The Impact of Supply Chain Integration on Corporate Social Responsibility

An Empirical Study of Jordanian Pharmaceutical Manufacturing Industry in Amman-Jordan

اثر تكامل سلسلة التوريد على المسؤولية الاجتماعية

دراسة تطبيقية لصناعة الادوية الاردنية في عمان – الاردن

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Thesis Submitted as Partial Fulfillment of the Requirement for Master Degree in Management

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Amman - Jordan

Jan 2022

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1 Examination Committee's Decision

This thesis of the student Lujain Moeen Shattah, which study "The Impact of Supply Chain Integration on Corporate Social Responsibility of Jordanian Pharmaceutical Manufacturing Industry" has been defined, accepted and approved on 24/01/2022.

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ACKNOWLEDGMENT

First and most importantly praise and thanks be to God for letting me through all the difficulties.

I am grateful to some people, who worked hard with me from the beginning till the completion of the present research particularly my supervisor Dr. Abdel-Aziz Ahmad Sharabati who made this work possible. His guidance and advice carried me through all the stages of writing my project. I would also like to thank my committee who were more than generous with their expertise and precious time and for your brilliant comments and suggestions, thank you.

I also would like to express my wholehearted thanks to my husband for his support that he provided me throughout my entire life and particularly through the process of pursuing the master degree.

Lujain Moeen Shattah

DEDICATION

This thesis work is dedicated to my husband, Thaer, He was always with me through the journey of struggles and the moments of success. He always inspires me. To my sweetest child Sanad

I would like to thank my parents, Moeen and Carmel, for their prayers to me and their encouragement all times.

Last but not least, my brother Thair and my sister Aseel who are proud of my achievements. They deserve endless gratitude

Finally, deepest thanks go to all people who took part in making this thesis real.

Lujain Moeen Shattah

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ABSTRACT

Purpose: Corporate Social Responsibility is among the most desired features of global operation in supply chains. Despite there is a societal urge for socially responsible supply chain, yet the supply chain players (manufactures) may only be motivated being socially responsible given it warrants them improved reputation, performance, profitability. Thus, the purpose of this study is to investigate the impact of Supply Chain Integration (suppliers, internal processes, customers) on CSR at the Pharmaceutical Manufacturing Industry.

Design/Methodology/Approach: To actualize this study the data collected from managers who are working at Jordanian Pharmaceutical Manufacturing Companies by questionnaire. After confirming the normality, validity and reliability of the tool, descriptive analysis carried out, and correlation between variables checked. Finally, the impact tested by multiple regressions.

Findings: The results show that there is a significant and positive impact of Supply Chain Integration on Corporate Social Responsibility of Jordanian Pharmaceutical Manufacturing Industry, where the internal integration dimension has the highest impact, contributing 55.6%. Next, customers' integration has the highest impact. On the other hand, the supplier's integration dimension has no significant impact.

Practical and Managerial Implications: Implementing the Supply Chain Integration in Pharmaceutical Industry is mandatory not option. Therefore, including Supply Chain within vision, mission and strategies will direct plans and daily activities towards CSR.

Social Implications: This study recommends companies to consider Corporate Social Responsibility with their Supply Chain Integration, starting from selecting the suppliers, internal processes and selling to customers.

Limitations/Recommendations: The current study conducted on Jordanian Pharmaceuticals Manufacturing Companies. Therefore, it recommends the future researches to collect more data over a longer time to check the current model validity and measuring instrument. It also recommends carrying out similar studies on other industries in Jordan and same industry outside Jordan to test its results generalizability.

Originality/Value: This study may be considered as one of few studies that tackle the issue of Supply Chain Integration, and investigates its impact on Corporate Social Responsibility of Jordanian Pharmaceutical Manufacturing Industry.

Keywords: Supply Chain, Supply Chain integration, Corporate Social Responsibility, Supplier's integration, internal integration, customer integration.

الملخص

اثر تكامل سلسلة التوريد على المسؤولية الاجتماعية

دراسة تطبيقية لصناعة الادوية الاردنية في عمان – الاردن

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الغرض: تعد المسؤولية الاجتماعية للشركات من بين أكثر الميزات المطلوبة في الشركات وخصوصا ضمن دائرة سلاسل التوريد. على الرغم من وجود دافع مجتمعي لسلسلة التوريد المسؤولة اجتماعيًا، إلا أنهم قد يكون لديهم الدافع فقط ليكونوا مسؤولين اجتماعيًا نظرًا لأنه يضمن تحسين سمعتهم وأداءهم وربحيتهم. وبالتالي، فإن الغرض من هذه الدراسة هو التحقيق في تأثير تكامل سلسلة التوريد مع (الموردين، العمليات الداخلية والعملاء) على المسؤولية الاجتماعية للشركات في صناعة تصنيع الأدوية.

التصميم/الاجراءات: من أجل تطبيق هذه الدراسة جمعت البيانات من مديرين ممن يعملون في شركات صناعة الأدوية الأردنية بواسطة الاستبانة. وبعد التأكد من التوزيع الطبيعي للإجابات وصدق وثبات الأداة، تم إجراء التحليل الوصفي والتحقق من الارتباط بين المتغيرات. وأخيرًا، تم اختبار الأثر بواسطة الانحدار المتعدد.

النتائج: أظهرت النتائج أن شركات صناعة الأدوية الأردنية تطبق كل من متغيرات تكامل سلسلة التوريد وأبعاد المسؤولية الاجتماعية. حيث كان الاثر الاكبر لتكامل العمليات الداخلية بنسبة 55.6% ,ثم تكامل العملاء . بينما لم يكن هناك اثر لتكامل الموردين.

التطبيقات العملية والإدارية: أصبح اليوم تطبيق سلسلة التوريد في صناعة الأدوية إجباري وليس اختياري. ولهذا يجب تضمين سلسلة التوريد في رؤية ورسالة واستراتيجيات الشركات لتوجيه الخطط والعمليات اليومية نحو تحقيق المسؤولية الاجتماعية.

التطبيقات المجتمعية: توصي هذه الدراسة الشركات الأخذ بعين الاعتبار المسؤولية المجتمعية للشركات من خلال نشاطات سلسلة التوريد بدء من اختيار المورد ثم العمليات الداخلية وصولا للعملاء.

المحددات/التوصيات: تم إجراء هذه الدراسة على شركات صناعة الادوية الأردنية، لذلك توصي هذه الدراسة إجراء أبحاث مستقبلية لجمع المزيد من البيانات على مدار فترة أطول للتحقق من صدق وثبات النموذج الحالي وأداة القياس. توصى الدراسة بإجراء مزيد من الأبحاث لتشمل الصناعات أخرى في الأردن وصناعة الأدوية خارج الأردن للتأكد من إمكانية تعميم النتائج.

الأصالة / القيمة: يمكن اعتبار هذه الدراسة واحد من الدراسات القليلة التي تتناول موضوع تكامل سلسلة التوريد، وتستطلع أثره على المسؤولية الاجتماعية لصناعة الأدوية الأردنية.

الكلمات المفتاحية: سلسلة التوريد, تكامل سلسلة التوريد، المسؤولية الاجتماعية ,التكامل مع الموردين، التكامل الداخلي، التكامل مع العملاء.

CHAPTER ONE: GENERAL FRAMEWORK

1.1 Introduction

Throughout the chapter, general information, as well as supply chain integration and corporate social responsibility definitions, is discussed. The research questions addressed include the objectives, the significance of the hypothesis, the limitations of the study, and the delimitations.

In the academic world, professional circles, as well as everyday life, Corporate Social Responsibility is becoming increasingly common. The role of corporate social responsibility (CSR) is to foster a vision and mission for a world of prosperous business and a culture of equality within the organization, based on the principle of corporate responsibility. Keeping a credible image of the company in the new era of fast changes and major global risks requires a balance between financial benefits to the company, public welfare, and preserving the environment. (Barauskaite and Streimikiene, 2021). Due to economic development around the world, anthropogenic sources cause more environmental damage than natural sources. Urbanization and development in coastal areas have contributed to a rise in costs and damages related to various global environmental crises, for example. As a result of this economic growth, natural ecosystems have also become precarious (Sarkis and Zhu, 2018).

Corporations are responsible for how their actions and practices affect community and the environment in a clear, ethical manner, which (1) improves society's health and well-being through sustainable development; (2) stakeholders' interests are taken into consideration; (3) conforms to applicable laws and regulations; as well as 4) integrating and implementing them throughout the organization. (Stefanova, 2013). Furthermore, massive, and rapid changes coupled with a new open door, as well as external obligations and activities, can be both spectacular and risky. A free-market economy poses economic, social, and political challenges to numerous countries (Sexton et al., 2000). The current news, in fact, is sufficient to convince the viewer that pressing challenges impose themselves at different stages of society. In our day-to-day lives, we are all familiar with issues such as community violence, poverty and unemployment in the region, lack of support for social programs, and overpopulation in other parts of the world (Guo et al., 2014). Companies are starting to pay more attention to community development and

social responsibility in their business activities. A major component of their growth depends upon them being recognized as being a part of society and supported by it.

Integrated supply chains help maximize companies' operations, and CSR is critical to manufacturing firms. The link between both concepts (integrated supply chains & CSR) is viewed as an effective method for manufacturing companies to achieve CSR without sacrificing operations. As such, this study aims to provide insights into how Pharmaceutical Manufacturing Companies can produce excellent operational performance while balancing their social, economic, and environmental responsibilities. The purpose of this study is to demonstrate the benefits of integrating supply chain integration with these responsibilities and practices so as to achieve the CSR objectives of the Pharmaceutical Manufacturing Industry.

1.2 Study Purpose and Objectives

The study purpose to explore the impact of supply chain integration on CSR of Jordanian Pharmaceutical Manufacturing Industry, and attaining the following objectives:

1. Determine the level of implementation of Supply Chain Integration among the Pharmaceutical Companies in Amman, Jordan
2. Determine the level of importance of CSR among the Pharmaceutical Companies in Amman, Jordan.
3. Identify the impact of Supply Chain Integration on Corporate Social Responsibility

1.3 Study Significance and Importance

This study may be viewed as one of the few studies to look into the impact of Supply Chain Integration on CSR. It expects to consider the importance of Supply Chain Integration and its contribution on the society and the environment and its role in enhancing the business growth, reputation and public image of the Jordanian Pharmaceutical Companies in Amman, Jordan. As for the population this study will be conducted on the Pharmaceutical Manufacturing Companies in Amman, Jordan.

The importance of this research emerges from the following theoretical and practical considerations:

Theoretically:

This study could be one of the few studies to investigate the impact of supply chain Integration on Corporate Social Responsibility, it is expected to provide accurate and precise economic, social and environmental solutions for the society.

Support other researchers and provide recommendations in Supply Chain Integration, and Corporate Social Responsibility literature.

Practically:

The study gives sound suggestions about several endeavors for successful Supply Chain Integration and their impact on the issues of Corporate Social Responsibility.

Highlight the significance of (supplier's integration, internal integration, customer's integration) the Supply Chain Integration dimensions and the key impact on Corporate Social Responsibility.

Support the decision makers in the Jordanian Pharmaceutical Companies in Amman, Jordan.

1.4 Study Problem Statement

According to structured interview was conducted with 3 managers from different companies for gathering detailed information about their role in helping the local society and the government during the COVID-19 pandemic in Jordan. Unfortunately, the window of opportunity to respond effectively was reduced. Everyone, from individuals and companies to governments and nations, should be concerned about CSR; CSR promotes fairness and equity throughout society. Equal economic, socioeconomic, and environmental opportunities are promoted (e.g. the empowerment of women and people with disabilities) as well as eco-friendly programs (Barauskaite and Streimikiene, 2021). CSR has become a frontline topic of concern for business corporations, and for this purpose they hire consultants specializing in CSR reputations and communication strategies (Islam et al., 2021). Companies wishing to improve corporate social responsibility should integrate their supply chains to meet the new challenges of global competition. This requires a cooperation between organizations, their suppliers, and their customers due to the high level of influence they possess (Freije et al., 2021). To achieve a unite objective like providing maximum customer value (Social Responsibility),

lowering overall costs (Economic Responsibility), and consuming and disposing products in an environmentally friendly way (Environmental Responsibility), all parties involved with the supply chain must work independently and dependably, resulting in a successful supply chain integration. As a result, the purpose of the study is to address the social, economic, and environmental issues as well as to examine the impact of Supply Chain Integration on Corporate Social Responsibility at Pharmaceutical Companies in Amman, Jordan.

1.5 Study Questions

Based on the discussion above the following questions was raised:

1. What is the level of implementation of Supply Chain Integration among the Jordanian Pharmaceutical Companies in Amman, Jordan?

2. What is the level of implementation of CSR among the Jordanian Pharmaceutical Companies in Amman, Jordan?

3. Is there a significant impact of Supply Chain Integration on CSR in the Jordanian Pharmaceutical Companies in Amman, Jordan?

1.6 Study Hypotheses

As stated above the fourth question is answered by testing the following main hypothesis:

H0: There is no significant impact of supply chain integration on CSR at the Jordanian Pharmaceutical Companies in Amman, Jordan, at ($\alpha \leq 0.05$).

Based on supply chain integration components the main hypothesis is divided into three sub-hypotheses:

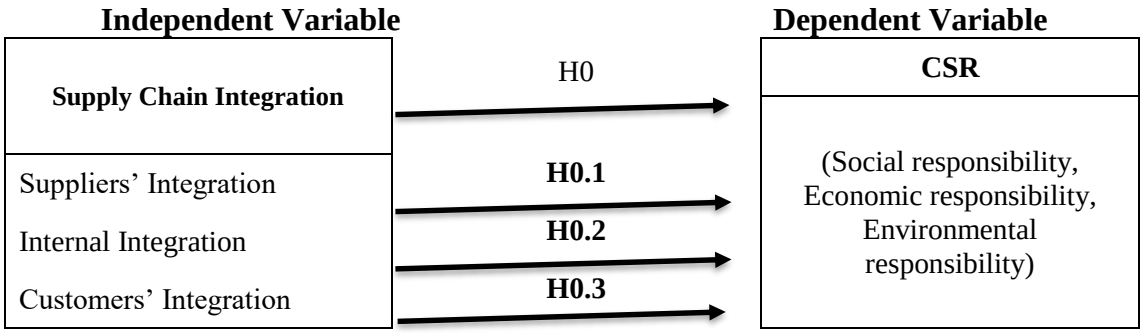
H0.1: There is no significant impact of suppliers' integration on CSR at the Jordanian Pharmaceutical Companies in Amman, Jordan, at ($\alpha \leq 0.05$).

