oman Automotive Market by Vehicle Type (Passenger Car & Commercial Vehicle), By Fuel Type (Gasoline and Diesel), By Tonnage, Application, Competition, Forecast & Opportunities, 2013-2023. Online. <https://www.techsciresearch.com/report/oman-automotive-market/3754.html>

Analyzing the Effectiveness of Advertisements in Marketing the Commercial Events in Oman

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Abstract:

Purpose: The Impact of technology on Marketing and Advertising has many advantages that can benefit many organizations, as they can easily personalize their message to customers, and allows marketers to attract and influence customers' attention. Various studies show that advertisement of commercial events helps in introducing a new product line in the market as well as expanding the existing markets. The need for advertisement practices increased throughout the industrial revolution, as there is technically no other way to encourage consumers to buy a product. This study aims to analyze the effectiveness of different advertising tools in marketing the commercial events.

Methodology: In this research, a deductive research method is used. The researcher is going to a specific level testing theory of the effectiveness of digital marketing tools over traditional marketing tools. The research design that was in this study is a descriptive research and aims to gather more information about advertising in commercial events. The target population in this study is advertising agencies, marketing companies, and the Oman Convention and Exhibition Centre. The sample size consisted of 39 participants, which consisted of 9 managers, 10 CEO, and 20 supervisors. The questionnaire, which the researcher designed using a Statistical package for social science (SPSS), was distributed among various companies like Oman Convention & Exhibition Centre, Advertising and marketing agencies, and some ministries involved in marketing departments.

Findings: The study findings indicate that marketing practitioners and event organizers should use both digital and traditional marketing channels to achieve the desired marketing objectives. Based on the research findings and the literature review, brand image and awareness are critical factors to use when selecting an advertisement method. It has been concluded that the effectiveness of advertising using online platforms specifically social media plays an important role in marketing commercial events. The industry such as marketing practitioners and event organizations could gain benefits from this research findings as they can develop innovative ways and solutions to their advertising campaigns for commercial events and measuring the effectiveness of promotional tools used. As for now, many advertising agencies are facing difficulties when consumers get advertisement by posts such as newspapers and magazines, and to what extent does it have an impact on them. Advertising agencies and event companies will benefit from this study as it will provide them with some useful implications and potential outcomes such as; maximizing the volume of sales, increasing the target audiences, enhancing their brand identity and image, building brand loyalty among visitors and customers in addition to establishing long-life relationships with customers.

Keywords: Effective, Advertising, Marketing, Commercial Events, Traditional Advertising, Social Media Advertising.

Introduction

For decades, product promotion was done through traditional advertising tools such as broadcast (TV and radio), print media (magazines and newspapers), and outdoor advertising (Bezjian-Avery et al., 1998). Unfortunately, even though traditional advertising could reach a vast number of people, it was not very effective as it did not target a specific market. Besides, with the evolution and changes in market dynamics, the traditional advertising tools have slowly been overtaken by online advertisement. Today, online advertisement is crucial for businesses to interact with a younger and broader customer market. Also, advertising is carried out through new media, including websites, blogs, text messages, and social media such as YouTube, Facebook, Instagram, and Twitter (Bezjian-Avery et al., 1998). Deepak and Jeyakumar (2019) define marketing as the process through which businesses create, communicate and deliver value to customers to provide some form of benefit to the organization and stakeholders. Therefore, marketing involves luring the buyers by first studying and understanding their wants, needs, and behaviors and realigning its processes to these needs. This article aims to analyze the effectiveness of different advertising tools in marketing commercial events. The main objective revolves around the following research question: To what extent are advertisements effective in promoting commercial events, such as exhibitions and Comex.

The research objectives are as follows:

- 1.To identify the various media channels of advertising used by event companies.
- 2.To compare the customers' perceptions of traditional versus social media ads tools for events.
- 3.To provide suggestions to marketing practitioners and event organizers on how to develop their advertising campaigns for commercial events.
- 4.Analyzing the effectiveness of advertisements in marketing the commercial events in Oman.

The use of technology in marketing and advertising has many advantages for individuals, businesses, and organizations and thus has been regarded as effective advertising. According to Kehinde, Ogunnaiké et al. (2016) effective advertisement is where businesses can reach potential customers and inform them about their products. In this case, online advertising is considered effective as companies can easily personalize their message to customers and allow marketers to attract and influence customers' attention. Online advertising has taken over the current business market due to the increase in the use of the internet and social media. For instance, in the past decade, digital transformation has been a saviour for online advertising and marketing efforts. As such, the traditional advertising channels such as television, radio, newspaper, and billboards are declining. Reports indicate that television, radio, and print media advertising revenues have declined steadily in the past years. Nowadays, advertising on social media is becoming more popular and has a strong influence compared to traditional forms of media. Moreover, in 2021, marketing practitioners are advised to move to digital advertising as traditional advertising methods are becoming less popular and social media is becoming the centre of attention. Thus, understanding the effectiveness of advertising campaigns is of significant value to stakeholders of commercial events. Such fundamental knowledge helps managers make a better-informed decision regarding budgets, scheduling events, and making other strategic plans dependent on promotions. The research findings also confirmed that the most used advertising model is digital marketing channels since it is the most effective. Based on the research findings and the literature review, brand image and awareness are critical factors for selecting an advertisement method. Marketing practitioners should ensure that services and products offered in a commercial event are of good quality so that consumers will have a positive image of the organization. In conclusion, the effectiveness of advertising using online platforms, specifically social media, plays an essential role in marketing commercial events.

Literature Review

Definition of Advertising

Armstrong, Adam et al., (2014, p.3) noted that advertising is a marketing communication that pays a non-personal, openly sponsored communication to endorse a service, product, or idea. One central element that makes advertising outstanding is that it is paid for by the advertiser, who also has control over the message and that it is not directed to a particular individual. The presentation of a marketing message in a medium is often referred to as an advertisement or in short form as an advert or ad.

Measures of Effective Advertisement

Scholars have developed various ways of measuring advertisements' effectiveness in commercial marketing to determine whether they are worth investing in. To understand effective advertisement, it is essential to examine its definition from the perspective of different scholars. According to Kehinde et al. (2016, p.2), effective advertisement entails how well an advert about commercial events accomplishes an intended purpose. Measuring advertisements effectiveness has been elaborated from one scholar to another. One of the tests is exposure. Kehinde et al. (2016, p.9) noted that an advertisement is regarded to be effective if it gains exposure, such as by evaluating the number of customers who have heard or seen the message. In contrast, an advertisement is doomed as a failure if it is not exposed as expected either through traditional or modern advertisement media. To determine whether the chosen media have exposed the message, Kehinde et al. (2016, p.12) marketing managers can examine its circulation such as by assessing the number of people passing and staring at billboards, print copies sold, surveys on number of people who listened on radio about the advertisement or watched in televisions. Besides, Kehinde et al. (2016, p.7) indicated that an advert's effectiveness increases over time with exposures and intended purpose, which can either be achieved almost immediately or after a specific time. Another way of testing the effectiveness of an advertisement is the consumers' attention. Armstrong et al. (2014) define attention as the multidimensional cognitive process of focusing on something at a given moment while consistently maintaining mental efforts and avoiding disruptions. In other words, it is what gives consumers a feeling of alert and aroused towards an advertisement message along with many distractions. Also, attention leads to understanding and the ability to remember the message for a long time (Pavlou & Stewart 2000, p.3).

Therefore, for an advert to be considered effective, it must create a lasting effect on the consumers. Customers' attitude change is another measure of the effectiveness of an advertisement. The author suggested that marketing personnel need to assess customer's attitudes towards a specific advertisement approach because they dictate their behaviors on a company's products and services. A study undertaken by Warc.com (n.d.) showed that due to cross-cultural differences across the world, advertisement content that may seem right for a specific group of people might be wrong to another subgroup. Studies exploring the relationship suggested that individuals with a positive attitude towards a particular advertisement on commercial events were able to recall than those who had a negative attitude (Warc.com, 2021). In another research, Blythe (2013) examined customer's attitudes by measuring time spent looking at an advert such as print, broadcast, and internet message. The study revealed that consumers who felt that the advert was manipulative got irritated and viewed advertisements as interruptions (Blythe 2013). In contrast, individuals who felt that the advertisement was not manipulative spend more time looking, listening, or reading details of the advertisement. Thus, an advertisement is effective if consumers have a positive attitude towards the message. However,

another researcher argued that consumers' past experiences with a company's services and products are the main determinant of the consumer attitude towards an advertisement. Thus, when the public has a positive attitude towards a specific brand, an advertisement will be more effective in reaching a wide range of customers (Herzog 2014, p.46).

Armstrong et al. (2014) proposed two popular measurements of effective communication which are; communication effect and sales effect. Under communication, effect Armstrong et al. (2014) suggested three types of research. The first one is a direct rating method where customers are requested to rate an advertisement through online surveys, then the ratings are calculated. The second method is portfolio testing that assesses how customers perceive ads and if they can recall the contents. The last method is laboratory tests where apparatus that measures blood pressure and heartbeats are used on consumers after watching, listening, or reading an advertisement to determine their psychological reactions. On sales effect, Armstrong et al. (2014) stated that the effectiveness of an advertisement could measure by comparing sales before and after the advertisement. If the revenue has significantly increased, then the advertisement media was effective in attracting customers. However, Wells (2014) noted that measuring the effectiveness of advertisements using sales can be difficult and unreliable because revenues fluctuate over time due to other factors such as product availability, market prices, and competition.

