Factors Affecting B2B EC Systems Performance Based on Managers Perception in Engineering, Electronic Industries and Information Technology Sector in Amman

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AUTHORIZATION

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To those people, I dedicate this thesis with acknowledgement and pride.

Sincerely Yours'

Mais M.Al-Qudah

DEDICATION

In particular, I dedicate this thesis to my father who has great perceptions for my life, also to my mother who has raised me to be the person I'm now. May Allah give them peace in their life and give them the heaven in the next life, Amen.

Table of Content

LIST OF ABBREVIATIONS

B2B	Business to Business
TPs	Trading Partners
DF	Degree of Freedom
E-Business	Electronic Business
E-Commerce	Electronic Commerce
IS	Information System
IT	Information Technology
Sig	Significant
JIT	Just in Time Delivery
TAM	Technology Acceptance Model
EDI	Electronic Data Interchange
ERP	Enterprise Resource Planning
TRA	Theory of Reasoned Action
VAN	Value-added Network

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ABSTRACT

Business - to - Business (B2B) systems are one key form of electronic business (e-business) that is concerned with transactions between businesses conducted over computer networks (internet, intranet and extranet). These B2B systems provide business with solution in rapid changing business environment to support their business processes. This research seeks to understand the factors influencing B2B systems performance in Amman. Using previous literature, this study develops a theoretical model that includes a set of four factors; perceived benefits, IT infrastructure, trading partners “TPs”, perceived

risk. The results of this research can help in understanding the shortcomings and enhancing the performance of B2B systems. Using a survey conducted on the Managerial Perception in Engineering, Electrical Industries and Information Technology Sector in Amman, this research examines the effect of these factors on B2B (EC) systems performance, Data obtained from a total of 54 enterprises respondent surveys were analyzed using statistical analysis .The findings of this study showed the significant effect of perceived benefits and trading partners on B2B (EC) systems performance. In addition, the researcher found a statistical significant effect for perceived risk and especially for IT infrastructure.

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الملخّص باللغة العربية

التجارة الإلكترونية بين أطراف الشركات هي شكل **رئيس** "تعديل د سعد " من أشكال نظم الأعمال الإلكترونية التي تهتم بالمعاملات بين الشركات عبر **الشبكات الحاسوبية** (الإنترنت والأنترانت و الإكسترانت). توفر هذه النظم التجارية الحلول السريعة في بيئة الأعمال المتغيرة يسعى هذا البحث إلى فهم العوامل التي تؤثر في أداء أنظمة . دوماً لدعم عمليات الأعمال الخاصة بهم التجارة الإلكترونية من وجهة نظر المدراء في قطاع الصناعات الهندسية والكهربائية وتكنولوجيا المعلومات في عمان ، وبناءً على الدراسات السابقة المتعلقة بالموضوع نفسه، فإن هذه الدراسة طوّرت نموذجاً نظرياً تتضمن أربعة عوامل رئيسية، من هذه العوامل "المنافع الم دركة "و"البنية التحتية لتكنولوجيا المعلومات "،إضافة إلى "شركاء واطراف العمل " و"المخاطر الم دركة ". إن النتيجة المرجوّة من هذا البحث قد تسهم في فهم اداء هذه الانظمة، و طرق دعمها وتطويرها.

باستخدام الاستبانة التي تم توزيعها على المدراء في الشركات ؛ لاختبار تأثير العوامل المذكورة آنفاً على أداء انظمة التجارة الالكترونية بين اطراف الشركات. تم تحليل المعلومات المعطاة في في الاستبانه على اربع خمسين شركة تم جمعها باستخدام التحليل الإحصائي. وأظهرت النتائج تأثيراً ذو دلالة احصائية لمتغيرات"المنافع الم دركة " و"شركاء وأطراف العمل "، كماأنها كشفت عن أثر ذو دلالة احصائية لمتغير "المخاطر المدركة "، خاصةً متغير البنية التحتية .

Chapter One:

Study General Framework

1.1 Introduction

Recently, Information Technology (IT) systems have changed our world and more importantly the way we do business. IT systems and networks improved business process and developed more agile, intelligent and efficient business functions (Davison et. al, 2003). The recent developments and growth of IT and networks made it possible for business to conduct many of their functions online (Pedrinaci. et. al, 2008). Electronic business (E-business) has transformed business environment towards a more efficient, globally connected and IT-oriented businesses, also buying and selling online in procurement or sales departments is now integrated in most organizations worldwide (Lai and Chen, 2009). Technological revolution made Electronic Commerce (EC) systems an essential part of E-business that not include just buying, selling, exchanging products and services but also serve customers and collaborating with business partner via computer networks to achieve competitive advantages for these businesses. Business-to-Business (B2B) systems are a type of EC systems that is concerned with transactions between businesses conducted over computer networks (internet, intranet and extranet A major characteristic of B2B is that Enterprises attempt to electronically Automate trading or communication processes in order to improve them (Turban.et.al, 2006).There are several benefits for B2B (EC) systems such as: reducing cost, facilities, mass customizations, efficient customer services and increasing opportunities for collaboration (Turban.et.al, 2006). Hence, this research attempted to examine the factors that influence B2B (EC)

systems performance within Jordanian industrial sector (Engineering, Electrical Industries and Information Technology "EEIIT") as a sample of this research.

1.2 Study Problems

The statement of the problem is: "**To study the factors that have influence on B2B (EC) systems performance for Engineering, Electronic Industries and Information Technology companies?** In the above-mentioned research problem is reformulated in the following research questions:

1. Would Engineering, Electrical Industries and Information Technology Enterprises adopt B2B (EC) systems?
2. Are the Engineering, Electrical Industries and Information Technology Enterprises adopting B2B (EC) systems to improve competitive advantage and add values to them?
3. Is the performance of B2B (EC) systems effective enough?
4. What are the factors that have influence on B2B (EC) systems performance?

1.3 Study Questions :

This research must answer these following questions:

1. What are the factors of B2B (EC) systems that have effect on the B2B systems by selected Engineering, Electrical Industries and Information Technology? (H1)
2. Do the Perceived benefits of B2B (EC) systems have effect on the B2B systems performance? (H2)
3. Does the Infrastructure in B2B (EC) systems have effect on the B2B systems **performance**? (H3).
4. Do the Trading Partners (TPs) in these Enterprises have effect on B2B systems performance? (H4).
5. Do the perceived risks that have effect on B2B (EC) systems Performance? (H5).

1.4 Study Hypotheses

Based on previous research questions related to the research matter and according to the research questions, the following hypotheses will be tested:

- **Ho1**: There is no significant statistical effect of the factors of B2B (EC) systems on B2B (EC) systems performance at level ($\alpha \leq 0.05$).

This hypothesis is divided into the following sub–hypotheses

- **Ho1a**: There is no significant statistical effect of B2B **Perceived benefits** on B2B (EC) systems performance at level ($\alpha \leq 0.05$).
- **Ho1b**: There is no significant statistical effect of B2B **Enterprises IT Infrastructure** on B2B (EC) systems performance at level ($\alpha \leq 0.05$).
- **Ho1c**: There is no significant statistical effect of B2B **Trading Partners (TPs)** on B2B (EC) systems performance at level ($\alpha \leq 0.05$).
- **Ho1d**: There is no significant statistical effect of B2B **perceived risks** on B2B (EC) systems performance at level ($\alpha \leq 0.05$).

1.5 Significance of the Study

The importance of the research appears from the following indicators:

- This research is one of the early researches in Amman that searches the factors that effect B2B (EC) systems performance.
- The result of this research may lead to an effective and optimal performance to B2B (EC) systems in Engineering, Electrical Industries and Information Technology (EEIIT) Enterprises in Amman .

1.6 Objectives of the Study

The research aimed at achieving the following objectives:

1. To identify the attitudes of Engineering, Electronic Industries and Information Technology Enterprises (EEIIT) in Amman toward the adoption of B2B (EC) systems performance.

2. Identifying and describing the current state of use, and implementation of B2B (EC) systems adoption by selected Engineering, Electronic Industries and Information Technology Enterprises (EEIIT) in Amman.

3. To identify the main factors that influence B2B (EC) systems performance.

4. To analyze the effective factor that have effects on B2B (EC) systems performance, and explains why.

1.7 Study Limitations

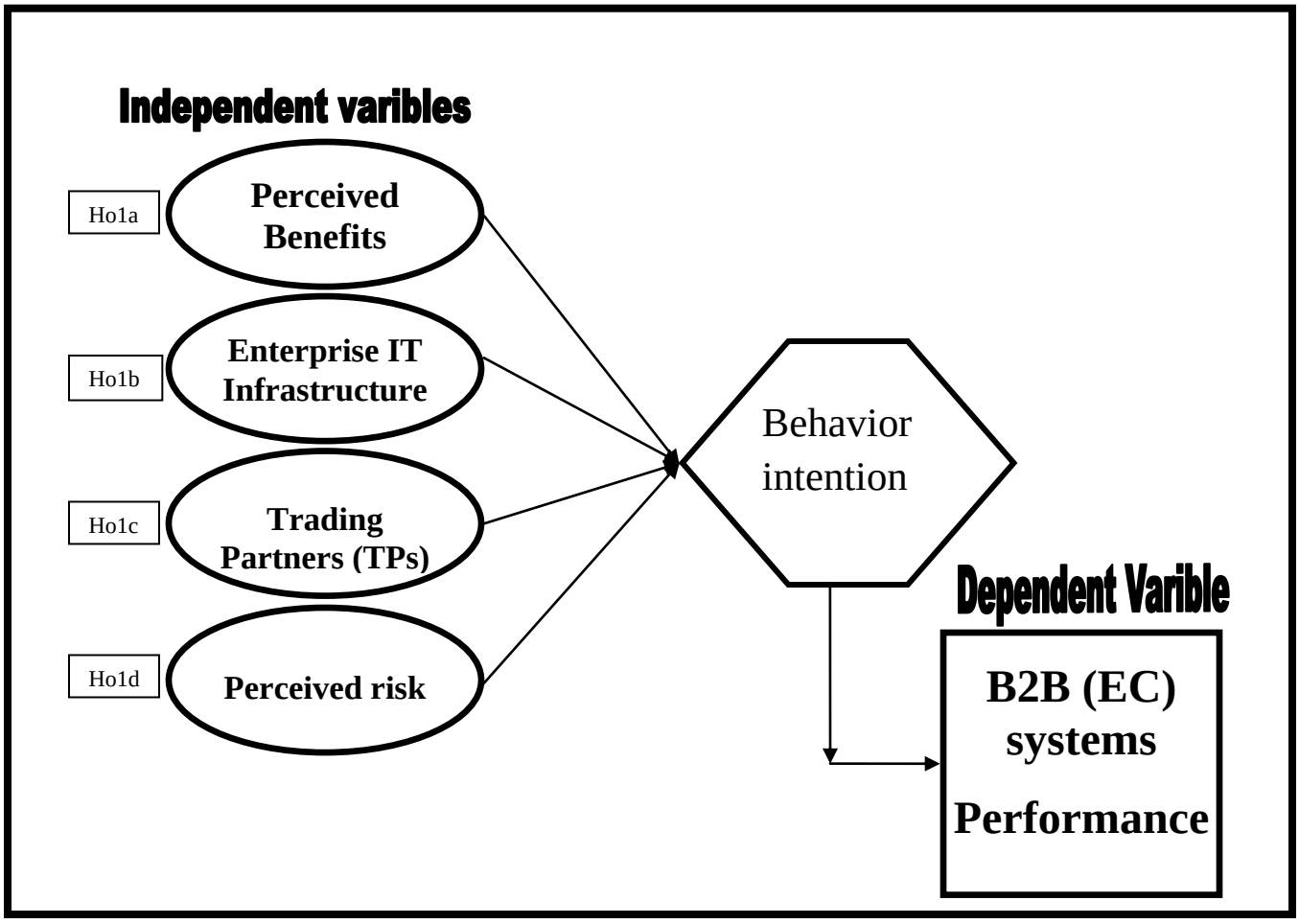
1- Location limitations: all Jordanian industrial Enterprises

2- Human resource limitations: Jordanian industrial Enterprises managers.

3- Timeline limitations: The academic year 2010-2011, (from June 2011 – December 2011).

1.8 Study Model

The following figure shows the tested variables that affect the performance of B2B systems: perceived benefits, Enterprise IT infrastructure, trading partners (TPs), and perceived risk.



❖ **Figure (1) Study model developed by Auther**

1.9 Terminologies of the Study

- **Perceived benefits:** refers to business value received by organizations that have adopted e-commerce systems (Pavlou .2002,5)
- **Enterprises IT infrastructure**: the architecture of hardware, software, content and data used to deliver e-business services to employee, customers and partner (Chaffey, 2007).
- **Trading Partners (TPs)**: One of the two or more participants in an ongoing business relationship(www.businessdictionary.com).
- **Perceived Risks:** Perceived risks refers to potential weaknesses, barriers and losses faced by organizations that have adopted e-commerce (Pavlou, 2002).
- **Electronic business (EB):** is a broader definition of EC that includes not just the buying and selling of goods and services but also serving customers, collaborating with business partners, and conducting electronic transactions within organizations (Turban et. al, 2010).
- **Electronic commerce (EC):** exchanging goods using digital media of structured information between buyers and sellers (Ibrahim, 2008).
- **Technology Acceptance Model (TAM):** is an informational system theory that demonstrates how users come to accept and use a certain technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it (Wikipedia, 2010).

- **E-business systems:** represent an e-business initiative aimed at employees who use an intra-business network allowing organizations to provide useful services, information, or products to their disperse employees (Rahim, 2006).

Chapter Two:

Theoretical Framework and

Previous Studies

2.1 Introduction

Many of us take the internet for granted; it has become an integral part of our lives-so much so that many people cannot imagine living their lives without spending at least part of their time online. Furthermore, the internet represents the great new frontier for the business world. Very few new businesses start without at least a minimal online presence. And more and more companies are relying exclusively on the internet for interacting with their customers. And for small businesses, the internet probably represents the best bet for entrepreneurial success (Holden, et.al, 2009, 2).

Commerce the exchange of valuable goods or services has been conducted for thousands of years. Traditionally, commerce involved bringing trades, buyers and sellers together in a physical marketplace to exchange information, products, services, and payments. Today, many business transactions occur across a telecommunications network where buyers, sellers and others involved in a business transaction (such as the employees who process transactions) rarely see or know each other and maybe in anywhere in the world(Napier, et.al, 2006, 2) .

This process of buying and selling products and services across a telecommunications network is often called “electronic commerce” or “e-commerce”. Many people use the term “e-commerce” in a border sense; to encompass not only the buying and selling of goods but also delivery of information, the providing of customer services before and after a sale ,the collaboration with business partners ,and the effort of enhance productivity within organizations. (Napier, et.al, 2006, 2).

This chapter will briefly discuss E-business in general. Then it will move on to discuss the E-commerce and its types. After that, it will show the factors which affect B2B (EC) systems performance in (EEIIT) Sector in Amman identified in previous literature as well as in this study. Later, the study presents previous related work and finally, contribution of study to knowledge.

2.2 E-business concept

E-business originally began in the 1970s, when large corporations started to create a private networks that enabled them to share information with business partners and suppliers (Matthewson, 2002,3).This process ,called Electronic Data Interchange (EDI),transmitted standardized data that streamlined the procurement process between businesses ,so that paperwork and human intervention were nearly eliminated and human errors reduced (Matthewson, 2002,3).

E-business is not just about dot com or internet-only companies or selling and buying via electronic channels .Fundamentally, e-business is a much boarder concept and it is concerned with using the internet and relegated technologies to integrate and redesign an organization's internal activities processes and external relations, and create new way of working that are significantly different from, and very often superior to ,what was possible in the past (Li,2007, 1-2).

There are many advantages for e-business practice that (Canzer, 2006) mentioned in his study that are summarized as follows:

1. Access information anytime, anywhere

2. Increase productively for both customers and employees by saving time and money.

3. Allows communicating at more convenient place and time through e-mail and other software.

4. Facilitates online shopping to geographically disperse customers.

5. Inexpensive means to promote the firm and its products to current and potential customers.

In the face of these advantages ,there are disadvantages such as: users must have internet access, requires specialized knowledge to use and may result in lots of customers or sales if online experience is unsatisfactory (Canzer,2006,10).

Impact of E-Business:

1. Improved efficiency and productivity.
2. Reduction in operation cost and cost of goods and services.
3. Improved competitive position.
4. Improved communications, information and knowledge sharing.
5. Improved internal information access.
6. Improved relationships with suppliers and improved customer services (Papazoglou & Ribbrers, 2006, 12-14).

2.3 E-commerce concept

The Business phenomenon that we now call electronic commerce has had an interesting history. From humble beginning in the mid-1990s, electronic commerce grew rapidly until 2000, when a major downturn occurred. Many people have seen new stories about the "dot-com boom" followed by the "dot-com bust "or the "dot-bomb". In the2000 to 2003 period, many industry observers were writing obituaries for electronic commerce. Just as the unreasonable expectation for immediate success fueled the high expectations during the boom years, overly gloomy news reports colored perceptions during this time (Schneider, 2006,4).

In spite of the spectacular dot.com bust a few years ago, the internet has markedly changed the way we do business, whether it is finding new streams of revenue tested (Reynolds, 2004).Acquiring new customers, or managing a business's supply chain, E-commerce is main stream –enabling businesses to sell products and services to consumers on a global basis tested (Reynolds, 2004).As such, e-commerce is the platform upon which new methods to sell and to distribute innovative products and services electronically are tested (Reynolds, 2004).

Bhasker,(2009) also defined E-commerce as E-commerce has been used for describing a variety of market transactions, enable by information technology and conducted over the electronic networks (Bhasker,2009,2).

EC can also be defined from the following perspectives: (Turban.et, all, 2010).

1. Business process: EC systems are doing business electronically by implementation business process over electronic networks
2. Service: EC system is a tool that addresses the desire of government, firms, consumers, and management to cut service cost while improving the quality of customer service and increasing the speed of service quality.
3. Learning: EC systems are an enabler of online training and education in schools, universities and other organizations including businesses.
4. Collaborative: EC systems are the framework for inter –and intra organizational collaboration.
5. Community: EC systems provide gathering place for community members to learn .transact .and collaborate (Turban.et, all, 2010).

The reason by e-commerce based on internet is so attractive to enterprise is that e-commerce enjoys several evident advantages over e-commerce based on EDI: (Qin, 2009, 6).

Low in cost: the expense of internet is low, no more than 1/10 of VAN in general, wide in overlaying: Internet spreads all over the world, by which trade partners can conveniently send commercial information and documents with common telephones wires, complete on function. Internet can help different users to carry out their targets of different levels and Flexible in use. E-commerce based on internet is not confined to agreement of special data exchange (Qin, 2009, 6).

Many companies have e-commerce sites but are not yet e-business .E-commerce is the online selling component of a web site (Rosen, 2004).E-business is the integration of companies activities, including products, procedures, and services, with the internet. And the companies turn from a business into an e-business when they integrate their sales, marketing, accounting, manufacturing, and operations with their website activities (Rosen, 2004).

- ***E-business vs. E-commerce:***

1. Compared with (EC) ,e-business is a more generic term because it doesn't only refer to information exchanges related to buying and selling but also to servicing customers and collaborating with business partners, distributors and suppliers . (Papazoglou & Ribbrers, 2006).

2. E-business encompasses sophisticated business –to- business interactions and collaboration activities at a level of enterprise applications and business process (Papazoglou & Ribbrers, 2006).

2.4 Categories of E-commerce

There are many classifications of EC systems by the nature of the transaction and the following liats some of them as the following: (Turban & King, 2003, 7).

1. Business - to - customer (B2C): EC model in which business sell to individual shoppers.

2. Customer - to – Business (C2B): Individuals who use the internet to sell products or services to organization as well as individuals who seek sellers to bid on products or services they need.

3. Customer – to – customer (C2C): EC model in which customers sell directly to other customers.

4. Mobile commerce (m-commerce): EC systems transaction and activities conducted in wireless environment.

5. Location commerce (L- Commerce): M-commerce transactions targeted to individuals in specific locations at specific times.

6. Business – to – Business (B2B): EC model in which all the participants are business or other organizations (Turban & King, 2003, 7).

2.5 Business-to- Business (B2B) E-commerce

One trillion dollars, that's what's at stake in the next few years in business-to-business e-commerce Research shows that b-to-b spending will soar from $43 billion to over $1 trillion. Meanwhile, in the same span of time, business-to-consumer spending is expected to rise from $7.8 to only $108 billion. That's what in the future for business-to-business electronic commerce and companies (Raisch, 2002).

In B2B, it’s not a matter of winning or losing—it’s getting into the game that matters. Companies on the Internet fast track are buzzing about the unquestionable potential of B2B (EC) systems and why not? Reliable estimates suggest that trillions of dollars will be transacted over the Web in the next few years—and the bulk of that will occur in the business-to-business space(Cunningham, 2001,204). For all of the discussion, however, this vast frontier of Internet commerce is still unexplored by most companies with the potential to profit (Cunningham, 2001, 206).

The term "business-to-business" was originally coined to describe the electronic communications between businesses or enterprises in order to distinguish it from the communications between businesses and consumers (B2C) (Haig, 2001, 2). Today it is widely used to describe all products and services used by enterprises. Many professional institutions and the trade publications focus much more on B2C than B2B, although most sales and marketing personnel are in the B2B sector (Haig, 2001, 2).

There are many benefits of B2B e-commerce as B2B technologies provide companies with a greater choice of trading partners ,suppliers , help to reduce the time it takes to get product or services ,streamlining that the internet helps B2B operators cut down their paperwork, eliminate bureaucratic systems and inventory control (Haig,2001,2).

Entities of B2B (EC) systems are many and there are some of them and their concerns:

1. Selling company: with marketing management perspective.

2. Buying company: with procurement management perspective.

3. Electronic intermediary: A third party intermediating service provider (the scope of service may be extended to include the order fulfillment).

4. Deliverer: who should fulfill the JIT (Just in Time Delivery) .

5. Network platform: such as the Internet, Intranet, and Extranet.

6. Protocols and communication: such as EDI systems and comparison shopping, possibly using software agents.

7. Back-end information system: possibly implemented using the intranet and Enterprise Resource Planning (ERP) systems (Mukhopadhyay& Mishra,2).

- ***The Future of B2B E-Commerce***

We see a number of positive forces fueling future growth of B2B marketplaces and electronic exchanges. Now the most Fortune 1000 companies are actively using an e-commerce or e-procurement product or service, the market segment that promises to provide the majority of future growth is small and mid-sized businesses (Boeth, 2001, 2) Reasons for adoption of B2B (EC) vary greatly between businesses of different sizes, between industry focuses, between geographic location, and between product/service line focuses (Boeth, 2001, 3). Some recent developments, however, work in favor of overcoming current limitations. On the one hand, online market platforms are slowly becoming more mature, integrating more and more features. On the other hand, arrangements between technology pure plays and "traditional" industry leaders show signs of fruitful cooperation that can possibly combine the technology knowledge, entrepreneurial spirit and small-business focus of the startups with the industry experience, market power and reputation of the established players. The extent to which these initiatives can provide liquidity, critical mass and de facto standards to a large number of participants, they will be the indicators of how B2B is becoming an intricate part of modern business (Judith & Zagler, 2000, 7).

2.6 Theoretical Framework Component

First factor is a Perceived benefits and its refer to business value received by organizations that have adopted e-commerce systems (Pavlou, 2002, 5).

There are three types of perceived benefits – perceived economic, perceived relationship-related, and perceived strategic benefits First, perceived economic benefits are derived from the automated processes that contribute to direct savings in costs and time.(Hunt, 1994). Second, perceived relationship-related benefits refer to positive trading partner trust relationships in the form of open communications, information sharing, cooperation, and commitment. Finally, perceived strategic benefits refer to closer ties between trading partners, and improved reputation that increases business continuity an organizational performance. (Morgan, 1994) second factor is the Enterprises IT infrastructure that is define as the architecture of hardware, software, content and data used to deliver e-business services to employee, customers and partner (Chaffey, 2007).

Technical infrastructure ensures that the underlying networks, hardware/software, and technical exist so that organizations can create the applications and web sites necessary for organizations to implement and sustain e-commerce ventures. Technical infrastructure exists for clients and providers and for the geographical areas between them,only the worker technical skills attribute was considered critical, all other attributes were considered very important (Jennex &Adelakun, 2004). Third one is the trading partners

Last is the Perceived risks that refers to potential weaknesses, barriers and losses faced by organizations that have adopted e-commerce (Pavlou, 2002).

Risks can either occur internally or externally, by human or non-human (e.g. technology-related risks), accidental or intentional and could be caused by disclosure, destruction, modification of e-commerce transactions, and by denial of service attacks from hackers (. Ring and Van de Ven (1994) also classified risks as performance risks derived from the technology versus relational risks (Das and Teng, 1996; Jamieson, 1996; Marcella et al., 1998). There are three types of perceived risks. First, perceived technology performance-related risks refer to misuse of ecommerce technologies, incompatible infrastructure, and uncertainties of ecommerce operations. Second, perceived relational risks refer to trading partner's lack of knowledge, exercising opportunistic behaviors, conflicting attitudes, and reluctance to change. Third, perceived general risks refer to poor business practices, environmental risks, and lack of standards and policies. Therefore, this paper cares for the effect of trading partner trust and perceived risks on perceived benefits and e-commerce performance. (*Pauline.et.al, 2002)*

2.7Model Theoretical Framework

This section provides the theoretical framework implications of this research. The main theories which provide a foundation for this study are Technology Acceptance and technological innovation adoption. The following is discussion of these frameworks, beginning with, TAM, then technological innovation adoption.