H0.2: There is no significant impact of internal process integration on CSR at the Jordanian Pharmaceutical Companies in Amman, Jordan, at, ($\alpha \leq 0.05$).

H0.3: There is no significant impact of customers' integration on CSR at the Jordanian Pharmaceutical Companies in Amman, Jordan, at, ($\alpha \leq 0.05$)

1.7 Study Model

This study investigates the impact of Supply Chain Integration (independent variable) on Corporate Social Responsibility (dependent variable) of the Jordanian Pharmaceutical Manufacturing Industry. Moreover, the impact of Supply Chain Integration to be investigated for each one of the CSR dimensions. Finally, each one of the Supply Chain Integration sub-variables to be investigated on each dimension of CSR.



Sources: The model is developed by the researcher and the following previous studies: For the independent variable (Freije, de la Calle & Ugarte, 2021). For the dependent variable (Islam et al., 2021).

1.8 Operational Definitions

Supply Chain Integration: is the degree in which companies integrates its supply chain partners (suppliers, customers and internal departments) by sharing information regarding the materials and supplies among them.

Suppliers' Integration: is the degree which companies plans, shares information, and collaborates with its suppliers to provide these companies with the required raw materials and supplies.

Internal Integration: is the degree in which the departments in the companies participates in the strategic planning and decision making while sharing information among each other's using online systems

Customers' Integration: is the degree which companies plans, shares information, and collaborates with its customers to provide them with the required products on time and promised quality.

Corporate Social Responsibility: is the company's inclination towards business voluntary activities to the society, and ethically increase its profit while protecting the natural environment.

Social Responsibility: is the company's responsibility towards the society by supporting the local community, providing equal and fair opportunities with no discrimination.

Economic Responsibility: is the company's responsibility towards its shareholders by increasing its profits, control costs while maintain long term growth.

Environmental Responsibility: is the company's responsibility toward mother-nature by adapting environmentally friendly practices such as waste management and recycling, reducing negative impacts and investing in clean technologies.

1.9 Study Limitations

Human Limitations: The study targets different categories of employees working at the top, middle, and operational level management in the Pharmaceutical Companies in Amman, Jordan

Place Limitations: The study is limited to the Pharmaceutical Companies located in Amman, Jordan.

Time Limitations: The study will be conducted during the academic year 2021

1.10 Study Delimitations

The accuracy of the research results depends on the perception of the participants from the Jordanian Pharmaceutical Manufacturing Companies in Amman, Jordan. And the generalizations of the outcomes are not viable, only on the population that study sample which will be pulled and similar societies. The study is limited to its objective limits related to the variables of supply chain integration and corporate social responsibility.

CHAPTER TWO: THEORETICAL AND CONCEPTUAL FRAMEWORK (LITERATURE REVIEW)

Introduction:

This chapter includes definition of Supply Chain, definitions and components of Supply Chain Integration and Corporate Social Responsibility. Moreover, it includes previous studies. Finally, it summarizes what differentiate this study from previous ones.

2.1 Supply Chain

The modern business environment is characterized by rapidly changing complexity, and firms increasingly depend on an interconnected network of supply chain partners to deliver goods and services at the right time and place at low cost and high quality. The use of advanced operations strategies like lean manufacturing and global sourcing is an increasingly popular strategy to gain a competitive advantage (Munir et al., 2020). The supply chain is a set of entities and processes that are involved in fulfilling orders for customers. For example, the supply chain includes suppliers, factories, distributors, retailers and customers. It can be categorized as planning, sourcing, making, delivering, returning and enabling (Ben-Daya et al., 2019). In his definition of supply chain management, Hassini (2008) states that the function of the supply chain manager is to maximize the surplus, which is defined as the price paid by the end client minus all the costs incurred along the way.

As Koberg and Longoni (2019) pointed out, companies are increasingly held accountable for their own internal operations and those of their suppliers, which have an effect on the environment, socially, and economically. The focal firm's supply chain processes, suppliers, and customers have been directed to integrate environmental, social, and economic goals to maintain its CSR over the past two decades. The importance of supply chain integration (SCI) in supply chain management solutions can be attributed to the fact that integration is seen as a viable strategy for improving efficiency and effectiveness of supply chain actors (Escorcia-Caballero et al., 2019).

In this study the Supply Chain is defined as it is the degree in which companies integrates its supply chain partners (suppliers, customers and internal departments) by sharing information regarding the materials and supplies among them.

Definitions and Component of Variables:

2.1.1 Supply Chain Integration

Supply chain integration is the effective and efficient flow of products, information, and funds to deliver maximum value to the customer at the lowest cost and the fastest speed possible. It refers to collaborative management between and within companies on the strategic, tactical, and operational business processes. (De Vass et al., 2018). However, Zhu et al., (2018) defined supply chain integration in terms of how closely the focal firm collaborates with its key supply chain partners and how collaboratively it manages inter-organizational processes to deliver the highest service level possible. The concept of supply chain integration as introduced by Naina et al. (2019) refers to the integration of supply chain operations and processes by improving information sharing and collaboration among companies in their supply chain networks.

According to scholars such as Chen et al., (2018), effective integration from suppliers to end users may improve firms' operating performance and give them a competitive advantage. In other words, good integration often requires a long development process and rigorous testing. As a result of supply chain integration, inter-supplier relationships (and customer relationships) and intra-company relationships (internal integration) are coordinated in a way that most competitors cannot match the advantages obtained, because SCI is characterized by cooperation, collaboration, information sharing, trust, and shared technology with external partners. (Escorcia-Caballero et al., 2019). In order to improve supply chain and logistics management, an improved model is important for the following reasons: supply chain managers can work on integration initiatives such as forecasting demand and production planning, designing new products together and developing the skills of supply chain partners. As a second step, it aims to encourage supply chain managers to share resources, such as logistical equipment, testing facilities, warehouse facilities, and third-party logistics (Radhakrishnan et al., 2018).

In this study the Supply Chain Integration is defined as the degree in which companies integrates its supply chain partners (suppliers, customers and internal departments) by sharing information regarding the materials and supplies among them.

2.1.2 Suppliers' Integration

Integration of suppliers involves synchronizing suppliers with the firm's procurement and production functions (Koç et al., 2018). Generally, customer and supplier integration is regarded as an external integration. It refers to the degree of collaboration and synchronization between manufacturers and their partners in order to construct strategies, practices, and cross-organizational processes. (Escorcia-Caballero et al., 2019). The result is that when manufacturing companies receive better services from their supply chain partners, specifically their suppliers, the amount of energy needed to run the production and process materials will be kept at a minimum. To protect the environment, manufacturers should also consider the type of material they use in the production of their products. The best way for manufacturers to reduce their negative impact on the environment is to switch to less carbon-intensive materials. This can be achieved by making materials that are not complex and can be processed with green technology. (Naina et al., 2019).

According to Shou et al., (2018), supplier integration refers to a coordination and collaboration relationship between the focal firm and suppliers, particularly when these firms provide external links for the focal firm to access supply chain information and improve their capability to process information through joint information sharing. As well as improving the effectiveness of information and physical flows between manufacturers and suppliers, the initiative aims to develop seamless processes and cohesive supply networks that are difficult for competitors to emulate (Zhang et al., 2018). De Giovanni and Duhaylongsod (2018) defined supplier integration as fostering synergistic relationships between suppliers and other members of supply chains to improve production-procurement processes. The practice begins internally, but then moves towards more external initiatives such as inter-firm collaborations. Additionally, supplier integration is the execution of projects that contribute to the long-term viability of a firm and its suppliers through the setting up of systems and processes that facilitate the flow of supplies and help resolve supply-related problems through information sharing and joint investments. (Amoako-Gyampah et al., 2020).

In this study the Supplier’s Integration is defined as the degree which companies plans, shares information, and collaborates with its suppliers to provide these companies with the required raw materials and supplies.

2.1.3 Internal Integration

Integrating internally, or cross-functionally, refers to the extent of interaction and communication between departments, the extent of information sharing, coordination levels, and participation levels (Koç et al., 2018). Internal integration is defined by Escorcia-Caballero et al. (2019) as the degree to which firms structure their strategies, practices, and processes collaboratively and in a coordinated manner. Additionally, Ellegaard and Koch (2012) pointed out that a detailed examination of the internal integration construct reveals several specific characteristics. It is also common for integrated companies to use cross-functional teams, cross-functional job rotation, process-oriented work routines, and regular communication (e.g., meetings, e-mails, and phone conversations) between the relevant units and collaboration between employees.

Nevertheless, the internal integration of a company occurs when the internal practices and procedures of its departments are aligned to meet the needs of customers through integrated and synchronized processes, production requirements can be translated to purchasing specifications and material movements and ordering processes improved, and the production department and purchasing department can exchange information and performance feedback through scheduled interdepartmental meetings or casual contacts. (Zhang et al., 2018).

In addition, it can also be viewed as a set of competencies within an organization, characterized by "local capabilities" that relate to technology and information systems within the firm: Enterprise Resource Planning, Advanced Planning and Scheduling System, Integrative Inventory Management (Errassafi et al., 2019). As a result, effective internal integration can help break down the functional boundaries, improve communication and information sharing, and create shared norms, values, and goals across different functional areas within the organization. Furthermore, it facilitates the creation of an internal structure with smooth information channels that expand the company's ability to process information and meet the challenges of executing tasks that require tacit and professional knowledge (Liu and Jayaraman, 2019).

In this study the Internal Integration is defined as the degree in which the departments in the companies participates in the strategic planning and decision making while sharing information among each other's using online systems.

2.1.4 Customers' Integration

A customer is considered as an important node in the supply chain when they receive finished products or services with the ability to choose appropriate products and suppliers. Customers are referred to as retailers, wholesalers, consumers, merchandisers, and online retailers (Jermsittiparsert et al., 2019). Therefore, Koç et al. 2018 writes that customer integration refers to the collaborative process and sharing of information between critical customers and the firm as a means to be more responsive to customer needs and requirements. Various studies have identified external integration, or customer and supplier integration, as a set of capability sets comprised of private and public organizations. The local capabilities relate to technologies and information systems embedded within supply chains, such as EDI, quick ordering systems, and information networks (Errassafi et al., 2019). In general, customer integration is the process of managing a company's relationship with both current and potential customers. Ultimately, such integration leads to increased customer satisfaction for a business by organizing, automating, and aligning sales, marketing, customer service, and technical support (Hossain et al., 2018).

Customers' integration is the active involvement of the customer in downstream and upstream processes associated with goods and services; in this role, the customer takes over tasks that would normally be performed by company employees, through his actions, the customer will influence how the company performs (Hamilton-Ibama and Ogonu, 2021). However, researchers have defined integration of customers as environmental collaboration between a firm and its clients, in order to meet environmental requirements and produce eco-friendly products for their needs (Jermsittiparsert et al., 2019). Furthermore, Shou et al., (2017) believe that customer integration makes it easier for manufacturers to get a better understanding of their customers' needs and to specify the quality and quantity requirements of products more precisely; manufacturers also send this information to suppliers, which improves their knowledge of the customers' needs.

In this study the Customers' Integration is defined as the degree which companies plans, shares information, and collaborates with its customers to provide them with the required products on time and promised quality.

2.2 Corporate Social Responsibility

Companies have obligations to the community beyond the profits they generate for shareholders. Whatever their size or type, businesses should strive for environmental sustainability, economic competitiveness, and social responsibility (Bahta et al, 2021). CSR has become a mainstream topic in marketing, finance, strategy management, and social studies. From a modern perspective, it is a business strategy which focuses on addressing a wider range of societal needs and expectations and perceiving socially responsible actions as positively influencing the bottom line (Islam et al, 2021). The emerging trend of corporate social responsibility (economic, social, and environmental) has already been driving organizations forward toward developing a new organizational mindset.

A growing number of companies are recognizing the strategic benefits derived from integrating environmental concerns into corporate social responsibility (Alam and Islam, 2021). The stakeholder theory contends that the success of an organization rests on the business' ability to manage relationships with its stakeholders, a higher level of social responsibility is correlated with a higher level of performance. CSR costs may help businesses achieve higher financial performance benefits indirectly since they are built and maintained through relationships with interest groups (Bahta et al, 2021). International organizations and multinational corporations are undoubtedly taking on their responsibilities in light of global threats such as environmental pollution, hunger, and poverty issues (Abdelhalim and Eldin, 2019).

CSR is a comprehensive commitment captured by businesses to accelerate their ethical concept and increase their community involvement in society, thereby contributing to the economic development, while at the same time raising the quality of the workforce and enhancing the quality of the products and services they provide (Rahman and Islam, 2019). It is clearly demonstrated by the CSR approach proposed by (Paetzold, 2010) that society as a whole assumes that modern companies should be more accountable to society other than to shareholders, which means not only maintaining a long-term profit for the company, but also giving greater consideration to the company's

stakeholders: customers, workers, the government, the natural environment, and society in general.

A comprehensive research paper by Agudelo, Jóhannsdóttir, and Davídsdóttir (2019) clarified that international certifications addressing social responsibility have also been influential in the global recognition of CSR. An example of this is ISO 26000, whose origins can be traced to 2002 when the ISO Committee on Consumer Policy recommended the creation of CSR guidelines to complement the quality management and environmental management standards (ISO 9001 and ISO 14001)

The CSR theory has been greatly influenced by the ISO 26000 standard. According to this, social responsibility means that a corporation is responsible for the effect its actions and practices have on both the community and the ecosystem in an ethical manner, which includes (1) actions that encourage sustainable development and, hence, improve health and well-being of individuals and communities; (2) accounts for stakeholder interests; (3) adheres to applicable laws and meets universal standards of behavior; and 4) is integrated and implemented throughout the company (Stefanova, 2013).

In this study the CSR is defined as the company's inclination towards business voluntary activities to the society, and ethically increase its profit while protecting the natural environment.

2.2.1 Social Responsibility

As a paradigm, social responsibility seeks to meet five broad requirements: integrating conservation and development; meeting the basic needs of people; achieving equity and social justice; recognizing social self-determination and cultural diversity; and maintaining ecological integrity. (Jacobs et al, 1987; Purvis et al., 2019) The concept of corporate social responsibility is self-enforcing, has no sanction, and no enforcement. Consequently, corporations' voluntary commitment to meeting their social obligations has led to the absence of clear social obligations. CSR practices are often criticized for being unproductive because voluntarism often makes these core obligations seem like mere instruments for serving businesses and creates a misperception of responsibility. (Tamvada, 2020).