Effectiveness of Traditional Media in Advertising of Commercial Events

Ansari and Riasi (2016, p.22) mentioned that traditional media remains a reliable basis of material. On this note, there has been an increased influence made by traditional media as most people are getting back to the network TV and other traditional mediums. For instance, newspapers can reach out to demographics that are traditionally challenging to access through different mediums (Cummings and Lemaire 2008, p.25). Thus, in this platform, advertisers can effectively reach niche audiences as well as specific geographies. Typically, adverts are made by inserting regular weekly advertisements in local newspapers. Furthermore, newspaper advertising is relatively economical and affordable to consumers (Gupta 2012, p.106). For instance, newspapers cost less per thousand readers than other platforms, such as online advertisements, whose initial costs are very high. From the customers' perspective, newspapers are inexpensive, and a single officer with several members can share one daily newspaper (Gupta 2012, p.106). Moreover, traditional outlets are increasingly capitalizing on mobile devices to propel news, including advertisements.

Effectiveness of Social Media in Advertising of Commercial Events

Since its invention, several decades ago, the internet has become a significant part of human lives. It plays a critical role in both our work and personal life. Currently, internet marketing is one of the fastest growing and developing marketing sectors. Internet-based networking technologies have also contributed to significant improvements in different economic industries' functioning, such as marketing. For instance, digital marketing is a tool used for managing the act of growing web traffic or brand recognition across social media. Social Media marketing primarily focuses on creating creative content and seeks to capture viewers' attention on social media platforms. This would also convince audiences to share it with someone else. This form of marketing is powered by eWoM – electronic word of mouth, which indicates that it leads to earned media instead of paid media and enables the firms to gain different objectives. There are many social media networking sites. Therefore, each internet marketing site will need a range of marketing resources, tools, or approaches. Information

Resources Management Association (2018, p.103) further noted that social media advertisements are flexible because an advertiser can customize them to suit customers. Also, unlike traditional media, in social media, one can start and stop campaigns at will. As a result, unnecessary costs are avoided, and planning is enhanced.

Commercial Events

The demand for traditional and new media advertisements by commercial events companies has been on market. According to Armstrong (2014, p.6), commercial events organizations must effectively boost all critical consumer information to help achieve various promotional objectives and attract new customers. For example, through advertising, commercial events organizations can clarify their services, including prices, locations, and engagement terms. As a result, potential clients can objectively contact them and impact sales.

Impacts of Advertisements in Marketing Commercial Events

The effectiveness of advertisements in marketing commercial events has been a controversial issue due to the benefits and drawbacks involved. Thus, before making advertisements decisions, entrepreneurs must evaluate marketing conditions such as channels, timing, and targeted audience to garner high returns. On the contrary, Shimp (2010, p.18) noted that regardless of the strategies implemented by a company to enhance its advertisement activities, unsatisfied customers will adversely impact sales because they spread negative information about the business. Thus, it is essential to note that a compelling advertisement approach must be backed up with other tactics to satisfy clients in marketing a commercial event. Also, Shareef et al. (2019, p.9) suggests that modern advertisement media such as online social platforms, video ads, and websites have led both small and large businesses to compete at the same level. The reason is that advertising through modern methods is affordable even for small enterprises, unlike advertising through television and magazines. A study conducted by Ryan and Jones (2012) supporting the earlier by Gupta (2012) indicated that most companies in the commercial event sector are opting for social sites due to their cost efficiency and ability to reach a wide range of consumers the world within a short time.

Advertisement Trends in Marketing Commercial Events

Disruptive and new technological innovations across the globe are forcing marketers to evolve advertisement strategies. Current trends show that advertisements through interactive video content have been effective. As stated earlier, the number of active users on social media channels such as Facebook and Twitter have been rising over the years. Thus, interactive videos in modern advertising media have enabled entrepreneurs to increase engagement with customers. For instance, studies show that more than 90% of respondents through an online survey agreed that it was easier to watch a full 360-degree video than traditional video formats (Obaid n.d., 2019). Recently, advertisements through chatbots have also been increasing exponentially. De (2019, p.7) noted that the trend is facilitated by artificial intelligence (AI) technology. The chatbots respond to the client's requests, detects a guest on a company's website, and engages customers 24/7. The use of AI helps eliminate guesses in advertisements and ensure that irrelevant content does not get through to the unintended client.

Additionally, AI in advertising leads to more accurate and precise data as well as reducing costs. De (2019, p.13) predicts that AI-powered Chatbot will gain its popularity by 2023, making retailers cut costs and increase sales. Due to increased cyber threats such as hacking and theft, current trends show

that companies opt for technologies that enhance users' privacy. Sivarajah et al. (2019, p.10) indicated that online advertisements were undergoing significant changes in 2019, and the trend is likely to continue to protect users' data. The new European Protocol on user privacy, mainly referred to as GDPR, ensures that organizations cannot collect online users' private information without their consent (Politou et al., 2018). However, marketers will still be able to personalize advertisement content through contextual advertising based on web pages visited instead of their private data. The trend will inspire more users to sign into online platforms because they are assured of their privacy.

Methodology

Research approach

This study will use a quantitative research approach. The reason behind choosing this approach is that data can easily be measured and analyzed by the author while reducing biased research findings. Besides, the research employs a deductive research method. The paper starts with a social theory that indicates the researcher finds it objectionable and then uses evidence to check the effects. The researcher will be going to a specific level testing theory of the effectiveness of digital marketing tools over traditional marketing tools.

The study's research design is descriptive research that aims to gather more information about advertising in commercial events. Therefore, the research will be beneficial in viewing the problem from different perspectives and perceptions. Lastly, a survey questionnaire will be used in knowing the effectiveness of advertisements in commercial events.

Population and sample size determination

Target population

This research's target population is advertising agencies, marketing companies, and the Oman Convention and Exhibition Centre.

Sample size

The sample size was limit to a certain extent focusing only on managerial positions, CEOs, and supervisors. Since the number of managerial positions is not large. The sample size consisted of 39 participants, which consisted of 9 managers, 10 CEO, and 20 supervisors.

Sampling technique

A convenient sampling technique will determine this research's sampling method because the researcher found it to be the most appropriate and comfortable technique.

Data source

The data sources that were used are primary and secondary data. The primary data includes questionnaires based on the effectiveness of Muscat's advertising methods and how it impacts commercial events. For secondary data sources, websites, books, articles, and journals will be assessed based on relevant information regarding advertising effectiveness and problems with measuring advertising effectiveness.

Data collection methods

For data collection, the research will use secondary data to gather statistics through a standardized survey that will help explore the topic according to the companies' perception of advertising.

Data collection procedure

The research will use primary data collection tools to collect data and gather information based on the topic. The questionnaire, which the researcher designed using a Statistical package for social science (SPSS), was distributed among various companies like Oman Convention & Exhibition Centre, Advertising and marketing agencies, and some ministries involved in marketing departments. The reason behind picking these specific companies is to assess the effectiveness of advertising in marketing commercial events. Consequently, the research targets Managers, CEO, and supervisors who know advertising and marketing events better. In analyzing the data, SPSS will be used to examine the findings of the survey. The reason behind selecting SPSS is that the software suits the type of research being done. Also, the researcher has more knowledge on SPSS and will easily be able to analyze and interpret data.

Data analysis

In analyzing the data, SPSS will be used along with pie charts, bar charts, and descriptive statistics. SPSS is suitable for social sciences and, therefore, best fits the project. Besides, the researcher has more knowledge of SPSS and can quickly analyze and interpret the results accurately.

Limitations

Several limitations are likely to affect the research. First, Researchers must have access to the citizens in Muscat such as managers, CEOs, and supervisors, and that are willing to give up their time to answer the questionnaires. As such, this process can be time-consuming and pricey. The next drawback is that respondents can be interested in sharing information that makes them look better, leading to the possibility of bias. Also, since quantitative analysis may not permit a thorough study of attitudes and behaviors, researchers will not be able to ask real, analytical questions.

Analysis, Data Presentation, and Interpretation of the Findings

The questionnaire was developed by reading similar surveys based on the effectiveness of advertising and how it can impact commercial events, as well as secondary data was used to find relevant information on the subject of advertising effectiveness and the problems that could be faced while measuring the effectiveness of advertising in marketing commercial events. The questions were formulated into two categories, multiple choice questions that the respondents are presented a set of three answers they must select from, as well as scaling questions that the respondents are asked to rank the following statements based on rating the differences between traditional and digital marketing channels on their effectiveness on commercial events. On a scale of 1-10 where 1 is "least effective" and 10 is "more effective" The questionnaire aimed at providing information used to "analyze the effectiveness of advertisement methods in marketing the commercial events." By the end of the analysis, the research question, "To what extent are the advertisements effective to promote the commercial events, such as exhibitions and COMEX, "should be answered.

Data Preparation

In this study, the distributed questionnaires were 39 out of 45 questionnaires were completed. To analyze the statistics, each of the answers has a code to enter the data In SPSS. The researcher focused on pie and bar charts, descriptive statistics, and T-test.

Demographic data

The information displayed in this chapter comes from the questionnaires’ responses. As stated before, the researcher collected preliminary information by questioning CEOs, managers, supervisors, and members of the Oman Convention Centre, advertising companies, and marketing agencies.

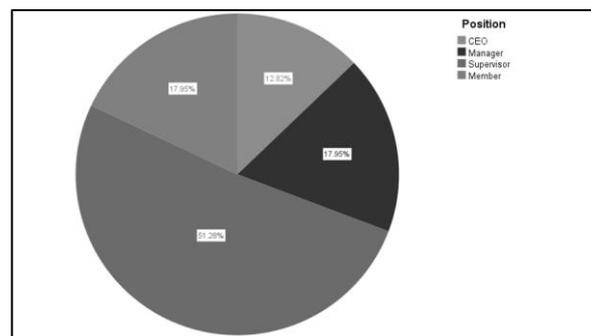


Figure 4.1: Position in the market

Figure 4.1 above, most of the respondents were supervisors with a percent of 51.28, followed by managers and members who both constituted 17.95% of all the respondents. With 12.82%, the CEOs category came last, making the supervisors be the majority.