2.7.1 Technology Acceptance Model (TAM)

As new information technologies infiltrate workplaces, home, and classrooms, research on user acceptance of new technologies start to receive much attention from professionals as well as academic researchers. Developers and software industries are beginning to realize that lack of user acceptance of technology can lead to loss of money and resources (EzineArticles.com)

Technology Acceptance Model is an adaptation of the Theory of Reasoned Action (TRA) to the field of (Venkatesh et. al., 2003).TAM posits that perceived usefulness and perceived ease of use determine an individual's intention to use a system with intention to use serving as a mediator of actual system. Perceived usefulness is also seen as being directly impacted by perceived ease of use. Researchers have simplified TAM by removing the attitude construct found in TRA from the current specification (Venkatesh et. al., 2003).

Attempts to extend TAM have generally taken one of three approaches: by introducing factors from related models, by introducing additional or alternative belief factors, and by examining antecedents and moderators of perceived usefulness and perceived ease of use (Wixom and Todd, 2005) .

2.8 Previous Studies

In 2002 Pavlou said in his study “The Importance of Technology Trust for B2B Electronic Commerce: that the traditional notion of trust primarily focuses on trust in a trading partner, trust in e-business also incorporates the notion of trust in the infrastructure and the underlying control mechanisms (technology trust), which deals with transaction integrity, authentication, confidentiality, and non-repudiation. He argues that value creation in B2B e-commerce is heavily dependent on technology trust. Given the absence of adequate metrics to capture the technology trust in B2B e-commerce, the research develops and validates measures for technology trust, captured both as perceived benefits and also as B2B e-commerce performance empirical results strongly support the hypothesis that technology trust is essential for successful B2B e-commerce.at the same year Jauhiainen.et, all they objective from the study is to identify drivers that guide the development of B2B integration. This problem is approached by examining how B2B adoption has evolved, what the benefits and costs of B2B integration are, and what the technologies used are and what is the role of standardization in B2B integration. At first they examine the definitions for B2B integration. After that, the adoption of B2B integration is studied through different standpoints, which are EDI, e-procurement, SCM, e-hubs, and RosettaNet and ebXML The benefits and costs are studied from strategic and operational viewpoints. Especially quality of service and supply chain agility is perceived as strategic benefits while operational benefits are more easily measured. Standardization organizations are existing industry standards gone through. They concentrate especially on EDI ASC X12 and EDIFACT, RosettaNet, ebXML, and Web Services. Technological

convergence is recognized as the most important development path in the field of standardization. The following drivers were found to be the most important: Big companies are the promoters of the chains Globalization has forced the companies to rethink their intra- and inter-company processes . Legislation is trying to cover also electric international commerce (4) VANs are still important. Significant operational benefits from advanced B2B integration which involves business process reengineering, Role of customer satisfaction is important (7) Agility of the whole supply chain is important , Due to globalization, B2B is important in management of geographically dispersed supply networks ,Convergence of B2B integration frameworks will lead to make trading partners connections easier, to make overall solution cheaper, and to make solution integration /implementation faster.

In (2002) Soh and Markus studied" B2B E-Marketplaces Interconnection Effects, Strategic Positioning, and Performance" and found that Electronic markets theory leads to the prediction that the "interconnection effects" of information technology will lower coordination costs in market transactions, prompting a move from hierarchical to market arrangements. This prediction was apparently validated by the proliferation of B2B e-marketplaces in the mid-1990s. But the subsequent abrupt consolidation of public, independent e-marketplaces raises questions about what it takes for e-marketplaces to succeed. Experience with actual e-marketplaces suggests that electronic interconnection effects alone may not explain e-marketplace success**.** The strategic management literature provides a complementary view, emphasizing the fit between an e-marketplace's value proposition, its product-market focus, and its value activities. The purpose of this paper, therefore, is to explore the degree to which the strategic positioning perspective

contributes to the explanation of e-marketplace success. They analyzed a pair of e-marketplaces sharing the same competitive space, one successful and the other less so. They found that the number and types of interconnection benefits alone did not make a good explanation of e -marketplace success. However, the additional concepts provided by strategic positioning theory—particularly the holistic fit between benefits types offered (value proposition), product-market focus, and value activities—do appear to explain well the observed differences in e-marketplace performance. Future research should extend our exploratory investigation of e-marketplace success.

Plant, et.al (2003), Measuring e-business performance: Towards a revised balanced scorecard approach, Information Systems and e-Business Management said that the balanced scorecard (BSC) is a managerial system that enables executives and managers to map their strategic objectives onto a set of performance measures in four inter-related areas, known as the financial, customer, learning and growth, and the internal process perspectives Based on research into leading and lagging e-business companies and their measurement practices, this paper introduces an approach to modifying the balanced scorecard, applicable to the management of e-business units in which the customer perspective of the traditional balanced score card is supplemented by the incorporation of four additional perspectives (brand, service, market and technology) that have been found to be critical to the development and execution of e-business strategies. This approach facilitates a clearer understanding of the customer perspective, which consequently benefits the process of selecting the goals and measures associated with the other three perspectives, improving the quality of the overall decision making and managerial processes as a whole at the same year Lee, et.al in his study business

value of B2B electronic commerce: the critical role of inter-firm collaboration. Electronic Commerce Research and Applications approved that B2B (business-to-business) electronic commerce provides firms with different business value depending on how organizations use the online network. In this paper, we distinguish two different types of B2B e-commerce adoption: basic and collaborative B2B e-commerce. With ‘‘basic B2B e-commerce’’, firms implement the electronic network simply to automate the exchange of commercial documents. In contrast, B2B networks are used to create new inter-firm operations with channel partners in ‘‘collaborative B2B e-commerce.’’ The central claim of this paper is that firms are unlikely to achieve significant benefits with Basic B2B e-commerce. B2B electronic networks offer dramatic performance improvement only when the B2B network is used to create new collaboration with channel partners. Based on the survey conducted in the grocery industry, this study suggests that the real source of performance improvement in the B2B electronic commerce is not an electronic linkage itself, but the collaboration enabled by the electronic network also chan in his study said that Two of the most commonly used classifications in IS research are the factor approach and the process approach. While many studies of IS implementation are undertaken using a factor approach, few researches so far have examined the process of e-commerce implementation, especially in relation to the implementation of e-commerce in business-to-business (B2B) relationships. A holistic understanding of implementation which combines both the factor and process approaches using a case study method, is suggested as particularly suitable because of its ability to capture the reality of e-commerce implementation in an organization’s natural environment and in much greater detail than is possible using one of these approaches alone. In this paper, therefore, the

researcher try to contribute to what perceive as a gap in the body of theory surrounding the Implementation process in the business-to-business e-commerce literature in addition to confirming earlier finding of the importance of non-technical factors for the success of the implementation process also present, through the case studies, the various management and business issues associated with the success or failure of B2B e-commerce implementation .Also in 2003 Moodley talked about Business-to-business electronic commerce has become a priority area for many international development organizations, particularly since concerns about the 'digital divide' have put the policymaking spotlight on the connection between ICTs and industrial development policies. The paper aims to explore the current state and likely future direction of B2B e-commerce in the South African. Used empirical research is based on 120 firm-level interviews and 31 personal Interviews with industry experts. The results suggest that B2B e-commerce is in an embryonic stage in the South African manufacturing sector, and technology and market dynamics are still casting its basic shape.

Al-Bakri in 2009 talked about the adoption of B2B by small and medium enterprises in Amman and the perception of its influence on performance and efficiency and he said that :the growth of business-to-business (B2B) system adoption and capability has become a requirement for effectively serving the business of many large, small and medium enterprises (SMEs) around the world (Kartiwi and Mac Gregor, 2007). It has also an enormous effect on development of more flexible transactions methods between enterprises, and their trading partners (TPs) and suppliers. In recent years, and according to government reports (2006-2008) almost one fifth of Jordanian enterprises have started Web-based and internet adoption to offer on-line products and services to their local and

global TPs, suppliers and customers. The purpose of this research is to explore the perceptions of SME managers in Jordan (capital city Amman) regarding the adoption of B2B systems and its effects on SMEs' performance and efficiency. Based on a literature review, previous information technology adoption models and the background of ICT in Jordan, a proposed research model is developed. Qualitative and quantitative approaches are used to get a better understanding of these issues. The quantitative approach and empirical data will be collected from a random SME sample in Amman using interviews and survey. Statistical data analyses will be conducted in accordance with the research questions to test the hypotheses and validate proposed research model. This research investigates the ways in which adoption of B2B systems by SMEs in Amman affects their performance and efficiency. It will also provide advice for SMEs, government and industry, on how to encourage SMEs in Amman to adopt B2B systems. This research will highlight the importance of B2B system adoption by SMEs in Amman for enhancing their performance and efficiency and may enable SMEs in Jordan to become much more useful, effective and productive. In 2010 Chen in his study Factors Affecting Business-to-Business Electronic Commerce Success: An Empirical Investigation said that Business to Business (B2B) e-commerce has a great impact on business performance improvement. Considerable research also shows that another dependent variable, B2B e-commerce success, can be a good overall measure of B2B systems. This paper investigates and examines the impact of several factors, which are either internal or external to the firm on B2B performance improvement and B2B ecommerce success. It is suggested that various factors affect B2B success through business performance improvement. A research model was developed to test and evaluate these factors. A survey instrument was

developed to examine the relationships between these factors and business performance. Survey data was collected online from 143 companies in the U.S.A. and Taiwan where their B2B e-commerce systems were operational for more than 1 year. Structural Equation Modeling (SEM) technique was used to assess the measurement and the structural model. Analyses and results of the pooled survey data suggest that the following factors are Significant in the B2B e-commerce environments: (a) alignment of business and ecommerce strategy has a positive impact on business performance, (b) strong relationships between the trading partners have a positive influence on business performance, and (c) B2B e-commerce success is significantly influenced by business performance improvements. Thus, firms that seek to implement successful B2B systems should focus on business performance improvements

2.9 Study Contribution to Knowledge

Previous studies discussed different factors that affected the performance of B2B systems. However, very few studies suggested a comprehensive model such as this study model that considers some key factors within the system. Moreover, the model suggested by the researcher focuses on main factors. Finally, the sample of the study was Engineering, Electronic Industries and Information Technology (EEIIT) sector in Amman which represents an interesting case from the whole population in Jordan .focusing on the main four factors that effect on the B2B EC systems performance and may lead to optimal performance Therefore the factors are also important because they are fixed on the environment of the sample. Also TAM model is used to develope the research model.

Chapter Three

Methods and Procedures

3.1 Introduction

This chapter discusses the methods used in the study to answer the research questions and test the hypotheses by several statistical methods. It is divided into the following five sections: Study Methodology; Study Population and Sample; Study Tools and Data Collection; Statistical Treatment; Reliability and Validity.

3.2 Study Methodology

This study used both descriptive and analytical analysis. Descriptive study includes data collected from previous related works and literature review. These resources were used to develop the theoretical model of this study.

Furthermore, statistical techniques were used for empirical analysis and a survey was designed to collect data from the population of the study, who are IT mangers in Engineering, Electronic Industries and Information Technology (EEIIT) in Amman.

3.3 Study Population and Sample

Sampling is important as budget and time restrictions prevent study from surveying the whole population. Sampling also gives higher truthfulness and fast result (Al-Bakri, 2009).The population in the current research consists of industrial companies in Amman. The industrial companies in Amman represent different industries. This research chosen sample can be used to represent the population. Given the large population of the study, a sample of industrial companies in Amman has been taken. In this research all industrial companies in Amman comprise the total population, (60) industrial companies in Amman have been chosen as a sample of (Engineering, Electrical Industries and Information

Technology) sector. These industrial companies are all located in the largest sector in Amman. The population of the study will be divided into divisions to obtain a representative sample of the population study. In order to increase sample size and statistical power, enterprises in the pilot study will also be the included as part of the final analysis.

3.4 Study Tools and Data Collection

This research of B2B system performance in industrials companies in Amman is not very extensive compared to the discussion of the effecting factors. Thus, to gain deeper understanding of the related aspects in the companies, current research is conducted with quantitative approaches to explore factors of B2B (EC) systems performance in industrial companies in Amman and examine the influence on its performance. The current research is conducted in these stages:

Stage 1. Literature review, examines the findings of other researchers and authors who have extensive experience in B2B system performance. This stage addresses a number of different issues, identified perceived benefits, enterprise IT infrastructure, trading partners (TPs), and perceives risk factors that influence the performance of B2B (EC) systems in industrial companies.

Stage 2. The quantitative approach includes a survey of a sample of IT managers representing industrial companies in Amman in our sample. The survey is conducted in this research to explore the perceptions, of industrial companies' IT mangers about the performance of B2B (EC) systems in it and to examine its influence on their performance. Also the purpose of the survey is to produce quantitative descriptions of

some aspects and issues of the study population. The questionnaire has been developed based on the literature review, and will be refined with results and information collected from the previous stage of the research. The questionnaire focuses on the performance of B2B systems in industrial companies in (Engineering, Electrical Industries and Information Technology" EEIIT") sector in Amman and perceptions of the managers of performance. Therefore, in reviewing previous studies, both in influential factors of B2B (EC) system performance and in analysis of collected data from resulting survey. The survey will be pre-tested for its validity and reliability. A pilot test will be conducted to check the validity of the questionnaire, eliminate any uncertainty, and make appropriate changes according to respondent's suggestions.

Stage 3. Data coding and analysis includes presentation, hypothesis testing, and analysis of results. Various quantitative statistics of methods such as factor analysis, analysis of variance and correlation will be employed on the survey data. The application of several statistical techniques to test the relationships between variables. Statistical Package for Social Science'SPSS' will be used to evaluate and perform all the analysis to test the hypotheses.

3.5 Statistical Treatment

After collecting data from the returned responses, the researcher used the Statistical Package for the Social Sciences SPSS (v19) to analyze the data. The researcher used suitable Statistical treatment for each question and hypothesis from the following tests:

- ✓ Cronbach Alpha (α) to test Reliability.
- ✓ Percentage and Frequency to describe the sample.
- ✓ Arithmetic Mean and Standard Deviation to answer the study questions.
- ✓ T-test and using ANOVA table to measure the impact of the user characteristics on the usage and the usage level of the Portal
- ✓ Simple Linear and Multiple Regression analysis with (F) test
- ✓ Relative importance, that is assigned using:

$$Class\ Interval = \frac{5-1}{3} = \frac{4}{3} = 1.33$$

$$Class\ Interval = \frac{Maximum\ class - Minimum\ Class}{Number\ of\ level}$$

The Low degree less than 2.33

The Median degree from 2.33 – 3.66

The High degree from 3.67 and above.

3.6 Validity and Reliability

(A) Validation

To test for survey clarity and coherency, a macro review covering all research components was performed by academic reviewers - from Jordanian Universities - specialized in Business, Information Technology and Statistics. Therefore, some items were added based on their recommendations while some others were modified. The survey was reviewed by a total of (8) academic reviewers and the overall percentage of response which was 100%. Please see appendix "B" for the list of academic arbitrators.

(B) Reliability

To test the survey reliability, Cronbach Alpha (α) analysis was used to measure internal consistency. A minimum acceptable level (Alpha ≥ 0.65) suggested by (Revelle &Zinbarg, 2009) was adopted. Results show that overall Cronbach Alpha (α) =equaled (97.83), whereas, Results of Cronbach Alpha (α) are shown in the following Table (2)

Variables	Cronbach Alpha (α)
Perceived benefits	**96.48**
IT Infrastructure	**95.08**
Trading partners	**96.82**
Perceived risk	**93.18**
B2B (EC) system performance	**96.87**
All survey	**97.83**

Table (1) *Reliability of survey Dimensions*

Chapter Four:

Results and Hypotheses Testing

4.1 Introduction

Based on previous research framework, this chapter presented and described the statistical analysis results for the research questions and research hypotheses. The data analysis included a descriptive analysis using the Means and Standard Deviations for the questions of the study; ANOVA and Multiple and Simple Linear and Regression analysis for the empirical analysis.

4.2 Answers of Study Questions

Table (2) descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
VAR00001	54	3.00	5.00	4.2963	.71717
VAR00002	54	3.00	5.00	4.2778	.73758
VAR00003	54	2.00	5.00	4.0556	.94003
VAR00004	54	2.00	5.00	4.2407	.79941
VAR00005	54	2.00	5.00	4.2778	.81070
VAR00006	54	2.00	5.00	4.1111	.79305
VAR00007	54	2.00	5.00	4.0741	.90807
VAR00008	54	2.00	5.00	4.2778	.87775
VAR00009	54	2.00	5.00	4.1667	.81842
VAR00010	54	2.00	5.00	4.1481	.91954
VAR00011	54	2.00	5.00	4.2407	.82268
VAR00012	54	2.00	5.00	4.2593	.85086
VAR00013	54	3.00	5.00	4.1852	.80269
VAR00014	54	2.00	5.00	4.0370	.86794
VAR00015	54	2.00	5.00	3.9259	.84344
VAR00016	54	2.00	5.00	4.0000	.82416
VAR00017	54	2.00	5.00	4.1111	.83929
VAR00018	54	2.00	5.00	3.8333	.96642
VAR00019	54	2.00	5.00	3.6667	.95166
VAR00020	54	2.00	5.00	3.8519	.89879
VAR00021	54	2.00	5.00	4.0000	.86874
VAR00022	54	2.00	5.00	3.8889	.92485
VAR00023	54	2.00	5.00	4.1111	.83929
VAR00024	54	2.00	5.00	3.9630	.84592
VAR00025	54	2.00	5.00	4.0000	.91115
VAR00026	54	2.00	5.00	3.8889	.83929
VAR00027	54	2.00	5.00	3.5741	1.05691
VAR00028	54	2.00	5.00	3.8519	1.03536
VAR00029	54	2.00	5.00	3.5370	1.14452
VAR00030	54	2.00	5.00	3.8333	1.04159
VAR00031	54	2.00	5.00	3.9259	1.06136
VAR00032	54	2.00	5.00	3.7778	.98415
VAR00033	54	2.00	5.00	3.8704	.84778
VAR00034	54	2.00	5.00	3.7778	.92485
VAR00035	53	1.00	5.00	3.5849	.90796
VAR00036	54	1.00	5.00	3.5741	.96352
VAR00037	54	2.00	5.00	3.8704	.89118
VAR00038	54	2.00	5.00	3.8889	1.02178
VAR00039	54	1.00	5.00	3.8519	1.10586
VAR00040	54	2.00	5.00	3.7407	1.03131
VAR00041	54	1.00	5.00	3.7778	1.05806
VAR00042	54	2.00	5.00	3.8519	.95971
VAR00043	54	1.00	5.00	3.8519	1.07119
Valid N (listwise)	53				

From table (2) it is clear that the highest stander deviation was for question 43 “1.07119” with mean 3.851 This indicates that the answers were less homogeneous ,and the lowest stander deviation for question 1 was “0.717117” with mean “4.29” This indicates that the answers were more homogeneous.

4.3 Study hypothesis testing

- **Ho1**: There is no significant statistical effect of the factors of B2B (EC) systems on B2B (EC) systems performance at level ($\alpha \leq 0.05$).

To ensure if there are any differences between the factors that affect B2B systems performance **,** the researcher divided the first main hypothesis into four sub-hypotheses, and used one way ANOVA to test ;***perceived benefits, It infrastructure, trading partners “TPs” and perceived risk*** . The sub-hypotheses were tested and the results are shown as the following:

- **Ho1a**: There is no significant statistical effect of B2B **Perceived benefits** on B2B (EC) systems performance at level ($\alpha \leq 0.05$).

To answer this sub-hypothesis the researcher used the one way ANOVA to ensure if there are any differences between perceived benefits and B2B (EC) systems performance as shown in Table (3).

Table (3): *The results of the differences between perceived benefits and B2B EC performance by one way ANOVA*

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	10.769	1	10.769	15.393	.000 [a]
	Residual	36.379	52	.700		
	Total	47.148	53			

A. Predictors: (Constant), perceived benefits

B. Dependent Variable: B2B (EC) systems performance

* The impact is significant at level ($\alpha \leq 0.05$)

From Table (3) it is clear that the absolute value of F calculated (15.393) is more than F tabulated at level ($\alpha \leq 0.05$). This indicates that the first sub-hypothesis is valid. Therefore, the null sub-hypotheses were refused and the alternative sub-hypotheses were accepted , therefore the result is

There is a significant statistical effect of B2B **Perceived benefits** on B2B (EC) systems performance at level ($\alpha \leq 0.05$).

- **Ho1b**: There is no significant statistical effect of B2B **IT infrastructure** on B2B (EC) systems performance at level ($\alpha \leq 0.05$).

To answer this sub-hypothesis the researcher used the one way ANOVA to ensure if there are any differences between IT infrastructure and B2B (EC) systems performance as shown in Table (4).

Table (4): *The results of the differences between it infrastructure and B2B EC performance by one way ANOVA*

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	20.529	1	20.529	40.105	.000 [a]
	Residual	26.619	52	.512		
	Total	47.148	53			

A. Predictors: (Constant), IT infrastructure

B. Dependent Variable: B2B EC systems performance

* The impact is significant at level ($\alpha \leq 0.05$)

From Table (4) it is clear that the absolute value of F calculated (40.105) is more than F tabulated at level ($\alpha \leq 0.05$). This indicates that the second sub-hypothesis is valid. Therefore, the null sub-hypotheses were refused and the alternative sub-hypotheses were accepted, therefore the result is :

There is a significant statistical effect of B2B **It infrastructure** on B2B (EC) systems performance at level ($\alpha \leq 0.05$).

- **Ho1c**: There is no significant statistical effect of B2B **trading partners** on B2B (EC) systems performance at level ($\alpha \leq 0.05$).

To answer this sub-hypothesis the researcher used the one way ANOVA to ensure if there are any differences between trading partners "TPs" and B2B (EC) systems performance as shown in Table (5).

Table (5): *The results of the differences between it infrastructure and B2B EC performance by one way ANOVA*

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	17.910	1	17.910	31.852	.000 [a]
	Residual	29.239	52	.562		
	Total	47.148	53			

A. Predictors: (Constant), trading partners"TPs"

B. Dependent Variable: B2B EC systems performance

* The impact is significant at level ($\alpha \leq 0.05$)

From Table (5) it is clear that the absolute value of F calculated (31.852) is more than F tabulated at level ($\alpha \leq 0.05$). This indicates that the third sub-hypothesis is valid. Therefore, the null sub-hypotheses were refused and the alternative sub-hypotheses were accepted , therefore the result is :

There is a significant statistical effect of B2B **trading partners "TPs" on** B2B (EC) systems performance at level ($\alpha \leq 0.05$).

- **Ho1d**: There is no significant statistical effect of B2B **perceived risk** on B2B (EC) systems performance at level ($\alpha \leq 0.05$).

To answer this sub-hypothesis the researcher used the one way ANOVA to ensure if there any differences between trading partners "TPs" and B2B (EC) systems performance as shown in Table (6).

Table (6): *The results of the differences between it infrastructure and B2B EC performance by one way ANOVA*

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	21.396	1	21.396	43.205	.000 [a]
	Residual	25.752	52	.495		
	Total	47.148	53			

A. Predictors: (Constant), perceived risk

B. Dependent Variable: B2B EC systems performance e

* The impact is significant at level ($\alpha \leq 0.05$)

From Table (6) it is clear that the absolute value of F calculated (43.205) is more than F tabulated at level ($\alpha \leq 0.05$). This indicates that the third sub-hypothesis is valid. Therefore, the null sub-hypotheses were refused and the alternative sub-hypotheses were accepted m therefore the result is :

There is a significant statistical effect of B2B **perceived risk on** B2B (EC) systems performance at level ($\alpha \leq 0.05$).

- ✓ ***The most effect factor***

The most effect factors affect B2B (EC) systems was the perceived risk as shown in the table:

Table (7): *the most effect factor by one way ANOVA*

Sig.	F	Mean Square	DF	Sum of Squares		Model
.000(a)	43.205	21.396	1	21.396	Regression	1
		.495	52	25.752	Residual	
			53	47.148	Total	
.000(b)	26.660	12.049	2	24.098	Regression	2
		.452	51	23.050	Residual	
			53	47.148	Total	

A. Predictors: (Constant), perceived risk

B. Predictors: (Constant), perceived risk, IT infrastructure

C. Dependent Variable: B2B (EC) systems performance

From Table (7) it is clear that the absolute value of F calculated for the most effect value (43.205) is more than F tabulated at level ($\alpha \leq 0.05$). This indicates that the most effective factor affect B2B (EC) systems performance was a perceived risk then the IT infrastructure.

4.4 Coefficient of determination

First factor: Perceived benefits

Table (8) : Coefficient of determination for perceived benefits

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.478 [a]	.228	.214	.83642

a. Predictors: (Constant), perceived benefits

From the table (8) the R coefficient between Perceived benefits and B2B EC systems performance .478 which indicates a significant effect of the predicting variables (Percived benefits) on the dependent variables (B2B EC systems performance). The R2 value = .228, which means part of the variance of B2B EC systems performance was explained by Perceived benefits.