Additionally, Singh and Misra (2021) defined social responsibility as the principle that a business organization must engage in activities that benefit society apart from its primary purpose. In fact, this type of activity can encompass a wide range of topics such as general community issues, rural development, agricultural activities, education, job training, conservation, environmental protection, funding and promoting the arts and culture, as well as being involved in health, sport, unemployment, child care, and poverty eradication. Despite this, Roberts (1992) argued that social responsibility practices are often known as policies or actions that confirm a company's association with social issues. Businesspeople should consider social responsibility in a certain way so that they include the entirety of their responsibilities as they conduct business, stated Carroll (1991).

Several forms of social responsibility have been proposed to make up a complete CSR: economic responsibility, legal responsibility, ethical responsibility, and philanthropic responsibility. As a conclusion, Wang et al., (2018) have demonstrated that all these forms of responsibility almost always exist to some extent, but recently, it has been only ethical responsibility as well as philanthropic responsibility functions that have been given serious consideration. Each of these four types deserves more attention. In other words, social responsibility involves ensuring equal employment opportunities, acquiring human rights awards, making charitable donations and encouraging local community involvement. (Wang and Sarkis, 2017).

In this study the Social Responsibility is defined as the company’s responsibility towards the society by supporting the local community, providing equal and fair opportunities with no discrimination.

2.2.2 Economic Responsibility

Responsible CSR activities are those that positively affect society and satisfy stakeholders while adhering to relevant laws and ethical standards. These activities also seek to continuously grow and develop businesses, while continuing to seek economic profit (Kim, 2020). Researchers Brin and Nehme (2019) found that a company's most important economic dimension is not to make high profits, but to maintain profits in the long run. Companies enroll in corporate social responsibility programs and develop a strategic plan by analyzing expenditures and taxes, assessing business climate factors, evaluating market benchmarks and averting maximum risk threats. In order to achieve

sustainable profits, all these components need to be studied in depth. According to Abdelhalim and Eldin (2019), economic responsibility involves meeting shareholders' needs, creating new products, new investments, and new job opportunities. Every other role within the organization is based on and endorsed by this role in some way.

Carroll (2016) holds that businesses have an economic responsibility to the society that allowed them to exist and sustain themselves. According to this concept, a business cannot act (responsibly) in a society if it is not profitable and does not ensure its long-term viability. (Talonen et al., 2021; Carroll, 2016). Obviously, economic responsibility explores the financial aspect of CSR, namely, taking a company's success in profitmaking into account and including it in the process of social responsibility (Lee, 2021). A company's social performance refers to its ability to create social value and achieve its social missions, goals, and objectives, while its economic performance refers to an organization's ability to generate financial value from its operations (Xu et al., 2020).

In this study the Economic Responsibility is defined as the company’s responsibility towards its shareholders by increasing its profits, control costs while maintain long term growth.

2.2.3 Environmental Responsibility

A local environmental concern has evolved into a global concern in production and supply chains. The industrial and supply chain industries have a direct impact on aspects of the environment such as localized water pollution, hazardous waste management and global climate change. It can be attributed to many advances that this concern has evolved from local to global (Sarkis and Zhu, 2018). In connection with this, the development of new environmentally sustainable products and business operations result in greater efficiencies of resources investment, market expansion, and improvement of corporate branding, and increase in sales, all of which contribute to sustained competitive advantage. (Alam & Islam, 2021). In spite of the fact that building the image of the firm has become increasingly important for management practitioners who are concerned about environmental protection, a deep exploration of the impact of this on the company was overlooked (Bansal, 2005).

By being environmentally responsible, companies are prevented from displacing workers, although they do provide employment, but they may subject their workers to

hazardous working conditions. Emissions of greenhouse gases and air pollution are caused by fossil fuel power stations. As previously mentioned, roads, railways, airports, ports and inland waterways (transport infrastructure) can also destroy habitats and fragment ecosystems, and provide access for overexploitation of natural resources (Thacker et al., 2019). In addition to humanitarian acts, CSR ensures that an company's employees are provided with a hospitable working environment, are paid fairly, are given regular vacations, are treated as human beings, and are involved in taking care of the environment (Rahman and Islam, 2019). The objective of environmental responsibility is to protect and improve the natural environment while minimizing the negative effects of that activity on the environment (Barauskaite and Streimikiene, 2021).

In this study the Environmental Responsibility is defined as the company's responsibility toward mother-nature by adapting environmentally friendly practices such as waste management and recycling, reducing negative impacts and investing in clean technologies.

2.3 Previous Studies

In this section, previous studies were contributed to enhance the literature review, it had been identified, analyzed and organized from oldest to newest.

A study by Carter and Jennings (2002) titled "**Social responsibility and supply chain relationships**" describes purchasing managers' involvement in socially responsible activities as purchasing social responsibility (PSR). PSR has the potential to influence supply chain relationships. This was the aim of the research. According to the research, PSR improves supplier performance directly as well as indirectly through positive effects on trust and co-operation. Not only do these findings hold implications for business-to-business marketing, but also for customer service, logistics and distribution managers.

A study by Majumdar and Nishant (2008) titled"**Sustainable entrepreneurial support (in supply chain) as corporate social responsibility initiative of large organizations: a conceptual framework**" By using Indian examples, the study explored CSR from a strategic and social perspective. Providing sustainable entrepreneurial support through supply chain linkages through CSR initiatives is possible. Two aspects of networking were discussed in the study, i.e., sustainable support from business firms

to the needy, and improved supply chain efficiency for businesses which also benefits consumers. An overview of the benefits of such alliances was presented, along with a conceptual framework. From the perspective of a developing country, such support is important. It was found that the sustenance of this type of relationship is assured since the firms approach it as a means of corporate social responsibility, which improves their image in society; they also focus on some business interests important for the longevity of this type of relationship.

A study by Cruz (2008) titled "**Dynamics of supply chain networks with corporate social responsibility through integrated environmental decision-making**" the study aimed to develop a dynamic framework for the modeling and analysis of supply chain networks with corporate social responsibility through integrated environmental decision-making. The targeted unit of analysis were the manufacturers, retailers, and consumers, observing their decision-making behavior regarding maximization of profit, the minimization of emission (waste), and the minimization of risk. The researcher used a qualitative approach, the study found a qualitative property of the dynamic trajectories, they track the evolution of the levels of social responsibility activities, product flows and prices over time. Then illustrate the model and computational procedure with several numerical examples.

A study by Andersen and Skjoett-Larsen (2009) titled "**Corporate social responsibility in global supply chains**" The paper aimed to present a conceptual framework for analyzing CSR practices in global supply chains. It also seeked to demonstrate how a pioneering Swedish company, IKEA, implements and manages CSR practices at its suppliers. A case analysis of IKEA illustrated the implementation and management of CSR practices in supply chains. The focus is on internal and external integration of CSR practices in the supply chain, personal interviews were performed with employees from one of the company's trading areas. The study found that practicing CSR in supply chains requires that CSR is embedded within the entire organization, including subsidiaries abroad and offshore suppliers. It includes employee training and sharing of experience, training of key personnel at the supplier level, positive incentives for suppliers in the form of long-term contracts and enlarged purchasing orders, and regular auditing of suppliers' performance.

A study by Dargusch and Ward (2010) titled "**Understanding corporate social responsibility with the integration of supply chain management in outdoor apparel manufacturers in North America and Australia**" the study aimed to investigate how supply chain management issues feature in the understandings of corporate social responsibility (CSR) held by managers of outdoor apparel manufacturing firms and whether outdoor apparel manufacturing firms engage in sustainable supply chain management practices. Data were collected using two methods: through semi-structured interviews with nine managers from nine manufacturing firms in the outdoor apparel industry; and through a review of the sustainable supply chain management practices of 27 firms that manufacture and retail outdoor apparel. The study found that small number of firms were found to engage in multiple types of sustainable supply chain management practices, and a larger number of firms either did not engage in any sustainable supply chain management practices or used only an industry administered code of practice to guide the way they worked with their suppliers.

A study by Russo Spena and De Chiara (2012) titled "**CSR, innovation strategy and supply chain management: toward an integrated perspective**" The study aimed to look at the relationship among CSR and innovation as a value-creating process which occur in a networks and relational context. The researcher adopted a case study methodology and selected three highly involved CSR and innovation firms. By studying the interactions between firms and stakeholders in CSR innovation processes they highlighted the innovative patterns to management that it creates most opportunities for reaching additional goals of growth, corporate social responsibility, and sustainability of firm and its network.

A study by Tuan (2015) titled "**From CSR, through EO, to knowledge sharing**" examined how antecedents such as CSR and EO in the chain affect knowledge sharing among the members of Cai Luong theatre companies in Vietnam. Both people and the organization's knowledge pool benefit from the sharing of knowledge. Linking the constructs in the study was actually achieved with the help of structural equation modeling, which was applied to cross-sectional data collected from 226 participants from Vietnam's Cai Luong theatre companies. It is evident from the study that CSR positively impacts EO, which in turn facilitates knowledge sharing among the theatre members.

Through CSR and EO acting as knowledge-sharing activators, the findings of the study expand the scope of knowledge management literature.

A study by Quarshie et al. (2016) titled "**Sustainability and corporate social responsibility in supply chains**" the purpose of the study was to examine and contrast existing research and knowledge creation, focusing on sustainability and corporate social responsibility (CSR) issues in supply chains, within and across these two disciplines. The in-depth systematic literature review covered 195 articles, published in 12 peer-reviewed journals from 2007 to 2013, the study examined the methodological and theoretical approaches, as well as the main research focus areas. The findings showed highly complementary research topic areas but only limited synergy and dialogue between the disciplines. The research area at large would benefit from greater integration. Based on our findings, the study propose a future research agenda that connects across the disciplines and highlights key areas that would benefit from further inquiry.

A study by Bhardwaj (2016) titled "**Role of green policy on sustainable supply chain management: a model for implementing corporate social responsibility (CSR**)" The paper aimed to discuss the various parameters and drivers of sustainable development, especially in supply chain management, the study used a resource-based theory and value chain analysis; the authors have developed a model for sustainable strategy. The data were analyzed with the help of regression and correlation analysis. The study found that the main drivers of GSCM include the environmental policy and the green human resource management by providing them training for adopting sustainability practices. Also, another key driver is the sustainability criteria in supplier selection which was found to be enhancing the outcomes of sustainability. The model clarified the need to have management support for implementing the sustainability strategy in the organization. The study also guides the managers for implementing sustainable supply chain management practices in the organization.

A study by Eteokleous et al. (2016) titled "**CSR in international marketing: review, assessment, and future research**" was conducted in order to review, evaluate and refine existing research on CSR practices in international marketing. We used both manual and electronic search techniques to track all related papers throughout the study period from 1993 to 2013. There were 132 studies reported in 106 publications distributed across 63 journals. Two programmers independently analyzed each report

according to a systematic encoding protocol. In order to analyze the completed codes statistically, they were grouped according to their nominal nature. Here, the researchers focused on aspects of global marketing strategy, international environmental impact and corporate social responsibility, as the most widely discussed issues. Researchers, policy makers, and marketing educators can benefit from the results.

A study by Ferrara et al., (2017) titled "**A Dynamic Stackelberg Game of Supply Chain for a Corporate Social Responsibility**" In the study, CSR (Corporate Social Responsibility) was allocated to the supply chain members through a dynamic game. Scientists proposed a model of a decentralized supply chain that included a manufacturer and a supplier. With the help of a dynamic discrete Stackelberg game made under two different information structures, the researchers developed a model that crosses through multiple periods to analyze supply chain performance in a decentralized state. The supply chains reached a balance point where profit maximization is achieved and CSR is maximized.

A study by Makepeace et al (2017) titled "**Internal integration in humanitarian supply chain management**" A comparison between program and logistics/support staff perspectives on humanitarian logistics (HL) and supply chain management (SCM) was the purpose of the study. Our study focuses on a non-governmental organization that is a leading international leader in human rights. A web-based survey, coupled with semi structured interviews with senior officials, was conducted with the organization's global operations staff. It is believed that this is the first study to consider the interpretation of logistics and SCM from the perspectives of programs and logistics staff. SCM was found to be highly contested between two cohorts and a lack of clarity was evident with regard to its relationship with logistics and cross-functional nature. There was insufficient response from program staff, so findings could not be generalized. Implementation implications - The results are consistent with the notion that an explicit distinction between the practice of SCM and the practice of HL may help to break down perceived jurisdictional boundaries, connect program and logistics teams, and strengthen demand-chain influences and "voice of the beneficiary".

A study by Valdez-Juárez et al. (2018) titled "**CSR and the Supply Chain: Effects on the Results of SMEs**" The purpose the study was to examine the effects of CSR and SCM (supply chain management) on innovation, image and reputation, and, in

turn, their influences on profitability in SMEs. The sample of the study was of 143 companies in the city of Guaymas Sonorain Mexico. The study used an analytical approach using used the ordinal least squares method (OLS) through multiple linear regressions and SEM (Structural Equation Modeling) statistical technique based on the variance, through PLS (Partial Least Squares). The study found that SMEs that develop social and sustainable practices increase their level of innovation, and improve their image, their reputation, and their financial profitability. The results also indicate that CSR and SCM have a strong interdependence. This work contributed mainly to the development of the literature on stakeholders and sustainability.

A study by Kang et al., (2018) titled: "**Supply chain integration and its impact on sustainability"** This paper analyzed the role of sustainability management practices (SMPs) and performance in the context of supply chain integration (SCI). To test their hypotheses, the authors collected data from 931 manufacturing firms located in various countries and regions. Integration between suppliers and customers is a key enabler for intra- and inter-organizational SMPs. As well as showing a positive correlation between intra- and inter-organizational SMPs, the results also suggest that both are complementary and increase environmental and social performance jointly.

A study by Michalski et al. (2018) titled "**Corporate social responsibility in supply chain management: a new model approach**" the authors studied the implications of incorporating non-governmental organizations (NGOs) in SCM to achieve CSR goals. A market survey was conducted in Poland among 100 medium-sized and large local and international enterprises. The model developed to test the research questions was specified and estimated using structural equation modelling (SEM). the study found that a CSR framework should be integrated into the company's core business operations as a full member of its SC. NGOs operating within SCs, owing to their experience and knowledge of market 'games', could help identify opportunities for business development.

A study by Basta et al., (2018) titled **"How are supply chains addressing their social responsibility dilemmas?"** Studying how supply chains impact social responsibility, various measures were taken to resolve and prevent problems. An analysis of 590 articles was conducted by the researchers. According to the findings, corporate social responsibility, sustainable reporting, and social life cycle assessments are the most

commonly used methods, but systems thinking lags far behind. Originality lies in the fact that it is the first scientific study to reveal such findings. As a result of this research, the supply chain's social footprint has been reduced, stakeholder quality of life has been improved, and social risk has been mitigated.