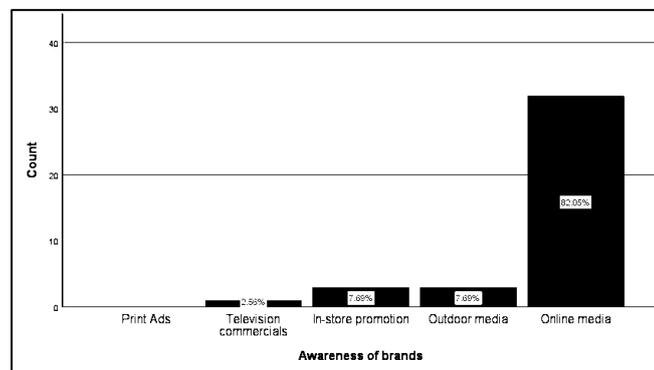


Figure 4.2: Gaining awareness of various brands

Figure 4.2 above displays what are the most effective methods of awareness in marketing tools. The highest was online media by 82.05%, and the lowest was print ads. This indicates that online media is the most effective way to advertise and make customers aware of the product or services.

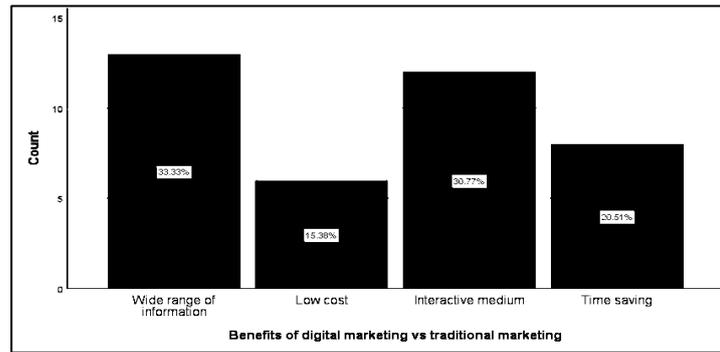


Figure 4.3: Benefits of digital marketing

Figure 4.3 shows that 33.33% mentioned that they prefer digital marketing over traditional marketing since it offers a wide range of information, 30.77% prefer digital marketing as it is a more interactive medium. Also, 20.51% of the respondents claim that digital marketing is timesaving, while only 15.38% prefer it due to low cost. This confirms that digital marketing has the benefit over traditional marketing in giving a wide range of information to its users, making it easier for companies to have lots of information on one page, website, or social media sites. This question answers the following objective “To compare the customers’ perceptions of traditional versus social media ads tools for events.”

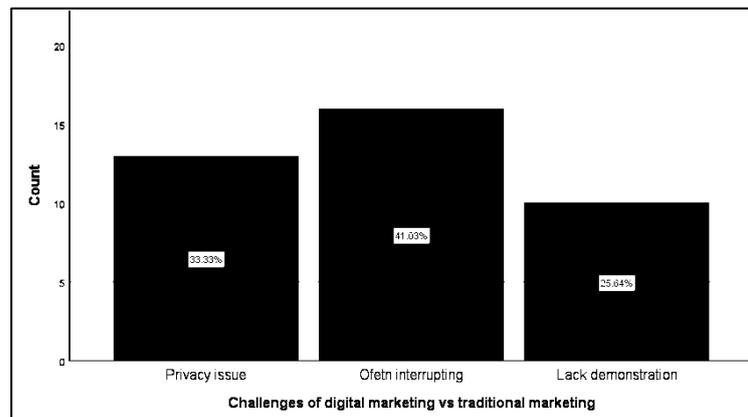


Figure 4.4: Challenges of digital marketing

Figure 4.4 indicates the challenges that digital marketing faces over traditional marketing. On this note, 41.03% of the respondents agree that digital mediums are often interrupting, and 33.33% approve that it creates privacy issues; however, only 25.64% mentions that digital marketing lacks demonstration. This shows that the major challenge of digital marketing is that it is often interrupting hence event managers find it an obstacle to use digital marketing tools because of the mentioned reasons above. Q6 answers the following objective “To compare the customers’ perceptions of traditional versus social media ads tools for events.”

Table 4.1 Descriptive Statistics Q7.11 and Q7.12

Sample	N	Mean	StDev	SE Mean
Q7.11	39	2.72	1.30	0.21
Q7.12	39	4.205	0.951	0.15

Table 4.1 above provides the solution to question 7, statement number 11 “in your opinion, the effectiveness of traditional advertisements in marketing commercial events are considered more significant than digital ads” the mean here is 2.72. This indicates that it is lower than question 7 statement 12. “in your opinion, the effectiveness of digital advertisements in marketing commercial events are considered more significant than traditional ads” with a mean of 4.205, which is the highest. This indicates that the respondents highly agreed with digital ads’ effectiveness over traditional ads in marketing commercial events.

Table 4.2: T-Test Sample of Q7.11 and Q7.12

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Q7.11	39	2.7179	1.29673	.20764
Q7.12	39	4.3077	.79980	.12807

The T-test associated with question 7 statement 11, “effectiveness of traditional ads in marketing commercial events,” and question 7 statement 12, “, the effectiveness of digital ads in marketing commercial events”, states that there is a statistical variance among them comparing with the highest mean of 4.3077 and the lowest mean of 2.7179.

Table 4.3: One-Sample T-Test of Q7.11 and Q7.12

One-Sample Test						
	Test Value = 0					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Q7.1 1	13.090	38	.000	2.71795	2.2976	3.1383
Q7.1 2	33.635	38	.000	4.30769	4.0484	4.5670

The table above specifies digital ads with the highest mean of 4.30769 and the lowest mean of 2.71795 for traditional ads. The researcher concludes that digital advertisements are considered a popular way of promoting COMEX exhibitions more than traditional advertisements.

Discussion of Findings

The research findings confirmed that the most used advertising model is digital marketing channels which are also the most effective.

Effectiveness of Digital Media in Advertising the Commercial Events

Advertisements in the marketing of exhibitions and COMEX should focus on the increasing effectiveness of digital advertisement. Thus, a cost-benefit analysis should be done to validate the best method for individual exhibitions and COMEX based on capitalization, marketing goals, etc. Furthermore, the research found that most of the population, 33.33%, prefers digital marketing due to its wide range of information compared to traditional marketing. Other respondents prefer digital marketing due to its low cost, interactive medium, and timesaving, with a rate of 15.38%, 30.77%, and

20.51%, respectively. On the contrary, the literature review notes the essence of digital advertising from social media, whereby benefits are pointed out. According to the literature review, there are quite several social media benefits in contrast to traditional media.

Effectiveness of Traditional Media in Advertising the Commercial Events

The research also focused on traditional advertisements to find out their effectiveness in advertising commercial events. Traditional outlets are increasingly capitalizing on mobile devices to propel news, including advertisements. In contrast to the digital media, most of the research results noted that traditional media is less effective, especially in the advertisement of COMEX. The reason is that the advancing communication technology and marketing trends enable many consumers to access digital media easily.

Impacts of Digital and Traditional Advertisement of Commercial Events

Based on figure 4.3, advertisement through digital methods is perceived to reach a wide range of potential customers and creates an interactive medium for users. This corresponds with the literature review that modern advertisement methods tend to reach many people worldwide within a short time (Ryan & Jones 2012; Gupta 2012). Thus, entrepreneurs can make their products and services popular in the market to enhance brand recognition. Moreover, the ability to reach a broad market helps increase the sales and profitability of an organization. The literature review and the research findings prove that presently most consumers perceive digital marketing to be fast because they can compare products and place orders directly, unlike when using traditional methods. This creates an opportunity for organizations to segment the market and personalize advertisement messages to targeted consumers.

Measures of effective marketing

The question that scored the highest mean point of 4.5385, most respondents agreed that image and brand recognition are the most crucial means of determining the effectiveness of an advertisement in commercial events. Similarly, the literature review indicates that brand value is essential in measuring the effectiveness of an advert. According to Kehinde et al. (2016, p.10), an effective advertisement method enhances the recognition of a brand by reaching a wide range of potential customers. Furthermore, as stated in the literature review, a positive brand image in the thoughts of the public increases the urge and interest of people to view an advertisement whether it is through traditional or digital media. Therefore, it is evident that consumers consider the brand reputation of a company when listening, viewing, or reading an advertisement content. Other tests identified in literature review as measures of effective advisement in commercial events are exposure and meeting an intended purpose. This can further be explained by Q7.10 which asked whether customers would be aware of commercial events around them without advertisements. A significant number of respondents stated that their exposure to ads is not always a source of them being aware of an event. On the contrary, the literature review shows that an advertisement is regarded as effective if it gains exposure and meets an intended purpose (Estévez & Fabrizio 2014; Kehinde et al. 2016, p.9). Thus, exposure of advisement constructed on the number of individuals who have seen or heard about the message does not dictate its effectiveness because it does not necessarily mean that they will seek commercial events services. Lastly, customers' attitude change is another critical factor that measures the effectiveness of advertisements in commercial events. As per the literature review, there is a high correlation between customers' attitudes and the nature of advertisement content from the perspective of cultural differences. According to Pavlou & Stewart (2000, p.3), a customer with a positive attitude towards a specific commercial event tends to be more attentive such as by taking adequate time to understand the message than those with a negative attitude. Moreover, an advertisement content that may seem right

to a specific target market may be offensive and manipulative to another group of consumers (Herzog 2014, p.46).

Conclusion

The study intended to analyze the effectiveness of advertisements in promoting commercial events. With the marketing sector has evolved over the years, there are many arguments on the most effective advertisements in commercial marketing events such as exhibitions, particularly COMEX. Typically, there are various digital and traditional media networks, including Broadcast (TV and radio), Print (magazines and newspapers), social media (Facebook, Twitter, and YouTube), and websites. Among these media, each has its benefits and challenges; thus, companies must consider a cost-benefit analysis to select a suitable one. Nevertheless, the research findings specify that digital media is more effective than the traditional one. That has been backed up by both the literature review and an analysis of the research data. The literature review has cited numerous advantages of digital media, especially social media, while the research findings have a larger percentage supporting digital media effectiveness. Besides, it has been stated that digital advertisement of commercial events is cost-effective and reaches a broad market within a short time compared to traditional methods. Thus, the paper recommends that marketing practitioners implement marketing strategies based on current digital advertisement methods.