Second factor: IT infrastructure

Table (9) : Coefficient of determination for It infrastructure

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.660 [a]	.435	.425	.71547

a. Predictors: (Constant), IT infrastructure

From the table (9) the R coefficient between IT infrastructure and B2B EC systems performance is .660 which indicates a significant effect of the predicting variables (IT infrastructure) on the dependent variables (B2B EC systems performance). The R2 value = .435, which means part of the variance of B2B EC systems performance was explained by IT infrastructure

Third factor: Trading partners "TPS"

Table (10) : Coefficient of determination for TPs

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.616 [a]	.380	.368	.74985

a. Predictors: (Constant),TPs

From the table (10) the R coefficient between trading partners and B2B EC systems performance is .616 which indicates a significant effect of the predicting variables (trading partners) on the dependent variables (B2B EC systems performance). The R2 value = .380, which means part of the variance of B2B EC systems performance was explained by trading partners

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Forth factor: Perceived risk

Table (11) : Coefficient of determination for Perceived risk

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.674 [a]	.454	.443	.70373

a. Predictors: (Constant), perceived risk

From the table (11) the R coefficient between perceived risk and B2B EC systems performance is .674 which indicates a significant effect of the predicting variables (perceived risk) on the dependent variables (B2B EC systems performance). The R2 value = .454, which means part of the variance of B2B EC systems performance was explained by perceived risk

4.5 level of importance for each factor

Table (12) level of importance for perceived benefits

No.	Perceived benefits	Mean	Standard deviation	Item if importance	Level of importance
1	B2B systems in your enterprise has a friendly user interface	4.29	0.717	2	High
2	B2B systems in your enterprise has a friendly system interface	4.72	0.737	1	High
3	B2B systems in your enterprise is easy to use	4.05	0.940	9	High
4	B2B systems in your enterprise reduce time and cost	4.24	0.799	4	High
5	B2B systems in your enterprise reduce errors	4.27	0.810	3	High
6	B2B systems in your enterprise increase transactions	4.11	0.793	7	High
7	B2B systems help your enterprise to create a competitive advantage.	4.07	0.908	8	High
8	Your enterprise has enough experience and knowledge to use B2B systems.	4.27	0.877	3	High
9	B2B systems in your enterprise ease enough to make the communications between employees more flexibility.	4.16	0.818	5	High
10	B2B systems in your enterprise ease enough to be effective	4.14	0.919	6	High
General Arithmetic mean and Standard deviation		**4.18**	**0.831**		

Table (12) above shows that the arithmetic means for perceived benefits range between (4.72 – 4.05) compared to General Arithmetic mean amount of (4.18). It is observed that the high mean was to item “B2B systems in your enterprise has a friendly system interface” with arithmetic mean of (4.72) and standard deviation of (0.737) while the lowest arithmetic mean was to item “B2B systems in your enterprise is easy to use” with arithmetic mean of (4.05) and Standard deviation of (0.940). In general, the level of importance of B2B perceived benefits is high.

Table (13) level of importance for IT infrastructure

No.	It infrastructure	Mean	Standard deviation	Item if importance	Level of importance
1	IT Infrastructure helps your enterprise to expand its B2B systems transactions	4.24	0.822	2	High
2	Your enterprise provides net lines that help in practicing B2B.	4.25	0.850	1	High
3	Your consultation of IT enterprises helps in building the enterprise's experience.	4.18	0.802	3	High
4	Your enterprise manager cares about providing staff with the capabilities to deal with the new technology.	4.03	0.867	5	High
5	Your enterprise capabilities and awareness of manager improved through continuous training.	3.92	0.843	7	High
6	Your enterprise employees benefit from these databases to speed up the enterprise's transactions.	4.00	0.824	6	High
7	The Enterprise has enough PCs and servers to use B2B systems	4.11	0.839	4	High
General Arithmetic mean and Standard deviation		**4.10**	**0.714**		

Table (13) above shows that the arithmetic means for It infrastructure range between (4.25 – 3.92) compared to General Arithmetic mean amount of (4.10). It is observed that the high mean was to item "Your enterprise provides net lines that help in practicing B2B." with arithmetic mean of (4.25) and standard deviation of (0.850) while the lowest

arithmetic mean was to item “Your enterprise capabilities and awareness of manager improved through continuous training.” with arithmetic mean of (3.92) and Standard deviation of (0.843). In general, the level of importance of B2B IT infrastructure is high.

Table (14) level of importance for trading partners

No	Trading partner	Mean	Standard deviation	Item if importance	Level of importance
1	The local TPs and suppliers apply B2B systems in daily and frequently transactions.	3.83	0.966	6	High
2	The local TPs and suppliers exchange payments through e-payments tools.	3.66	0.951	7	Medium
3	Local trading partner's infrastructure is reliable to practice B2B systems.	3.85	0.898	5	High
4	Global trading partner's infrastructure is reliable to practice B2B systems.	4.00	0.868	3	High
5	Local trading partners extend effort to increase the trust in their work.	3.88	0.924	4	High
6	Global trading partners extend effort to increase the trust in their work.	4.11	0.839	2	High
7	The distribution of B2Bsystems in global TPs helps in using B2B systems	4.96	0.854	1	High
8	Higher competitiveness of TPs improved the enterprise's performance	4.00	0.911	3	High
9	The explanation of the mechanism of B2B systems will increase trading partners trust in your enterprise.	3.88	0.839	4	High
General Arithmetic mean and Standard deviation		**3.57**	**1.026**		

Table (14) above shows that the arithmetic means for trading partners range between (4.96 – 3.66) compared to General Arithmetic mean amount of (3.57). It is observed that the high mean was to item “The distribution of B2Bsystems in global TPs helps in using B2B systems” with arithmetic mean of (4.95) and standard deviation of (.854) while the lowest arithmetic mean was to item “The local TPs and suppliers exchange Payments through e-payments tools.” with arithmetic mean of (3.66) and Standard deviation of (0.951). In general, the level of importance of B2B perceived benefits is medium.

Table (15) level of importance for perceived risk

No	Perceived risks	Mean	Standard deviation	Item if importance	Level of importance
1	Running and maintenance of B2B systems is less costly than expected.	3.57	1.056	4	Medium
2	B2B systems provide more trust of your enterprise transactions	3.85	1.035	2	High
3	There isn't external pressure by trading partners in the direction of using B2B systems.	3.53	1.144	5	Medium
4	B2B systems reduce errors in electronic transaction in your enterprise.	3.83	1.041	3	High
5	Your enterprise trust in using B2B systems	3.92	1.061	1	High
General Arithmetic mean and Standard deviation		**1.87**	**1.067**		

Table (15) above shows that the arithmetic means for trading partners range between (3.92 – 3.53) compared to General Arithmetic mean amount of (1.87). It is observed that the high mean was to item "The Your enterprise trust in using B2B systems" with arithmetic mean of (3.92) and standard deviation of (1.061) while the lowest arithmetic mean was to item "There is not external pressure by trading partners in the direction of using B2B systems." with arithmetic mean of (3.53) and Standard deviation of (1.1441). In general, the level of importance of B2B perceived risks is low.

Table (16) level of importance for B2B (EC) performance

No	B2B (EC) performance	Mean	Standard deviation	Item if importance	Level of importance
1	B2B systems performance are enough to improve performance in your enterprise	3.77	0.984	4	High
2	B2B systems performance are enough to improve the productivity in your enterprise	3.87	0.847	2	High
3	B2B systems performance are enough to increase sales in your enterprise	3.77	0.924	4	High
4	Your enterprise revenue activity is performed on-line	3.58	0.907	6	Medium
5	B2B systems performance are enough to increase the profit in your enterprise	3.57	0.963	7	Medium
6	B2B systems performance are enough to reduce inventory costs in your enterprise	3.87	0.891	2	High
7	B2B systems has reduced cost of production & labor in your enterprise	3.88	1.021	1	High
8	B2B systems performance are enough to reduce the frequency of mistakes in the receipt and translation of TPs and suppliers orders in your enterprise	3.85	1.105	3	High
9	B2B systems performance are enough to improve your enterprise on-time delivery to and from TPs and suppliers	3.74	1.031	5	High
10	B2B systems has improved inventory management and control in your enterprise	3.77	1.058	4	High
11	B2B systems performance are enough to improve procurement business process in your enterprise	3.85	0.959	3	High

12	B2B systems performance are enough to improve work-in-process (WIP) in your enterprise	3.85	1.071	3	High
General Arithmetic mean and Standard deviation		**3.78**	**0.980**		

Table (16) above shows that the arithmetic means for trading partners range between (3.88 – 3.57) compared to General Arithmetic mean amount of (3.78). It is observed that the high mean was to item "B2B systems has reduced cost of production & labor in your enterprise" with arithmetic mean of (3.88) and standard deviation of (1.021) while the lowest arithmetic mean was to item "B2B systems performance enough to increase the profit in your enterprise." with arithmetic mean of 3.57) and Standard deviation of (0.963). In general, the level of importance of B2B perceived risks is high.

Chapter Five: Conclusion & Recommendations

5.1Conclusion

In this study, the researcher examined a set of questions and suggested a set of hypotheses and the study came out with a number of results that may contribute to increase B2B (EC) systems performance. The main results are:

- ✓ There is a significant statistical effect of B2B **perceived benefits on** B2B (EC) systems performance at level ($\alpha \leq 0.05$).

  This result indicates that the perceived benefits affect the performance of the B2B EC systems by increasing sales, decreasing cost and errors, increasing the number efficiency of transaction by useful systems which have friendly user interfaces and friendly systems interfaces, get the communication more flexible between employee through the B2B (EC) systems and increasing the competitive advantages in the enterprises.
- ✓ There is a significant statistical effect of B2B **IT infrastructure on** B2B (EC) systems performance at level ($\alpha \leq 0.05$).

  The IT infrastructure factor was the second most important and most effective factor affecting B2B (EC) systems performance having a good IT infrastructure helping the enterprise to expand its B2B systems transactions consisting of net lines and enough PCs and servers to employment B2B (EC) systems and databases to speed up the transaction .
- ✓ There is a significant statistical effect of B2B **trading partners TPs** B2B (EC) systems performance at level ($\alpha \leq 0.05$).

This result indicate that The TPs and suppliers trust using B2B (EC) systems and they apply B2B systems in daily and frequently transactions and sometimes using electronic payment tools to exchange payment and Local and global trading partner's infrastructure is reliable to practice B2B systems.

- ✓ There is a significant statistical effect of B2B **perceived risks** B2B (EC) systems performance at level ($\alpha \leq 0.05$).

The perceived risk factors were the fist most important and effective factor that affect B2B (EC) systems performance such as the cost of running and maintenance the system ,systems errors ,and external pressure all those have to be avoided to reach the B2B (EC) performance .And finally these factors can lead to increasing B2B (EC) performance by :

1. Improve the productivity.
2. Improve the productivity.
3. Increase the profit.
4. Increase sales in your enterprise.
5. Reduce inventory costs.
6. Reduce cost of production & labor.
7. Reduce the frequency of mistakes in the receipt and translation of TPs orders.
8. To improve on-time delivery to and from TPs and suppliers
9. Has improved inventory management and control
10. Improve procurement business process
11. Improve work-in-process (WIP)

5.2 Recommendations

Based on previous results and conclusions, the following recommendations might help in enhancing B2B (EC) systems performance:

1. Provide enough net lines, PCs and servers to use B2B (EC) systems.
2. The enterprises have to train their employees and improve top management support for the use of the B2B (EC) systems. In addition to improving employee capabilities to handle their systems by all managers at the different levels of management leaders.
3. Enhance the consultation of IT enterprises to help in building the enterprise's experience.
4. Increase the employees experience and knowledge to use B2B systems.
5. Running and maintenance of B2B systems monthly to deal with any errors that may occur.
6. Development of the E-payment tools to get the payment exchange easier and more flexible.
7. The enterprises have to avoid the external pressure by trading partners in the direction of using B2B systems.

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APPENDIXES

Appendix – A – Survey

Survey Questionnaire

Factors Affecting B2B Systems Performance Based on Managerial Perception in Engineering, Electronic Industries and Information Technology Sector in Amman

Dear IT Manger

The objective of this research project, entitled "Factors Affect B2B Systems Performance Based on Managerial Perception in Engineering, Electrical Industries and Information Technology Sector in Amman ", is to measure the B2B systems performance in Amman through measuring the factors that have effect on B2B systems. The research project will investigate the obstacles to practicing B2B systems in Engineering, Electrical Industries and Information Technology Sector in Amman. This research contributes by introducing some solutions for overcoming the barriers of practicing B2B systems in Engineering, Electrical Industries and Information Technology Sector in Amman Sector in Amman, and to increase their performance.

I would appreciate your cooperation in filling out all the parts of this questionnaire, knowing that any collected information will be used for research purposes only.

If your company is interested in the results of this study, please tick the following box and record your email address ……..

Researcher: Mais.M Al-Qudah

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Part one:

This part is to collect information about the factors that affect B2B systems performance in Engineering, Electrical Industries and Information Technology Sector in Amman. The five-point Likert scale is designed in the percentage for the importance of factors, variables and items. Please consider the following definitions in making your choices. Please choose only 1 answer per question.

(1) None: means that variables and items are not affecting B2B performance in your enterprise
(2) < 25%: means that variables and items are affecting B2B performance in your enterprise, but less than 25% of importance variable.
(3) 25%-50%: means that variables and items are affecting B2B performance in your enterprise, but only 25%-50% of importance variable.
(4) 51%-70%: means that variables and items are affecting B2B performance in your enterprise, but only 51%-70% of importance variable.
(5) >70%: means that variables and items are affecting B2B performance in your enterprise, and more than 70% of importance variable.

Terminologies

1. **Perceived benefits:** refer to business value received by organizations that have adopted e-commerce systems (Pavlou ,2002,5)
2. **Enterprises IT infrastructure**: the architecture of hardware, software, content and data used to deliver e-business services to employee, customers and partner (Chaffey, 2007).
3. **Trading Partners (TPs) relation**:One of the two or more participants in an ongoing businessrelationship(www.businessdictionary.com).
4. **Perceived Risks**: Perceived risks refer to potential weaknesses, barriers and losses faced by organizations that have adopted e-commerce (Pavlou, 2002).

No	Question	5	4	3	2	1
Perceived benefits,V1						
1	B2B systems in your enterprise has a friendly user interface					
2	B2B systems in your enterprise has a friendly system interface					
3	B2B systems in your enterprise is easy to use					
4	B2B systems in your enterprise reduce time and cost					
5	B2B systems in your enterprise reduce errors					
6	B2B systems in your enterprise increase transactions					
7	B2B systems help your enterprise to create a competitive advantage.					
8	Your enterprise has enough experience and knowledge to use B2B systems.					
9	B2B systems in your enterprise ease enough to make the communications between employees more flexibility.					
10	B2B systems in your enterprise ease enough to be effective					
Enterprise IT infrastructure, V2						
11	IT Infrastructure helps your enterprise to expand its B2B systems transactions					
12	Your enterprise provides net lines that help in practicing B2B.					
13	Your consultation of IT enterprises helps in building the enterprise's experience.					
14	Your enterprise manager cares about providing staff with the capabilities to deal with the new technology.					
15	Your enterprise capabilities and awareness of manager improved through continuous training.					
16	Your enterprise employees benefit from these databases to speed up the enterprise's transactions.					
17	The Enterprise has enough PCs and servers to use B2B systems					
Trading partners (TPs),V3						
18	The local TPs and suppliers apply B2B systems in daily and frequently transactions.					
19	The local TPs and suppliers exchange payments through e-payments tools.					

20	Local trading partner's infrastructure is reliable to practice B2B systems.					
21	Global trading partners infrastructure is reliable to practice B2B systems.					
22	Local trading partners extend effort to increase the trust in their work.					
23	Global trading partners extend effort to increase the trust in their work.					
24	The distribution of B2Bsystems in global TPs helps in using B2B systems					
25	Higher competitiveness of TPs improved the enterprise's performance					
26	The explanation of the mechanism of B2B systems will increase trading partners trust in your enterprise.					
Perceived risk , V4						
27	Running and maintenance of B2B systems is less costly than expected.					
28	B2B systems provide more trust of your enterprise transactions.					
29	There isn't external pressure by trading partners in the direction of using B2B systems.					
30	B2B systems reduce errors in electronic transaction in your enterprise.					
31	Your enterprise trust in using B2B systems					

Part Two:

This section in part three seeks to discover the degree to which your enterprise's performance and were improved by using B2B systems. Please consider the following definitions in making your choices. Please choose only 1 answer per question.

(1) None: means that factors are not performed your enterprise.
(2) < 25%: means that factors are performed in your enterprise, but less than 25% of total factors are performed
(3) 25%-50%: means that factors are performed in your enterprise, but only 25%-50% of total factors are performed
(4) 51%-70%: means that factors are performed in your enterprise, but only 51%-70% of total factors are performed
(5) >70%: means that factors are performed in your enterprise, and more than 75% of total

factors are performed.

No	Question	5	4	3	2	1
1	B2B systems performance are enough to improve performance in your enterprise					
2	B2B systems performance are enough to improve the productivity in your enterprise					
3	B2B systems performance are enough to increase sales in your enterprise					
4	Your enterprise revenue activity is performed on-line					
5	B2B systems performance are enough to increase the profit in your enterprise					
6	B2B systems performance are enough to reduce inventory costs in your enterprise					
7	B2B systems has reduced cost of production & labor in your enterprise					
8	B2B systems performance are enough to reduce the frequency of mistakes in the receipt and translation of TPs and suppliers orders in your enterprise					
9	B2B systems performance are enough to improve your enterprise on-time delivery to and from TPs and suppliers					
10	B2B systems has improved inventory management and control in your enterprise					
11	B2B systems performance are enough to improve procurement business process in your enterprise					
12	B2B systems performance are enough to improve work-in-process (WIP) in your enterprise					

Appendix B : Arabic Survey

جـامـعـة الـشـرق الأوسـط
MIDDLE EAST UNIVERSITY

الإستبيان

العوامل المؤثرة في أداء أنظمة التجارة الإلكترونية بين أطراف الشركات من وجه نظرإدارية في قطاع الصناعات الهندسية والكهربائية وتكنولوجيا المعلومات في عمان

السيد مدير تكنولوجيا المعلومات

الهدف الأساسي لهذا البحث تحت عنوان " العوامل المؤثرة في أداء أنظمة التجارة الإلكترونية بين أطراف الشركات من وجه نظرإدارية في قطاع الصناعات الهندسية والكهربائية وتكنولوجيا المعلومات في عمان "هو قياس أداء أنظمة التجارة الإلكترونية بين أطراف الشركات . سوف ساهم هذا البحث في تقديم بعض الحلول للتغلب على العوائق في تطبيق أنظمة التجارة الاكترونية بين أطراف الشركات في قطاع الصناعات الهندسية والكهربائية وتكنولوجيا المعلومات في عمان .

نقدر تعاونكم في تعبيئة جميع أجزاء الإستبيان علماً بأن سيتم استخدام المعلومات الي تم جمعها لاغراض البحث العلمي فقط .

اذا كانت الشركة تهتم في نتائج هذه الدراسة يرجى وضع علامة في الخانة التالية وتسجيل البريد الالكتروني الخاص بك .....

الباحثة : ميس موسى القضاه

مرشحة للحصول على درجة الماجستير ، قسم أدارة الاعمال ، كلية الأعمال

جامعة الشرق الأوسط للدراسات العليا

عمان ، الأردن

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الجزء الأول :
هذا الجزء من الاستبيان يجمع معلومات عن العوامل التي تؤثر في أداء أنظمة التجارة الإلكترونيه بين أطراف الشركات في قطاع الصناعات الهندسية والكهربائية وتكنولوجيا المعلومات في عمان .
تم استخدام مقياس ليكرت الخامسي من اوافق بشدة (5) إلى لا أوافق بشدة (1) ، ارجو الأخذ بعين الاعتبار المرفق ببعض المصطلحات الأجرائية التي قد تساعدك في اختيار الأجابة المناسبة ،الرجاء اختيار اجابة واحدة لكل فقرة من الفقرات بوضع اشارة (X) امام الاختيار

Terminologies

1. Ease of use: The ability to deal with the system easily
2. Enterprises IT infrastructure: the architecture of hardware, software, content and data used to deliver e-business services to employee, customers and partner (Chaffey, 2007).
3. Trading Partners (TPs) relation :One of the two or more participants in an ongoing businessrelationship.(www.businessdictionary.com)
4. Perceived Risks: Perceived risks refer to potential weaknesses, barriers and losses faced by organizations that have adopted e-commerce (Pavlou, 2002).

الرقم	السؤال	5	4	3	2	1
المتغير الأول : سهولة الأستخدام						
1	تتمتع أنظمة التجارة الإلكترونية في شركتك بواجهات سهلة الاستخدام للمستخدم					
2	تتمتع أنظمة التجارة الإلكترونية في شركتك بواجهات سهلة الاستخدام داخل النظام					
3	أنظمة التجارة الإلكترونية بين أطراف الشركات سهلة الاستخدام في شركتكم					
4	أنظمة التجارة الإلكترونية بين أطراف الشركات تقلل الوقت والتكاليف في شركتكم					
5	أنظمة التجارة الإلكترونية بين أطراف الشركات تقلل الاخطاء في شركتكم					
6	أنظمة التجارة الإلكترونية بين أطراف الشركات تزيد التعاملات التجارية في شركتم					
7	أنظمة التجارة الإلكترونية بين أطراف الشركات تساعد في خلق الميزة التانفسية في شركتكم					
8	تتوفر في شركتكم المعرفة والخبرة الكافية لاستخدام أنظمة التجارة الأكترونية بين أطراف الشركات					
9	أنظمة التجارة الإلكترونية في شركتكم سهلة بشكل كافً لجعل الاتصالات بين الموظفين أكثر مرونة					
10	أنظمة التجارة الإلكترونية في شركتكم سهلة بشكل كاف لتكون فعالة					
المتغير الثاني : البنية التحتية لتكنولجيا المعلومات في الشركة						
11	البنية التحتية لتكنولجيا المعلومات في الشركة تساعد الشركة لزيادة المعاملات بين اطراف الشركات					
12	شركتكم مزودة بخطوط انترنت تساعد في تطبيق أنظمة التجارة الإلكترونية بين اطراف الشركات					
13	استشاراتكم في مجال تنكولوجيا المعلومات تساعد الشركة في بناء خبراتها					

14	يهتم المدير في شركتكم في توفير موظفين اصحاب قدرات للتعامل مع التكنولوجيا الجديدة .					
15	قدرات المنظمة ووعي المدير تتطور من خلال التدريب المستمر .					
16	يستفيد العاملين في الشركة من قواعد البيانات الخاصة في الشركة لزيادة المعاملات الخاصة بالشركة .					
17	الشركة لديها ما يكفي من اجهزة الحاسوب والسيرفرات لاستخدام انظمة التجارة الاكترونية بين اطراف الشركات					
المتغير الثالث : أطراف وشركات العمل						
18	اطراف وشركاء العمل والمزودين يطبقون انظمة التجارة الالكرونية بين اطراف الشركات يوميا وللمعاملات المتتالية (بشكل متتالي)					
19	أطراف وشركاء العمل والموزدين يتبادول الدفعات من خلال انظمة الدفع الالكتروني					
20	البنية لتحتية لاطراف وشركاء العمل العمل المحلين موثوقة لتطبيق أنظمة التجارة الاكترونية بين اطراف الشركات					
21	البنية لتحتية لاطراف وشركاء العمل العالمين موثوقة لتطبيق أنظمة التجارة الاكترونية بين اطراف الشركات					
22	أطراف وشركاء العمل المحلين توسع نطاق الجهد لزيادة الثقة في العمل					
23	أطراف وشركاء العمل العالمين توسع نطاق الجهد لزيادة الثقة في العمل.					
24	توزيع أنظمة التجارة الإكترونية بين أطراف وشركاءالشركات في اطراف العمل والشركاء العالمين يساعد في استخدامها					
25	المنافسة العالية بين اطراف وشركاء العمل يساعد في تطوير اداء انظمة التجارة الالكترونية					
26	شرح آلية أنظمة التجاة الإلكترونية بين أطراف الشركات يزيد من ثقة أطراف وشركاء العمل في شركتكم و في التعامل معها					
المتغير الرابع : المخاطر المحتملة						
27	التشغيل والصيانه المستمرة للنظام اقل تكلفة ن المتوقع					
28	انظمة التجارة الالكترونية توزد الشركة بثقة اكبر بالمعاملات والانشطة التجارية					
29	لا يوجد ضغوط خارجية من قبل اطراف وشركاء العمل في استخدام تلك الأنظمة					
30	انظمة التجارة الإلكترونية يقلل الأخطاء في التعاملات الإلكترونية في شركتكم					
31	شركتكم تثق باستخدام انظمة التجارة الاكترونية بين اطراف الشركات					

الجزء الثاني :

هذا الجزء مخصص لاكتشاف ما ازا كانت تلك العوامل ساهمت في زيادة اداء انظمة التجارة الالكترونية وما مدى نجاح هذا الاداء بين أطراف الشركات في قطاع الصناعات الهندسية والكهربائية وتكنولوجيا المعلومات في عمان .
تم استخدام مقياس ليكرت الخامسي من اوافق بشدة (5) إلى لا أوافق بشدة (1) ، ارجو الأخذ بعين الاعتبار المرفق ببعض المصطلحات الأجرائية التي قد تساعدك في اختيار الأجابة المناسبة ،الرجاء اختيار اجابة واحدة لكل فقرة من الفقرات بوضع اشارة (X) امام الاختيار

الرقم	السؤال	5	4	3	2	1
1	أداء أنظمة التجارة الإلكترونيةبين أطراف الشركات كاف لتحسين أداء الشركة					
2	أداء أنظمة التجارة الإلكترونية بين أطراف الشركات كاف لتحسين الانتاجية قي الشركة					
3	أداء أنظمة التجارة الإلكترونيةبين أطراف الشركات كاف لزيادة المبيعات في الشركة					
4	يتم تنفيذ النشاط الخاص بايرادات المؤسسة على الانترنت عبر النظام					
5	أداء أنظمة التجارة الإلكترونية بين أطراف الشركات كاف لزيادة الارباح في المؤسسة					
6	أداء أنظمة التجارة الإلكترونية بين أطراف الشركات كاف لتخفيض تكلفة المخزون في الشركة					
7	أداء أنظمة التجارة الإلكترونية بين أطراف الشركات كاف لخفض تكلفة الانتاج والعمل في الشركة					
8	أداء أنظمة التجارة الإلكترونية بين أطراف الشركات كاف للحد من تكرار الاخطاء التلسم بين اطراف وشركاء العمل					
9	أداء أنظمة التجارة الإلكترونية بين أطراف الشركات كاف لتحسين نقاط الاستلام في الوقت المحدد من والى أطراف وشركاء العمل					
10	أداء أنظمة التجارة الإلكترونية بين أطراف الشركات كاف لتحسين اداؤة المخزون والرقابة في الشركة					
11	أداء أنظمة التجارة الإلكترونية بين أطراف الشركات كاف لتحسين عمليات الاعمال بما يخص الشراء .					
12	أداء أنظمة التجارة الإلكترونية بين أطراف الشركات كاف لتحسين عمليات work –in – process					

Appendix –C

جـامـعـة الـشـرق الأوسـط
MIDDLE EAST UNIVERSITY

Survey Questionnaire Arbitration Model

Factors Effect on B2B Systems Performance Based on Managerial Perception in Engineering, Electrical Industries and Information Technology Sector in Amman

Dear Professor,

Researcher conducted a field study under the title" Factors Effect on B2B Systems Performance Based on Managerial Perception in Engineering, Electrical Industries and Information Technology (EEIIT) Sector in Amman" and the questioner consists of four main factors may have effects on B2B systems performance in EEIIT Sector in Amman.