A study by Jalilvand et al. (2018) titled "**Total quality management, CSR and EO in the hotel industry**" dealt with the impact of Total Quality Management and CSR on EO in the hospitality industry. Hospitality literature has hypothesized and examined the connections between TQM, CSR, and EO. A structural equation model has been developed based on valid answers to a questionnaire. CSR is positively affected by TQM. CSR was also positively associated with EO. This paper's contextual contribution is enhanced by its focus on the topics of Total Quality Management, CSR, and EO in a developing country.

A study by Abdelhalim and Eldin (2019) titled "**Can CSR help achieve sustainable development? Applying a new assessment model to CSR cases from Egypt"** This study was aimed at developing an assessment model of corporate social responsibility (CSR) that is interconnected with sustainable development and examining it on CSR cases in Egypt. In this paper, a sustainable development assessment model is presented that incorporates Archie Carroll's Hierarchy of Corporate Responsibilities (1979) and Donna Wood's Corporate Performance Model (1991), with sustainable development imperatives integrated. An in-depth interview-based qualitative analysis was conducted on two case studies: one about an international multinational company operating in Egypt, and the other about a family business representative of the majority of Egyptian corporations. CSR practices tend to fall under philanthropy in such a context, while few fall under business case or human development. A lack of formal institutional frameworks for organizing the state's CSR role prevents it from being linked to the Sustainable Development Goals or similar initiatives.

A study by Jermsittiparsert et al., (2019) titled "**The Influence of Customer and Technology Supply Chain Integration on Social Sustainable Performance with Moderating Role of Organizational Structure**" the study investigated the relationship between supply chain integration and sustainability in the Thai auto industry. The study also evaluated the role of organizational structure in determining supplier, customer and technological integration, as well as the effectiveness of sustainable social performance

as a dependent variable. By using SMART-PLS and structural equation modeling techniques, we analyzed the data collected from Thailand's automotive manufacturing industry. At the study's conclusion, direct and indirect impacts between independent and dependent variables were confirmed; additionally, a moderating role of organizational structure was also highlighted. However, results were found to be insignificant when comparing customer integration with social sustainable performance at the automotive manufacturing industry of Thailand.

A study by Errassafi et al., (2019) titled "**The mediating effect of internal integration on the relationship between supply chain integration and operational performance**" An objective of this paper was to investigate how supply chain integration can directly impact operating performance of manufacturing companies, and how internal integration is mediated by external integration. The research used PLS - Structural Equation Modeling to study the direct effect of integration between customers, internal integration and suppliers, and the mediating effect of internal integration on operational performance for 75 manufacturing companies in Morocco. According to the findings, customer integration, internal integration, and supplier integration are all positively and significantly correlated with operational performance, while internal integration mediates the relationship between customer integration and operational performance, while supplier integration does not. This study focuses on a set of best practices that industrial companies should use to integrate flows and business processes in order to create value for the final consumer and learn how to take advantage of external integration via internal integration practices.

A study by Liu et al., (2020) titled "**A coordination mechanism through value-added profit distribution in a supply chain considering corporate social responsibility**" The study constructed a supply chain involving a dominated retailer, a company that is socially responsible, and a company that is not ethically responsible (in comparison with the socially responsible supplier). Consumer preferences were taken into account and a game analysis technique was used to analyze the optimal decisions under centralized and decentralized decision-making, and a coordination mechanism based on value-added profit distribution was developed. Under concentrated decision-making, retail prices and order quantity of two products are lower than they were under decentralized decision-making, the socially responsible supplier's CSR effort is higher,

and the whole supply chain performs better than it did under decentralized decision-making. A mechanism such as this could also encourage the socially responsible supplier to perform CSR activities without reducing its profits, encourage the members of the supply chain to make concentrated decisions, and promote the competitiveness of the retailer-dominated supply chain.

A study by Chen et al., (2021) titled **"Two-Stage Production System Pondering upon Corporate Social Responsibility in Food Supply Chain: A Case Study"** By optimizing the replenishment policy by taking into account the relationship between midstream producers and final customers, this study aimed to integrate CSR initiatives into food supply chain management. It is based on the two-stage assembly production system and employs the classical economic production quantity model. For the purpose of calculating the profit per unit sold, the three parameters that contributed to it were the social charity amount, the wholesale price of the unit, and the return rate of the used goods. In the study, it was emphasized that CSR initiatives affect the enterprise's inventory policy in a way that leads to improved financial performance.

Differences between the Current Study and Previous Studies

- While most of previous studies addressed each of the Supply Chain Integration and Corporate Social Responsibility variables individually, this is one of the few studies that addressed both combined.
- This is one of the few studies addressed the Corporate Social Responsibility in Pharmaceutical Manufacturing Industry sector.
- Most of the few previous studies investigated the impact of Supply Chain Integration on Corporate Social Responsibility in public, government, banking and health sectors among others, this is one of the earliest studies to investigate such impact the Pharmaceutical Manufacturing Industry.
- This is one of the earliest studies to investigate the impact of Supply Chain Integration on Corporate Social Responsibility in Jordan.
- Previous research considered Corporate Social Responsibility through specific factors that are categorized under either social or economic responsibility, this is one of the few studies that addressed additional factor (environmental responsibility) as key factors actively participating in driving corporate social responsibility.

CHAPTER THREE: STUDY METHODOLOGY

3.1 Introduction

This chapter includes study design, population and sampling, data collection methods, data collection analysis, study tool and validity and reliability test. In addition to respondent demographic description.

3.2 Study Design

The current study is considered as a descriptive and correlation study. It aims to study the impact of supply chain integration on corporate social responsibility of Jordanian Pharmaceutical Manufacturing Industry. It starts with literature review to develop model for measuring the impact of supply chain on Jordanian Pharmaceutical Manufacturing Industry. Then, a panel of judges used to improve the measurement tool for example questionnaire. Afterward, the survey carried out and the data collected from the managers working at Jordanian Pharmaceutical Manufacturing companies. After that, the data coded against SPSS 20. After checking normality, validity and reliability, a descriptive analysis carried out, and a correlation among variables checked. Finally, the impact tested by multiple regressions.

3.3 Study Population, Sample and Unit of Analysis

The Jordanian Pharmaceutical Manufacturing Companies listed in 2021 with the Jordanian Association of Pharmaceutical Manufacturers (JAPM) are 12 companies. All these companies have been targeted, and this negates the sampling criterion.

Unit of Analysis is composed from different managerial positions in Jordanian Pharmaceutical Manufacturing Companies for those who are present at the time of the distribution and were willing and ready to take part. Where 9 out of 12 companies

cooperated in answering the questionnaire, and three companies did not cooperate. 120 questionnaires were distributed. 105 questionnaires were retrieved and were suitable for further analysis, with an 87.5 percent response rate. The population until the start of the survey was all managerial level employees working at the twelve Pharmaceutical Manufacturing Industry in Amman, Jordan. The twelve Pharmaceutical Manufacturing Industry have been targeted.

The unit of analysis composed from four different managerial job positions in the Pharmaceutical Manufacturing Industry in Amman, Jordan including managers, department heads, supervisors and assistant manager who were present at the time of the distribution and were willing and ready to participate.

3.4 Data Collection Methods (Tools):

For fulfilling the purposes of the study, the data collected from two sources: secondary and primary data as follows:

Secondary data: secondary data collected from different sources such as journals, working papers, researches, thesis, articles, World Wide Web and Jordanian Pharmaceutical Manufacturing Organizations.

Primary data: To actualize this study primary data collected from managers working in Pharmaceutical Industry by a questionnaire, which built and developed for this purpose.

3.5 Study Instrument (Tools):

The Questionnaire.

To actualize this study, the questionnaire was used as a main tool, which contains two parts, as follows:

First part contains the demographic factors related to gender, age, experience, education, job position. Second part includes both independent and dependent variables as follows:

Independent Variable (Supply Chain Integration) contains the following sub-variables: supplier, internal and customer integration.

Dependent Variable (Corporate Social Responsibility) contains the following dimensions: social, economic and environment responsibility.

All items measured by five points Likert-type scale to rate respondents' actual perceptions regarding each item as follows: 1 (Never implemented) to 5 (Highly implemented).

Table: 3. 1 Distribution of questionnaire's items to measure study variables.

Research variables	Variable type	Items	Number of items
Suppliers' integration	IV	1-7	7
Internal integration		8-14	7
Customers' integration		15-21	7
Supply chain integration		1-21	21
Corporate social responsibility	DV	21-42	21
The total number			42

All items were measured by a 5-Point Likert type scale to rate the respondents' real perceptions regarding each item and give them flexibility in the selection of their actual perceptions. Where the value ranged between 1 and 5 as shown in table (3.12) below.

Based on the processing, the degree of implementation was determined according to the following

Table: 3. 2 Likert Scale

Never implemented	Almost implemented	To some extent	Slightly implemented	Highly implemented
1	2	3	4	5

3.6 Data Collection and Analysis:

One Hundred and five questionnaires collected out of 120 distributed to supervisors and managers. Data collected from 9 out of 12 companies registered at Jordanian Association of Pharmaceutical Manufacturers.

3.7 Validity Test

The tool's validity confirmed by using three methods: content, face and construct. The content validity confirmed through collecting the data from multiple literature resources such as books, journals, working papers researches, thesis, dissertations, articles and worldwide Web and Jordanian Pharmaceutical Manufacturing companies. Moreover, the face validity confirmed through questionnaires. Finally, construct validity confirmed by Principal Component Factor Analysis with Kaiser Meyer Olkin (KMO)

Content Validity: it was established by accumulating information from multiple sources such as studies, books, study papers, journals, theses, dissertations, and the Internet.

Face Validity: Jordanian academic referees with knowledge of Jordanian universities reviewed the study tool for validity. They assess the appropriateness of the paragraph for the content, the suitability of the study tool provided in terms of the number, comprehensiveness, diversity, and the quality of the language and any other additions they feel necessary. Modifications were made in response to the referees' observations and suggestions. Referee names and a validation letter for the study instrument are shown in appendices (1) and (2).

Construct Validity (Factor Analysis):

The construct validity confirmed using Principal Component Factor Analysis with Kaiser Meyer Olkin (KMO). The data explanatory and conformity examined using Principal Factor Analysis. Factor loading more than 0.50 is good and accepted if it is exceeding 0.40 (Hair, et. al. 2014). However, Kaiser Meyer Olkin (KMO) is used to measure sampling adequacy, harmony and inter-correlations, KMO values between 0.8 and 1 indicate that a high sampling is adequacy and accepted if it is exceeding 0.6. Another indicator is Bartlett's of Sphericity used for the determination of suitability of data and correlation, where if the significant value of data is less than 0.05 at 95% confidence level, that's indicates for a useful factor analysis. Variance percentage shows explanation power of factors (Cerny & Kaiser, 1977).

Suppliers' Integration:

Table (3.1) shows that the loading factor of Suppliers' integration items scored between 0.822 and 0.900. Therefore, the construct validity is assumed. KMO has rated 86.7%, which indicates high sampling adequacy, and the Chi^2 is 707.83, which indicates the fitness of the model. Moreover, variance percentage is 75.751, so it can explain 75.75% of variation. Finally, the significance of Bartlett's Sphericity is less than 0.05, which indicates the factor analysis is useful.

Table: 3. 3 Principal Component Analysis Suppliers' integration

No.	Item	F1	KMO	Chi^2	BTS	Var%	Sig.
1	The company shares information with key suppliers	.822	.867	707.830	21	75.751	0.000
2	The company develops collaborative approaches with key suppliers	.898					
3	The company makes joint decision with key suppliers	.873					
4	The company uses system coupling with key suppliers	.900					
5	The company develops strategic plans in collaboration with key suppliers	.894					

6	The company agrees with suppliers on raw material suitable prices	.864					
7	The company gets the best facilitation payment methods.	.837					

Principal Component Analysis.

Internal Integration:

Table (3.2) shows that the loading factor of internal integration items scored between 0.841 and 0.930. Therefore, the construct validity is assumed. KMO has rated 87.3%, which indicates high sampling adequacy, and the Chi^2 is 752.600, which indicates the fitness of the model. Moreover, variance percentage is 77.188, so it can explain 77.19% of variation. Finally, the significance of Bartlett's Sphericity is less than 0.05, which indicates the factor analysis is useful.

Table: 3. 4 Principal Component Analysis Internal integration

No.	Item	F1	KMO	Chi^2	BTS	Var%	Sig.
1	The company shares information with purchasing department	.863	.873	752.600	21	77.188	0.000
2	The company makes joint decision making with purchasing department	.888					
3	The company shares information with sales department	.930					
4	The company makes joint decision making with sales department	.893					
5	The company develops strategic plans in collaboration with its departments.	.882					
6	The company uses the online systems for inside communication.	.841					
7	The company departments meet and cooperate to solve problems.	.849					

Principal Component Analysis.

Customers' Integration:

Table (3.3) shows that the loading factor of Customers' integration items scored between 0.744 and 0.901. Therefore, the construct validity is assumed. KMO has rated 87.2%, which indicates high sampling adequacy, and the Chi^2 is 639.196, which indicates the fitness of the model. Moreover, variance percentage is 72.351, so it can explain 72.35% of variation. Finally, the significance of Bartlett's Sphericity is less than 0.05, which indicates the factor analysis is useful.

Table: 3. 5 Principal Component Analysis Customers' integration

No.	Item	F1	KMO	Chi²	BTS	Var%	Sig.
1	The company shares information with key customers	.862	.872	639.196	21	72.351	0.000
2	The company develops collaborative approaches with key customers	.880					
3	The company makes joint decision making with key customers	.860					
4	The company uses system coupling with key customers	.890					
5	The company develops strategic plans in collaboration with key customers	.901					
6	The company shares information with customers about new products and services.	.744					
7	The company has fast communication systems with customers.	.807					

Principal Component Analysis.

Corporate Social Responsibility:

Table (3.4) shows that the loading factor of CSR items scored between 0.77 and 0.877. Therefore, the construct validity is assumed. KMO has rated 92.1%, which indicates high sampling adequacy, and the Chi^2 is 2671.66, which indicates the fitness of the model. Moreover, variance percentage is 74.925, so it can explain 74.93% of variation. Finally, the significance of Bartlett's Sphericity is less than 0.05, which indicates the factor analysis is useful.