Recommendations

The research shows that there are many measures to determine the effectiveness of an advertisement for commercial events. Based on the research findings and the literature review, brand image and awareness are critical factors for selecting an advertisement method. Marketing practitioners should ensure that services and products offered in a commercial event are of good quality so that consumers will have a positive image of the organization. This will lure more customers into talking positively about the brand to friends and sharing the advertisement content. However, it has been identified that digital marketing is prone to privacy issues. Thus, marketing practitioners should enhance users' safety such as reporting scam messages that use other organizations to mislead customers or share unsafe links through social media. Privacy issues can scare customers from clicking on ads which can compromise the effectiveness of an advertisement.

References

- Ansari, A. and Riasi, A. (2016). An investigation of factors affecting brand advertising success and effectiveness. *International Business Research*, 9(4), pp.20-30.
- Armstrong, G., Adam, S., Denize, S., & Kotler, P. (2014). Principles of Marketing VS. Sydney, Pearson Education Australia. <http://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=4741493>.
- Bezjian-Avery, A., Calder, B. and Iacobucci, D. (1998). New media interactive advertising vs. traditional advertising. *Journal of advertising research*, 38, pp.23-32.
- Cummings, T. J., & Lemaire, B. (2008). Print media distribution: a look at infrastructure, systems, and trends. Rochester, NY, RIT Cary Graphic Arts Press.
- Camp, W. (2001). Formulating and evaluating theoretical frameworks for career and technical education research. *Journal of vocational education research*, 2001, pp. 4-25
- Deepak, R. K. A., & Jeyakumar, S. (2019). Marketing management. Educreation Publishing.

- De Mooij, M. (2019). *Consumer behavior and culture: Consequences for global marketing and advertising*. SAGE Publications Limited.
- Gupta, R. (2012). *Advertising principles and practice: with 17 recent Indian case studies*. [S.l.], S CHAND & CO LTD.
- Information Resources Management Association (2018). *Social media marketing breakthroughs in research and practice*.
- Herzog, B., (2014). *Analyzing the Effectiveness of Ambush Marketing With Google Search Data*. [online] Available at: https://www.researchgate.net/publication/264732011_Analyzing_the_Effectiveness_of_Ambush_Marketing_With_Google_Search_Data [Accessed 1 Nov. 2019].
- Kehinde, O.J., Ogunnaike, O.O., Akinbode, M. and Aka, D. (2016). Effective Advertising: Tool For Achieving Client-Customer Relationships. *Journal of Media Studies*, 2(1).
- Obaid, S. n.d (2019). *Print Media vs. New Information Technology*. [online] Globalmediajournal.com. Available at: <http://www.globalmediajournal.com/open-access/readership-and-readers-perception-of-omani-newspapers.php?aid=35358> [Accessed 1 Nov. 2019].
- Pavlou, P.A. and Stewart, D.W. (2000). Measuring the effects and effectiveness of interactive advertising: A research agenda. *Journal of Interactive Advertising*, 1(1), pp.61-77.
- Politou, E., Alepis, E. and Patsakis, C. (2018). Forgetting personal data and revoking consent under the GDPR: Challenges and proposed solutions. *Journal of Cybersecurity*, 4(1), pp.001.
- Ryan, D., & Jones, C. (2012). *Understanding digital marketing: marketing strategies for engaging the digital generation*. Philadelphia, Pa, Kogan Page. http://www.123library.org/book_details/?id=99084.
- Shareef, M.A., Mukerji, B., Dwivedi, Y.K., Rana, N.P. and Islam, R. (2019). Social media marketing: Comparative effect of advertisement sources. *Journal of Retailing and Consumer Services*, 46, pp.58-69.
- Shimp, T. A. (2010). *Advertising, promotion, and other aspects of integrated marketing communications*. Mason, OH, South-Western Cengage Learning.
- Sivarajah, U., Irani, Z., Gupta, S. and Mahroof, K. (2019). Role of big data and social media analytics for business-to-business sustainability: A participatory web context. *Industrial Marketing Management*.
- Warc.com (2021). *Advertising Attitudes and Advertising Effectiveness* | WARC. [online] Warc.com

أثر ملائمة استراتيجية سلسلة الإمداد على ربحية الشركات: نموذج مقترح

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الملخص

تعرف "ملائمة استراتيجية سلسلة الإمداد" بأنها الاتساق الاستراتيجي الأمثل الذي يتحقق بين خصائص الطلب والعرض على المنتج من جهة وبين الخصائص والسمات المرتبطة بتصميم سلسلة الإمداد لهذا المنتج من جهة أخرى. تهدف الدراسة إلى تطوير إطار نظري للربط بين ملائمة استراتيجية سلسلة الإمداد وربحية الشركات. تتمثل منهجية الدراسة في استعراض الدراسات السابقة التي تناولت العلاقة بين ملائمة استراتيجية سلسلة الإمداد والمؤشرات المالية وبخاصة مؤشرات الربحية، وكذلك التحديات المرتبطة باختيار الاستراتيجية الملائمة لسلسلة الإمداد فضلاً عن استعراض نماذج بناء وتحديد الاستراتيجية المثلى لسلسلة الإمداد.

باستعراض الدراسات السابقة والأوراق البحثية - منذ عام 2007 وحتى عام 2020- وجد أن تركيز معظمها قد انصب بشكل كبير على دراسة أثر اختيار الاستراتيجية المثلى لسلسلة الإمداد أو تحقيق مفهوم الملائمة في استراتيجية سلسلة الإمداد على الأداء المالي للشركات بشكل عام دون التركيز بشكل أكثر تفصيلاً على الربحية، وبالنظر للدراسات التي تناولت الربحية كمتغير تابع لم نجد أي منها قام بتضمين جميع مؤشرات الربحية المتعلقة بمفهوم الملائمة، بل وجد أن هناك اختلاف واضح في مؤشرات الربحية التي اعتمدت عليها معظم هذه الدراسات وكان التوافق بين هذه الدراسات على عدد محدود جداً من المؤشرات.

خلصت الدراسة إلى الخروج بالمتغيرات المكونة للإطار النظري والتي تمثلت في ملائمة استراتيجية سلسلة الإمداد كمتغير مستقل وربحية الشركات- بشكل مفصل- كمتغير تابع وكل من (الإيراد - التكلفة - إدارة الأصول) كمتغيرات وسيطة.

تتمثل قيمة الدراسة في أنها تقدم إطار نظري متكامل يربط بين المتغيرات سالفة الذكر (ملائمة استراتيجية سلسلة الإمداد - ربحية الشركات - الإيراد - التكلفة - إدارة الأصول) بنموذج واحد، بالإضافة إلى الاستفادة المقدمه لصانع ومتخذ القرار من نتائج الدراسة والتي ستكون بمثابة دليل استرشادي للمتعاملين داخل الدولة أو المنطقة الجغرافية التي سيتم تطبيق نموذج الدراسة على مجموعة الشركات العاملة بها.

الكلمات الدالة: ملائمة استراتيجية سلاسل الإمداد، تصميم سلسلة الإمداد، مؤشرات الربحية .

المقدمة

تواجه الشركات تحديات كبيرة لإرضاء وتلبية رغبات عملائها خاصة في ظل ظروف وطبيعة بيئة السوق المتغيرة التي نعيشها تلك الأيام، وبالتالي نجد أن المنافسة قد انتقلت من نطاق الشركات الفردية إلى المنافسة بين سلاسل الإمداد الخاصة بتلك الشركات. وفي هذا السياق فإن إدارة سلاسل الإمداد تلعب دوراً حيوياً في الحفاظ على المكانة التنافسية للشركات في السوق من خلال تنظيم جميع الأنشطة التي تبدأ من المورد وصولاً للمستهلك النهائي بما يضمن كفاءة تنظيم تلك الأنشطة. تهتم إدارة سلاسل الإمداد بتنظيم ومتابعة سير العمل بداية من شراء المواد الخام مروراً بالتصنيع وصولاً للتوزيع وخدمة العملاء وعمليات المعالجة وإعادة المعالجة الخاصة بالمنتجات، لذا فإن كل سلسلة إمداد تهدف لتحسين مستوى الأداء للوصول وتلبية توقعات العملاء. وتعد ملائمة استراتيجية سلسلة الإمداد من أهم عوامل نجاح المنظمة، حيث أن تحقيق الربط المناسب بين سلسلة الإمداد من ناحية واستراتيجية الشركة من ناحية أخرى من شأنه أن يكسب الشركة ميزة تنافسية في السوق (Chopra and Meindl, 2016; Jagan, et al., 2019).

في ضوء ذلك تهدف هذه الدراسة إلى استخلاص وتقديم إطار نظري (نموذج مقترح) للربط بين ملائمة استراتيجية سلسلة الإمداد وربحية الشركات، وفيما يلي سيتم استعراض أهم المفاهيم المتعلقة بالدراسة للوقوف على ماهية وطبيعة الفجوة البحثية:

ملائمة استراتيجية سلسلة الإمداد

تم التعرف على مصطلح "ملائمة استراتيجية سلسلة الإمداد" بواسطة فيشر عام 1997، حيث يمكن تعريفها على أنها "الاتساق الاستراتيجي الأمثل الذي يتحقق بين خصائص الطلب والعرض على المنتج من جهة (مثل القدرة على التنبؤ بحجم الطلب، طول دورة حياة المنتج، تنوع المنتجات ومتطلبات السوق الواجب توافرها في المنتج) وبين الخصائص والسمات المرتبطة بتصميم سلسلة الإمداد لهذا منتج من جهة أخرى (مثل استراتيجية المخزون، استراتيجية تصميم المنتج ومعايير اختيار المورد)". ومن خلال تطوير وفهم تأثير ملائمة استراتيجية سلسلة الإمداد على أداء الشركات، فإن هذه الشركات ستصبح قادرة على تحديد المعايير وتصميم النماذج الخاصة بها والتي تضمن لها الوصول إلى شكل سلسلة الإمداد الأمثل (Stephan, et al., 2012).