For being the specialists in this area, kindly read every paragraph and double check , and being kind to judge the degree of affiliation for the vector and the degree of safety of paragraph, formulation of language and any suggestions you find it appropriate.

Note that the wave of the questionnaire to managers in Engineering, Electronic Industries and Information Technology Sector in Amman .Appreciate your cooperation and your recommendations. Attached a list of terminologies used in the study

Yours sincerely

Researcher: Mais.M Al-Qudah

Master Candidate, Business Administration Department, Faculty of Business

Middle East University (MEU)

Amman, Jordan

Email: Mais.mousa@hotmail.com

Mobile: +962 (77) 9670244

Terminologies

1. Ease of use: The ability to deal with the system easily
2. Enterprises IT infrastructure: the architecture of hardware, software, content and data used to deliver e-business services to employee, customers and partner (Chaffey, 2007).
3. Trading Partners (TPs) relation :One of the two or more participants in an ongoing businessrelationship.(www.businessdictionary.com)

4. Perceived Risks: Perceived risks refer to potential weaknesses, barriers and losses faced by organizations that have adopted e-commerce (Pavlou, 2002).

Part One

This part is to collect information about the factors that have an effect on B2B systems performance in Engineering, Electrical Industries and Information Technology Sector in Amman. The five-point Likert scale is designed in the percentage for importance of factors, variables and items. Please consider the following definitions in making your choices. Please choose only 1 answer per question.

(1) None: means that variables and items do not affect B2B performance in your enterprise
(2) < 25%: means that variables and items affect B2B performance in your enterprise, but less than 25% of importance variable.
(3) 25%-50%: means that variables and items affect B2B performance in your enterprise, but only 25%-50% of importance variable.
(4) 51%-70%: means that variables and items affect B2B performance in your enterprise, but only 51%-70% of importance variable.
(5) >70%: means that variables and items affect B2B performance in your enterprise, and more than 70% of importance variable.

1. Perceived benefits : Paragraphs are divided from 1-7 from questioner.

2. IT infrastructure: Paragraphs are divided from 8-20 from questioner.

3. Trading partners (TPs): Paragraphs are divided from 21-25 from questioner.

4. Perceived risk: Paragraphs divide from 30-35 from questioner.

5. B2B systems performance: Paragraphs divide from 1-12 from questioner.

Ease of use,V1

	Paragraph	affiliation for the vector		Validity of the paragraph to linguistically		Need changes and suggestions
		Yes	No	Yes	No	
1	B2B systems in your enterprise is ease to use					
2	B2B systems in your enterprise has a friendly uses interface					
3	B2B systems in your enterprise has a friendly system interface					
4	The enterprise has the need to practice B2B systems.					
5	The enterprise has enough experience and knowledge to use B2B systems.					
6	B2B systems in your enterprise ease enough to make the communications between employees more flexible.					
7	B2B systems in your enterprise is ease enough to reduce time and efforts					
Enterprise IT infrastructure, V2						
8	IT Infrastructure helps the enterprise to expand its B2B systems transactions					

9	The enterprise provides net lines that help in practicing B2B.					
10	. Internet and other services are provided in the enterprise to practice B2B					
11	The consultation of IT enterprises helps in building the enterprise's experience.					
12	The databases are the only sources of information used to contact suppliers and trading partners.					
13	The enterprise manager cares about providing staff with the capacity to deal with the new technology.					
14	The capabilities and awareness of manager improved through continuous training.					
15	The enterprise's databases include information about the stock quantities.					
16	The enterprise employees benefit from these databases to speed up the enterprise's transactions.					
17	The enterprise manager has his own programs to improve his staff skills in IT.					

18	The enterprise manager insists on employing new qualified staff.					
19	The Enterprise has enough PCs and servers to use B2B systems .					
20	The enterprise cares about providing databases for its staff.					
Trading partners (TPs),V3						
21	The resists dealing with B2B systems.					
22	The local TPs and suppliers apply B2B systems in daily and frequently transactions.					
23	The local TPs and suppliers exchange payments through electronic tools.					
24	Global and local trading partners and suppliers' infrastructure is reliable to practice B2B systems.					
25	Global and local trading partners and suppliers extend effort to increase the trust in their work.					
26	The distribution of B2B in global TPs and suppliers helps in adopting B2B.					
27	Higher competitiveness of TPs improved the enterprise's performance					
28	Higher competition of TPs through B2B systems leads to expansion of business.					
29	The explanation of the mechanism					

	of B2B systems will increase trading partners trust in your enterprise.					
Perceived risk , V4						
30	Running and maintenance of B2B systems is more costly than expected.					
31	B2B systems provide more trust of your enterprise transactions.					
32	The enterprise trust using B2B systems					
33	There is external pressure by trading partners in the direction of using B2B systems.					
34	B2B systems reduce errors in electronic transaction in your enterprise.					
35	B2B systems providers extend effort to increase the trust in their work.					

Part Two:

This section in part three seeks to discover the degree to which your enterprise's performance and were improved by using B2B systems. Please consider the following definitions in making your choices. Please choose only 1 answer per question.

(1) None: means that factors are not performed in your enterprise.
(2) < 25%: means that factors are performed in your enterprise, but less than 25% of total factors are performed
(3) 25%-50%: means that factors are performed in your enterprise, but only 25%-50% of total factors are performed
(4) 51%-70%: means that factors are performed in your enterprise, but only 51%-70% of total factors are performed
(5) >70%: means that factors are performed in your enterprise, and more than 75% of total factors are performed.

	Paragraph	**affiliation for the vector**		**Validity of the paragraph to linguistically**		**Need changes and suggestions**
		yes	**No**	**Yes**	**No**	
1	B2B has improved performance in your enterprise					
2	B2B has improved the productivity in your enterprise					
3	B2B has increased sales in your enterprise					
4	Your enterprise revenue activity is performed on-line					
5	B2B has increased the profit in your enterprise					
6	B2B has reduced inventory costs in your enterprise					
7	B2B has reduced cost of production & labor in your enterprise					

8	B2B has reduced the frequency of mistakes in the receipt and translation of TPs and suppliers orders in your enterprise				
9	B2B has improved your enterprise on-time delivery to and from TPs and suppliers				
10	B2B has improved inventory management and control in your enterprise				
11	B2B has improved procurement business process in your enterprise				
12	B2B has improved work-in-process (WIP) in your enterprise				

Appendix – D– The academic arbitrators

No	Name	Specialization	Working Place
1	Prof. Mohammad Alnuimi	Electronic Business	Middle East University
2	Prof.Gassan Omet	Finance	Jordan University
3	Dr.Mousa Al-Qaryote	Marketing	Al-Balqa Applied University
4	Dr.Shadi sarayrah	Economics	Al-Balqa Applied University
5	Dr.Ashraf Bany Mohammad	Computer information system	Middle East University
6	Dr.Hamzah Khram	Marketing	Middle East University
17	Dr.Feras Al-Shalabi	Management Information systems	Al-Balqa Applied University
8	Dr.Mohammad mayth'a	Computer information systems	Al-Balqa Applied University

Appendix –E - proposal time line

جـامـعـة الـشـرق الأوسـط
MIDDLE EAST UNIVERSITY

Proposal Time Line

Supervisor Name: Dr. Anas Al-Bakri

Name: Mais Mousa Al-Qudah

Semester / Year	Months	Activities
Semester Two (S2), 2011	April (18-24)	Commencement program Plan thesis time line, Draft of chapter one; Introduction
Semester Two (S2), 2011	April(25-31)may	Finalize and write up Introduction
Semester Two (S2), 2011	May(1-5)	Write Theoretical Framework
Semester Two (S2), 2011	May (5-10)	Write up the Research Questions
Semester Two (S2), 2011	May (10-13)	Write Hypotheses, preparing for Literature review.
Semester Two (S2), 2011	14-17	Write up Literature Review
Semester Two (S2), 2011	16-18	Make Research Design and write the Methodology
Semester Two (S2), 2011	May(19-21)	**Re-Submission of proposal** **(Hardcover Final Version)**

Appendix – F thesis time line

جـامـعـة الـشـرق الأوسـط
MIDDLE EAST UNIVERSITY

Thesis Time Line

Supervisor Name: Dr. Anas Al-Bakri

Name: Mais Mousa Al-Qudah

Semester / Year	Months	Activities
Summer Semester, 2011	(1-30)June	Chapter one 1.1 Introduction 1.2 Study Problems and Questions 1.3 Study Hypotheses 1.4 Significance of the Study 1.5 Objectives of the Study 1.6 Study Limitations 1.7 Study Variables 1.8 Study Model 1.9 Terminologies of the Study
Summer Semester, 2011	July (1-9)	Chapter Two: Theoretical Framework and Previous Studies 2.1 Introduction. 2.1.1 E-business concept.
Summer Semester, 2011	July (6-10)	2.1.2 E-commerce concept and e-commerce systems.
Summer Semester, 2011	July (11)	2.1.3 Categories of E-commerce.
Summer Semester, 2011	July(12-14)	2.1.4 Business-to- Business E-commerce
Summer Semester,		2.2. Theoretical Framework Component

2011	July (15-28)	2.2.1 perceived benefits 2.2.2 Enterprise IT infrastructure. 2.2.3 Trading partner (TPs) 2.2.4 Perceived risk 2.3 Previous Studies
Summer Semester, 2011	July(29-31)	2.4 Difference between Current Study and Previous Studies
Summer Semester, 2011	July(3-6)	Chapter Three: Method and Procedure 3.1 Introduction 3.2 Study Methodology 3.3 Study Population and Sample 3.4 Study Tools and Data Collection 3.5 Statistical Treatment 3.6 Validity and Reliability
Summer Semester, 2011	August	Questioners distribution
First semester 2012	September (1-25)	Chapter Four : Results and Hypotheses Testing 4.1 Introduction 4.2 Answers of study Questions 4.3 Study Hypotheses testing
First semester 2012	September(26 - 30)	Chapter Five : conclusion & Recommendations 5.1 Conclusions 5.2 Recommendations
First semester 2012	October (1-10)	Thesis formatting

Appendix G Frequency and percentage for each Question

Independent variables

Variable one: perceived benefits

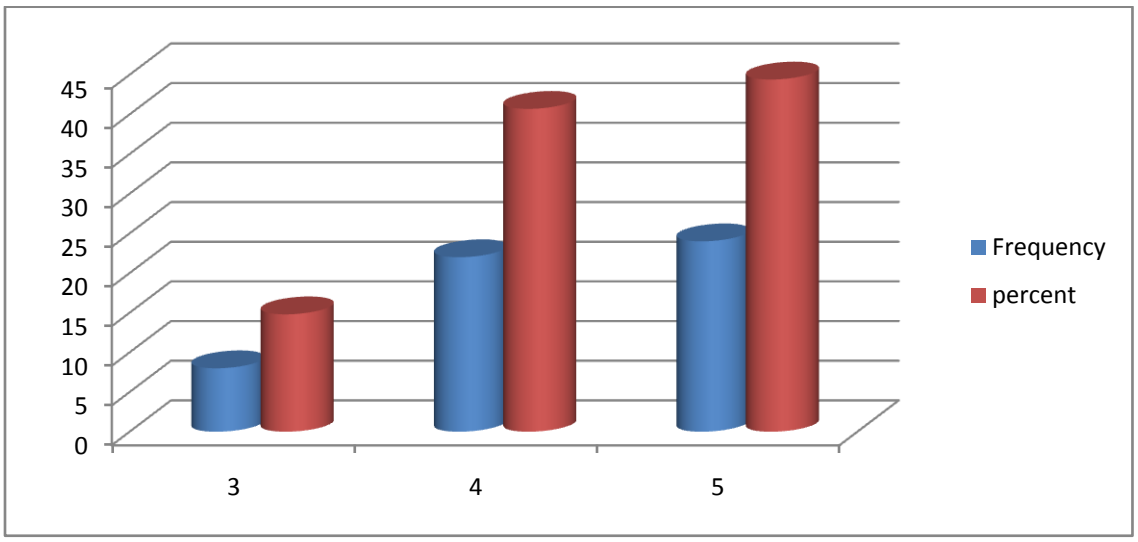
Q1: B2B systems in your enterprise has a friendly user interface

Frequency and percentage for Q1

VAR00001

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	8	14.8	14.8	14.8
	4.00	22	40.7	40.7	55.6
	5.00	24	44.4	44.4	100.0
	Total	54	100.0	100.0	

This table shows that 24 of Responses for this question answer that they Very agree with question in 44.4 % from all the response and it was the highest Response, and just 8 of them answer that they are Neutral about the question and this indicates that one of the perceived benefits from the B2B (EC) systems that B2B systems in your enterprise has a friendly user interface and it Affect on the B2B (EC) performance.



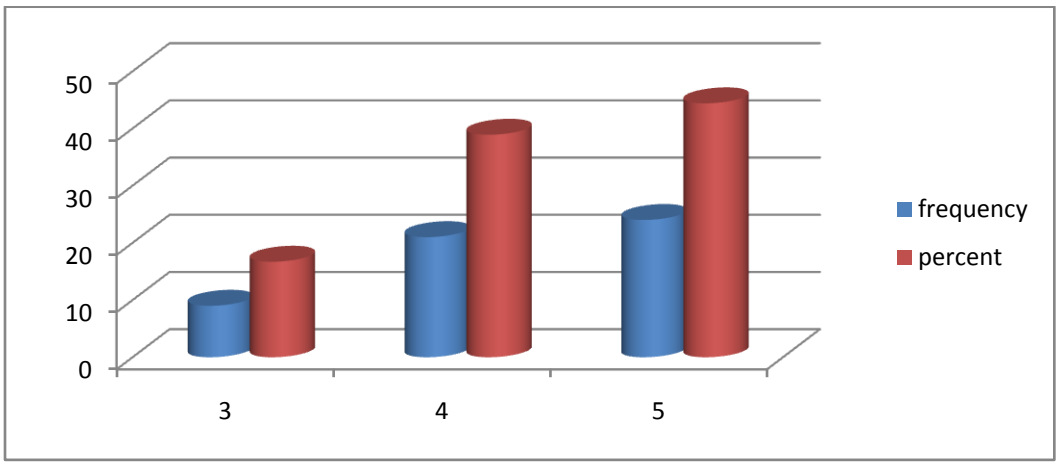
Q2: B2B systems in your enterprise has a friendly system interface

Frequency and percentage for Q2

VAR00002

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	9	16.7	16.7	16.7
	4.00	21	38.9	38.9	55.6
	5.00	24	44.4	44.4	100.0
	Total	54	100.0	100.0	

This table shows that 24 of Responses for this question answer that they Very agree with question in 44.4 % from all the response and it was the highest Response and just 9 of them answer that they are Neutral about the question and this indicates that one of the perceived benefits from the B2B (EC) system that B2B systems in your enterprise has a friendly system interface and it has an effect on the B2B (EC) performance.



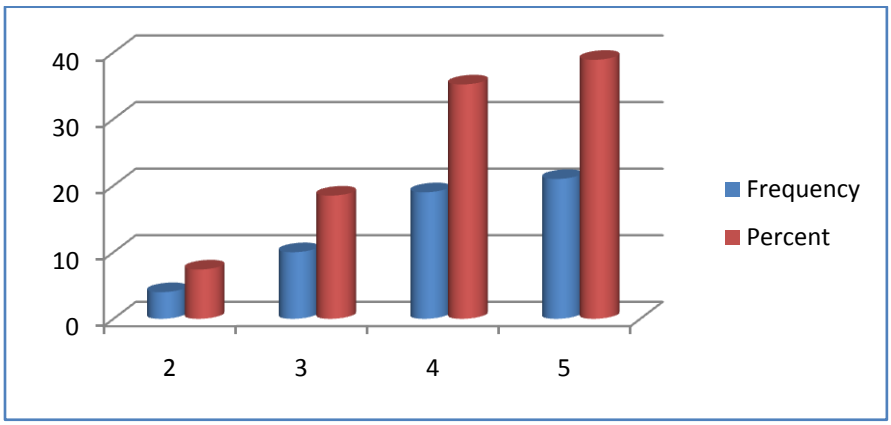
Q3: B2B systems in your enterprise is easy to use

Frequency and percentage for Q3

VAR00003

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	4	7.4	7.4	7.4
	3.00	10	18.5	18.5	25.9
	4.00	19	35.2	35.2	61.1
	5.00	21	38.9	38.9	100.0
	Total	54	100.0	100.0	

This table shows that 21 of Responses for this question answer that they Very agree with question in 38 % from all the response and it was the highest Response and just 4 of them answer that they are not agree about the question and this indicates that one of the perceived benefits from the B2B (EC) system that B2B systems in B2B systems in your enterprise is easy to use and it has an effect on the B2B (EC) performance.



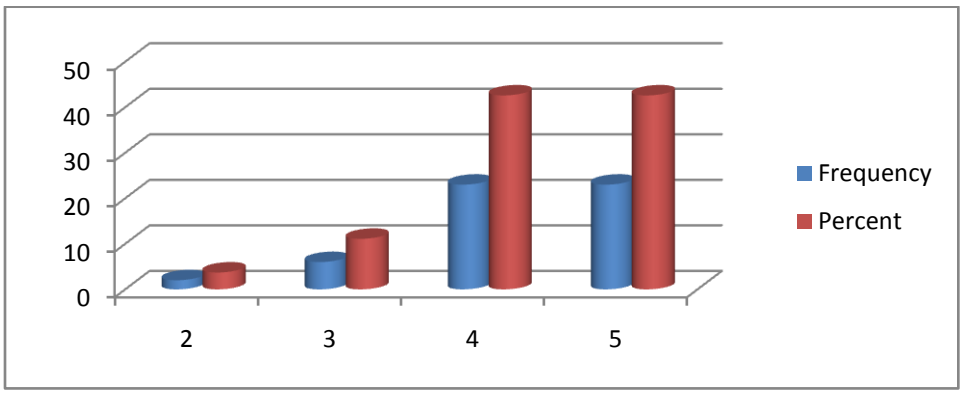
Q4: B2B systems in your enterprise reduce time and cost

Frequency and percentage for Q4

VAR00004

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	6	11.1	11.1	14.8
	4.00	23	42.6	42.6	57.4
	5.00	23	42.6	42.6	100.0
	Total	54	100.0	100.0	

This table shows that 23 of Responses for this question answer that they Very agree with question in 42.6 % from all the response and it was the highest Response and just 2 of them answer that they are not agree about the question and this indicates that one of the perceived benefits from the B2B (EC) system that B2B systems in B2B systems in your enterprise is reduce time and cost and by reducing them will has an effect on the B2B (EC) performance.



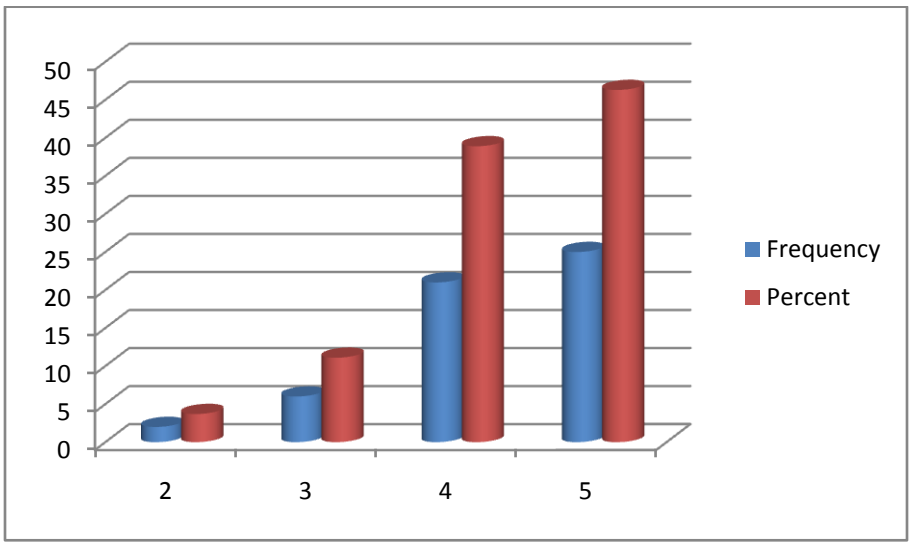
Q5: B2B systems in your enterprise reduce errors

Frequency and percentage for Q5

VAR00005

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	6	11.1	11.1	14.8
	4.00	21	38.9	38.9	53.7
	5.00	25	46.3	46.3	100.0
	Total	54	100.0	100.0	

This table shows that 25 of Responses for this question answer that they Very agree with question in 38.9 % from all the response and it was the highest Response and just 4 of them answer that they are not agree about the question and this indicates that one of the perceived benefits from the B2B (EC) system that B2B systems in B2B systems in your enterprise is easy to use and it has an effect on the B2B (EC) performance.



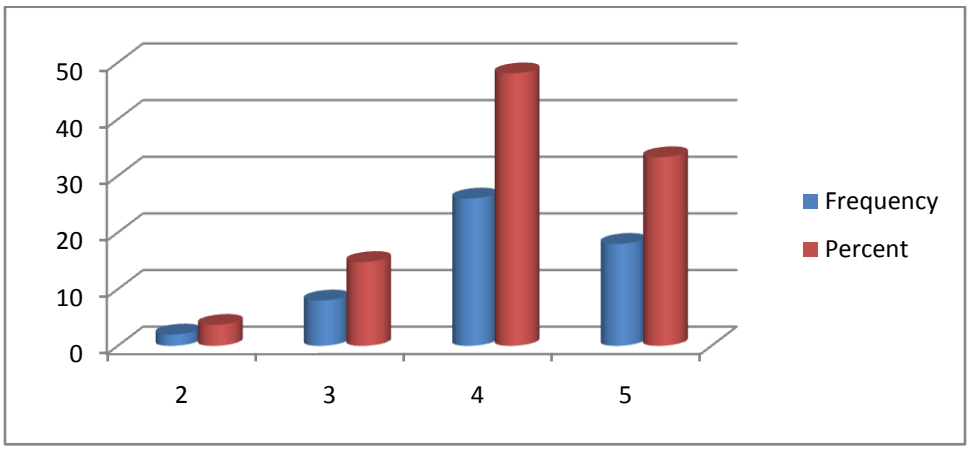
Q6: B2B systems in your enterprise increase transactions

Frequency and percentage for Q6

VAR00006

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	8	14.8	14.8	18.5
	4.00	26	48.1	48.1	66.7
	5.00	18	33.3	33.3	100.0
	Total	54	100.0	100.0	

This table shows that 26 of Responses for this question answer that they agree with question in 48.1 % from all the response and it was the highest Response and 18 of them answer that they are very agree about the question and just 2 answer that they are not very agree this indicates that one of the perceived benefits from the B2B (EC) system that B2B systems in your enterprise increase transactions and it has an effect on the B2B (EC) performance.