Table: 3. 6 Principal Component Analysis CSR

No.	Item	F1	KMO	Chi²	BTS	Var%	Sig.
1	The company encourages social activities that support local communities	.797	.921	2671.66	210	74.925	0.000
2	The company practices gender balance equality between males and females	.818					
3	The company practices non-discrimination policy	.814					
4	The company aims to create employment opportunities	.837					
5	The company provides appropriate employment opportunities for disabled people	.770					
6	The company pays fair salaries to its employees	.817					
7	The company offers a pleasant work environment (flexible hours, remote working, maternity hour)	.816					

8	The company adopts good financial governance practices	.836					
9	The company keeps working to increase the value of its shares	.844					
10	The company contributes to the development of the local economy	.846					
11	The company keeps working on strengthening its relations with customers	.850					
12	The company keeps working on the development of its relations with public institutions	.877					
13	The company keeps a strict control over its costs	.848					
14	The company tries to maximize its profits	.802					
15	The company ensures compliance with environmental legislation	.862					
16	The company practices the minimization of waste and support for recycling	.815					
17	The company implements special programs to minimize its negative impact on the natural environment	.818					
18	The company participates in activities which aim to protect and improve the quality of the natural environment	.808					
19	The company invests into clean technologies	.818					
20	The company is concerned with respecting and protecting the natural environment	.823					
21	The company uses saving energy and other resources production facilities	.778					

Principal Component Analysis.

3.8 Reliability Test

The Cronbach's Alpha value was calculated to verify the consistency and appropriateness of the items included in the questionnaire. If the result is greater than 0.70, then the value is considered statistically acceptable and the closer it is to one (or 100%), the higher the stability of the research tool (Sekaran and Bougie, 2016). As shown in Table (3.5), Cronbach's Alpha ranges between 0.941 and 0.976 for the supply chain integration dimensions, and for the corporate social responsibility dimensions it is 0.976. In other words, the study tool is stable, and the data it yields are accurate and reliable in

measuring the variables. Because all dimensions of independent and dependent variables are greater than 70%, the reliability was considered.

Table: 3. 7 Cronbach Alpha values for study tool variables

No.	Variable	No. of items	Cronbach's Alpha
1	Suppliers' integration	7	.946
2	Internal integration	7	.950
3	Customers' integration	7	.941
Supply chain integration		21	.976
Corporate social responsibility		21	.976

Demographic Analysis:

To show the frequency and percentages of demographic characteristics for respondents, SPSS was used in the current study to describe all variables. The respondents' demographic profile aims to show the frequency and percentages of demographic characteristics for respondents. This is related to the first part of the questionnaire, such as gender, age, experience, educational level, and job title.

Gender: As shown in Table (3.6), 48.6% of the respondents are males, representing 51 individuals, while 51.4% are females, representing 54 individuals. This is an indication that pharmaceutical manufacturing companies are applying the gender balance approach in several managerial levels.

Table: 3. 8 Frequencies and percentages of respondents according to gender.

		Frequency	Percentage
Gender	Male	51	48.6%
	Female	54	51.4%
	Total	105	100%

Age: The results of Table (3.7) show that the majority of the respondents were of those less than 30 years old with a percentage of 35.2 % of the respondents representing 37 participants. A 29.5% was within the range of 30- less than 35 years old representing 31 participants. A 13.3% was 35 to less than 40 years and 21.9 % was over 40 years old, representing 14 and 23 participants, respectively.

Table: 3. 9 Frequencies and percentages of the respondents according to age.

		Frequency	Percent
Age	25- less than 30	37	35.2%
	30- less than 35	31	29.5%
	35- less than 40	14	13.3%
	40 and more	23	21.9%
	Total	105	100%

Experience: The results of Table (3.8) show that the respondents' experiences that are less than 5 years peaked at the top beside the 5-10 years of experience participants with a 34.4% representing 35 participants for each. Furthermore, 17 respondents have 10 to less than 15 years of experience and 18 respondents were above 15 years representing 16.2% and 17.1% of respondents, respectively.

Table: 3. 10 Frequencies and percentages of the respondents according to experience.

		Frequency	Percent
Experience (Years)	Less than 5 years	35	33.3%
	5 - 10 years	35	33.3%
	10 - 15 Years	17	16.2%
	15 Years or greater	18	17.1%
	Total	105	100%

Education: The results of table (3. 9) show that the majority of respondents hold a bachelor degree with a percentage of 52.4% representing 55 participants. While 14.3% of the participants their highest educational level is diploma representing 15 individuals, 29.5% hold a master/PhD degree representing 31 participants. Notably, only 4 participant holds a high school. Constituting a 3.8% of the sample.

Table: 3. 11 Frequencies and percentages of the respondents' according to educational level.

		Frequency	Percent
Education	High School	4	3.8%
	Diploma	15	14.3%
	Bachelor	55	52.4%
	Master \ PhD	31	29.5%
	Total	105	100%

Job position: The results of Table (3.10) show that the percentages of participants holding different job positions including Assistant manager, department manager, supervisor and general manager were 30.5%, 23.8%, 32.4%, and 13.3%, respectively. Of a sample of 105 participants, 32 were Assistant managers, 25 were department managers, 34 were supervisors and 14 were general managers.

Table: 3. 12 Frequencies and percentages of the respondents' according to job position.

		Frequency	Percent
Job position	Assistant Manager	32	30.5%
	Department Manager	25	23.8%
	Supervisor	34	32.4%
	General Manager	14	13.3%
	Total	105	100%

CHAPTER FOUR: DATA ANALYSIS

Introduction:

This chapter includes data descriptive statistical analysis of respondent's perception, Pearson Bivariate Correlation Matrix to test the relationships among Supply Chain Integration sub-variables with each other; and between Supply Chain Integration sub-variables with Corporate Social Responsibility dimensions. Finally, multiple regressions to check hypothesis; the impact of Supply Chain Integration on Corporate Social Responsibility.

4.1 Descriptive Statistical Analysis

A set of statistics were used including the mean, standard deviation, t-value, ranking and implementation level.

The implementation level is divided into three categories based on the following formula:

Table 4. 1 The degree of implementation level.

Level	
Low level	Include a group of items that have less than 2.34. (Since Category length + lowest weight = 1.33 + 1 = 2.33, where the first degree (1-2.33)).
Medium level	Include a group of items that have mean ranges between 2.34 and 3.66. (Since 2.33 + 1.33 = 3.66, where the second degree 2.34 -3.66).
High level	Include a group of items that have averages above 3.66. (Since 3.66 + 1.33 = 5, where the third approval degree 3.67-5).

4.1.1 Independent Variable (Supply Chain Integration):

This part of the study relates to the description of the supply chain integration variable in order to determine the degree of relative agreement of the respondents', where the mean was calculated and the degree of implementing the supply chain integration dimensions was determined.

Table 4. 2: Mean, Standard deviation, T-value, Ranking and Implementation Level toward Supply Chain Integration.

No	**Variables**	**Mean**	**Std. Dev.**	**t**	**Ranking**	**Implement**
1	Suppliers' integration	3.34	0.95	3.662	3	Medium
2	Internal integration	3.51	1.01	5.134	1	Medium
3	Customers' integration	3.35	0.97	3.662	2	Medium
Supply chain integration		3.40	0.93	4.391	Medium	

T-tabulated=1.960

Based on table (4.2), it can be seen that the values of the mean of the supply chain integration dimensions range between 3.34 and 3.51 with a medium level of implementation. With an agreement on a medium level of implementation, the dimension (internal integration) received the highest mean. In contrast, the dimension of suppliers' integration obtained the lowest means with an agreement to a medium implementation. In addition, the general index (Supply chain integration) reached (3.40) indicating a relatively medium level of implementation of supply chain integration in the Pharmaceutical Manufacturing Industry in Amman, Jordan. This is supported by high t-value of (4.391) compared to the T-tabulated which is (1.960)

Compared to T-tabulated

4.1.1.1 Suppliers' Integration:

Table (4.3) shows the mean, standard deviation, and order of respondents' answers towards the (suppliers' integration) dimension, the number of which was measured on (7) items.

Table 4. 3: Means, Standard Deviation, T-value, Ranking and Implementation of Suppliers' Integration.

No.	Items	Mean	Std. Dev.	t	Ranking	Implement
1	The company shares information with key suppliers	3.25	1.036	2.450	7	Medium
2	The company develops collaborative approaches with key suppliers	3.32	1.061	3.128	4	Medium
3	The company makes joint decision with key suppliers	3.32	1.164	2.850	5	Medium
4	The company uses system coupling with key suppliers	3.32	1.042	3.183	3	Medium
5	The company develops strategic plans in collaboration with key suppliers	3.26	1.065	2.473	6	Medium
6	The company agrees with suppliers on raw material suitable prices	3.43	1.117	3.932	2	Medium
7	The company gets the best facilitation payment methods.	3.47	1.144	4.180	1	Medium
Suppliers' integration		3.34	0.95	3.662	Medium	

T-tabulated=1.960

As shown in Table (4.3), the average mean for the (suppliers' integration) dimension is 3.34, indicating a medium degree of agreement from the respondents'

perspective. Taking a look at the results, it was apparent that paragraph no. 7, "The company gets the best facilitation payment methods." ranked first with a mean of (3.47) and a standard deviation of (1.144). However, paragraph no. 1, which reads, "The company shares information with key suppliers." finished last with a mean of (3.25) and a standard deviation of (1.036). According to the overall results, the Pharmaceutical Manufacturing Companies in Jordan have a medium degree of Supplier integration. This is supported by high t-value of (3.662) compared to the T-tabulated which is (1.960)

4.1.1.2 Internal Integration

Table (4.4) shows the mean, standard deviation, and order of respondents' answers towards the (internal integration) dimension, the number of which was measured on (7) items

Table 4. 4: Means, Standard Deviation, T-value, Ranking and Implementation of Internal Integration.

No.	Items	Mean	Std. Dev.	T	Ranking	Implement
1	The company shares information with purchasing department	3.49	1.093	4.554	4	Medium
2	The company makes joint decision making with purchasing department	3.45	1.185	3.872	6	Medium
3	The company shares information with sales department	3.43	1.184	3.710	7	Medium
4	The company makes joint decision making with sales department	3.46	1.209	3.874	5	Medium
5	The company develops strategic plans in collaboration with its departments.	3.66	1.073	6.278	1	High
6	The company uses the online systems for inside communication.	3.56	1.117	5.153	2	Medium
7	The company departments meet and cooperate to solve problems.	3.51	1.210	4.356	3	Medium
Internal integration		3.51	1.01	5.134	Medium	

T-tabulated=1.960

The (internal integration) dimension achieved an average mean of 3.51 on Table (4.4), which indicates a medium level of implementation as perceived by the respondents. With a mean of (3.66) and a standard deviation of (1.073), item no. 5, which states, "The Company develops strategic plans in collaboration with its departments." ranked first. In contrast, item no. (3), "The Company shares information with the sales department."

ranked at the bottom, with a standard deviation of 1.184 and a mean of (3.43). Overall, the results indicate that Pharmaceutical Manufacturing Companies in Jordan have implemented internal integration to a medium extent. This is supported by high t-value of (5.134) compared to the T-tabulated which is (1.960)

4.1.1.3 Customers' Integration:

Table (4.5) shows the mean, standard deviation, and the order of respondents' answers towards (customers' integration) dimension, the number of which was measured on (7) items.

Table 4. 5: Means, Standard Deviation, T-value , Ranking and Implementation of Customers' Integration.

No.	Items	Mean	Std. Dev.	t	Ranking	Implement
1	The company shares information with key customers	3.30	1.168	2.590	5	Medium
2	The company develops collaborative approaches with key customers	3.41	1.124	3.733	2	Medium
3	The company makes joint decision making with key customers	3.35	1.160	3.113	4	Medium
4	The company uses system coupling with key customers	3.26	1.144	2.304	7	Medium
5	The company develops strategic plans in collaboration with key customers	3.30	1.110	2.812	6	Medium
6	The company shares information with customers about new products and services.	3.37	1.137	3.347	3	Medium
7	The company has fast communication systems with customers.	3.45	1.193	3.845	1	Medium
Customers' integration		3.35	0.97	3.662	Medium	

T-tabulated=1.960

As shown in Table (4.5), the (customers' integration) dimension achieved an average mean of 3.35, which indicates a medium level of implementation from the respondents' perspective. Item number (4), which states "The company uses system coupling with key customers." ranked last with a mean of (3.26) and a standard deviation of (1.144), while item number (7), which states "The company has fast communication systems with customers." ranked first with a mean of (3.45) and a standard deviation of

(1.193). Overall, the results suggest that the Pharmaceutical Manufacturing Companies in Jordan have implemented the integration of customers to a medium extent. This is supported by high t-value of (3.662) compared to the T-tabulated which is (1.960)

4.1.2 Dependent Variable (Corporate Social Responsibility):

The purpose of this section of the study is to evaluate the level of relative agreement among respondents by determining the mean. According to the table (4.6), respondents' responses to the variable corporate social responsibility were rated by means of a mean, standard deviation, and order, and the number of responses was measured using 21 items.

Table 4. 6: Means, Standard Deviation, T-value , Ranking and Implementation of Corporate Social Responsibility.

No.	Variables	Mean	Std. Dev.	t	Ranking	Implement
1	Social Responsibility	3.51	1.175	5.178	2	Medium
2	Economic Responsibility	3.52	1.176	5.113	1	Medium
3	Environmental Responsibility	3.44	1.183	4.288	3	Medium
Corporate social responsibility		3.49	1.178	5.151	Medium	

T-tabulated=1.960

Based on table (4.6), it can be seen that the values of the mean of the CSR dimensions range between 3.44 and 3.52 with a medium level of implementation. With an agreement on a medium level of implementation, the dimension (Economic responsibility) received the highest mean. In contrast, the dimension of (Environmental responsibility) obtained the lowest means with an agreement to a medium implementation. In addition, the general index (CSR) reached (3.49) indicating a relatively medium level of implementation of CSR in the Pharmaceutical Manufacturing Industry in Amman, Jordan. This is supported by high t-value of (5.151) compared to the T-tabulated which is (1.960)

4.1.2.1 Social Responsibility:

Table (4.7) shows the mean, standard deviation, and the order of respondents' answers towards (social responsibility) dimension, the number of which was measured on (7) items.

Table 4. 7: Means, Standard Deviation, T-value , Ranking and Implementation of Social Responsibility.