ويمكن التمييز بين نوعين من الاستراتيجيات المختلفة لسلاسل الإمداد الأولى تسمى باستراتيجية الكفاءة والأخرى تسمى باستراتيجية الاستجابة. تقوم استراتيجية سلسلة الإمداد ذات الكفاءة على توفير المنتجات للمستهلكين بأقل تكلفة ممكنة، وتتصف هذه المنتجات بأنها منتجات وظيفية ذات أحجام طلب مستقرة مثل أسواق الخضروات، الأدوية والكتب التقليدية. وتعتمد استراتيجية سلسلة الإمداد ذات الاستجابة السريعة على الوصول إلى أقل وقت ممكن لتقديم الخدمة بداية من تقديم المستهلك لطلب الحصول على المنتج وصولاً باستلام المنتج بالفعل، وتعتبر هذه الاستراتيجية هامة جداً للمنتجات ذات الطبيعة المبتكرة والتي تمتاز بقصر دورة الحياة، ارتفاع هامش الربح والتغير المستمر في حجم وطبيعة الطلب (Fisher, 1997; Gregory, et al., 2015).

مؤشرات الربحية وملائمة استراتيجية سلسلة الإمداد

ملائمة استراتيجية سلسلة الإمداد يمكن أن تؤثر على الإيراد طويل وقصير الأجل، التكلفة وأصول الشركة ومن ثم يمكن لهذه العوامل أن تؤثر على معدلات الربحية. بالنسبة لجانب الإيراد، فإن سلاسل الإمداد الملائمة تساعد الشركات في تمويل طلب السوق المتزايد وذلك لتجنب التعرض لمخاطر نفاذ المخزون مما يؤثر بالسلب على صافي المبيعات وحصة الشركة السوقية، لذا فإن ملائمة استراتيجية سلسلة الإمداد تؤثر بشكل مباشر على معدل نمو المبيعات (Sales Growth)، وكذلك قد ترتبط ملائمة استراتيجية سلسلة الإمداد بتوافر المنتجات وتحقيق مستويات مرتفعة من الخدمات اللوجستية ورضا العملاء وسمعة الشركة في السوق مما يؤثر بشكل مباشر على تحقيق هامش أرباح قبل الفوائد والضرائب مرتفع (EBIT Margin). وبالنسبة لجانب التكلفة، فيرتبط انخفاض تكلفة الحصول على كل من أصول ورأس مال الشركة بالتحسينات المستمرة في هيكل سلاسل الإمداد المتمثلة في معدلات تشغيل مرتفعة، ووقت أداء خدمة منخفض وكذلك انخفاض التكاليف التي تؤدي بدورها إلى ارتفاع في قيمة كل من معدل العائد على الأصول (ROA) ومعدل العائد على رأس المال العامل (ROCE). أما جانب إدارة أصول الشركة، فإنه بفعل القرارات الاستراتيجية التي يتم تطبيقها على سلاسل الإمداد يترتب عليها امتلاك الشركات القدرة والتأثير المباشر على معدلات الانتاجية الخاصة بأصولها، لذا فإن ملائمة استراتيجية سلسلة الإمداد تؤثر بشكل مباشر على معدل العائد على الأصول (ROA) (Fisher, 1997; Selldin and Olhager, 2007; Simchi-Levi, et al., 2000; Stephan, et al., 2012; Chopra and Meindl, 2016).

وبالحديث عن مؤشرات الربحية التي ترتبط ارتباطاً وثيقاً بمستوى أداء سلسلة الإمداد نجد أن من أهمها: إجمالي هامش الأرباح (Gross Profit Margin) ومعدل العائد على المبيعات (Return on Sales). وهذه المؤشرات يمكن لها أن تعمل على تقييم قدرة الشركة على توليد أرباح من خلال قدرتها على زيادة حجم المبيعات. ويمكن أن يشير معدل العائد على المبيعات (ROS) إلى حجم الفائض أو المتبقي من المبيعات بعد قيام الشركة بدفع جميع التكاليف والالتزامات المرتبطة بالأفراد، الموردين، المقرضين، الحكومة.... إلخ. ويوضح إجمالي هامش الأرباح (Gross Profit Margin) حجم الأرباح الأساسية للمنتج أو للخدمة، وعندما يكون هذا المعدل سالباً أو متناقصاً فيشير في هذه الحالة إلى وجود مجموعة من المشكلات والأزمات التي تضع الشركة تحت ضغوط شديدة من شأنها أن تجبرها أو تدفعها إلى خفض سعر المنتج أو الخدمة بصورة هائلة (Seock and Najmi, 2020).

وبالتالي يمكن القول أن القرارات الاستراتيجية التي يمكن أن تؤثر بشكل مباشر على معدلات الانتاجية وبالتالي زيادة معدلات الإيراد ترتبط ارتباطاً مباشراً بارتفاع معدل نمو المبيعات (Sales Growth)، معدل العائد على المبيعات (ROS)، هامش الأرباح قبل الفوائد والضرائب (EBIT Margin) وإجمالي هامش الأرباح (Gross Profit Margin). في حين أن قدرة الشركة على خفض تكلفة الحصول على كل من الأصول ورأس المال يؤثر بشكل مباشر على ارتفاع في قيمة كل من معدل العائد على الأصول (ROA) ومعدل العائد على رأس المال العامل (ROCE). وبالنسبة لجانب إدارة الأصول فإن تحقيق درجة من المركزية في مجالات وخطط

التصنيع والشبكات اللوجستية يؤثر بشكل مباشر على قاعدة الأصول الخاصة بالشركة ومن ثم تحقيق معدل مرتفع من العائد على الأصول (ROA).

ومما سبق يتضح أن ملائمة استراتيجية سلسلة الإمداد لها تأثير على مؤشرات الربحية الخاصة بالشركات ، لذا سوف نقوم باستعراض الدراسات السابقة كمنهجية متبعة بهدف الوصول في النهاية لإطار نظري متكامل (نموذج مقترح) يربط بين ملائمة استراتيجية سلسلة الإمداد وربحية الشركات.

منهجية الدراسة

تعتمد منهجية الدراسة على استعراض الدراسات السابقة والأوراق البحثية - منذ عام 2007 وحتى عام 2020- والتي قامت بدراسة العلاقة بين ملائمة استراتيجية سلسلة الإمداد من جهة والأداء المالي وربحية الشركات من جهة أخرى وذلك للوصول لنموذج مقترح للربط بينهما من خلال الإجابة على التساؤلات البحثية الآتية :

- ما هي أهم الدراسات السابقة التي تناولت العلاقة بين ملائمة استراتيجية سلسلة الإمداد وربحية الشركات ؟
- كيف يمكن بناء نموذج متكامل يربط جميع النقاط التي ظهرت في الدراسات السابقة ويغطي الفجوة البحثية ؟

أهم الدراسات السابقة التي تناولت العلاقة بين ملائمة استراتيجية سلسلة الإمداد وربحية الشركات

اتفقت كل من دراسة (Seock and Najmi, 2020) ، (Ebenezer, et al., 2016) ودراسة (Saba and Waqar, 2014) على استخدام معدل العائد على الأصول (ROA) كمؤشر مالي مناسب لقياس مستوى قدرات سلسلة الإمداد وكفاءة سلسلة الإمداد. حيث توصلت دراسة (Seock and Najmi, 2020) إلى أن مؤشرات الأداء المالية المناسبة لقياس مستوى قدرات سلسلة الإمداد والتي ينتج عنها تعظيم القيمة لحملة الأسهم هي : معدل العائد على الأصول (ROA) ، عدد أيام ذروة المبيعات (DSO) والنسبة الحالية (CR) . وهذا يعني أن ارتفاع معدل العائد على الأصول ، وقصر عدد أيام ذروة المبيعات ومستوى مناسب من النسبة الحالية من الممكن أن يؤدي في النهاية إلى سلسلة إمداد مستدامة. وفي دراسة (Ebenezer, et al., 2016) تم قياس الأداء المالي للبنوك محل الدراسة من خلال أربعة مؤشرات هي: معدل العائد على الاستثمار (ROI) ، معدل العائد على الأصول (ROA) ، معدل العائد على الأسهم (ROE) ونسب السيولة. واستخدم معدل العائد على الأصول (ROA) في دراسة (Saba and Waqar, 2014) للتعبير عن الأداء المالي للشركة ، حيث يشير إلى فعالية الشركة في تعظيم قيمة أصولها لتوليد أرباح ، ويعتبر كذلك مقياساً للأداء الإداري للشركة. ويشير معدل العائد على الأصول إلى درجة نجاح الشركة في تحويل الأموال المستثمرة إلى صافي دخل ، وكلما زادت قيمة معدل العائد على الأصول كان ذلك أفضل لأنه يشير في هذه الحالة إلى مستوى مرتفع من الربحية وبالتالي قوة الأداء المالي للشركة.