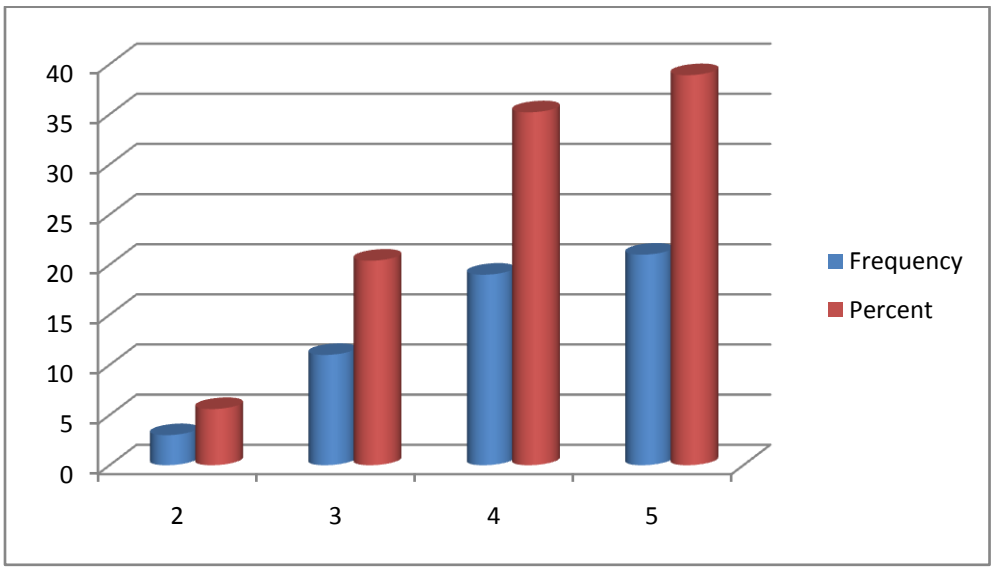
Q7: B2B systems help your enterprise to create a competitive advantage.

Frequency and percentage for Q7

VAR00007

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	3	5.6	5.6	5.6
	3.00	11	20.4	20.4	25.9
	4.00	19	35.2	35.2	61.1
	5.00	21	38.9	38.9	100.0
	Total	54	100.0	100.0	

This table shows that 21 of Responses for this question answer that they very agree with question in 38.9 % from all the response and it was the highest Response and just 3 answer that they are not very agree this indicates that one of the perceived benefits from the B2B (EC) system that B2B systems help your enterprise to create a competitive advantage.



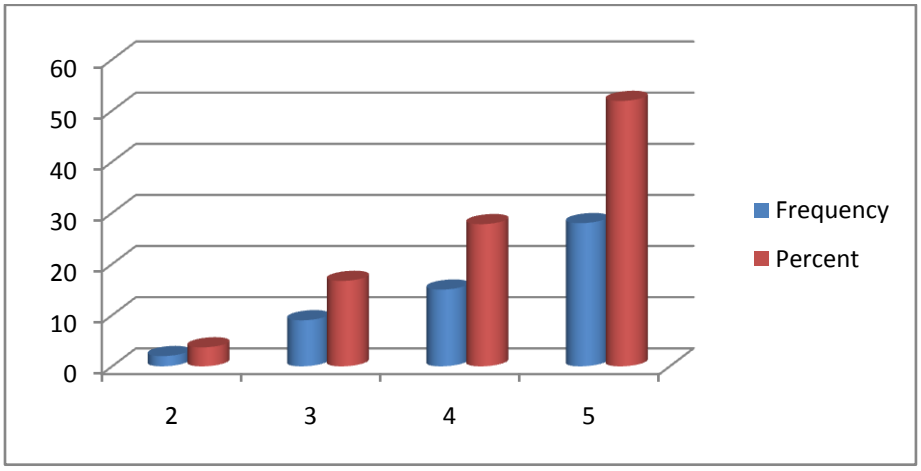
Q 8: Your enterprise has enough experience and knowledge to use B2B systems.

Frequency and percentage for Q8

VAR00008

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	9	16.7	16.7	20.4
	4.00	15	27.8	27.8	48.1
	5.00	28	51.9	51.9	100.0
	Total	54	100.0	100.0	

This table shows that 28 of Responses for this question answer that they very agree with question in 51.9 % from all the response and it was the highest Response and just 2 answer that they are not very agree, this indicates that one of the perceived benefits from the B2B (EC) system that your enterprise has enough experience and knowledge to use B2B systems.



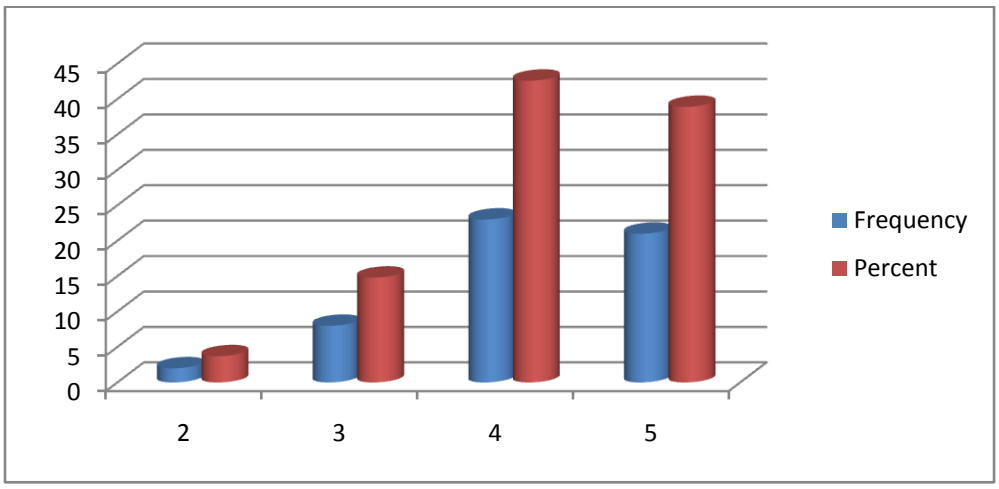
Q 9: B2B systems in your enterprise ease enough to make the communications between employees more flexibility.

Table (11) *Frequency and percentage for Q9*

VAR00009

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	8	14.8	14.8	18.5
	4.00	23	42.6	42.6	61.1
	5.00	21	38.9	38.9	100.0
	Total	54	100.0	100.0	

This table shows that 21 of Responses for this question answer that they very agree with question in 38.9 % from all the response and it was the highest Response and just 2 answer that they are not very agree, this indicates that one of the perceived benefits from the B2B (EC) system that B2B systems in your enterprise ease enough to make the communications between employees more flexibility.



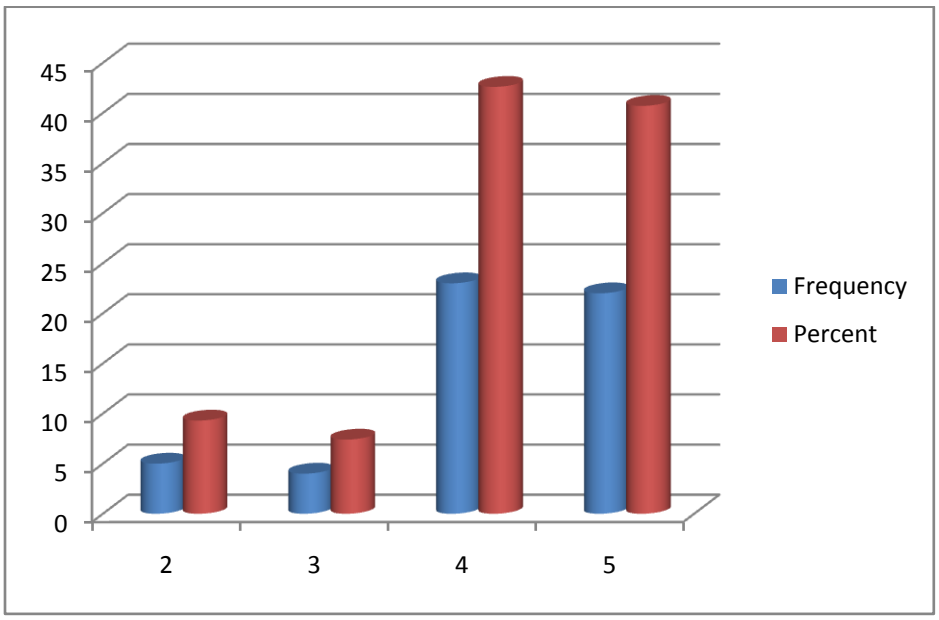
Q 10: B2B systems in your enterprise ease enough to be effective

Frequency and percentage for Q10

VAR00010

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	5	9.3	9.3	9.3
	3.00	4	7.4	7.4	16.7
	4.00	23	42.6	42.6	59.3
	5.00	22	40.7	40.7	100.0
	Total	54	100.0	100.0	

This table shows that 22 of Responses for this question answer that they very agree with question in 40.7 % from all the response and it was the highest Response and 5 answer that they are not very agree , this indicates that one of the perceived benefits from the B2B (EC) system that B2B systems in the enterprises ease enough to be effective.



Variable two: IT infrastructure

Q 11: IT Infrastructure helps your enterprise to expand its B2B systems transactions.

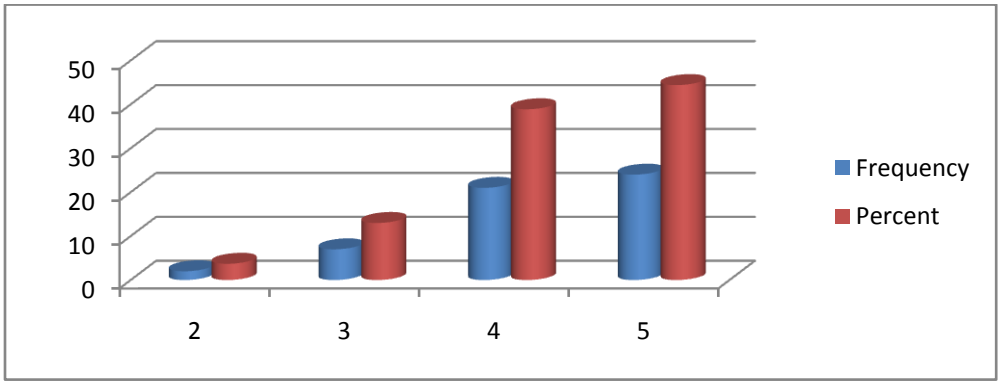
Table (13) *Frequency and percentage for Q11*

VAR00011

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	7	13.0	13.0	16.7
	4.00	21	38.9	38.9	55.6
	5.00	24	44.4	44.4	100.0
	Total	54	100.0	100.0	

This table shows that 24of Responses for this question answer that they very agree with question in 44.4 % from all the response and it was the highest Response and just 2 answer that they are not very agree this indicates that one of most important things

in It infrastructure in B2B (EC) systems that's IT Infrastructure helps your enterprise to expand its B2B systems transactions.



Q 12: Your enterprise provides net lines that help in practicing B2B

Frequency and percentage for Q12

VAR00012

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	8	14.8	14.8	18.5
	4.00	18	33.3	33.3	51.9
	5.00	26	48.1	48.1	100.0
	Total	54	100.0	100.0	

This table shows that 26 of Responses for this question answer that they very agree with question in 48.1 % from all the response and it was the highest Response and just 2 answer that they are not very agree this indicates that the enterprise provides net lines that help in practicing B2B (EC) systems and it's a positive thing for increasing the performance.

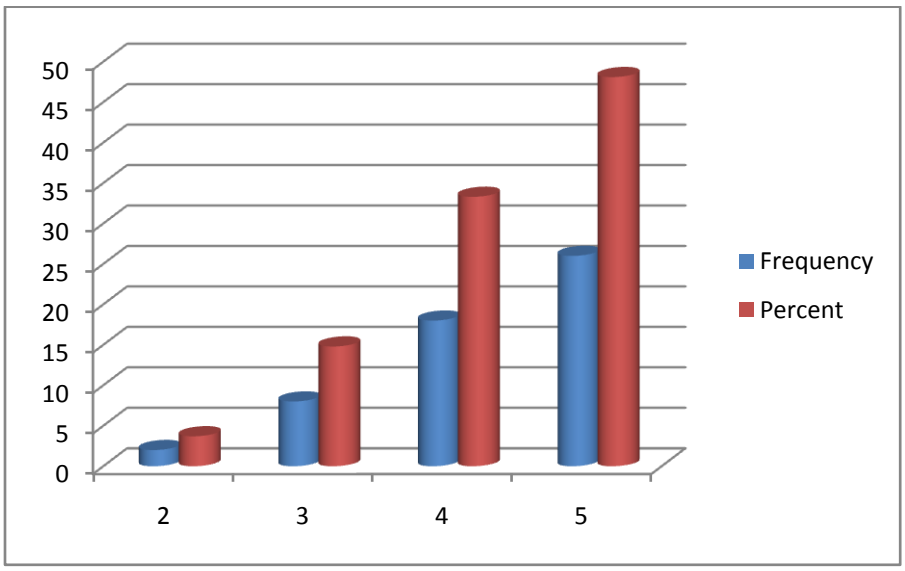


Figure (15) *Frequency and percentage for Q12*

Q 13: Your consultation of IT enterprises helps in building the enterprise's experience.

Frequency and percentage for Q13

VAR00013

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	13	24.1	24.1	24.1
	4.00	18	33.3	33.3	57.4
	5.00	23	42.6	42.6	100.0
	Total	54	100.0	100.0	

This table shows that 23 of Responses for this question answer that they very agree with question in 42.6 % from all the response and it was the highest Response and 13 answer that they are not very agree this indicates that your consultation of IT enterprises helps in building the enterprise's experience but not too much and they need more consultation in It infrastructure to increase the performance.

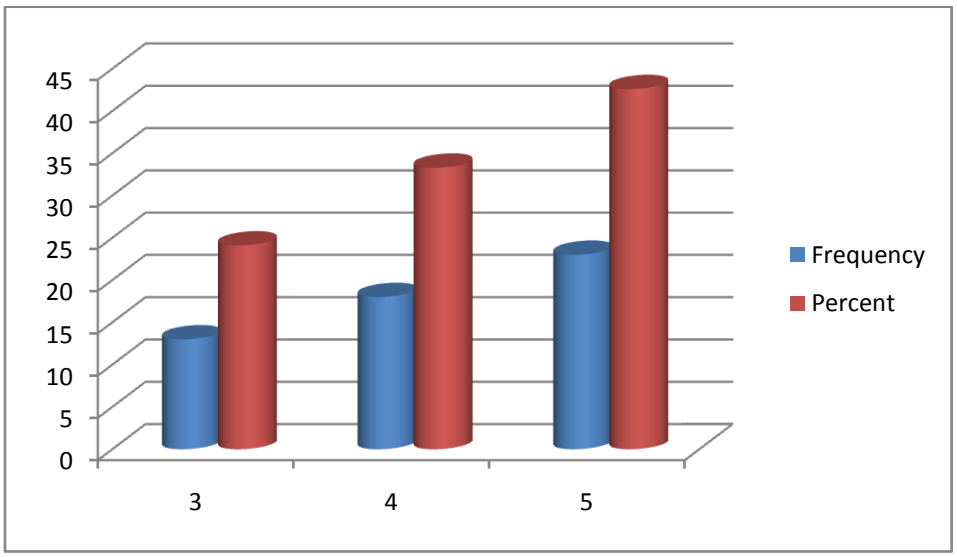


Figure (16) *Frequency and percentage for Q13*

Q 14: Your enterprise manager cares about providing staff with the capabilities to deal with the new technology.

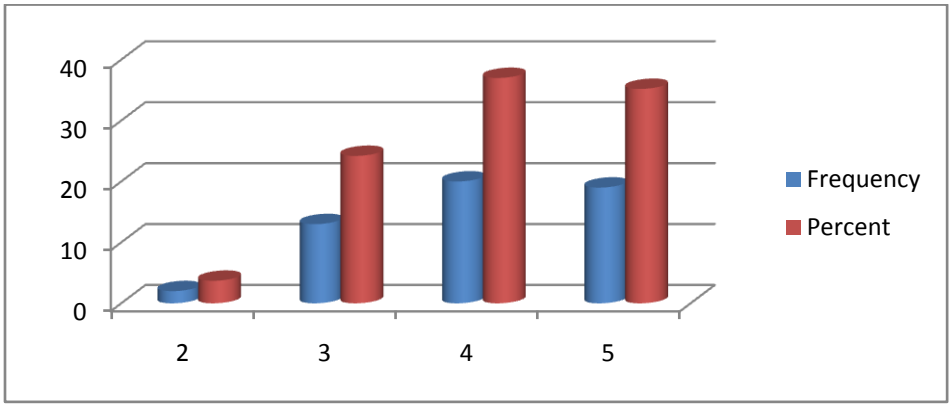
Frequency and percentage for Q14

VAR00014

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	13	24.1	24.1	27.8
	4.00	20	37.0	37.0	64.8
	5.00	19	35.2	35.2	100.0
	Total	54	100.0	100.0	

This table shows that 19 of Responses for this question answer that they very agree with question in 35.2 % from all the response and it was the highest Response and just 2 answer that they are not very agree this indicates that your enterprise manager cares

about providing staff with the capabilities to deal with the new technology and increase the performance.



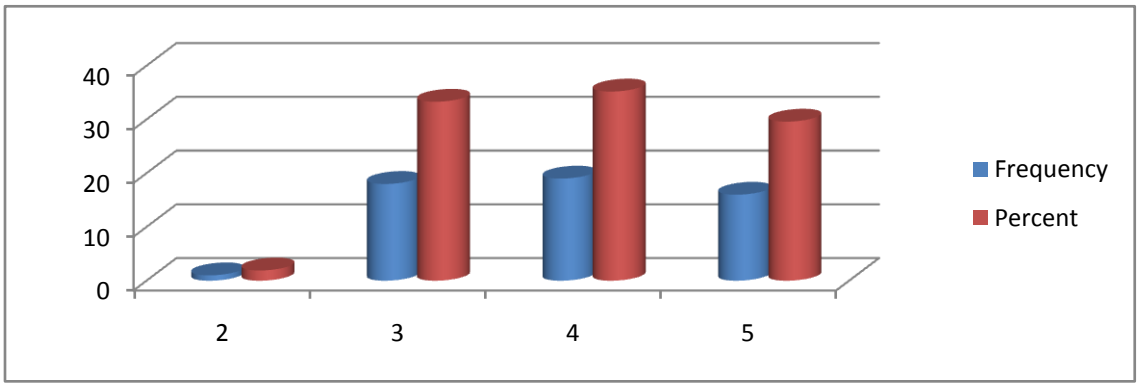
Q 15: Your enterprise capabilities and awareness of manager improved through continuous training.

Frequency and percentage for Q15

Cumulative Percent		Percent	Frequency		
1.9	1.9	1.9	1	2.00	Valid
35.2	33.3	33.3	18	3.00	
70.4	35.2	35.2	19	4.00	
100.0	29.6	29.6	16	5.00	
	100.0	100.0	54	Total	

This table shows that 16 of Response for this question answer that they very agree with question in 29.6 % from all the response and it was the highest Response and just 1 answer that they are not agree this indicates that your enterprise capabilities and awareness of manager improved through continuous training and therefore increase the

performance.



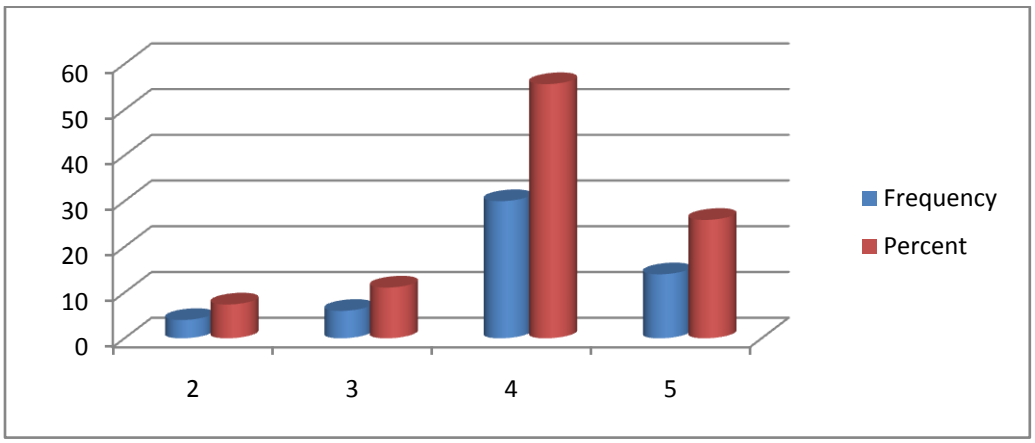
Q16: Your enterprise employees benefit from these databases to speed up the enterprise's transactions.

Frequency and percentage for Q16

VAR00016

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	4	7.4	7.4	7.4
	3.00	6	11.1	11.1	18.5
	4.00	30	55.6	55.6	74.1
	5.00	14	25.9	25.9	100.0
	Total	54	100.0	100.0	

This table shows that 14 of Responses for this question answer that they very agree with question in 25.9 % from all the response and it was the highest Response and 4 answer that they are not very agree this indicates that your enterprise employees benefit from these databases to speed up the enterprise's transactions and therefore increase the performance.



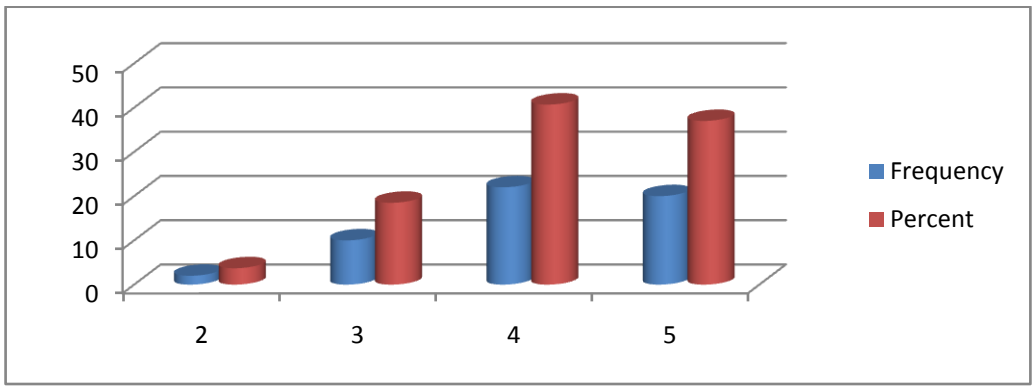
Q 17: The Enterprise has enough PCs and servers to use B2B systems.

Frequency and percentage for Q17

VAR00017

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	10	18.5	18.5	22.2
	4.00	22	40.7	40.7	63.0
	5.00	20	37.0	37.0	100.0
	Total	54	100.0	100.0	

This table shows that 20 of Responses for this question answer that they very agree with question in 37.0 % from all the response and it was the highest Response and just 2 answer that they are not very agree this indicate that the enterprise has enough PCs and servers to use B2B systems and therefore increase the performance.



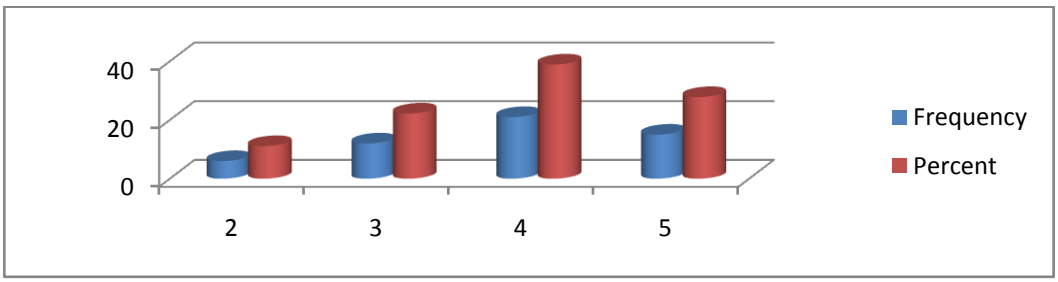
Variable three: Trading partners (TPs)

Q 18: The local TPs and suppliers apply B2B systems in daily and frequently transactions.

Frequency and percentage for Q18

Cumulative Percent	Valid Percent	Percent	Frequency		
11.1	11.1	11.1	6	2.00	Valid
33.3	22.2	22.2	12	3.00	
72.2	38.9	38.9	21	4.00	
100.0	27.8	27.8	15	5.00	
	100.0	100.0	54	Total	

This table shows that 15 of Responses for this question answer that they very agree with question in 27.8 from all the response and it was the highest Response and 6 answer that they are not very agree this indicate that the local TPs and suppliers apply B2B systems in daily and frequently transactions but not enough and the enterprises have to apply it more in daily and frequently transaction to increase the B2B (EC) systems performance.



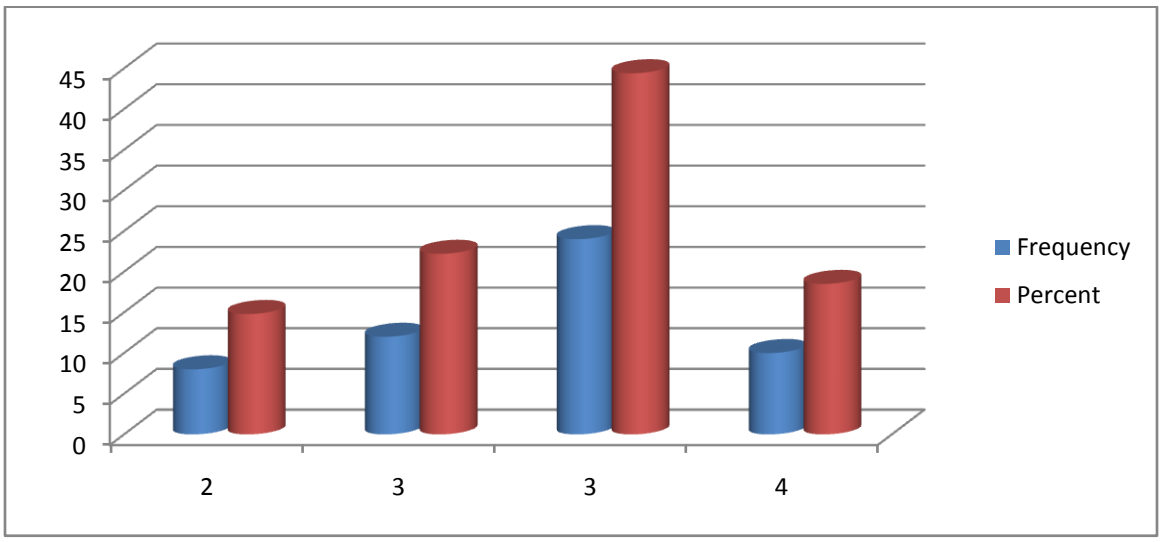
Q 19: The local TPs and suppliers exchange payments through e-payments tools.