No.	Items	Mean	Std. Dev.	t	Ranking	Implement

1	The company encourages social activities that support local communities	3.44	1.13	3.957	5	Medium
2	The company practices gender balance equality between males and females	3.52	1.23	4.352	4	Medium
3	The company practices non-discrimination policy	3.63	1.26	5.121	2	Medium
4	The company aims to create employment opportunities	3.65	1.16	5.720	1	Medium
5	The company provides appropriate employment opportunities for disabled people	3.37	1.24	3.064	7	Medium
6	The company pays fair salaries to its employees	3.40	1.09	3.766	6	Medium
7	The company offers a pleasant work environment (flexible hours, remote working, maternity hour)	3.54	1.11	5.013	3	Medium
Social responsibility		3.51	1.175	5.178	Medium	

T-tabulated=1.960

As shown in Table (4.7), the social dimension achieved an average mean of 3.51, which indicates a medium level of implementation from the respondents' perspective. Item number (4), which states “The company aims to create employment opportunities.” ranked first with a mean of (3.65) and a standard deviation of (1.16), while item number (5), which states “The company provides appropriate employment opportunities for disabled people.” ranked last with a mean of (3.37) and a standard deviation of (1.24). Overall, the results suggest that the Pharmaceutical Manufacturing Companies in Jordan have implemented the customer’s integration to a medium extent. This is supported by high t-value of (5.178) compared to the T-tabulated which is (1.960)

4.1.2.2 Economic Responsibility:

Table (4.8) shows the mean, standard deviation, and the order of respondents’ answers towards (economic responsibility) dimension, the number of which was measured on (7) items.

Table 4. 8: Means, Standard Deviation, T-value , Ranking and Implementation of Economic Responsibility.

No.	Items	Mean	Std. Dev.	t	Ranking	Implement
1	The company adopts good financial governance practices	3.35	1.21	2.987	7	Medium

2	The company keeps working to increase the value of its shares	3.49	1.22	4.087	5	Medium
3	The company contributes to the development of the local economy	3.48	1.10	4.430	6	Medium
4	The company keeps working on strengthening its relations with customers	3.63	1.18	5.464	1	Medium
5	The company keeps working on the development of its relations with public institutions	3.53	1.19	4.610	4	Medium
6	The company keeps a strict control over its costs	3.54	1.14	4.863	3	Medium
7	The company tries to maximize its profits	3.61	1.20	5.218	2	Medium
Economic Responsibility		3.52	1.176	5.113	Medium	

T-tabulated=1.960

As shown in Table (4.8), the economic dimension achieved an average mean of 3.52, which indicates a medium level of implementation from the respondents' perspective. Item number (4), which states “The company keeps working on strengthening its relations with customers.” ranked first with a mean of (3.63) and a standard deviation of (1.18), while item number (1), which states “The company adopts good financial governance practices.” ranked last with a mean of (3.35) and a standard deviation of (1.21). Overall, the results suggest that the Pharmaceutical Manufacturing Companies in Jordan have implemented the economic responsibility to a medium extent. This is supported by high t-value of (5.113) compared to the T-tabulated which is (1.960)

4.1.2.3 Environmental Responsibility:

Table (4.9) shows the mean, standard deviation, and the order of respondents’ answers towards (environmental responsibility) dimension, the number of which was measured on (7) items.

Table 4. 9: Means, Standard Deviation, T-value , Ranking and Implementation of Environmental Responsibility.

No.	Items	Mean	Std. Dev.	t	Ranking	Implement
1	The company ensures compliance with environmental legislation	3.53	1.14	4.812	2	Medium
2	The company practices the minimisation of waste and support for recycling	3.42	1.15	3.734	4	Medium

3	The company implements special programs to minimize its negative impact on the natural environment	3.33	1.20	2.850	7	Medium
4	The company participates in activities which aim to protect and improve the quality of the natural environment	3.34	1.22	2.872	6	Medium
5	The company invests into clean technologies	3.42	1.25	3.424	5	Medium
6	The company is concerned with respecting and protecting the natural environment	3.54	1.14	4.900	1	Medium
7	The company uses saving energy and other resources production facilities	3.47	1.19	4.034	3	Medium
Environmental Responsibility		3.44	1.183	4.288	Medium	

T-tabulated=1.960

As shown in Table (4.9), the environmental dimension achieved an average mean of 3.44, which indicates a medium level of implementation from the respondents' perspective. Item number (6), which states “The company is concerned with respecting and protecting the natural environment.” ranked first with a mean of (3.54) and a standard deviation of (1.14), while item number (3), which states “The company implements special programs to minimize its negative impact on the natural environment.” ranked last with a mean of (3.33) and a standard deviation of (1.20). Overall, the results suggest that the Pharmaceutical Manufacturing Companies in Jordan have implemented the environmental responsibility to a medium extent. This is supported by high t-value of (4.228) compared to the T-tabulated which is (1.960)

4.1.3 Relationship between Independent and Dependent Variables:

Bivariate Pearson Correlation Test has been used to check the relationship between variables. Table (4.10) shows that the relationships among supply chain integration dimensions are strong, where r ranges from 0.835 to 0.883. Moreover, the strong relationship between the dependent variable dimensions ranges from 0.805 to 0.879, while the relationship between independent and dependent variables is very strong, where r equals 0.848.

Table 4. 10: Relationship between Independent and Dependent Variables

No.		1	2	3	4	5	6	7	8
1	Suppliers Integration	1							

2	Internal Integration	.883**	1						
3	Customers Integration	.842**	.835**	1					
4	Social Responsibility	.780**	.801**	.849**	1				
5	Economic Responsibility	.719**	.800**	.735**	.879**	1			
6	Environmental Responsibility	.622**	.760**	.763**	.805**	.815**	1		
7	Supply Chain Integration	.955**	.955**	.939**	.853**	.792**	.754**	1	
8	Corporate Social Responsibility	.749**	.835**	.829**	.948**	.953**	.927**	.848**	1

****. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed).**

4.2 Testing Study Hypothesis

After verifying the validity, reliability, correlation, and impact of supply chain integration on corporate social responsibility, the researcher will then perform a group of tests, such as normality tests and multicollinearity tests, before implementing regression analysis tests Sekaran, 2003). In order to confirm that the data are consistent with the assumptions of the regression analysis, the following tests were conducted:

4.2.1 Normal Distribution

For determining a distribution's normality, Skewness and Kurtosis statistics are used. Skewness statistics are used to test the symmetry of distributions. Kurtosis statistic, on the other hand, is used to determine how heavy the distribution tails are (Pandian, 2003). The Skewness of the study variables in Table (4.11) ranges between -2 and 2, indicating that they are normally distributed (West et al., 1995).

Table 4. 11: Results of testing the normality of the distribution.

Variables	Dimensions	Skewness	Kurtosis
Supply chain integration	Suppliers' integration	-.164	-.689
	Internal integration	-.448	-.647
	Customers' integration	-.269	-.664
Corporate social responsibility		-.559	-.343

Moreover, Figure (4.1) shows that the histogram form, fits the normal distribution, where this assumption is not violated in the model in such a case.

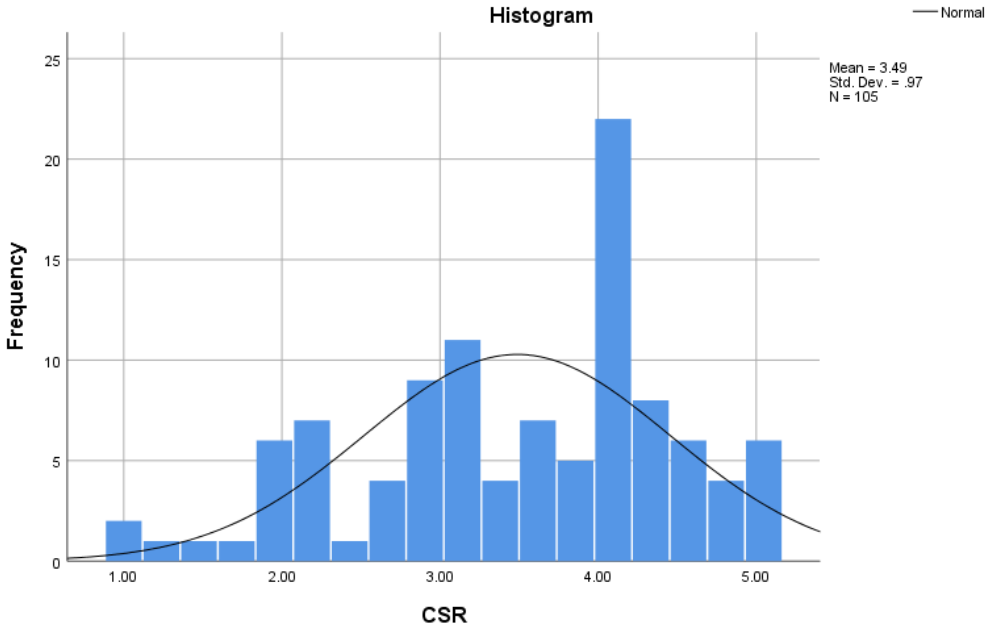


Figure 4. 1 Normality test.

Linearity test: figure (4.2) shows that there is a linear relationship between independent and dependent variables. In such case, the model does not violate this assumption.

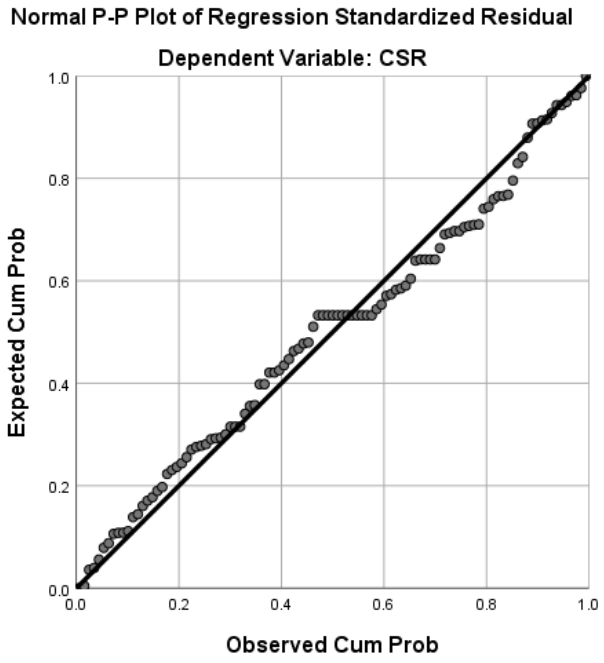


Figure 4. 2 Linearity Test

Equal variance (homoscedasticity): figure (4.3) shows that the errors are scattered around the mean, therefore there is no relation between errors and predicted values, in such case the model does not violate this assumption.

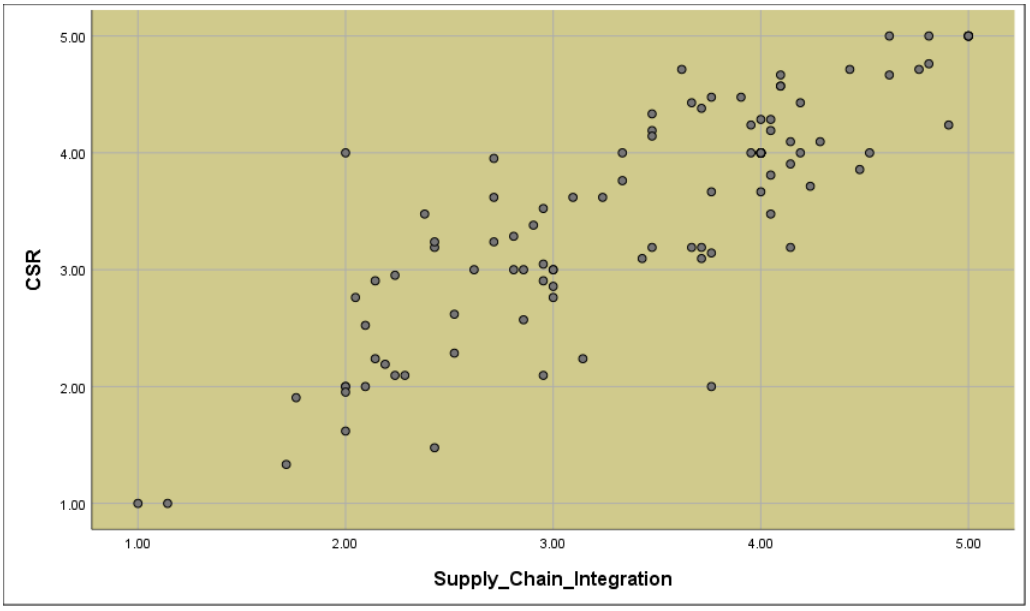


Figure 4. 3 Linearity Test

Multi-collinearity: Using the Variance Inflation Factor (VIF) and the Tolerance Variant Statistics, we check that the independent variables dimensions indicate no multicollinearity. In table (4.12) the tolerance coefficient was lower than (1), higher than (0.05), and all three values of VIF were less than (10). Based on Hair et al., (2017), these values suggest that there is no multi-collinearity among all dimensions, demonstrating that multiple regression analysis can be used to test study hypotheses.

Table 4. 12 Results of testing the strength of multi-collinearity between IV dimensions.

Dimension	Collinearity Statistics	
	Tolerance	VIF
Suppliers' integration	.184	5.425
Internal integration	.192	5.204
Customers' integration	.253	3.951

Below is an analysis of the hypotheses test, which employed multiple regression to test the main hypothesis and its sub-hypotheses. Based on the significance level (α) the null hypothesis (H0) is accepted or rejected. The significance level (α) was adopted as (0.05) as the maximum. Therefore, if the level of significance is less than or equal to (0.05), then a statistically significant impact will be felt, but if the level is higher than (0.05), no statistically significant impact will be felt.

4.2.2 Main Hypothesis

This part of the study aims to test the main study hypothesis, which states, "**H0**: There is no significant impact of supply chain integration (suppliers' integration, internal process integration, customers integration) on CSR at the Pharmaceutical Companies in Amman, Jordan, at ($\alpha \leq 0.05$)" Thus, to answer the main question about the study problem, this hypothesis was tested using the multiple regression as shown in Table (4.13) which represents the results of the statistical test for the main hypothesis model, where it shows the impact results of the three dimensions (suppliers' integration, internal integration, and customers' integration) of the independent variable (Supply chain integration) against the dependent variable (corporate social responsibility).

Table 4. 13: Results of testing the impact of supply chain integration dimensions on corporate social responsibility.

Dependent Variable	Model Summary			ANOVA		Coefficients			
	R	R^2	Adjusted R^2	F	Sig.	Dimension	B	t	Sig.
Corporate social responsibility	.872	.761	.753	106.961	.000	Constant	.503	2.807	.006
						Suppliers' integration	-.187	-1.614	.110
						Internal integration	.556	5.225	.000
						Customers' integration	.496	5.152	.000
						Tabulated T value		1.960	

The results of the model indicate the regression between the three independent variables (Supply Chain Integration) and the dependent variable (Corporate Social Responsibility). R^2 equals 0.761, meaning that the independent variable (Supply chain integration) can explain about 76% of the changes within DV (corporate social responsibility), while the remaining 23.9% of the changes within the dependent variable can be accounted for by other factors. There is a positive correlation between the two variables as indicated by the correlation coefficient (R) of (.872).