واعتمدت كل من دراسة (Wahdan and Emam, 2017) ، (Ebenezer, et al., 2016) ، (Philipp and Erik, 2019) ودراسة (Miklós, et al., 2019) على الأداء المالي كمعيار تابع وتم ربطه بالعمليات المختلفة لسلسلة الإمداد. حيث توصلت دراسة (Wahdan and Emam, 2017) إلى أن هناك علاقة ذات دلالة إحصائية بين إدارة سلاسل الإمداد والأداء المالي للشركات من خلال زيادة معدلات الانتاجية ، خفض التكاليف وتحسين معدلات الربحية . وبالتالي فإن استخدام سلاسل الإمداد ذات الكفاءة العالية من الممكن أن يؤدي إلى تحسين المعايير المحاسبية من خلال الاستخدام الكفء للموازنة المرصودة للمحاصيل الزراعية. وهدفت دراسة (Ebenezer, et al., 2016) لبحث أثر العمليات المختلفة لسلسلة الإمداد (التسويق، التمويل ، الخ....) على الأداء المالي لمجموعة من البنوك التجارية المختارة داخل غانا، وكان الهدف الرئيسي للدراسة اظهار الربط والعلاقة بين عمليات سلاسل الإمداد المختلفة والأداء المالي للشركات العاملة في القطاع المالي وبالتحديد من منظور الدول النامية. وهدفت دراسة (Philipp and Erik, 2019) لاكتشاف الشكل الوظيفي للعلاقة بين الأصول الرأسمالية وأداء الشركة المالي، أو بمعنى آخر كيف للشركة أن تحدد المستوى المناسب من رأس المال والذي يتأثر بمحدودية الموارد المالية وذلك على طول سلسلة الإمداد. وهدفت دراسة (Miklós, et al., 2019) إلى تطوير إطار لتكامل سلاسل الإمداد، وذلك لاختبار العلاقة بين تكامل سلاسل الإمداد والأداء المالي للقطاع المصرفي. كما هدفت للخروج بإطار تطبيقي للعلاقة بين المتغيرين يمكن استخدامه من جانب البنوك، كما سيأتي عن هذا الإطار مجموعة من الأدوات والمعايير التي سيتم استخدامها من جانب المديرين لتحديد تأثير تكامل سلاسل الإمداد على الأداء المالي.

واعتمدت منهجية كل من دراسة (Stephan, et al., 2012) ودراسة (Ebenezer, et al., 2016) على أسلوب الاستبيان. حيث تم جمع البيانات من سبتمبر 2007 وحتى ابريل 2008 من مديري الشركات الصناعية في (أمريكا ، إنجلترا ، ألمانيا ، النمسا ، سويسرا ، فرنسا) في دراسة (Stephan, et al., 2012) ، وتم التواصل مع ما يقرب من 1834 مسئول في أكبر 1000 شركة صناعية في تلك الدول ، وذلك لاختبار صحة الفرض القائل بأن ملائمة سلاسل الإمداد ترتبط ارتباطاً طردياً بالأداء المالي للشركات. وفي دراسة (Ebenezer, et al., 2016) تم تحديد العينة من مجتمع الدراسة الذي يشمل جميع العاملين في قطاعات سلاسل الإمداد المختلفة للبنوك التجارية المختارة في دولة غانا ، وتم توزيع حوالي 190 استبيان واعتمد 170 استبيان فقط وذلك لاختبار صحة الفروض القائلة بأن العمليات الخاصة بسلاسل الإمداد لها أثر إيجابي على الأداء المالي والتسويقي والوظيفي للبنوك، وأن الأداء

الوظيفي والتسويقي للبنوك له أثر ايجابي على أدائها المالي. وتم قياس الأداء المالي للبنوك من خلال أربعة متغيرات وهي : العائد على الاستثمار ، العائد على الأصول ، العائد على الأسهم والسيولة.

توصلت كل من دراسة (Philipp and Erik, 2019) ودراسة (Pan Theo,2009) إلى أنه يتحقق أفضل أداء للشركات عند الوصول لمستوى ملائم من تمويل سلاسل الامداد المعتمد بالأساس على إدارة رأس المال العامل(ROCE) ، كما أن تحقيق مستوى مرتفع من تعظيم الأرباح لرأس المال العامل يقابله قيود تمويلية مرتبطة بإدارة سلاسل الإمداد. وأن الشركة التي تحقق مفهوم ملائمة استراتيجية سلسلة الإمداد الخاصة بها تحقق معدلات ربحية مرتفعة ، وأنه من أهم مميزات ملائمة استراتيجية سلاسل الامداد أنها تحمي الشركات من أخطار سوء السمعة ومشكلات الائتمان والتي تنعكس بالسلب على الوقت اللازم لأداء الخدمة ، مستوى الخدمة ، درجة الابتكار والابداع في تصميم المنتج ومستوى الجودة.

فعالية نموذج (Fisher,1997) في تحديد درجة ملائمة استراتيجية سلسلة الإمداد

قام (fisher, 1997) بتطوير نموذج لمساعدة المديرين على اختيار وتحديد سلسلة الإمداد المناسبة لشركاتهم وذلك انطلاقاً من طبيعة المنتج المقدم (منتج وظيفي ومنتج مبتكر) ، وتوالت المساهمات العلمية للباحثين والتي أثبتت أن هناك عوامل اضافية قد يكون لها تأثير في تحديد الاستراتيجية المثلى لسلسلة الإمداد ومنها : زيادة حدة المنافسة في السوق ، التغيرات المتزايدة في طبيعة وحجم الطلب على المنتج ، زيادة درجة تنوع المنتجات ، التوسع في المنتجات ذات الخصائص المحددة وفقاً لرغبات المستهلكين وكذلك دورة حياة المنتجات والتي أصبحت أقصر عما كانت عليه (Lo and Power, 2010).

عملت كل من دراسة (Selldin and Olhager, 2007) ، (Stephan, et al., 2012) ودراسة (Madeleine, et al., 2014) على اختبار مدى فعالية وملائمة نموذج (Fisher, 1997). أثبتت دراسة (Selldin and Olhager, 2007) فعالية نموذج (Fisher, 1997) في تحقيق الربط الأمثل بين طبيعة المنتج وهدف سلسلة الإمداد، حيث أثبتت نتائج الدراسة أن هناك دلالة لتفضيل الشركات صاحبة المنتجات الوظيفية لسلاسل الإمداد ذات الكفاءة حتى وإن كان ذلك على حساب درجة الاستجابة لمتطلبات السوق، وبالمثل فإن الشركات التي تتبنى مفهوم سلاسل الإمداد ذات الكفاءة تميل لاستخدامها وتوظيفها لخدمة المنتجات الوظيفية بدلاً من المنتجات المبتكرة. وبالتالي فإن هناك علاقة ذات دلالة احصائية للربط بين طبيعة المنتج ونوع سلسلة الإمداد تنعكس على مستوى أداء الشركة ككل ممثلاً في : سرعة التسليم ، الاعتمادية ومستوى التكاليف. لذا يعد نموذج (Fisher, 1997) مفيداً للشركات التي تهدف دائماً للتوسع في السوق . قامت دراسة (Stephan, et al., 2012) باختبار الإطار المفاهيمي لنموذج (Fisher, 1997) في الجزئية الخاصة بالربط بين ظروف عدم التأكد في طلب وعرض المنتج من جهة وسلسلة الإمداد المستجيبة من جهة أخرى وذلك للوصول لمقياس مالي للشركة. وتوصلت الدراسة إلى أنه كلما تحققت الملائمة في استراتيجية سلسلة الإمداد كلما أدى ذلك لارتفاع معدل العائد على الأصول المتحقق. اعتمدت منهجية دراسة (Madeleine, et al., 2014) على استخدام أسلوب "دراسة الحالة" لاختبار ما إذا كانت النماذج الخاصة باستراتيجيات سلاسل الإمداد - ومنها نموذج (Fisher, 1997) - صالحة للتطبيق على المنتجات المبتكرة أم لا.

واعتمدت كل من دراسة (Selldin and Olhager, 2007) ودراسة (Andreas, 2012) على استخدام نموذج (Fisher, 1997). هدفت دراسة (Selldin and Olhager, 2007) لاختبار صحة الفرض القائل بأن الشركات ذات المنتجات الوظيفية والمرتبطة بسلسلة الإمداد الكفؤة تكون أفضل من غيرها في جانب خفض التكاليف . وبافتراض أن الجودة تعد أساس وألوية عند اختيار الموردين في كل من أنواع سلاسل الإمداد المختلفة ، اعتمدت الدراسة على نموذج (Fisher, 1997) للربط بين أنواع المنتجات وطبيعة سلاسل الإمداد التي تخدم تلك المنتجات وذلك بافتراض أن المنتجات عالية الجودة يمكن تحقيقها في أي نوع من المنتجات وكذلك في جميع أنواع سلاسل الإمداد. هدفت دراسة (Andreas, 2012) لاقتراح نموذج يمكن الشركات من اختيار استراتيجية سلسلة الإمداد المناسبة اعتماداً على احتمالات المخاطرة ومعامل المخاطرة. وتم استخدام نماذج رياضية لاستراتيجيات التكلفة لكي تعطى نقاط مثلى يمكن عندها اختيار الاستراتيجية المثلى للشركة وذلك انطلاقاً من نموذج (Fisher,1997). والجدول التالي يوضح الدراسات التي تم الاستعانة بها من حيث منهجية ونتائج كل منها :