Frequency and percentage for Q19

VAR00019

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	8	14.8	14.8	14.8
	3.00	12	22.2	22.2	37.0
	4.00	24	44.4	44.4	81.5
	5.00	10	18.5	18.5	100.0
	Total	54	100.0	100.0	

This table shows that 24 of Responses for this question answer that they agree with question in 44.4 from all the response and it was the highest Response and 8 answer that they are not agree this indicate that the local TPs and suppliers exchange payments through e-payments tools but they need to improve their e-payments tools to increase B2B (EC) systems performance.



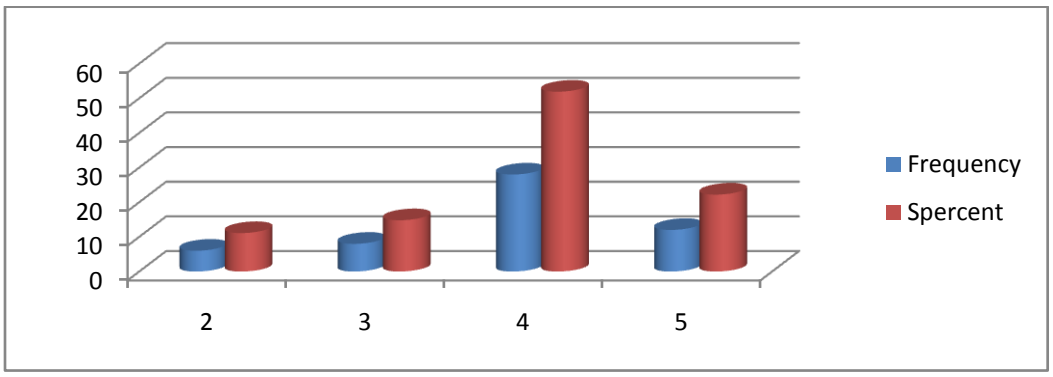
Q 20: Local trading partner's infrastructure is reliable to practice B2B systems.

Frequency and percentage for Q20

VAR00020

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	6	11.1	11.1	11.1
	3.00	8	14.8	14.8	25.9
	4.00	28	51.9	51.9	77.8
	5.00	12	22.2	22.2	100.0
	Total	54	100.0	100.0	

This table shows that 12 of Responses for this question answer that they very agree with question in 22.2 from all the response and it was the highest Response and 6 answer that they are not agree this indicate that local trading partner's infrastructure is not reliable enough to practice B2B systems and the enterprise have to improve the reliability to increase B2B (EC) systems performance.



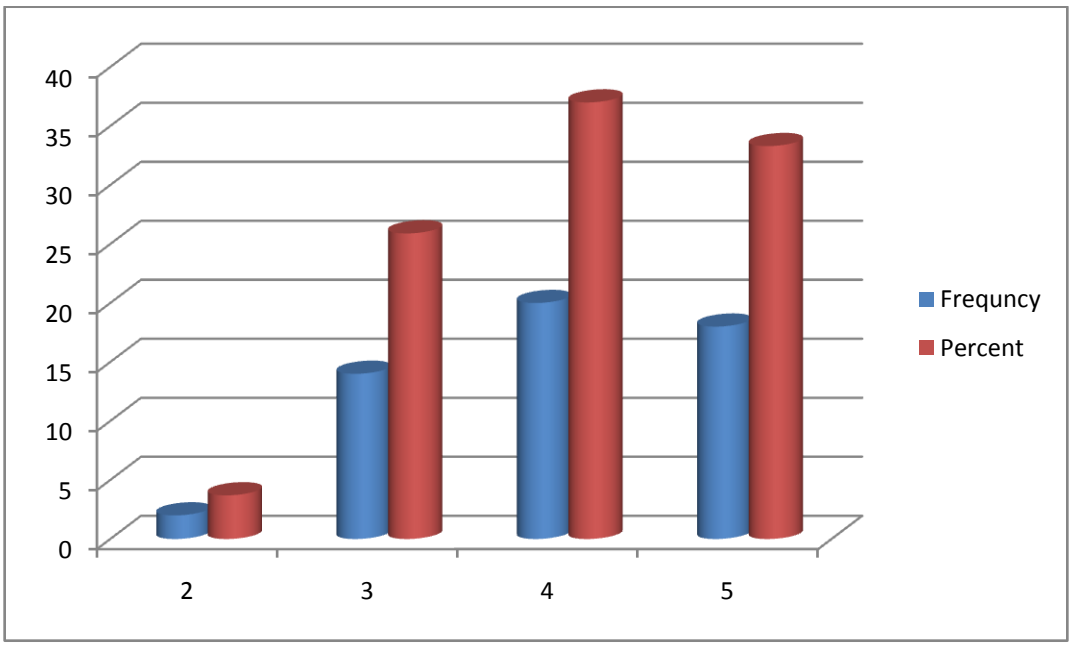
Q 21: Global trading partner's infrastructure is reliable to practice B2B systems.

Frequency and percentage for Q21

VAR00021

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	14	25.9	25.9	29.6
	4.00	20	37.0	37.0	66.7
	5.00	18	33.3	33.3	100.0
	Total	54	100.0	100.0	

This table shows that 18 of Responses for this question answer that they very agree with question in 33.3 from all the response and it was the highest Response and just 2 answer that they are not very agree this indicate that global trading partner's infrastructure is reliable to practice B2B systems and increase B2B (EC) systems performance .



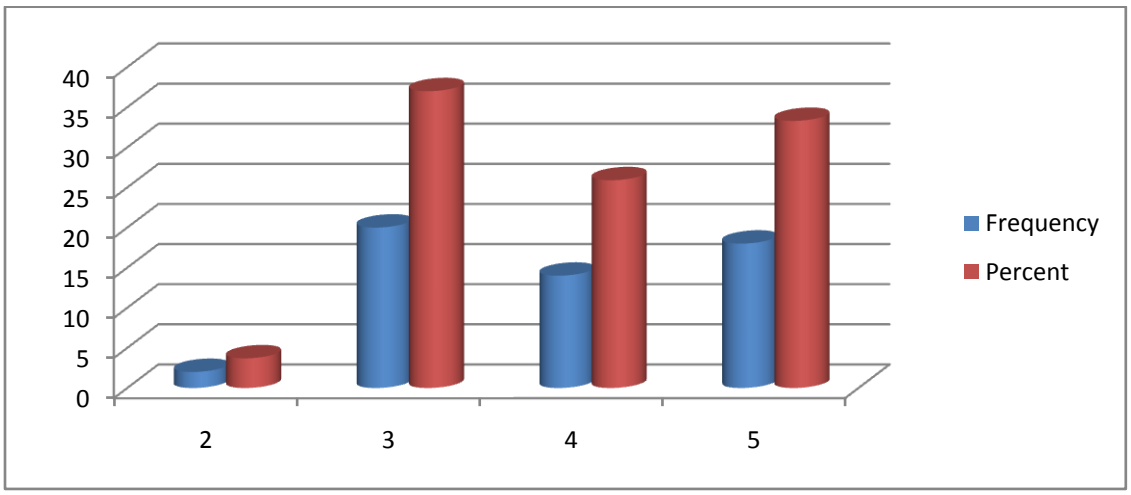
Q 22: Local trading partners extend effort to increase the trust in their work.

Frequency and percentage for Q22

VAR00022

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	20	37.0	37.0	40.7
	4.00	14	25.9	25.9	66.7
	5.00	18	33.3	33.3	100.0
	Total	54	100.0	100.0	

This table shows that 18 of Responses for this question answer that they very agree with question in 33.3 from all the response and it was the highest Response and just 2 answer that they are not very agree this indicate that local trading partners extend effort to increase the trust in their work and therefore increase B2B (EC) systems performance



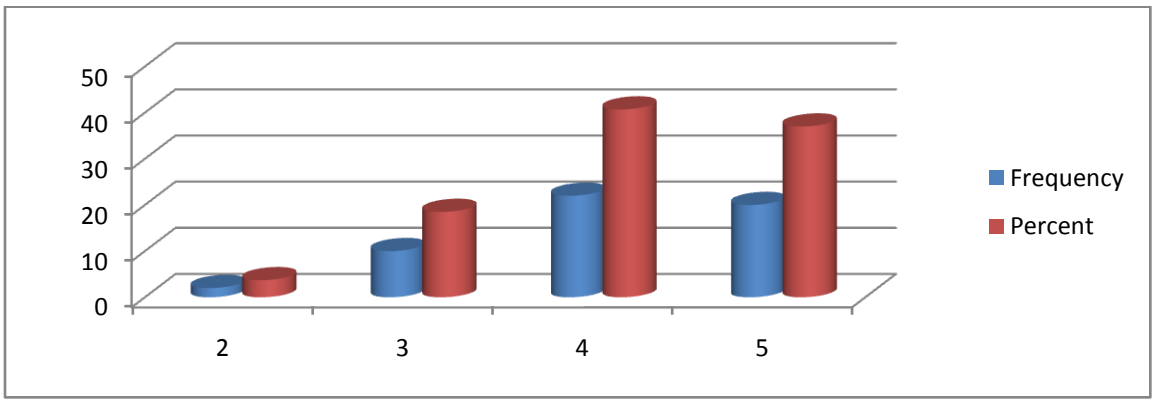
Q 23: Global trading partners extend effort to increase the trust in their work.

Frequency and percentage for Q23

VAR00023

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	10	18.5	18.5	22.2
	4.00	22	40.7	40.7	63.0
	5.00	20	37.0	37.0	100.0
	Total	54	100.0	100.0	

This table shows that 20 of Response for this question answer that they very agree with question in 37.0 from all the response and it was the highest Response and just 2 answer that they are not very agree this indicate that global trading partners extend effort to increase the trust in their work and therefore increase B2B (EC) systems performance.



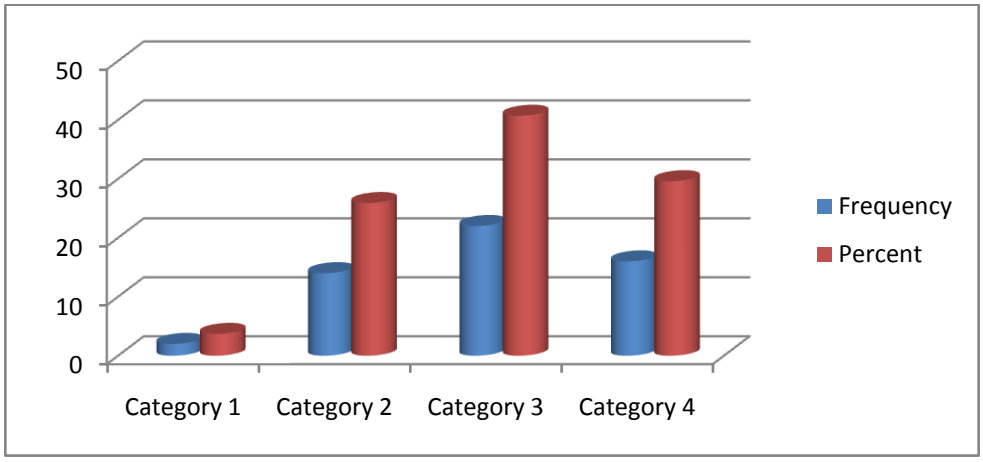
Q 24: The distribution of B2Bsystems in global TPs helps in using B2B systems

Frequency and percentage for Q24

VAR00024

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	14	25.9	25.9	29.6
	4.00	22	40.7	40.7	70.4
	5.00	16	29.6	29.6	100.0
	Total	54	100.0	100.0	

This table shows that 16 of Responses for this question answer that they very agree with question in 29.6 from all the response and it was the highest Response and just 2 answer that they are not very agree this indicate that the distribution of B2Bsystems in global TPs helps in using B2B systems and therefore increase B2B (EC) system systems.



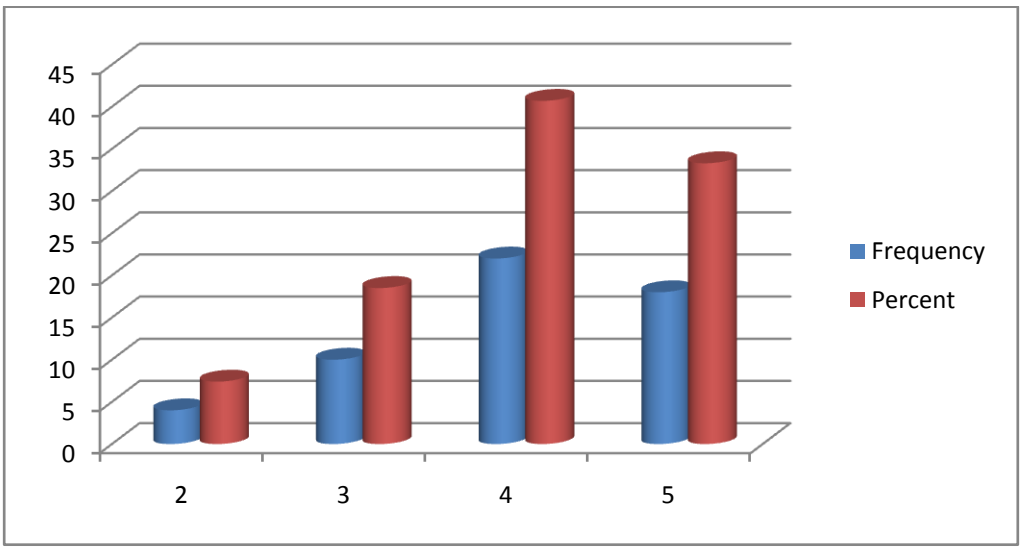
Q 25: Higher competitiveness of TPs improved the enterprise's performance

Frequency and percentage for Q25

VAR00025

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	4	7.4	7.4	7.4
	3.00	10	18.5	18.5	25.9
	4.00	22	40.7	40.7	66.7
	5.00	18	33.3	33.3	100.0
	Total	54	100.0	100.0	

This table shows that 18 of Responses for this question answer that they very agree with question in 33.3 from all the response and it was the highest Response and 4 answer that they are not very agree this indicate that the higher competitiveness of TPs improved the enterprise's performance by improving B2B (EC) systems performance



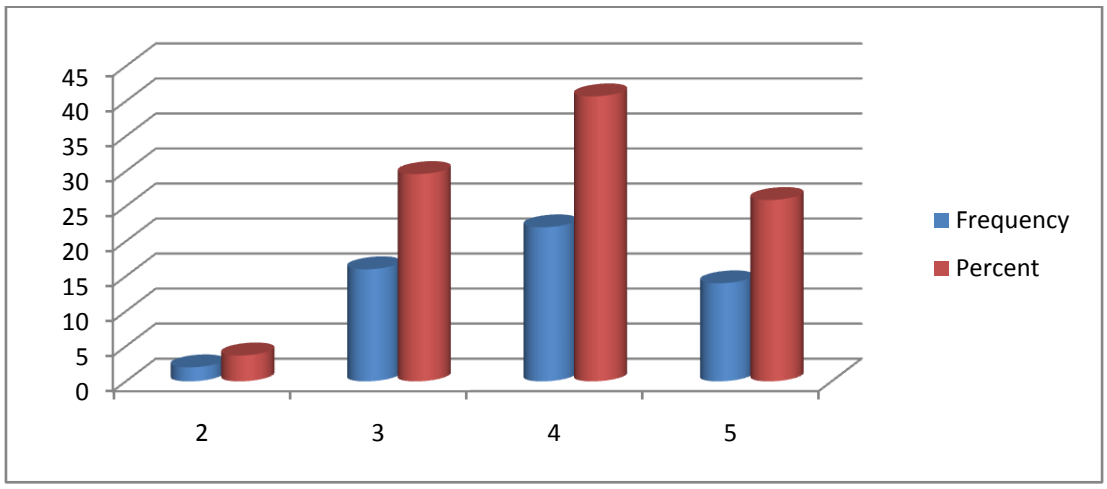
Q 26: The explanation of the mechanism of B2B systems will increase trading partners trust in your enterprise.

Frequency and percentage for Q26

VAR00026

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	3.7	3.7	3.7
	3.00	16	29.6	29.6	33.3
	4.00	22	40.7	40.7	74.1
	5.00	14	25.9	25.9	100.0
	Total	54	100.0	100.0	

This table shows that 14 of Responses for this question answer that they very agree with question in 25.9 from all the response and it was the highest Response and just 2 answer that they are not very agree this indicate that the explanation of the mechanism of B2B systems will increase trading partners trust in your enterprise by increasing B2B (EC) systems performance.



Variable Four: perceived risk

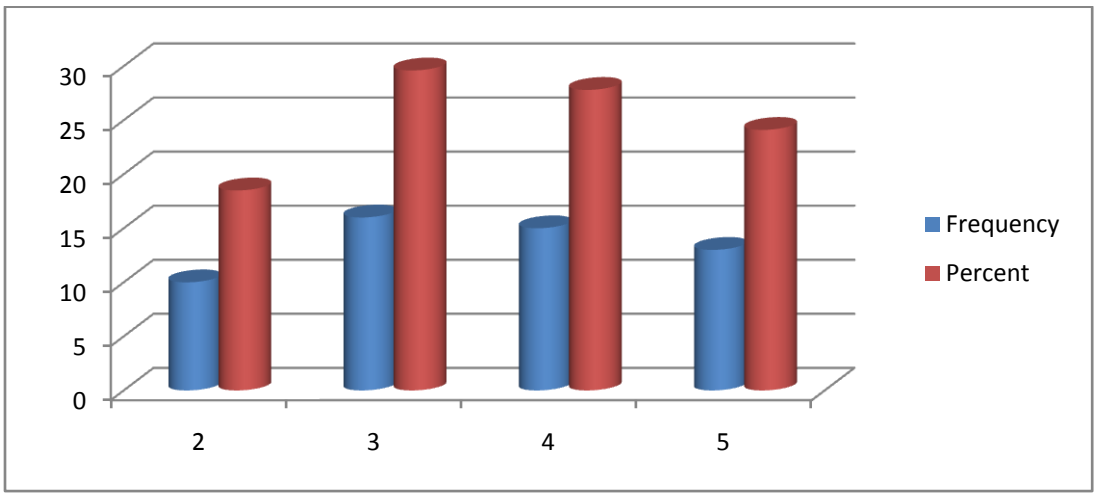
Q27: Running and maintenance of B2B systems is less costly than expected.

Frequency and percentage for Q27

VAR00027

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	10	18.5	18.5	18.5
	3.00	16	29.6	29.6	48.1
	4.00	15	27.8	27.8	75.9
	5.00	13	24.1	24.1	100.0
	Total	54	100.0	100.0	

This table shows that 13 of Responses for this question answer that they very agree with question in 24.1 from all the response and it was the highest Response and 10 answer that they are not agree this indicate that running and maintenance of B2B systems is less costly than expected but it's still a cost that the enterprise have to reduce it .



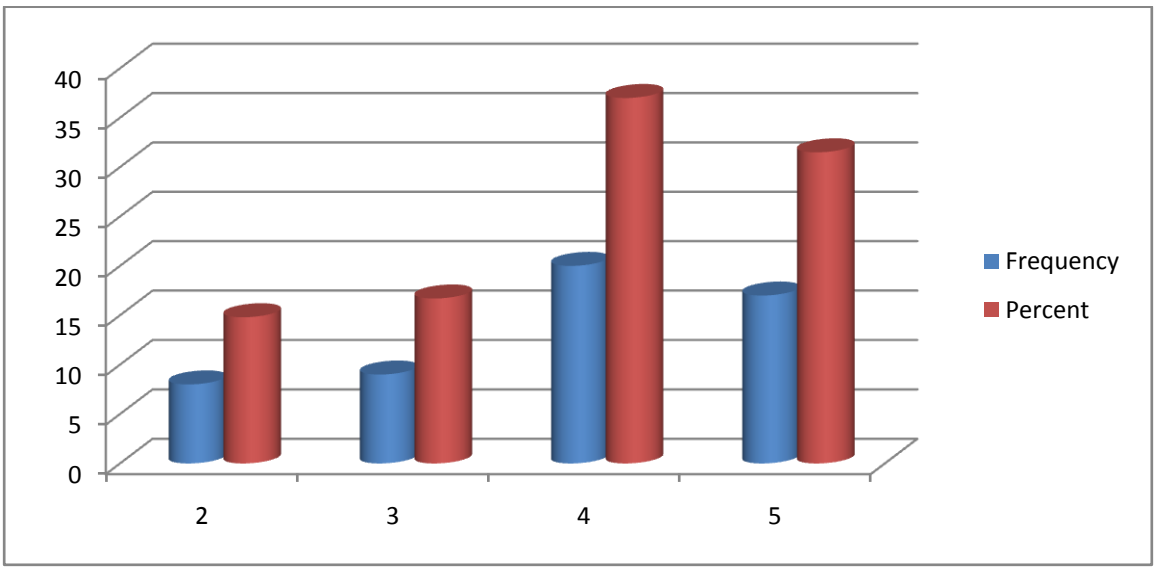
Q 28: B2B systems provide more trust of your enterprise transactions.

Frequency and percentage for Q28

VAR00028

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	8	14.8	14.8	14.8
	3.00	9	16.7	16.7	31.5
	4.00	20	37.0	37.0	68.5
	5.00	17	31.5	31.5	100.0
	Total	54	100.0	100.0	

This table shows that 17of Responses for this question answer that they very agree with question in 31.5 from all the response and it was the highest Response and 8 answer that they are not agree this indicate that B2B systems provide more trust of your enterprise transactions but the enterprise have to increase the trust more in the transactions .



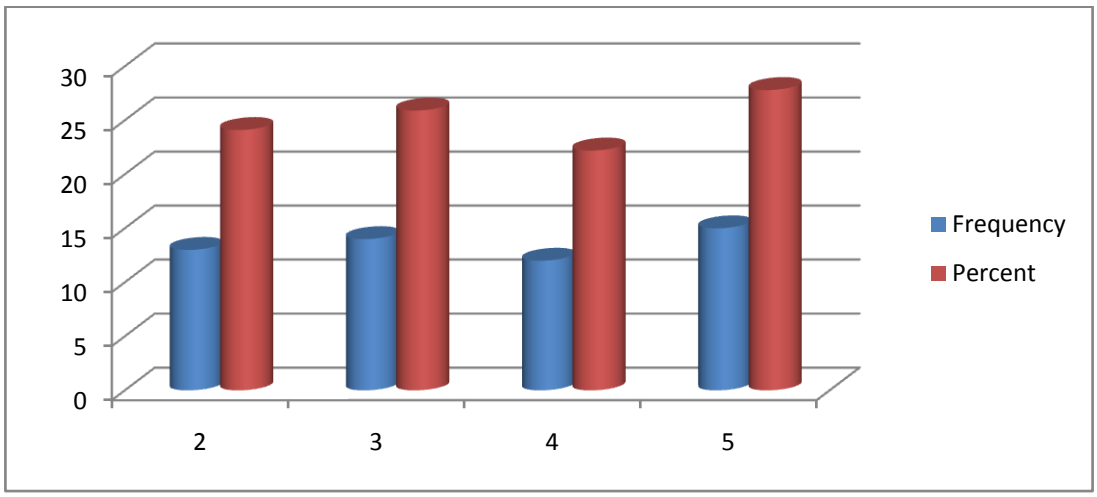
Q 29: There isn't external pressure by trading partners in the direction of using B2B systems.

Frequency and percentage for Q29

VAR00029

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	13	24.1	24.1	24.1
	3.00	14	25.9	25.9	50.0
	4.00	12	22.2	22.2	72.2
	5.00	15	27.8	27.8	100.0
	Total	54	100.0	100.0	

This table shows that 15of Responses for this question answer that they very agree with question in 27.8 from all the response and it was the highest Response and 13 answer that they are not agree this indicate that there is an external pressure by trading partners in the direction of using B2B systems and the enterprise have to avoid this because it affect B2B (EC) systems performance.