Corporate social responsibility is measured by the impact of three dimensions of supply chain integration (suppliers' integration, internal integration, and customers' integration). Results indicate that the three dimensions combined have a significant impact on the CSR. The internal integration dimension has the highest impact,

contributing 55.6%. then, customers' integration. As shown in the mentioned category results, the suppliers integration has no significant impact.

As a result of an ANOVA analysis, the results indicate that supply chain integration has significant effects on corporate social responsibility in Pharmaceutical Manufacturing in Jordan when calculated using Calculated F (106.961) and p-value (0.000) at the level of significance ($\alpha \leq 0.05$). Therefore, it is shown that supply chain integration has a significant impact on corporate social responsibility at the Pharmaceutical Manufacturing Industry in Jordan at ($\alpha \leq 0.05$), Therefore rejecting the null hypothesis.

4.2.3 Results of sub-Hypothesis 1

This part of the study aims to test the first sub-hypothesis, which states, “There is no significant impact at level ($\alpha \leq 0.05$) of suppliers’ integration, on corporate social responsibility in the pharmaceutical manufacturing industry in Amman, Jordan”. To answer the sub-question about the study problem, this hypothesis was tested as shown in table (4.13). Results show t- value of (-1.641) and p-value of (0.110), which is higher than the level of significance ($p<0.05$). Thus, the null hypothesis is accepted; indicating that there is no statistically significant impact of suppliers’ integration on the corporate social responsibility in Pharmaceutical Manufacturing Industry in Amman, Jordan, at ($\alpha \leq 0.05$).

4.2.4 Results of sub-Hypothesis 2

This part of the study aims to test the second sub-hypothesis, which states, “There is no significant impact at level ($\alpha \leq 0.05$) of internal integration on corporate social responsibility in the Pharmaceutical Manufacturing Industry in Amman, Jordan”. To answer the sub-question about the study problem, this hypothesis was tested as shown in table (4.13). Results show t-value of (5.225) and p-value of (0.00), which is less than the level of significance ($p<0.05$). Thus, the null hypothesis is rejected, and the alternative hypothesis is accepted; indicating that there is a statistically significant impact of internal integration on corporate social responsibility in the Pharmaceutical Manufacturing Industry in Jordan, at ($\alpha \leq 0.05$).

4.2.5 Results of sub-Hypothesis 3

This part of the study aims to test the third sub-hypothesis, which states, “There is no significant impact at level ($\alpha \leq 0.05$) of customers’ integration on corporate social

responsibility in the Pharmaceutical Manufacturing Industry in Amman, Jordan". To answer the sub-question about the study problem, this hypothesis was tested as shown in table (4.13). Results show t-value of (5.152) and p-value of (0.00), which is less than the level of significance ($p<0.05$). Thus, the null hypothesis is rejected, and the alternative hypothesis is accepted; indicating that there is a statistically significant impact of customers' integration on the corporate social responsibility in the Pharmaceutical Manufacturing Industry in Jordan, at ($\alpha \leq 0.05$).

4.2.6 Results using stepwise multiple regression

In this part the researcher used the stepwise multiple regression in the aim of supporting the results of the study.

Table 4. 14: Results of testing the impact of supply chain integration dimensions on corporate social responsibility using stepwise multiple regression

Model	DV	Model Summary			ANOVA			Coefficients				Partial/Part Correlations		
		R	^{2}R	Adj ^{2}R	df	F	Sig	Dimensions	B	t	Sig	Zero-order	Partial	Part
1	CSR	0.835	0.697	0.694	1 103	236.96	0.000	Constant	0.684	3.607	0.000			
					104			II	0.799	15.393	0.000	0.835	0.835	0.835
2	CSR	0.869	0.754	0.750	2 102	156.67	0.000	Constant	0.453	2.550	0.012			
								II	0.452	5.295	0.000	0.835	0.464	0.260
					103			CI	0.433	4.883	0.000	0.829	0.435	0.240
Corporate social responsibility								Excluded Variable	B	t	Sig	Partial		
								SI	-.183	-1.614	0.110	-0.159		

Tabulated T value=1.960

The results show that the stepwise multiple regression analysis entered the (internal integration and customers integration) dimensions of supply chain integration with a p-value of (0.00) for each, while it excluded the other dimension (suppliers' integration) since it has a non-significant p-value that is higher than (0.05) and a very weak and negative partial correlation (-0.159), also a t-value of -1.614 which is less than the tabulated t-vale (1.96) justifying excluding the suppliers' integration dimension from

the analysis. The results indicate the regression between the (internal integration and customers' integration) dimensions and the dependent variable (Corporate Social Responsibility). R^2 equals 0.754, meaning that the internal integration dimension can explain about 75.4% of the changes within DV (corporate social responsibility), while the remaining 24.6% of the changes within the dependent variable can be accounted for by other factors. There is a positive correlation between the two variables as indicated by the correlation coefficient (R) of (0.869). Moreover, Corporate social responsibility here was measured by the impact of the internal integration and customers' integration dimensions of supply chain integration. Results indicate that the two dimensions combined have a significant impact on CSR. The internal integration dimension has the highest impact, contributing 45.2%. then the customers integration with 43.3%. As shown in the coefficients category results, the suppliers' integration dimension also has no significant impact. Finally, In the ANOVA analysis category, the results indicate that supply chain integration has significant effects on corporate social responsibility in Pharmaceutical Manufacturing in Jordan with F= (156.67) and p-value= (0.000) at the level of significance ($\alpha \leq 0.05$). Therefore, it is shown that supply chain integration has a significant impact on corporate social responsibility at the pharmaceutical manufacturing industry in Jordan at ($\alpha \leq 0.05$), Therefore rejecting the null hypothesis and accept the alternative hypothesis.

CHAPTER FIVE RESULTS DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Results Discussion

This research aimed to investigate the impact of supply chain integration on corporate social responsibility at the pharmaceutical manufacturing industry in Amman, Jordan, at first and according to the hypotheses, the researcher conducted two tests (Standard Multiple Regressions and Stepwise Multiple Regressions) to assess the impact of the IV (supply chain integration) on the DV (CSR), The results reveal that there is positive and significant impact of supply chain integration on CSR at the pharmaceutical manufacturing industry in Jordan, which was the reason to reject the main null hypothesis that states "*H0: There is no significant impact of supply chain integration (suppliers' integration, internal process integration, customers integration) on CSR at the pharmaceutical companies in Amman, Jordan, at ($\alpha \leq 0.05$)".* And accept the alternative hypothesis.

Findings were supported by using the stepwise multiple regression test which showed almost same results. Since the research hypotheses were developed based on several previous studies, this result consisted with the study findings of Jermsittiparsert et al., (2019) which confirmed that the direct impact between independent and dependent variables was significant and accepted. In addition to the study of Basta et al., (2018) when they published their practical implications in which they clarify that reducing the supply chain's social footprint, ameliorating stakeholder quality of living, and mitigating social risk.

As well as Kang et al., (2018) findings which suggest that supplier and customer integration are vital enablers for both intra- and inter-organizational sustainable management practices. The results also reveal that both intra- and inter-organizational sustainable management practices are significantly and positively associated with economic, environmental, and social performance, and function as complements to jointly enhance environmental and social performance.

Consequently, this finding answered the first research question "*Is there any significant impact of supply chain integration with all its dimensions combined on CSR in the pharmaceutical companies in Amman, Jordan."* Although supply chain integration has a medium implementation in the Pharmaceutical Manufacturing Industry in Jordan, but the results show pharmaceutical manufacturing companies set high priority on quickly responding to its customers, as well as getting the best facilitation payment methods while strategically collaborate with their internal departments on improving the internal processes, which is a very important reason to improve sharing information on materials and supplies and achieve more efficient operations. Nevertheless, the results indicate medium level of adopting CSR dimensions, but the results shows that Pharmaceutical Manufacturing Companies provide and create job opportunities, and maintain a culture of non-discrimination in the work place while continuously improving its relationships with the customers.

On the other hand, the results of the sub hypotheses show a non-significant impact of suppliers' integration on CSR in both tests standard and stepwise multiple regressions which was the reason to accept the null sub-hypothesis that states "*H0.1: There is no significant impact of suppliers' integration on CSR at the pharmaceutical companies in Amman, Jordan, at ($\alpha \leq 0.05$)".* This might be due to the limited collaboration between the pharmaceutical companies and their suppliers on their strategic objectives such as achieving CSR and sharing little information about their vision and goals. Moreover, the results revealed that the other two dimensions (internal integration and customer's integration) have a significant impact on CSR at the Pharmaceutical Manufacturing Companies, the reason could be within the rules and policies in these companies which set high importance level to their employees and customers as well.

5.2 Conclusion

This study is dedicated to answer the study main question: do supply chain integration (suppliers' integration, internal process integration, customers integration) impact on CSR at the Pharmaceutical Companies in Amman, Jordan The approach of this study was developed to pay attention to the importance of the social, economic, and environmental dimensions in the business these days, and the effective role of the supply chain integration in achieving the corporate social responsibility. Data collated via questionnaire, which tested for its validity and reliability. Then correlation and multiple regressions used to test the hypothesis.

The results show that there is a significant and positive impact of Supply Chain Integration on Corporate Social Responsibility of Jordanian Pharmaceutical Manufacturing Industry, where the internal integration dimension has the highest impact, contributing 55.6%. Next, customers' integration has the highest impact. On the other hand, the supplier's integration dimension has no significant impact, this consequence also was reflected on the results of the stepwise multiple regression analysis.

5.3 Recommendations

5.3.1 Theoretical Implications

This research should provide additional explanation of how supply chain integration relates to Corporate Social Responsibility at the Pharmaceutical Manufacturing Industry in Jordan since many studies have been conducted in the Supply Chain, and for purposes of theoretical knowledge, making it the first study to examine these two variables on this study population. Researchers found that Supply Chain Integration had a positive impact on Corporate Social Responsibility (CSR) and that these results were consistent with previous research in different approaches and different target populations, this research mainly sought to increase responsibility for other important aspects such as society and environment, while most aimed to increase operational performance efficiency, profit, revenue, and growth.

This study was conducted on the Pharmaceutical Manufacturing Industry in Jordan as opposed to other studies on tourism, hotels, family enterprises, service sectors, or the government. Furthermore, this is among the few studies that used a model different from Archie Carroll's Hierarchy of Corporate Responsibilities (1979, 2010). With regard

to the research tool, it was created entirely on the basis of previously published research with a high level of stability and reliability, giving it a significant advantage for future researchers using the research tool.

5.3.2 Recommendations for Jordanian Pharmaceutical Manufacturing Industry

- The study is highly recommended that Jordanian Pharmaceutical Manufacturing Companies integrate with their supply chain partners, since it is imperative that all the operations related to that are efficient and smooth in sharing the vision and the objective effectively to achieve the CSR objective.

- The study recommends that Jordanian Pharmaceuticals Manufacturing Companies implement Supply Chain Integration components together because they affect each other.

- The study recommends that Jordanian Pharmaceuticals Manufacturing Companies have methods, tools and KPIs to check supply chain through evaluating, benchmarking and comparing its components with other organizations within pharmaceutical industry.

- The study recommends that Jordanian Pharmaceutical Manufacturing Companies train their employees on effective communication skills so that they can communicate effectively with their suppliers.

- The study recommends that companies set new standards for their suppliers so that they can collaborate together to achieve their CSR goals. Due to their crucial role in providing them with environmentally friendly materials and supplies on demand, Pharmaceutical Companies should make joint decisions with their key suppliers.

- The study recommends that Jordanian Pharmaceutical Manufacturing Companies aim to build a stronger connection with their customers. Because of the power of word of mouth, they play a key role in boosting and improving the company's image and reputation.

- The study recommends that Jordanian Pharmaceutical Manufacturing Company consider its beneficial impacts on the natural environment. Trends such as climate change and environmental awareness are more likely to keep Pharmaceutical Manufacturing Companies afloat in the current economic industry.

-

5.3.3 Recommendations for Academics and Future Research

- Since this study is carried out on managers who are working at Jordanian Pharmaceutical Manufacturing Industry, the study recommends including other level of employees.
- This study is carried out on Jordanian Pharmaceutical Manufacturing Industry located in Jordan. To be able to generalize the current study results, it is recommended to conduct such study on same industry in other countries, especially, Arab Countries because they have similar social and cultural lifestyle.
- This study carried out within limited period; therefore, it is advised to repeat this study after a suitable time to check industry development.
- Extending the analyses to other industries and countries represent future research opportunities, which can be done by further testing with larger samples within same industry, and including other industries will help mitigate the issue of generalizing conclusions on other organizations and industries.

- Therefore, more research is needed, including data gathering from numerous countries, particularly from the MENA region. Further, this research is more focused on the Pharmaceutical Manufacturing sector. Further studies are essential and should be undertaken to see if the results can be generalized to other business sectors.

- We recommend that future researchers examine supply chain integration and CSR with additional variables, such as technology, in the same study setting or in a different study setting.

- Finally, Research into future studies in this area is being recommended, as the same study variables can be applied to other industries. These include industrial, insurance, real estate, services, and education.

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Appendices

Appendix 1

Name of arbitrators

No.	Name	Academic Rank	University Name
1	Prof. Ahmad Ali Saleh	Professor of Management	Middle East University
2	Prof. Mohammad Khair Abu Zaid	Professor of Management	Al-Balqa's University
3	Prof. Rateb Swiess	Professor of Management	University of Jordan
4	Prof. Abdallah Daas	Associate prof	Middle East University
5	Dr. Abdallah Batayneh	Associate prof	Middle East University
6	Dr. Layla Ashour	Associate prof	Petra University
7	Dr. Murad Ityani	Associate prof	Israa University
8	Dr. Nahla Al Nazer	Associate prof	Middle East University
9	Dr.Sameer Al-Jabali	Associate prof	Middle East University

Appendix 2

Letter and Academic Questionnaire

Academic Questionnaire

Dear participant,

Greetings

May I request you to answer the below questionnaire, which related to master thesis titled:

"**The Impact of Supply Chain Integration on Corporate Social Responsibility "of Jordanian Pharmaceutical Manufacturing Industry**

This questionnaire includes 72 paragraphs which may take only 15 minutes to answer all related questions. Please rate your actual perception related to actual implementation of each question. The responses will be treated as confidential data and will be used only for academic purposes. Therefore, the collected data will not be exposed to anybody. Finally, I would like to thank you for your participation and support. If you have any question or comment, please call me (0791124333)

Thank you in advance for your support and assistance.