جدول (1) : الدراسات السابقة ومنهجية ونتائج كل دراسة

النتائج	المنهجية	التاريخ	الدراسة
وجود علاقة ذات دلالة احصائية بين أنواع المنتجات وأنواع سلاسل الإمداد ، وأن هناك تأثير قوي - للملائمة بين نوع المنتج وطبيعة سلسلة الإمداد - على الأداء في العموم.	اعتمدت الدراسة على نموذج (Fisher,1997) للربط بين أنواع المنتجات وطبيعة سلاسل الإمداد التي تخدم تلك المنتجات وذلك بافتراض أن المنتجات عالية الجودة يمكن تحقيقها في أي نوع من المنتجات وكذلك في جميع أنواع سلاسل الإمداد وذلك لاختبار صحة الفرض القائل بأن الشركات ذات المنتجات الوظيفية والمرتبطة بسلسلة الإمداد الكفوة تكون أفضل من غيرها في جانب خفض التكاليف.	2007	Linking products with supply chains: testing Fisher's model
- تظهر التحديات في سلاسل الإمداد نتيجة عدم التناسق في تطبيق استراتيجيات سلاسل الإمداد - السبب الأساسي في المشكلات التي تواجه معظم سلاسل الإمداد هو عدم الترابط بين حالات عدم التأكد المختلفة واستراتيجيات سلسلة الإمداد. - يتوجب على مديري سلاسل الإمداد فهم الآلية التي من خلالها اختيار الاستراتيجية الصحيحة لسلسلة الإمداد لإشباع حاجات المستهلكين	اعتمدت الدراسة على استعراض الإطار النظري التحليلي المرتبط باستراتيجيات سلاسل الإمداد وكيفية اختيار الاستراتيجية المثلى. وذلك لبيان التحديات التي تواجه إدارة سلاسل الإمداد في صناعة السيارات بجنوب إفريقيا، وكذلك هدفت الدراسة لاقتراح إطار معين لمساعدة المديرين في اختيار الاستراتيجية الملائمة لسلسلة الإمداد الخاصة بشركاتهم .	2011	Framework for choosing supply chain strategies
الخروج بنموذج لربط أثر واحتمال المخاطرة بالاستراتيجيات المختلفة لسلاسل الإمداد.	اعتمدت منهجية الدراسة على اقتراح نموذج يمكن الشركات من اختيار استراتيجية سلاسل الإمداد المناسبة اعتماداً على احتمالات المخاطرة ومعامل المخاطرة. وتم استخدام نماذج رياضية لاستراتيجيات التكلفة لكي تعطى نقاط مثلى يمكن عندها اختيار الاستراتيجية المثلى للشركة وذلك انطلاقاً من نموذج (Fisher,1997)	2012	Selecting the right supply chain based on risks
توصلت الدراسة إلى أنه كلما تحققت الملائمة في استراتيجية سلسلة الإمداد كلما أدى ذلك لارتفاع معدل العائد على الأصول المتوقع.	اعتمدت الدراسة على أسلوب الاستبيان ، حيث تم جمع البيانات من سبتمبر 2007 وحتى ابريل 2008 من مديري الشركات الصناعية في (امريكا ، انجلترا ، ألمانيا ، النمسا ، سويسرا ، فرنسا) ، وتم التواصل مع ما يقرب من 1834 مسئول في أكبر 1000 شركة صناعية في تلك الدول ، وذلك لاختبار صحة الفرض القائل بأن ملائمة سلاسل الامداد ترتبط ارتباطاً طردياً بالأداء المالي للشركات.	2012	The link between supply chain fit and financial performance of the firm

حجم المتجر له أهمية كبيرة في تحديد درجة كفاءة إدارة سلسلة الامداد ، فتزداد قدرة المتجر كبير الحجم على التنبؤ بحجم الطلب بشكل كفاء ، حيث أن الكفاءة في التنبؤ بحجم الطلب تمكن من الاستجابة السريعة لرغبات المستهلكين في الوقت المناسب لتحقيق مستوى مرتفع من الرضا لدى المستهلك ، وبالتالي فإن المتاجر كبيرة الحجم تمتلك مستوى مرتفع من رضا المستهلكين مقارنة بالمتاجر صغيرة الحجم . واقتُرحت الدراسة ضرورة تحقيق التكامل بين طلب المستهلك من جهة وبين وظائف سلسلة الامداد من جهة أخرى للوصول لرضا المستهلك.

- استراتيجية سلسلة الإمداد لا يمكن تحديدها اعتماداً على خصائص المنتج فقط.
- هناك عوامل أخرى يجب أخذها في الاعتبار عند تحديد الاستراتيجية المثلى لسلسلة الإمداد ومنها (حالة النقل - مخاطر التوريد)

الأداء الوظيفي والتسويقي للبنوك له أثر ايجابي على أدائها المالي . وتم قياس الأداء المالي للبنوك من خلال أربعة متغيرات وهي : العائد على الاستثمار ، العائد على الأصول ، العائد على الأسهم والسيولة.

هناك علاقة ذات دلالة احصائية بين إدارة سلاسل الإمداد والأداء المالي للشركات من خلال زيادة معدلات الانتاجية ، خفض التكاليف وتحسين معدلات الربحية . وبالتالي فإن استخدام سلاسل الإمداد ذات الكفاءة العالية من

اعتمدت الدراسة على المنهجية الكمية لتوضيح أهمية وجود ملائمة استراتيجية بين سلسلة الإمداد وطلب المستهلك وذلك من خلال الاعتماد على مجموعة من دراسات الحالة لأسواق تجارة التجزئة بدولة باكستان.

اعتمدت منهجية الدراسة على استخدام "دراسة الحالة" لاختبار ما إذا كانت النماذج الخاصة باستراتيجيات سلاسل الإمداد - ومنها نموذج Fisher,1997 - صالحة للتطبيق على المنتجات المبتكرة أم لا.

اعتمدت الدراسة على أسلوب الاستبيان وتم تحديد العينة من مجتمع الدراسة الذي يشمل جميع العاملين في قطاعات سلاسل الامداد المختلفة للبنوك التجارية المختارة في دولة غانا ، وتم توزيع حوالي 190 استبيان واعتمد 170 استبيان فقط وذلك لاختبار صحة الفروض القائلة بأن العمليات الخاصة بسلاسل الامداد لها أثر ايجابي على الأداء المالي والتسويقي والوظيفي للبنوك، وأن الأداء الوظيفي والتسويقي للبنوك له أثر ايجابي على أدائها المالي

اعتمدت منهجية الدراسة على كل من البيانات الأولية والثانوية، فظهرت البيانات الأولية في الاستبيان الذي تم توزيعه على مجموعة من العاملين في الشركات محل الدراسة ، أما البيانات الثانوية فتم جمعها عن طريق القوائم المالية للشركات بداية من العام المالي

2013 The necessity of establishing a strategic fit between consumer demand and supply chain

2014 A supply chain strategy for an innovative commodity producer: Testing the applicability of established theoretical models

2016 Supply chain practices and firm performance: Evidence from some selected commercial banks in Ghana

2017 The Impact of Supply Chain Management on Financial Performance and

الممكن أن يؤدي إلى تحسين المعايير المحاسبية من خلال الاستخدام الكفء للموازنة المرصودة للمحاصيل الزراعية.

2009/2008 وحتى العام المالي 2013 / 2014 . وتم تحليل هذه البيانات عن طريق البرامج الاحصائية لاختبار صحة الفروض القائلة بأنه لا توجد علاقة ذات دلالة إحصائية بين إدارة سلاسل الإمداد من ناحية والانتاجية ، التكاليف ، الربحية والأداء المالي من ناحية أخرى.

Responsibility

Accounting:
Agribusiness
Case from
Egypt

- يتحقق أفضل أداء للشركات عند الوصول لمستوى ملائم من تمويل سلاسل الامداد المعتمد بالأساس على إدارة رأس المال العامل
- تحقيق مستوى مرتفع من تعظيم الأرباح لرأس المال العامل يقابله قيود تمويلية مرتبطة بإدارة سلاسل الإمداد.

اعتمدت منهجية الدراسة على تحليل واستعراض المداخل والنماذج المختلفة الخاصة بتمويل سلاسل الإمداد ، وذلك لاكتشاف الشكل الوظيفي للعلاقة بين الأصول الرأسمالية وأداء الشركة ، أو بمعنى آخر كيف للشركة أن تحدد المستوى المناسب من رأس المال والذي يتأثر بحدودية الموارد المالية وذلك على طول سلسلة الإمداد

2019 Supply chain finance, financial constraints and corporate performance: An explorative network analysis and future research agenda

- أكثر محاور تكامل سلاسل الإمداد انتشارا هي تكامل المستهلكين ، تكامل الموردين والتكامل الداخلي
- هناك تأثير إيجابي لتكامل المستهلكين ، تكامل الموردين ، التكامل الداخلي والتحكم الداخلي على الأداء المالي.

اعتمدت منهجية الدراسة على أسلوب الاستبيان وتم توزيعه على 249 موظف من العاملين بالقطاع المصرفي الأردني، وذلك لاختبار العلاقة بين تكامل سلاسل الامداد والأداء المالي للقطاع المصرفي. وهدفت كذلك الدراسة للخروج بإطار تطبيقي للعلاقة بين المتغيرين يمكن استخدامه من جانب البنوك، كما سينتج عن هذا الإطار مجموعة من الأدوات والمعايير التي سيتم استخدامها من جانب المديرين لتحديد تأثير تكامل سلاسل الإمداد على الأداء المالي.

2019 The Impact of Supply Chain Integration and Internal Control on Financial Performance in the Jordanian Banking Sector

مؤشرات الأداء المناسبة لقياس مستوى قدرات سلسلة الإمداد والتي ينتج عنها تعظيم القيمة لحملة الأسهم هي : معدل العائد على الأصول (ROA) ، عدد أيام ذروة المبيعات (DSO) والنسبة الحالية (CR) . وهذا يعني أن ارتفاع معدل العائد على الأصول ، وقصر عدد أيام ذروة المبيعات ومستوى مناسب من النسبة الحالية من الممكن أن يؤدي في النهاية إلى سلسلة إمداد مستدامة.