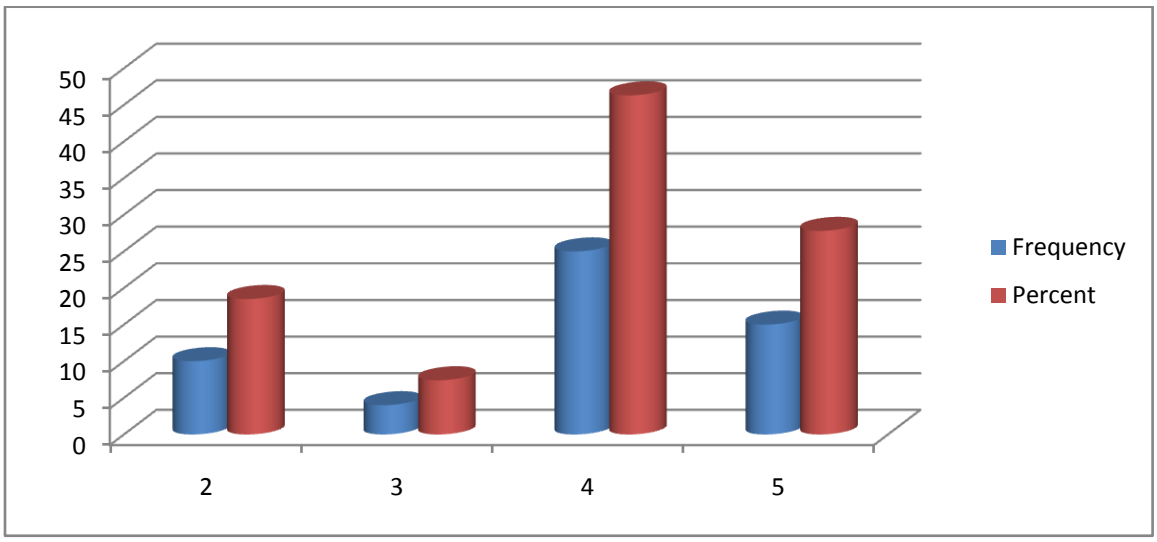
Q 30: B2B systems reduce errors in electronic transaction in your enterprise.

Frequency and percentage for Q30

VAR00030

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	10	18.5	18.5	18.5
	3.00	4	7.4	7.4	25.9
	4.00	25	46.3	46.3	72.2
	5.00	15	27.8	27.8	100.0
	Total	54	100.0	100.0	

This table shows that 15 of Responses for this question answer that they very agree with question in 27.8 from all the response and it was the highest Response and 10 answer that they are not agree this indicate that B2B systems can't reduce errors enough in electronic transaction in your enterprise so the enterprises need to support the system to be effective enough and reduce the errors.



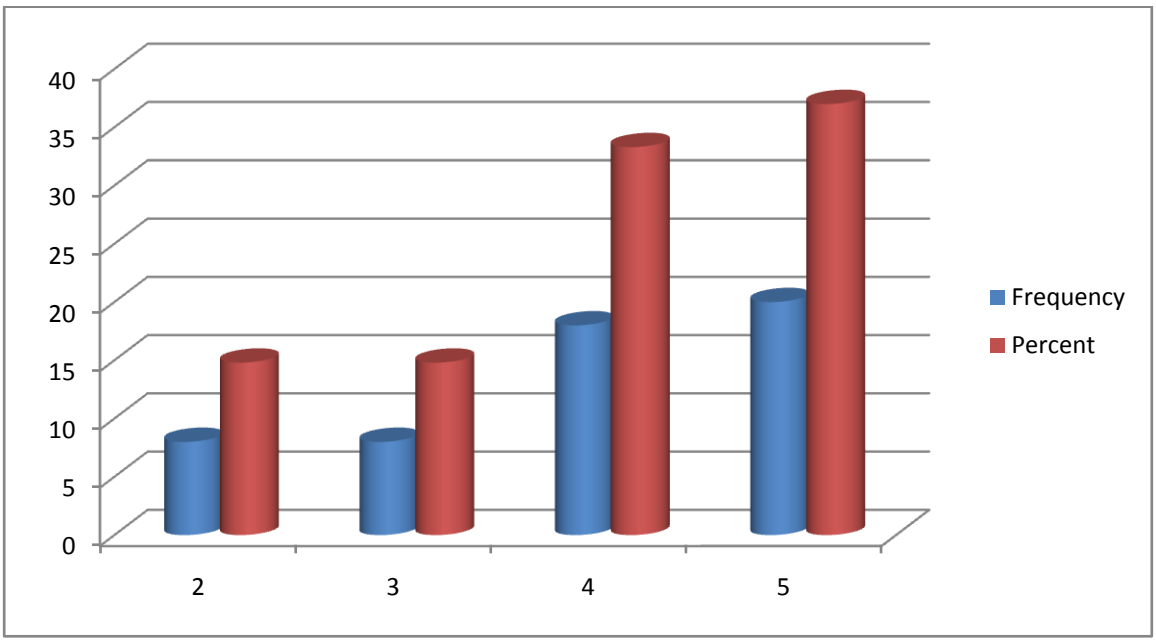
Q 31: Your enterprise trust in using B2B systems

Frequency and percentage for Q31

VAR00031

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	8	14.8	14.8	14.8
	3.00	8	14.8	14.8	29.6
	4.00	18	33.3	33.3	63.0
	5.00	20	37.0	37.0	100.0
	Total	54	100.0	100.0	

This table shows that 20 of Responses for this question answer that they very agree with question in 37.0 from all the response and it was the highest Response and 8 answer that they are not agree, this indicate that your enterprise trust in using B2B systems and its affect in B2B (EC) systems performance and its increase by increasing the trust.



Dependent variable

B2B (EC) systems performance

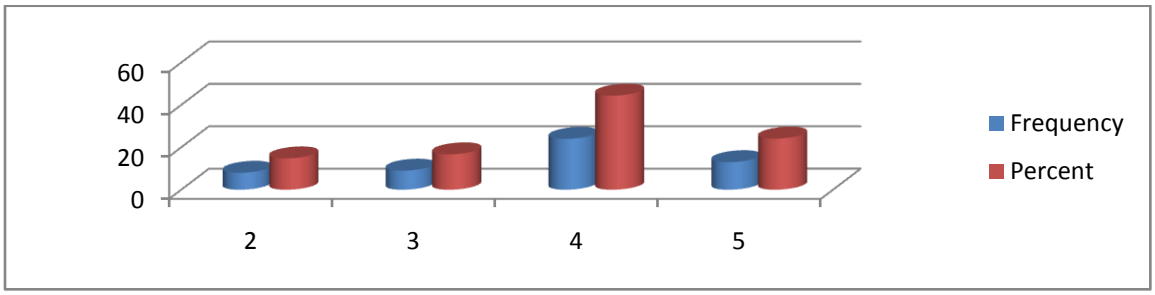
Q 32: B2B systems performance enough to improve performance in your enterprise

Frequency and percentage for Q32

VAR00032

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	8	14.8	14.8	14.8
	3.00	9	16.7	16.7	31.5
	4.00	24	44.4	44.4	75.9
	5.00	13	24.1	24.1	100.0
	Total	54	100.0	100.0	

This table shows that 24 of Responses for this question answer that they agree with question in 44.4 from all the response and it was the highest Response and 8 answer that they are not agree, this indicate that B2B systems performance enough to improve performance in your enterprise .



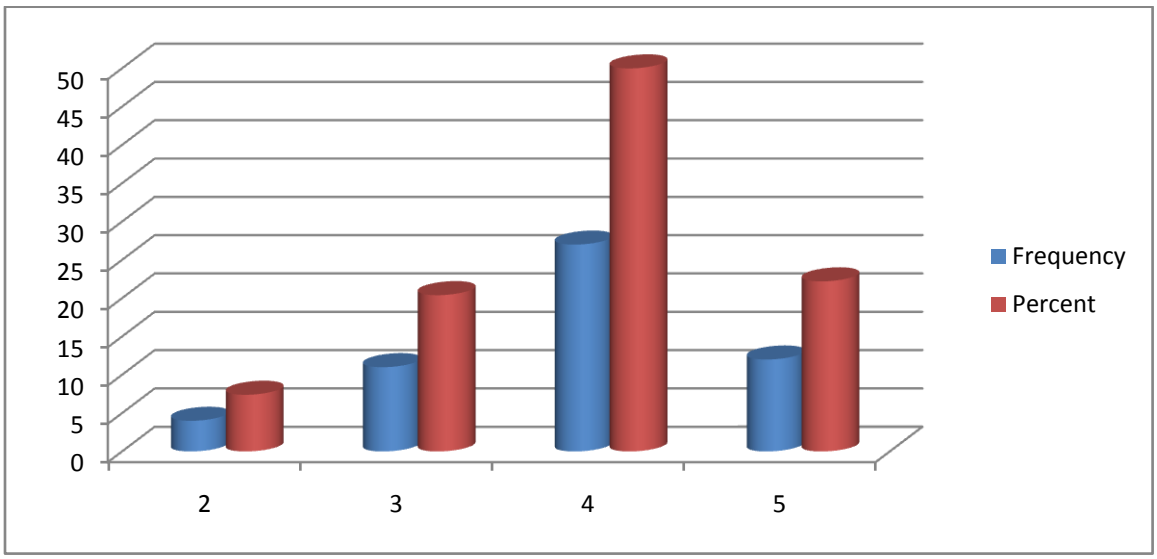
Q 33: B2B systems performance enough to improve the productivity in your enterprise

Frequency and percentage for Q33

VAR00033

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	4	7.4	7.4	7.4
	3.00	11	20.4	20.4	27.8
	4.00	27	50.0	50.0	77.8
	5.00	12	22.2	22.2	100.0
	Total	54	100.0	100.0	

This table shows that 27 of Responses for this question answer that they agree with question in 50.0 from all the response and it was the highest Response and 4 answer that they are not agree, this indicate that B2B systems performance enough to improve the productivity in your enterprise.



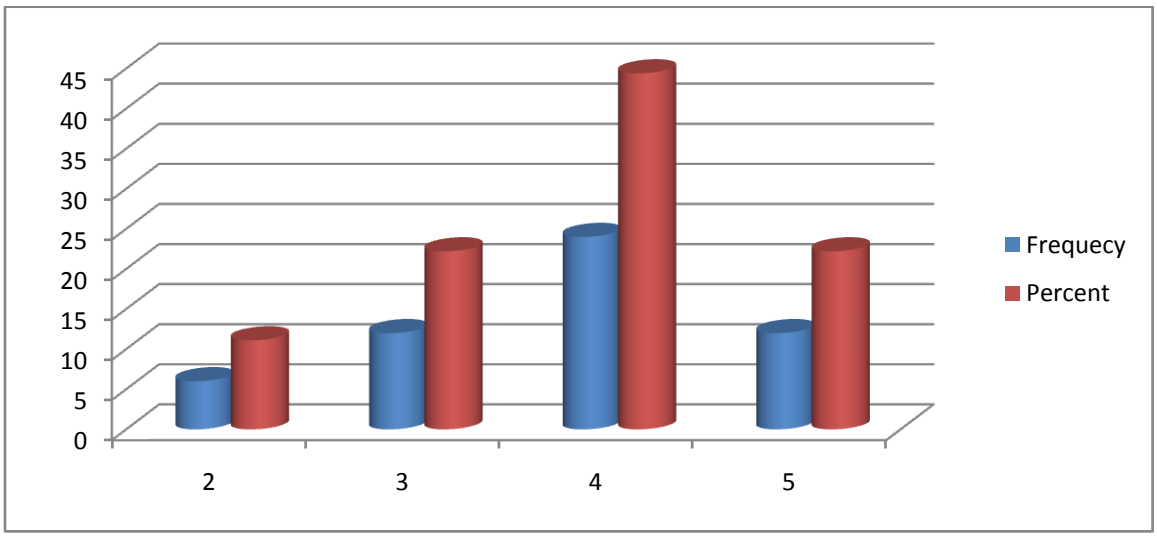
Q 34: B2B systems performance enough to increase sales in your enterprise

Frequency and percentage for Q34

VAR00034

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	6	11.1	11.1	11.1
	3.00	12	22.2	22.2	33.3
	4.00	24	44.4	44.4	77.8
	5.00	12	22.2	22.2	100.0
	Total	54	100.0	100.0	

This table shows that 24 of Responses for this question answer that they agree with question in 44.4 from all the response and it was the highest Response and 6 answer that they are not agree, this indicate that B2B systems performance enough to increase sales in your enterprise



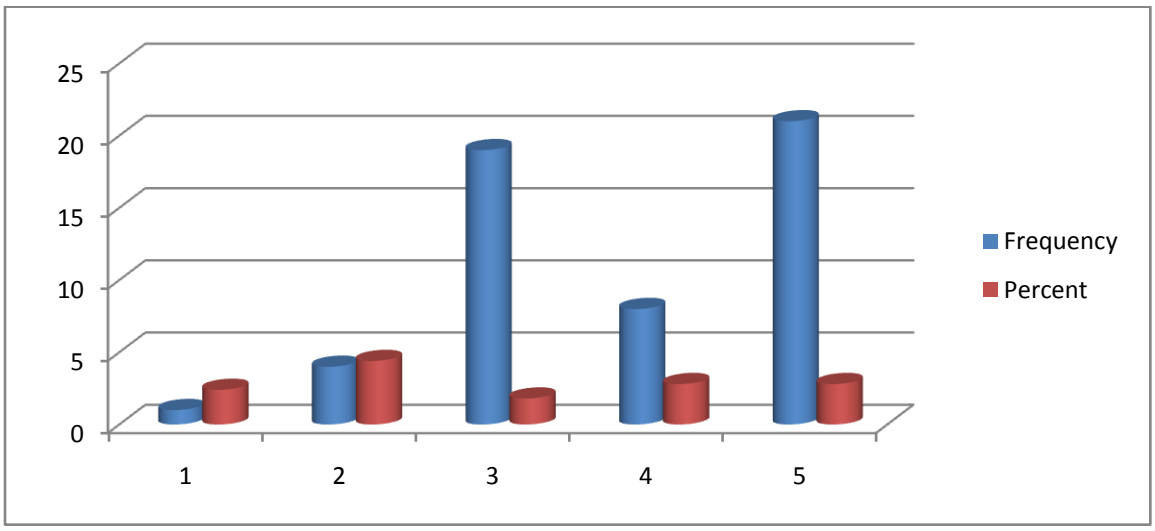
Q 35: Your enterprise revenue activity is performed on-line

Frequency and percentage for Q35

VAR00035

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	1.9	1.9	1.9
	2.00	4	7.4	7.5	9.4
	3.00	19	35.2	35.8	45.3
	4.00	21	38.9	39.6	84.9
	5.00	8	14.8	15.1	100.0
	Total	53	98.1	100.0	
Missing	System	1	1.9		
Total		54	100.0		

This table shows that 21 of Responses for this question answer that they agree with question in 38.9 from all the response and it was the highest Response and 1 answer that they are not very agree, this indicate that your enterprise revenue activity is performed on-line and affect B2B (EC) systems performance



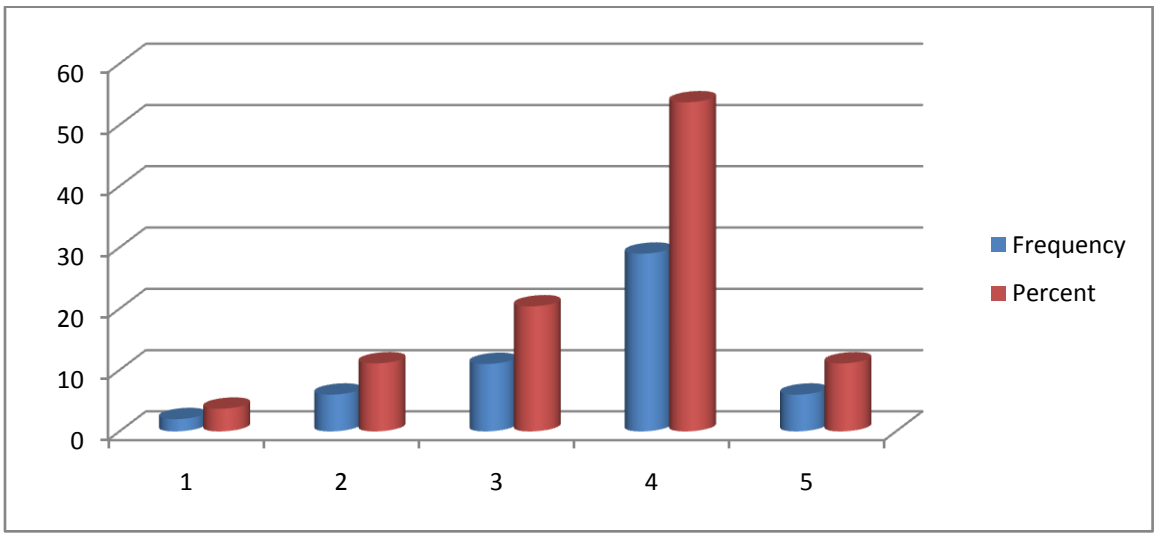
Q 36: B2B systems performance enough to increase the profit in your enterprise

Frequency and percentage for Q36

VAR00036

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	3.7	3.7	3.7
	2.00	6	11.1	11.1	14.8
	3.00	11	20.4	20.4	35.2
	4.00	29	53.7	53.7	88.9
	5.00	6	11.1	11.1	100.0
	Total	54	100.0	100.0	

This table shows that 29 of Responses for this question answer that they agree with question in 53.7 from all the response and it was the highest Response and 2 answer that they are not very agree, this indicate that B2B systems performance enough to increase the profit in your enterprise and affect B2B (EC) systems performance.



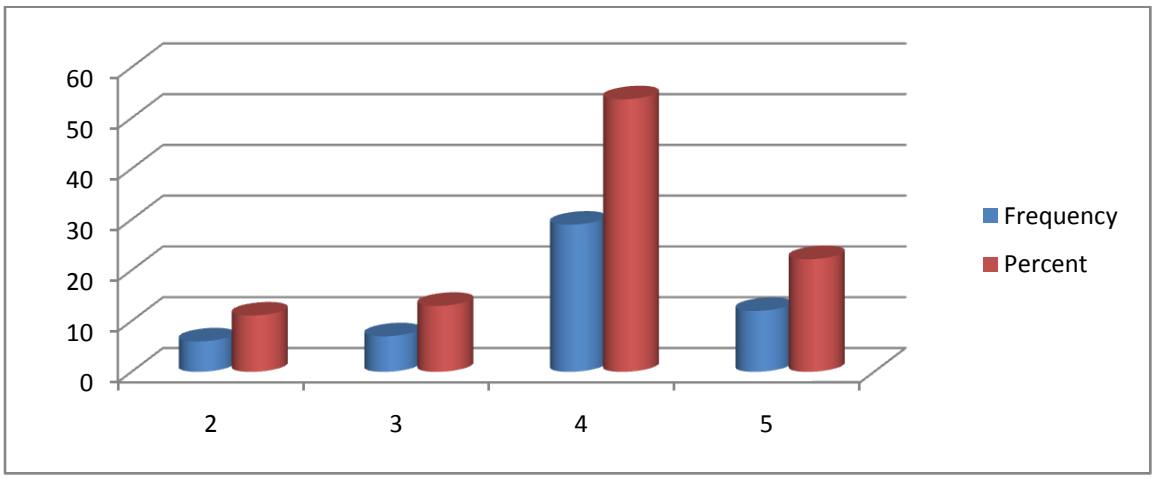
Q 37: B2B systems performance enough to reduce inventory costs in your enterprise

Frequency and percentage for Q37

VAR00037

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	6	11.1	11.1	11.1
	3.00	7	13.0	13.0	24.1
	4.00	29	53.7	53.7	77.8
	5.00	12	22.2	22.2	100.0
	Total	54	100.0	100.0	

This table shows that 29 of Responses for this question answer that they agree with question in 53.7 from all the response and it was the highest Response and 6 answer that they are not agree, this indicate that B2B systems performance enough to reduce inventory costs in your enterprise and affect B2B (EC) system performance .



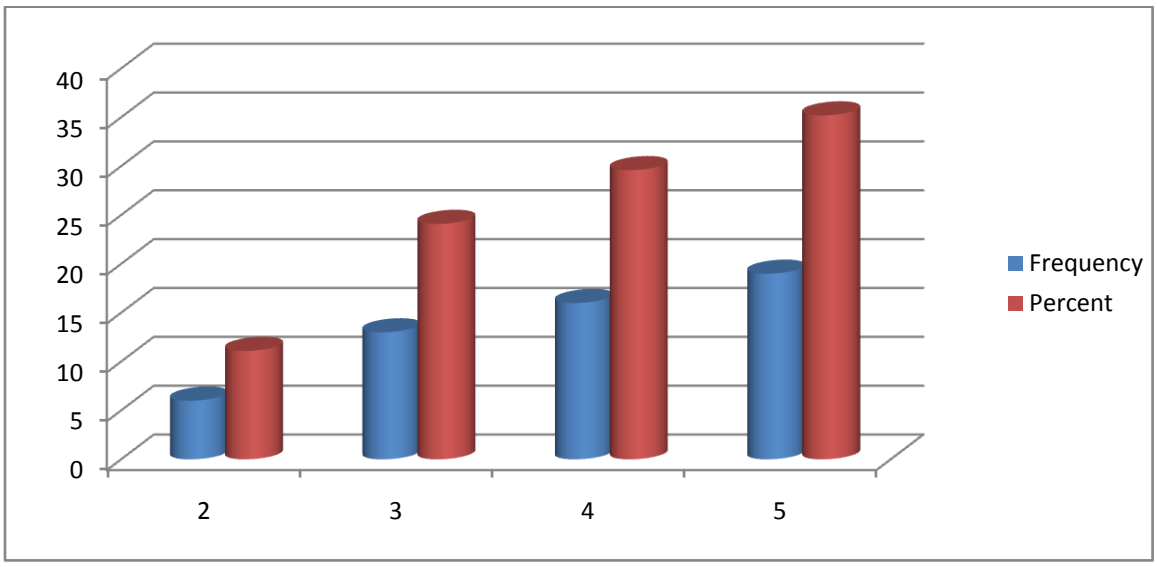
Q 38: A B2B system has reduced cost of production & labor in your enterprise.

Frequency and percentage for Q38

VAR00038

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	6	11.1	11.1	11.1
	3.00	13	24.1	24.1	35.2
	4.00	16	29.6	29.6	64.8
	5.00	19	35.2	35.2	100.0
	Total	54	100.0	100.0	

This table shows that 19 of Responses for this question answer that they agree with question in 35.2 from all the response and it was the highest Response and 6 answer that they are not agree, this indicate that B2B system has reduced cost of production & labor in your enterprise.



Q 39: B2B systems performance enough to reduce the frequency of mistakes in the receipt and translation of TPs and suppliers orders in your enterprise

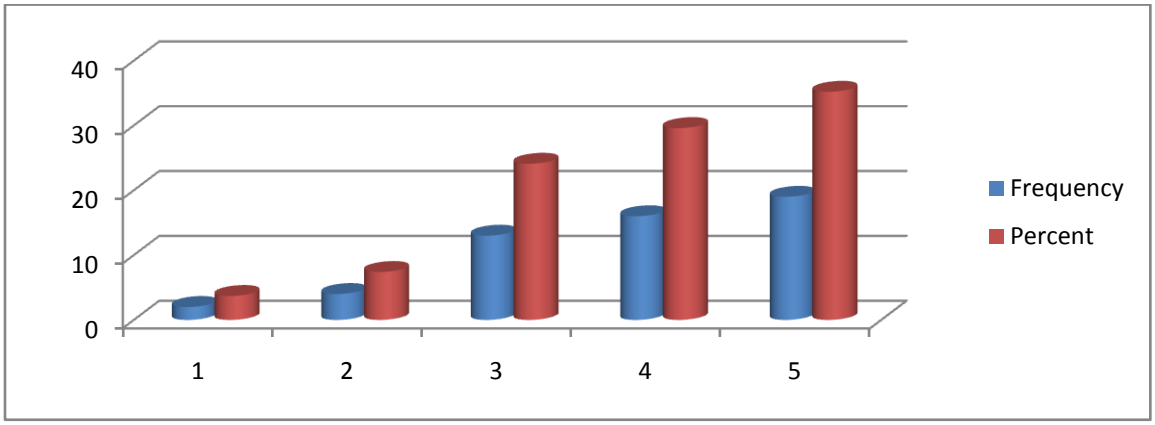
Frequency and percentage for Q39

VAR00039

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	3.7	3.7	3.7
	2.00	4	7.4	7.4	11.1
	3.00	13	24.1	24.1	35.2
	4.00	16	29.6	29.6	64.8
	5.00	19	35.2	35.2	100.0
	Total	54	100.0	100.0	

This table shows that 19 of Responses for this question answer that they agree with question in 35.2 from all the response and it was the highest Response and 2 answer that they are not agree, this indicate that B2B systems performance enough to reduce the

frequency of mistakes in the receipt and translation of TPs and suppliers orders in your enterprise and affect B2B (EC) systems performance.



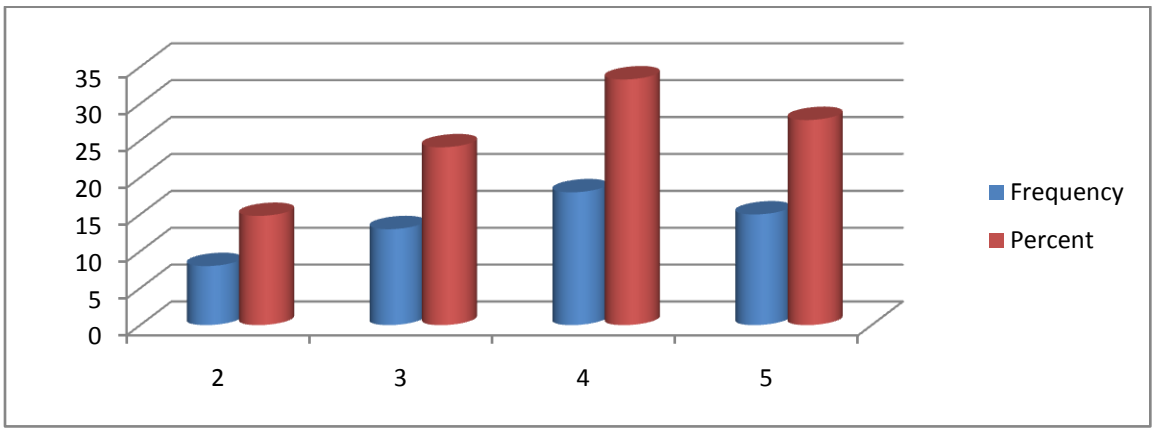
Q 40: B2B systems performance enough to improve your enterprise on-time delivery to and from TPs and suppliers.