Best regards,

Prepared by: Lujain Shattah

Supervisor: Dr. Abdel-Aziz Ahmad Sharabati

E-mail: lujain.shattah@gmail.com

Part one: Personal and Occupational characteristics

Gender

Male

Female

Age

25- less than 30

30- less than 35

35- less than 40

40 and more

Experience

Less than 5 years

5 - 10 years

10 - 15 Years

15 Years or greater

Educational Level

High School

Diploma

BSc

Master \ PhD

Job Title

General Manager

Department Manager

Supervisor

Assistant Manager

Part two: The following 72 questions tests the perception of Jordanian Manufacturing Companies employees about the implementation of Supply Chain Integration and Corporate Social responsibility. Please respond to the following questions by placing a check mark (√) in the answer box that corresponds to your response.

Supply chain integration is the degree in which companies integrates its supply chain partners (suppliers, customers and internal departments) by sharing information regarding the materials and supplies among them.

No	Item	Answer Alternatives				
		Never implemented	**Almost implemented**	**To some extent**	**Slightly implemented**	**Highly implemented**
Suppliers' Integration: is the degree which companies plans, shares information, and collaborates with its suppliers to provide these companies with the required raw materials and supplies.						
1	The company shares information with key suppliers	**1**	**2**	**3**	**4**	**5**
2	The company develops collaborative approaches with key suppliers	**1**	**2**	**3**	**4**	**5**
3	The company makes joint decision with key suppliers	**1**	**2**	**3**	**4**	**5**
4	The company uses system coupling with key suppliers	**1**	**2**	**3**	**4**	**5**
5	The company develops strategic plans in collaboration with key suppliers	**1**	**2**	**3**	**4**	**5**
6	The company agrees with suppliers on raw material suitable prices	**1**	**2**	**3**	**4**	**5**
7	The company gets the best facilitation payment methods.	**1**	**2**	**3**	**4**	**5**

No	Item	Answer Alternatives				
		Never implemented 1	**Almost implemented** 2	**To some extent** 3	**Slightly implemented** 4	**Highly implemented** 5
Internal Integration: is the degree in which the departments in the companies participates in the strategic planning and decision making while sharing information among each other's using online systems						
1	The company shares information with purchasing department	**1**	**2**	**3**	**4**	**5**
2	The company makes joint decision making with purchasing department	**1**	**2**	**3**	**4**	**5**
3	The company shares information with sales department	**1**	**2**	**3**	**4**	**5**
4	The company makes joint decision making with sales department	**1**	**2**	**3**	**4**	**5**
5	The company develops strategic plans in collaboration with its departments.	**1**	**2**	**3**	**4**	**5**
6	The company uses the online systems for inside communication.	**1**	**2**	**3**	**4**	**5**

7	The company departments meet and cooperate to solve problems.	**1**	**2**	**3**	**4**	**5**

No	Item	Answer Alternatives				
		Never implemented 1	Almost implemented 2	To some extent 3	Slightly implemented 4	Highly implemented 5
Customers' Integration: is the degree which companies plans, shares information, and collaborates with its customers to provide them with the required products on time and promised quality.						
1	The company shares information with key customers	**1**	**2**	**3**	**4**	**5**
2	The company develops collaborative approaches with key customers	**1**	**2**	**3**	**4**	**5**
3	The company makes joint decision making with key customers	**1**	**2**	**3**	**4**	**5**
4	The company uses system coupling with key customers	**1**	**2**	**3**	**4**	**5**
5	The company develops strategic plans in collaboration with key customers	**1**	**2**	**3**	**4**	**5**
6	The company shares information with customers about new products and services.	**1**	**2**	**3**	**4**	**5**
7	The company has fast communication systems with customers.	**1**	**2**	**3**	**4**	**5**

Corporate Social Responsibility: is the company's inclination towards business voluntary activities to the society, and ethically increase its profit while protecting the natural environment.						
No.	**Item**	**Answer Alternatives**				
		Never implemented	**Almost implemented**	**To some extent**	**Slightly implemented**	**Highly implemented**
Social Responsibility: is the company's responsibility towards the society by supporting the local community, providing equal and fair opportunities with no discrimination.						
1	The company encourages social activities that support local communities	**1**	**2**	**3**	**4**	**5**
2	The company practices gender balance equality between males and females	**1**	**2**	**3**	**4**	**5**
3	The company practices non-discrimination policy	**1**	**2**	**3**	**4**	**5**
4	The company aims to create employment opportunities	**1**	**2**	**3**	**4**	**5**
5	The company provides appropriate employment opportunities for disabled people	**1**	**2**	**3**	**4**	**5**
6	The company pays fair salaries to its employees	**1**	**2**	**3**	**4**	**5**
7	The company offers a pleasant work environment (flexible hours, remote working, maternity hour)	**1**	**2**	**3**	**4**	**5**
Economic Responsibility: is the company's responsibility towards its shareholders by increasing its profits, control costs while maintain long term growth.						

No	Item	Answer Alternatives				
		Never implemented	**Almost implemented**	**To some extent**	**Slightly implemented**	**Highly implemented**
6	The company adopts good financial governance practices	**1**	**2**	**3**	**4**	**5**
7	The company keeps working to increase the value of its shares	**1**	**2**	**3**	**4**	**5**
8	The company contributes to the development of the local economy	**1**	**2**	**3**	**4**	**5**
9	The company keeps working on strengthening its relations with customers	**1**	**2**	**3**	**4**	**5**
10	The company keeps working on the development of its relations with public institutions	**1**	**2**	**3**	**4**	**5**
11	The company keeps a strict control over its costs	**1**	**2**	**3**	**4**	**5**
12	The company tries to maximize its profits	**1**	**2**	**3**	**4**	**5**

Environmental Responsibility: is the company's responsibility toward mother-nature by adapting environmentally friendly practices such as waste management and recycling, reducing negative impacts and investing in clean technologies.

No	Item	Answer Alternatives				
		Never implemented 1	**Almost implemented** 2	**To some extent** 3	**Slightly implemented** 4	**Highly implemented** 5
11	The company ensures compliance with environmental legislation	**1**	**2**	**3**	**4**	**5**
12	The company practices the minimisation of waste and support for recycling	**1**	**2**	**3**	**4**	**5**
13	The company implements special programs to minimize its negative impact on the natural environment	**1**	**2**	**3**	**4**	**5**
14	The company participates in activities which aim to protect and improve the quality of the natural environment	**1**	**2**	**3**	**4**	**5**
15	The company invests into clean technologies	**1**	**2**	**3**	**4**	**5**
16	The company is concerned with respecting and protecting the natural environment	**1**	**2**	**3**	**4**	**5**
17	The company uses saving energy and other resources production facilities	**1**	**2**	**3**	**4**	**5**

Thank you

Appendix 3

Letter and Questionnaire of Respondents (Arabic Version)

حضرة الدكتور..... المحترم

ارجوا من حضراتكم التكرم بالإجابة على الاستبيان المرفق حول رسالة الماجستير بعنوان:

أثر تكامل سلسلة التوريد على المسؤولية الاجتماعية

دراسة تطبيقية لصناعة الادوية الاردنية في عمان – الاردن

يتضمن هذا الاستبيان 72 فقرة وقد يستغرق الاجابة عليه 15 دقيقة فقط. نرجو من حضرتكم التكرم بالإجابة حول التطبيق الفعلي على جميع الاسئلة. نعدكم بانه سيتم التعامل مع الاجابات بشكل سري، وسوف تستخدم لأغراض البحث العلمي فقط. ولن يسمح لاحد بالاطلاع عليها.

واخيرا، اود ان اشكركم على مشاركتكم و دعمكم , و اذا كان لديكم اي سؤال او تعليق , يرجى الاتصال على الرقم (0791124333)

شكرا مقدما لمساهمتكم ودعمكم

اعداد الباحثة: لجين معين شطة

اشراف الدكتور: عبد العزيز احمد الشرباتي

Part one: Personal and Occupational characteristics

Gender

ذكر

انثى

Age

25 – اقل من 30 سنة

30 – اقل من 35 سنة

35 – اقل من 40 سنة

اكبر من 40 سنة

Experience

اقل من 5 سنوات

5 – 10 سنوات

10 – 15 سنة

15 سنة فأكثر

Educational Level

توجيهي

دبلوم

بكالوريوس

ماستر / دكتوراه

Job Title

مدير عام

مدير قسم

مشرف

مساعد مدير

Part two:

التكامل مع الموردين						
#	الفقرة	البدائل				
		لم تنفذ مطلقاً	نفذت قليلاً	احياناً	نفذت تقريباً	نفذت بشكل متكرر
1	تشارك الشركة المعلومات مع الموردين الرئيسيين	1	2	3	4	5
2	تطور الشركة مناهج تعاونية مع الموردين الرئيسيين	1	2	3	4	5
3	تتخذ الشركة قرارًا مشتركًا مع الموردين الرئيسيين	1	2	3	4	5
4	تستخدم الشركة نظام اقتران مع الموردين الرئيسيين	1	2	3	4	5
5	تقوم الشركة بتطوير الخطط الإستراتيجية بالتعاون مع الموردين الرئيسيين	1	2	3	4	5
6	تتفق الشركة مع الموردين على أسعار مناسبة للمواد الخام	1	2	3	4	5
7	تحصل الشركة على أفضل طرق الدفع الميسرة.	1	2	3	4	5
التكامل مع العمليات الداخلية						
#	الفقرة	البدائل				
		لم تنفذ مطلقاً	نفذت قليلاً	احياناً	نفذت تقريباً	نفذت بشكل متكرر
1	تشارك الشركة المعلومات مع قسم المشتريات	1	2	3	4	5
2	تتخذ الشركة قرارًا مشتركًا مع قسم المشتريات	1	2	3	4	5
3	تشارك الشركة المعلومات مع قسم المبيعات	1	2	3	4	5
4	تتخذ الشركة قرارات مشتركة مع قسم المبيعات	1	2	3	4	5
5	تقوم الشركة بتطوير الخطط الإستراتيجية بالتعاون مع اقسامها.	1	2	3	4	5
6	تستخدم الشركة أنظمة الإنترنت للاتصال الداخلي.	1	2	3	4	5
7	تجتمع اقسام الشركة وتتعاون لحل المشاكل.	1	2	3	4	5
التكامل مع الزبائن						
#	الفقرة	البدائل				
		لم تنفذ مطلقاً	نفذت قليلاً	احياناً	نفذت تقريباً	نفذت بشكل متكرر
1	تشارك الشركة المعلومات مع العملاء الرئيسيين	1	2	3	4	5
2	تطور الشركة مناهج تعاونية مع العملاء الرئيسيين	1	2	3	4	5

3	تتخذ الشركة قرارات مشتركة مع العملاء الرئيسيين	**1**	**2**	**3**	**4**	**5**
4	تستخدم الشركة نظام اقتران مع العملاء الرئيسيين	**1**	**2**	**3**	**4**	**5**
5	تقوم الشركة بتطوير خطط إستراتيجية بالتعاون مع العملاء الرئيسيين	**1**	**2**	**3**	**4**	**5**
6	تشارك الشركة المعلومات مع العملاء حول المنتجات والخدمات الجديدة.	**1**	**2**	**3**	**4**	**5**
7	تستخدم الشركة أنظمة اتصال سريعة مع العملاء	**1**	**2**	**3**	**4**	**5**

المسؤولية الاجتماعية						
#	الفقرة	البدائل				
		لم تنفذ مطلقاً	نفذت قليلاً	احياناً	نفذت تقريباً	نفذت بشكل متكرر
1	تشجع الشركة الأنشطة الاجتماعية التي تدعم المجتمعات المحلية	**1**	**2**	**3**	**4**	**5**
2	تطبق الشركة مبدأ المساواة بين الجنسين بين الذكور والإناث	**1**	**2**	**3**	**4**	**5**
3	تمارس الشركة سياسة عدم التمييز	**1**	**2**	**3**	**4**	**5**
4	تهدف الشركة إلى خلق فرص عمل	**1**	**2**	**3**	**4**	**5**
5	توفر الشركة فرص عمل مناسبة لذوي الاحتياجات الخاصة	**1**	**2**	**3**	**4**	**5**
6	تدفع الشركة رواتب عادلة لموظفيها	**1**	**2**	**3**	**4**	**5**
7	توفر الشركة بيئة عمل مريحة	**1**	**2**	**3**	**4**	**5**
المسؤولية الاقتصادية						
No	**Item**	**Answer Alternatives**				
		Never implemented 1	**Almost implemented** 2	**To some extent** 3	**Slightly implemented** 4	**Highly implemented** 5
6	تتبنى الشركة ممارسات حوكمة مالية جيدة	**1**	**2**	**3**	**4**	**5**
7	تواصل الشركة العمل على زيادة قيمة أسهمها	**1**	**2**	**3**	**4**	**5**
8	تساهم الشركة في تنمية الاقتصاد المحلي	**1**	**2**	**3**	**4**	**5**
9	تواصل الشركة العمل على تعزيز علاقاتها مع العملاء	**1**	**2**	**3**	**4**	**5**
10	تواصل الشركة العمل على تطوير علاقاتها مع المؤسسات العامة	**1**	**2**	**3**	**4**	**5**
11	تتبنى الشركة اسلوب رقابة صارم على تكاليفها	**1**	**2**	**3**	**4**	**5**
12	تسعى الشركة تعظيم أرباحها	**1**	**2**	**3**	**4**	**5**
المسؤولية البيئية						

No	Item	Answer Alternatives				
		Never implemented 1	**Almost implemented** 2	**To some extent** 3	**Slightly implemented** 4	**Highly implemented** 5
11	تحرص الشركة على الامتثال للتشريعات البيئية	**1**	**2**	**3**	**4**	**5**
12	تتبنى الشركة ممارسات تقليل النفايات ودعم إعادة التدوير	**1**	**2**	**3**	**4**	**5**
13	تنفذ الشركة برامج خاصة لتقليل تأثيرها السلبي على البيئة	**1**	**2**	**3**	**4**	**5**
14	تشارك الشركة في الأنشطة التي تهدف إلى حماية وتحسين جودة البيئة	**1**	**2**	**3**	**4**	**5**
15	تستثمر الشركة في التقنيات النظيفة	**1**	**2**	**3**	**4**	**5**
16	تهتم الشركة باحترام وحماية البيئة الطبيعية	**1**	**2**	**3**	**4**	**5**
17	تستخدم الشركة "مرافق إنتاج الطاقة الموفرة" وغيرها من الموارد	**1**	**2**	**3**	**4**	**5**