قامت الدراسة بالتحليل الاحصائي لبيانات تسع مؤشرات أداء مالية تم اختيارها من القوائم المالية لحوالي 155 شركة مقسمة على 9 قطاعات كل قطاع يمثل صناعة معينة. وذلك بهدف اكتشاف مؤشرات الأداء المالي التي يمكن أن تساعد في تقييم مستوى قدرات سلسلة الإمداد والتي من الممكن أن تؤثر في الوظائف والعمليات التي تتم داخل الشركة ،

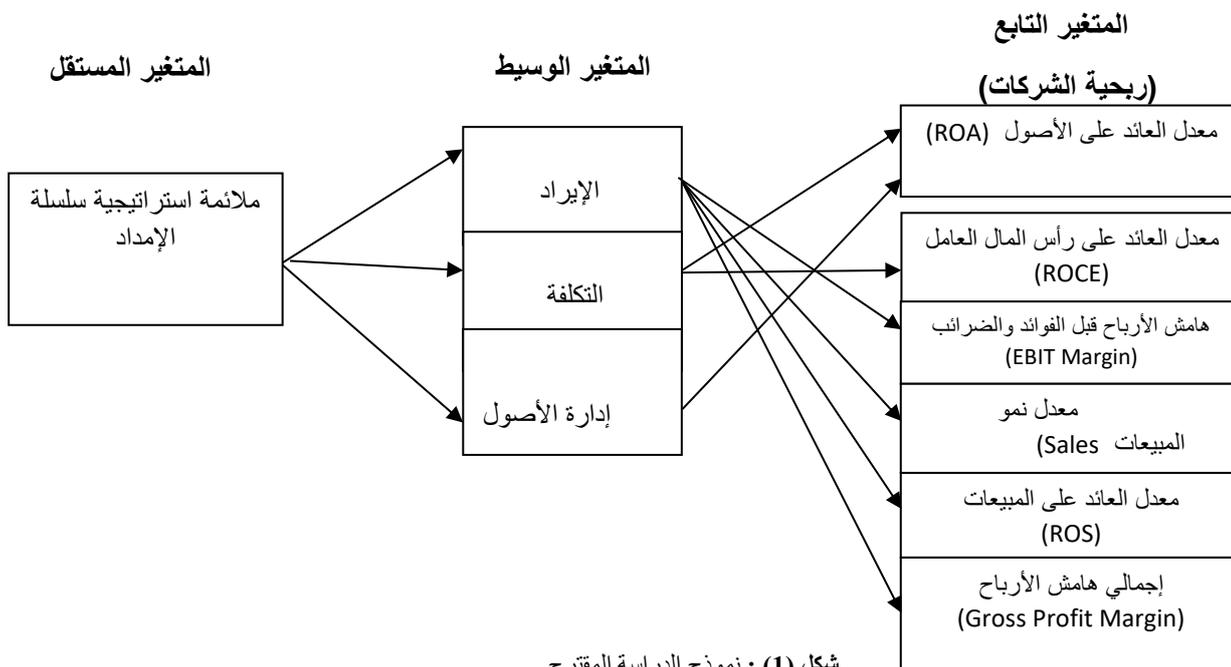
2020 The Relationships between Supply Chain Capability and Shareholder Value Using Financial Performance Indicators

المصدر: إعداد الباحث

نتائج الدراسة

باستعراض الدراسات السابقة وجد أن تركيز معظمها قد انصب بشكل كبير على دراسة أثر اختيار الاستراتيجية المثلى لسلسلة الإمداد أو تحقيق مفهوم الملائمة في استراتيجية سلسلة الإمداد على الأداء المالي للشركات بشكل عام دون التركيز بشكل أكثر تفصيلاً على الربحية ، وبالنظر للدراسات التي تناولت الربحية كمتغير تابع لم نجد أي منها قام بتضمين جميع مؤشرات الربحية المتعلقة بمفهوم الملائمة ، بل وجد أن هناك اختلاف واضح في مؤشرات الربحية التي اعتمدت عليها معظم هذه الدراسات وكان التوافق بين هذه الدراسات على عدد محدود جداً من المؤشرات.

تمثلت الفجوة البحثية للدراسة في التركيز بشكل محدد على الربحية - بجميع مؤشراتها - عند دراسة أثر ملائمة استراتيجية سلسلة الإمداد عليها، وتم الخروج باطار نظري يدرس العلاقة الثلاثية بين ملائمة استراتيجية سلسلة الإمداد كمتغير مستقل وربحية الشركات - بشكل مفصل- كمتغير تابع من خلال تأثير الملائمة على كل من الإيراد والتكلفة وإدارة الأصول الخاصة بالشركة كمتغيرات وسيطة. وبالتالي يمكن تحديد الإطار النظري (نموذج مقترح للدراسة) والذي يربط بين المتغيرات سالفة الذكر (ملائمة استراتيجية سلسلة الإمداد - ربحية الشركات - الإيراد - التكلفة - إدارة الأصول) بنموذج واحد يقوم على منهجية (Fisher, 1997) في الشكل الآتي:



شكل (1) : نموذج الدراسة المقترح

المصدر : إعداد الباحث

التوصيات

في ضوء ما سبق فقد اعتمدت الدراسة على استعراض الدراسات والأبحاث السابقة في استخلاص الإطار النظري سالف الذكر (نموذج الدراسة) ، وبالتالي يمكن التوصية بأن تعمل الدراسات المستقبلية (Further Studies) على اختبار نموذج الدراسة المقترح من خلال اجراء دراسة تطبيقية تجريبية (Empirical Study) على مجموعة من الشركات العاملة داخل دولة ما أو في نطاق منطقة جغرافية معينة (خلال عام مالي معين) للتعرف على مدى وقوة العلاقة التي تربط بين تبني مفهوم الملائمة في استراتيجية سلسلة الإمداد وبين معدلات الربحية التي تحققها تلك الشركات.

- Andreas Wieland. (2012). Selecting the Right Supply Chain Based on Risks. *Journal of Manufacturing Technology Management*. Vol.24 No.5.
- Chopra, S. and Meindl, P. (2016). *Supply Chain Management: Strategy, Planning, and Operation*. 6th Ed., Upper Saddle River, New Jersey: Pearson Education, Inc.
- David Gligor. (2017). Re-Examining Supply Chain Fit: An Assessment of Moderating Factors. *Journal of Business Logistics*/Volume 38, Issue 4.
- Dawei Lu. (2011). *Fundamentals of Supply Chain Management*. Dawei Lu & Ventus Publishing APS, ISBN 978-87-7681-798-5.
- Ebenezer Adaku, Samuel Famiyeh, Constance Anderson and Kwasi Amoako-Gyampah. (2016). Supply chain practices and firm performance: Evidence from some selected commercial banks in Ghana.
- Fisher, M. L. (1997). What is the Right Supply Chain for Your Product? *Harvard Business Review*, 75 (2), pp.105-116.
- Gregory Harris, Paul Compton and Phillip Farrington. (2015). An Exploration of Fisher's Framework for the Alignment of Supply Chain Strategy with Product Characteristics. *Engineering Management Journal*.
- Intaher Marcus AMBE. (2010). Agile Supply Chain: Strategy for Competitive Advantage. *Journal of Global Strategic Management* | V. 4 | N. 1.
- Jagan Mohan Reddy. K, Neelakanteswara Roa. A and Krishnnand. L. (2019). A review on supply chain performance measurement systems. 14th Global Congress on Manufacturing and Management (GCMM). *Proceedings Manufacturing* 30(2019)40-47.
- Lo, S.M. and Power, D. (2010). An empirical investigation of the relationship between product nature and supply chain strategy. *Supply Chain Management: an International Journal*, 15 (2), 139-153.26.
- Madeleine Baras, Annika Brunberg and Robin von Haartman. (2014). A supply chain strategy for an innovative commodity producer: Testing the applicability of established theoretical models. 21st EurOMA Conference, Palermo, Italy, 20-25 June 2014.
- Michael H. Hugos. (2018). *Essentials of Supply Chain Management*, 4th Edition. Wiley; (February 22, 2018).
- Miklós Pakurár , Hossam Haddad , János Nagy , József Popp ,and Judit Oláh. (2019). The Impact of Supply Chain Integration and Internal Control on Financial Performance in the Jordanian Banking Sector. *Sustainability* 2019, 11, 1248; doi:10.3390/su11051248.
- Mohammed Ali Wahdan and Mohamed Ashraf Emam. (2017). The Impact of Supply Chain Management on Financial Performance and Responsibility Accounting: Agribusiness Case from Egypt. *Accounting and Finance Research*. Vol. 6, No. 2.
- Pan Theo Grosse-Ruyken. (2009). *SUPPLY CHAIN FIT: Constituents and Performance Outcomes*. Dissertation. WHU – Otto Beisheim School of Management

Philipp Wetzel and Erik Hofmann. (2019). Supply chain finance, financial constraints and corporate performance: An explorative network analysis and future research agenda. *International Journal of Production Economics* 216 (2019) 364–383.

S. Kamal Chaharsooghi and Jafar Heydari. (2014). Strategic Fit in Supply Chain Management: A Coordination Perspective. DOI: 10.5772/14801.

Saba Arshad and Waqar Akbar. (2014). Impact of Supply Chain Operations on Financial Performance: Evidence from 5 Big Cement Companies in Pakistan. *European Journal of Business and Management*. ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online). Vol.6, No.31.

Selldin, E. and Olhager, J. (2007). Linking products with supply chains: Testing Fisher's Model. *Supply Chain Management: An International Journal*. 12 (1), 42–51.

Seock-Jin Hong and Hossein Najmi. (2020). The Relationships between Supply Chain Capability and Shareholder Value Using Financial Performance Indicators. *Sustainability* 2020, 12, 3130; doi:10.3390/su12083130.

Simchi-Levi, D., Simchi-Levi, E. and Kaminsky, P. (2000). *Designing and managing supply chain*. McGraw-Hill Higher Education.

Stephan M.Wagner, Pan Theo Grosse-Ruyken, and Feryal Erhun. (2012). the link between supply chain fit and financial performance of the firm. *Journal of Operations Management*. Volume 30, Issue 4. Pages 340-353.

Vachon, S., Halley, A. and Beaulieu, M. (2009). Aligning competitive priorities in the supply chain: The role of Interactions with Suppliers, *International Journal of Operations & Production Management*. V. 29 No. 4, pp. 322-344.



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