Frequency and percentage for Q40

VAR00040

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	8	14.8	14.8	14.8
	3.00	13	24.1	24.1	38.9
	4.00	18	33.3	33.3	72.2
	5.00	15	27.8	27.8	100.0
	Total	54	100.0	100.0	

This table shows that 18 of Responses for this question answer that they agree with question in 33.3 from all the response and it was the highest Response and 8 answer that they are not agree, this indicate that B2B systems performance enough to improve your enterprise on-time delivery to and from TPs and suppliers and affect B2B (EC) systems performance.



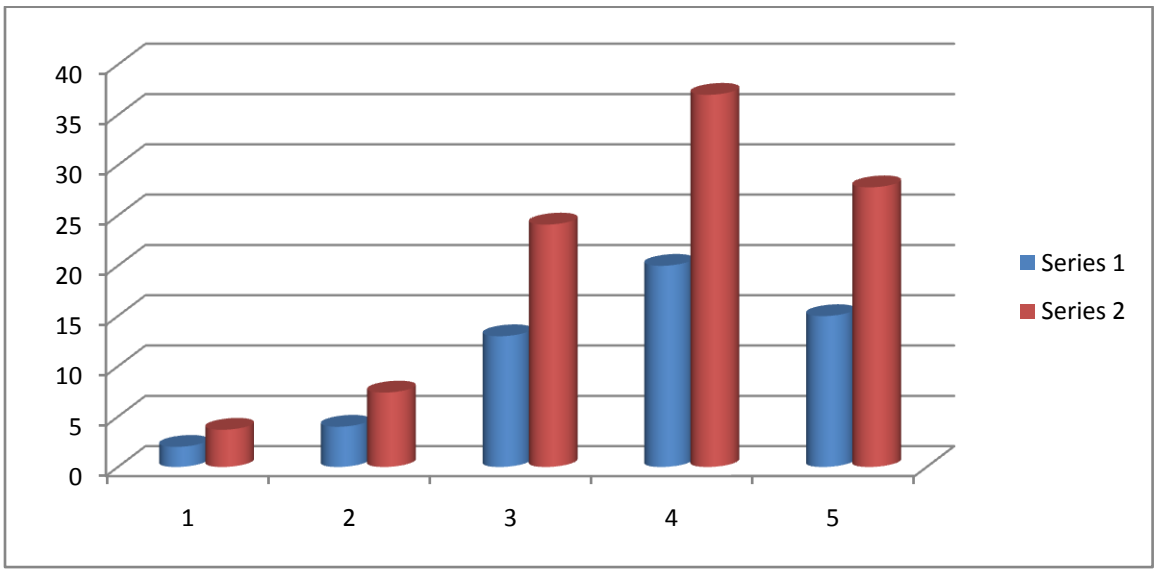
Q 41: B2B systems has improved inventory management and control in your enterprise

Frequency and percentage for Q41

VAR00041

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	3.7	3.7	3.7
	2.00	4	7.4	7.4	11.1
	3.00	13	24.1	24.1	35.2
	4.00	20	37.0	37.0	72.2
	5.00	15	27.8	27.8	100.0
	Total	54	100.0	100.0	

This table shows that 20 of Responses for this question answer that they agree with question in 37.0 from all the response and it was the highest Response and 2 answer that they are not very agree, this indicate that B2B systems has improved inventory management and control in your enterprise and affect B2B (EC) systems performance.



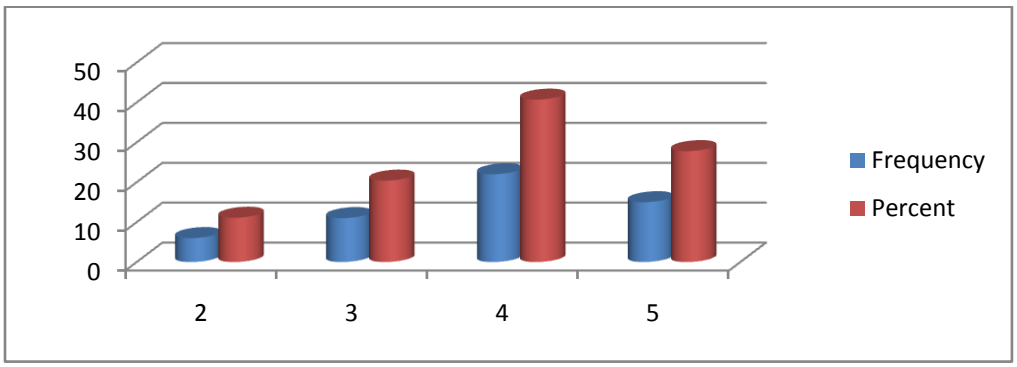
Q42: B2B systems performance enough to improve procurement business process in your enterprise

Frequency and percentage for Q42

VAR00042

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	6	11.1	11.1	11.1
	3.00	11	20.4	20.4	31.5
	4.00	22	40.7	40.7	72.2
	5.00	15	27.8	27.8	100.0
	Total	54	100.0	100.0	

This table shows that 22 of Response for this question answer that they agree with question in 40.7 from all the response and it was the highest Response and 6 answer that they are not agree, this indicate that B2B systems performance enough to improve procurement business process in your enterprise and affect B2B (EC) systems performance.



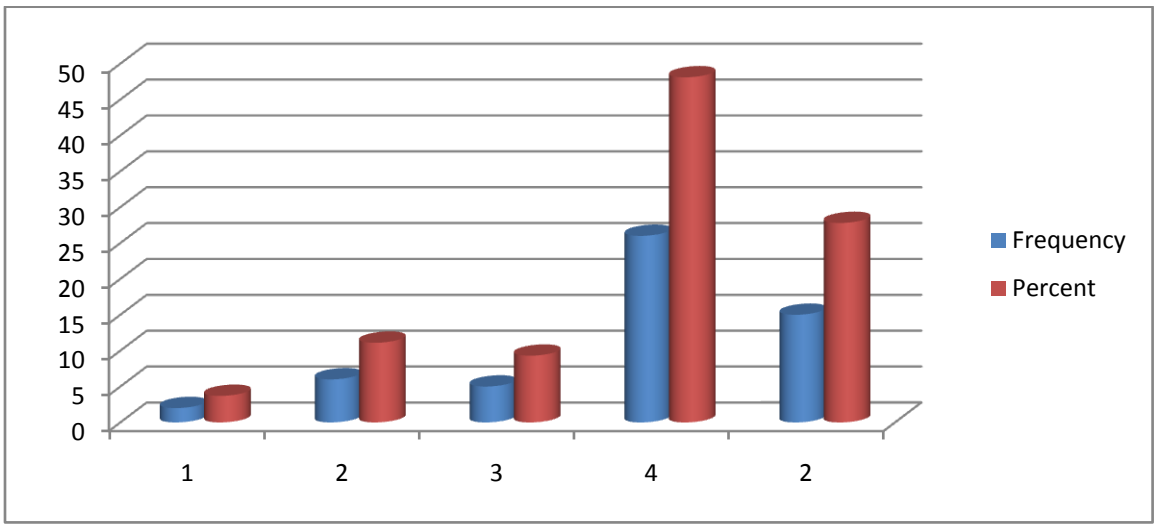
Q43: B2B systems performance enough to improve work-in-process (WIP) in your enterprise

Frequency and percentage for Q43

VAR00043

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	3.7	3.7	3.7
	2.00	6	11.1	11.1	14.8
	3.00	5	9.3	9.3	24.1
	4.00	26	48.1	48.1	72.2
	5.00	15	27.8	27.8	100.0
	Total	54	100.0	100.0	

This table shows that 26 of Responses for this question answer that they agree with question in 48.1 from all the response and it was the highest Response and 2 answer that they are not very agree, this indicate that B2B systems performance enough to improve work-in-process (WIP) in your enterprise and affect B2B (EC) systems performance.


50
45
40
35
30
25
20
15
10
5
0
1
2
3
4
2
Frequency
Percent

Appendix –H- the list of enterprises that included in the sample

بنك المعلومات الصناعي

قوائم المنشأت الصناعية

اسم المستخدم : admin التاريخ : 2011/07/30

تنازلي

رقم المنشأة	اسم المنشأة		هاتف	فاكس	رمز وصندوق البريد	البريد الالكتروني	الموقع الالكتروني
15938	**الشركة الكهرباء الوطنية المساهمة العامة**	**المصنع:**	6-5858615	6-5818336	2310 جبل عمان 11181	info@nepco.com.jo	WWW.NEPCO.COM.JO
		الادارة:	6-5858615	6-5818336	2310 جبل عمان 11181	info@nepco.com.jo	WWW.NEPCO.COM.JO
	موقع المصنع: العاصمة/وادي السير/وادي السير						
	موقع الإدارة : العاصمة/وادي السير/وادي السير						
	رأس المال العامل: 230000000.000						
2979	**شركة مجمع الشرق الاوسط للصناعات الهندسيةوالالكترونية**	**المصنع:**	6-4020383	6-4020385	146 مدينة عبدالله الثاني 11512	info@mecgroup.jo	
		الادارة:	6-5827831	6-5864210	707 وادي السير 11810	info@mecgroup.jo	
	موقع المصنع: العاصمة/سحاب/مدينة عبدالله الثاني						
	موقع الإدارة : العاصمة/وادي السير/وادي السير						
	150000000.000						
70	**شركة الكهرباءالاردنية م.ع.م**	**المصنع:**	6-5503600	6-5503619	618 عمان الوسط 11118	jepco@go.com.jo	www.jepco.com.jo

الادارة: 6-5503600 6-5503618 618 عمان الوسط 11118 jepco@go.com.jo www.jepco.com.jo

مـــوقـــــع المـــصنـــــع: العاصمة/الجامعة/تلاع العلي وخلدا

مـــوقـــــــــع الإدارة : العاصمة/الجامعة/تلاع العلي وخلدا

100000000.000

4220 **عاليه للخطوط الجوية الملكية الاردنية -** **المصنع:** 6-5607300 6-5679243 302 عمان الوسط 11118 hdq@rja.com.jo www.rja.com.jo

الادارة: 6-5607300 6-5679243 302 عمان الوسط 11118 hdq@rja.com.jo www.rja.com.jo

مـــوقـــــع المـــصنـــــع: العاصمة/قصبة عمان/العبدلي

مـــوقـــــــــع الإدارة : العاصمة/قصبة عمان/العبدلي

22080000.000

21639 **شركة مياه الديسي** **المصنع:** 6-5534771 6-5534773 17318 العبدلي/قصر العدل 11190 eshawareb@gamaenergy.com

الادارة: 79-6699777 6-5534773 17318 العبدلي/قصر العدل 11190 eshawareb@gamaenergy.com

مـــوقـــــع المـــصنـــــع: العاصمة/قصبة عمان/العبدلي

مـــوقـــــــــع الإدارة : العاصمة/قصبة عمان/العبدلي

رأس المـــــال العـــــامل: 59076466.000

9933 **الشركة المتحده لصناعة الحديد والصلب** **المصنع:** 6-4460223 6-4460578 125 الجيزه 16010 INFO@MGC-STEEL.COM www.manaseergroup.com

الادارة: 6-4460577 6-4460578 125 الجيزه 16010 INFO@MGC-STEEL.COM www.manaseergroup.com

مـــوقـــــع المـــصنـــــع: العاصمة/الجيزة/الجيزة

مـــوقـــــــــع الإدارة : العاصمة/الجيزة/الجيزة

32165176.000

100 **شركة رم علاء الدين للصناعات الهندسيه** **المصنع:** 6-4022929 6-4021979 20 مدينة عبدالله الثاني 11512 tariqr@rum_aladdin.com www.rum-aladdin.com

الادارة: 6-4022929 6-4021979 20 مدينة عبدالله الثاني 11512 tariqr@rum_aladdin.com www.rum-aladdin.com

مـــوقـــــع المـــصنـــــع: العاصمة/سحاب/مدينة عبدالله الثاني

مـــوقـــــــــع الإدارة : العاصمة/سحاب/مدينة عبدالله الثاني

542726.000

12830 **شركة توليد الكهرباء المركزيه** **المصنع:** 6-5340008 6-5340800 2564 تلاع العلي 11953 cegco@cegco.com.jo www.cegco.com.jo

الادارة: 6-5340008 6-5340800 2564 تلاع العلي 11953 cegco@cegco.com.jo www.cegco.com.jo

مـــوقـــــع المـــصنـــــع: العاصمة/الجامعة/تلاع العلي وخلدا

مـــوقـــــــــع الإدارة : العاصمة/الجامعة/تلاع العلي وخلدا

30000000.000

2541 **شركة بترا للصناعات الهندسية** **المصنع:** 6-4050940 6-4050941 141351 بيادر وادي السير 11814 omar@go.com.jo www.petra-eng.com

الادارة: 6-4050227 6-4051074 141351 بيادر وادي السير 11814 omar@go.com.jo www.petra-eng.com

مـــوقـــــع المـــصنـــــع: العاصمة/الموقر/الموقر

مـــوقـــــــــع الإدارة : العاصمة/الموقر/الموقر

22000000.000

9943 **شركة الباطون الجاهز والتوريدات الانشائية** **المصنع:** 6-5858110 6-5818177 851602 الصويفيه 11185 rmccs@go.com.jo

الادارة: 6-5858109 6-5812410 851602 الصويفيه 11185 rmccs@go.com.jo

مـــوقـــــع المـــصنـــــع: العاصمة/وادي السير/وادي السير

مـــوقـــــــــع الإدارة : العاصمة/وادي السير/وادي السير

25000000.000

1449 **شركة هير الشرق الاوسط للاجهزة** **المصنع:** 6-4050420 6-4050525 138 تلاع العلي 11953 hma-lgr@mecgroup.jo

الادارة: 6-5852884 6-5813828 138 تلاع العلي 11953 hma-lgr@mecgroup.jo

مـــوقـــــع المـــصنـــــع: العاصمة/الجامعة/تلاع العلي وخلدا

مـــوقـــــــــع الإدارة : العاصمة/الجامعة/تلاع العلي وخلدا

25000000.000

الاردن **المصنع:** 6-4293202 6-4293200 3099 جبل عمان 11181 marwan.abualsaad@aes.com

الادارة: 6-4293200 6-4293200 3099 جبل عمان 11181 marwan.abualsaad@aes.com

مـــوقـــــع المـــصنـــــع: العاصمة/سحاب/المناخر

مـــوقـــــــــع الإدارة : العاصمة/سحاب/المناخر

21294391.000

شركة حديد الاردن المساهمه العامه المحدوده

9776 **المصنع:** 6-911870 6-911871 35165 فندق الاردن 11180

الادارة: 6-4619380 6-4619384 35165 فندق الاردن 11180

مـــوقـــــع المـــصنـــــع: العاصمة/قصبة عمان/المدينة

مـــوقـــــــــع الإدارة : الزرقاء/الهاشمية/الهاشمية

5000000.000

18833 **شركة اياس لصناعة السيارات** **المصنع:** 6-5548934 6-5548925 928577 العبدلي/قصر العدل 11190 AYASSMOTORS@YAHOO.COM www.ayassmotors.com

الادارة: 6-5548935 6-5517310 928577 العبدلي/قصر العدل 11190 AYASSMOTORS@YAHOO.COM www.ayassmotors.com

مـــوقـــــع المـــصنـــــع: العاصمة/الجامعة/تلاع العلي وخلدا

مـــوقـــــــــع الإدارة : العاصمة/الجامعة/تلاع العلي وخلدا

2200000.000

2074 **شركة الباهاوس للمباني الجاهزة والمنشات المعدنية** **المصنع:** 6-5300600 6-5300624 3449 جبل عمان 11181 elba@go.com.jo www.elbahouse.com

الادارة: 6-5300625 6-5300624 3449 جبل عمان 11181 elba@go.com.jo www.elbahouse.com

مـــوقـــــع المـــصنـــــع: العاصمة/الجامعة/صويلح

مـــوقـــــــــع الإدارة : العاصمة/الجامعة/صويلح

17660527.000

4137 **شركة الصناعات الهندسيةالعربية م.ع.م** **المصنع:** 2-295530 2-295188 1 م. الحسن الصناعية 21467

الادارة: 6-5819101 6-5810302

مـــوقـــــع المـــصنـــــع: العاصمة/وادي السير/وادي السير

مـــوقـــــــــع الإدارة : اربد/الرمثا/مدينة الحسن الصناعية

201132.000

17020 **شركة النجم الوطني للصناعات الالكترونيةوالكهربائية ذ.م.م** **المصنع:** 6-4022824 6-4023123 166 مدينة عبدالله الثاني 11512 radi@nseec.com+naelobaid@nseec.com WWW.NSEEC.COM

الادارة: 6-4022825 6-4023123 166 مدينة عبدالله الثاني 11512 radi@nseec.com+naelobaid@nseec.com WWW.NSEEC.COM

مـــوقـــــع المـــصنـــــع: العاصمة/سحاب/مدينة عبدالله الثاني

مـــوقـــــــــع الإدارة : العاصمة/سحاب/مدينة عبدالله الثاني

10000000.000

ياء **المصنع:** 6-5331330 6-5341213 830878 زهران 11183 lubna@edco.jo

الادارة: 6-5331330 6-5341213 830878 زهران 11183 lubna@edco.jo

مـــوقـــــع المـــصنـــــع: العاصمة/الجامعة/تلاع العلي وخلدا

مـــوقـــــــــع الإدارة : العاصمة/الجامعة/تلاع العلي وخلدا

10000000.000

21329 **شركة الفاتحون العرب للصناعة والتجارة مساهمة عامة**

المصنع: 6-5540255 6-5540253 927588 العبدلي/قصر العدل 11190 info@fatihounarab.com

الادارة: 6-5540255 6-5540253 927588 العبدلي/قصر العدل 11190 info@fatihounarab.com

مـــوقـــــع المـــصنـــــع: العاصمة/الجامعة/تلاع العلي وخلدا

مـــوقـــــــــع الإدارة : العاصمة/الجامعة/تلاع العلي وخلدا

10000000.000

21707 **شركة المجمع الوطني المتكامل للصناعات**

المصنع: 6-4050008 6-4050007 144402 بيادر وادي السير 11814 info@niic.jo www.niic.jo

الادارة: 6-5561954 6-5561967 144402 بيادر وادي السير 11814 info@niic.jo www.niic.jo

مـــوقـــــع المـــصنـــــع: العاصمة/وادي السير/وادي السير

مـــوقـــــــــع الإدارة : العاصمة/وادي السير/وادي السير

رأس المـــــال العـــــامل: 10000000.000

شاعة المواسير المعدنية

المصنع: 6-4022137 6-4022890 13 مدينة عبدالله الثاني 11512 info@asp-jo.com m

الادارة: 6-4022137 6-4022890 13 مدينة عبدالله الثاني 11512 info@asp-jo.com m

مـــوقـــــع المـــصنـــــع: العاصمة/سحاب/مدينة عبدالله الثاني

مـــوقـــــــــع الإدارة : العاصمة/سحاب/مدينة عبدالله الثاني

رأس المـــــال العـــــامل: 8500000.000

9861 **الشركة الوطنية لصناعات الالمنيوم** **المصنع:** 6-4460570 6-4460566 712 وادي السير 11810 nalco@zain.jo www.nalco.com.jo

الادارة: 6-5652971 6-5652973 712 وادي السير 11810 nalco@zain.jo www.nalco.com.jo

موقع المصنع: العاصمة/الجيزة/الجيزة

موقع الإدارة : العاصمة/قصبة عمان/العبدلي

9000000.000

10612 **الشركة الحديثة لصناعة الالمنيوم** **المصنع:** 6-4403001 6-4403086 154 عمان الوسط 11118 MODAL@NUQULGROUP.COM www.modal.com.jo

الادارة: 6-4652688 6-4645669 154 عمان الوسط 11118 MODAL@NUQULGROUP.COM www.modal.com.jo

موقع المصنع: العاصمة/الجيزة/الجيزة

موقع الإدارة : العاصمة/قصبة عمان/زهران

9000000.000

1760 **الشركة العربية للصناعات الكهربائية** **المصنع:** 6-4050550 6-4050492 3 مدينة عبدالله الثاني 11512 h.kysi@aei-jo.com www.aei-jo.com

الادارة: 6-5859125 6-5826124 3 مدينة عبدالله الثاني 11512 h.kysi@aei-jo.com www.aei-jo.com

موقع المصنع: العاصمة/الموقر/النقبرة

موقع الإدارة : العاصمة/وادي السير/وادي السير

6000000.000

13042 **الشركة العامه لصناعه الحديد التخصصي** **المصنع:** 6-4050737 6-4050736 446 عمان الوسط 11118 info@gassco.jo www.gassco.jo

الادارة: 6-4642026 6-4675602 446 عمان الوسط 11118 info@gassco.jo www.gassco.jo

موقع المصنع: العاصمة/الموقر/النقبرة

موقع الإدارة : العاصمة/قصبة عمان/زهران

6000000.000

4241 **الشركة السلفوكيماويات الاردنية م.ع.م** **المصنع:** 5-3650434 5-3651433 811643 مركز التبادل الدولي 11110 JSCCO@INDEX.COM.JO

الادارة: 5-3653435 5-3651433 1491 الزرقاء المركزي 13110 JSCCO@INDEX.COM.JO

مـــوقـــــع المـــصنـــــع: العاصمة/ماركا/ماركا

مـــوقـــــــــع الإدارة : العاصمة/ماركا/ماركا

4000000.000

ساعات الالكترونية والكهربائية - **المصنع:** 6-4024296

الادارة: 6-4628228

مـــوقـــــع المـــصنـــــع: العاصمة/سحاب/مدينة عبدالله الثاني

مـــوقـــــــــع الإدارة : العاصمة/سحاب/مدينة عبدالله الثاني

5000000.000

14634 **الاردن لصناعة وتطوير الطائرات -** **المصنع:** 6-5560551 6-5560514 815570 فندق الاردن 11180 info@jai.jo www.jai.jo

الادارة: 6-4452300 6-4452900 815570 فندق الاردن 11180 info@jai.jo www.jai.jo

مـــوقـــــع المـــصنـــــع: العاصمة/الجيزة/الجيزة

مـــوقـــــــــع الإدارة : العاصمة/قصبة عمان/العبدلي

1000000.000

صناعات المعدنيةمحدودةالمسؤولية **المصنع:** 6-4161360 6-4161516 20717 عمان الوسط 11118 mashrek@mashreksteel.com m

الادارة: 6-4621212 6-4622499 20717 عمان الوسط 11118 mashrek@mashreksteel.com m

مـــوقـــــع المـــصنـــــع: العاصمة/القويسمة/القويسمة والجويدة

مـــوقـــــــــع الإدارة : العاصمة/قصبة عمان/زهران

4500000.000

لانشاءات		**المصنع:**	6-4711330	6-4711330	926638 مركز التبادل الدولي 11110	info@elconcorde.com		m
		الادارة:	6-4610560	6-4610561	926638 مركز التبادل الدولي 11110	info@elconcorde.com		m

مـــوقـــــع المـــصنـــــع: العاصمة/الجيزة/الجيزة

مـــوقـــــــــع الإدارة : العاصمة/قصبة عمان/العبدلي

4000000.000

19366	**الشركة الاردنية للطاقة المركزية**	**المصنع:**	6-5675678	6-5675660	460338 ابو علیا/ طارق 11946	shadded@jde.jo	WWW.JDE.JO	
		الادارة:	6-5675678	6-5675660	460338 ابو علیا/ طارق 11946	shadded@jde.jo	WWW.JDE.JO	

مـــوقـــــع المـــصنـــــع: العاصمة/قصبة عمان/العبدلي

مـــوقـــــــــع الإدارة : العاصمة/قصبة عمان/زهران

4000000.000

8130	**مؤسسة ابوحلتم للصناعات الالكترونية والكهربائية**	**المصنع:**	6-4883187	6-4875269	340611 ماركا الشماليه / المحطة / حي هملان / المنارة 11134	generald@go.com.jo		
		الادارة:	6-4653128	6-4651277	340611 ماركا الشماليه / المحطة / حي هملان / المنارة 11134	generald@go.com.jo		

مـــوقـــــع المـــصنـــــع: العاصمة/ماركا/ماركا

مـــوقـــــــــع الإدارة : العاصمة/ماركا/ماركا

3500000.000

جاهز -		**المصنع:**	6-4207771	6-4207700	502 المقابلين 11623	info@mgc-readymix.com		M.JO
		الادارة:	6-4207772	6-4207700	502 المقابلين 11623	info@mgc-readymix.com		M.JO

مـــوقـــــع المـــصنـــــع: العاصمة/القويسمة/ام قصير والمقابلين

مـــوقـــــــــع الإدارة : العاصمة/القويسمة/ام قصير والمقابلين

3356000.000

3167 **الشركة العربية لصناعة انابيب الري بالتنقيط/ادريتك** **المصنع:** 6-4027013 6-4022198 14 مدينة عبدالله الثاني 11512 luay@adritec.com.jo www.adritec.com

الادارة: 6-5603779 6-5603780 5474 جبل عمان 11181 luay@adritec.com.jo www.adritec.com

مـــوقـــــع المـــصنـــــع: العاصمة/سحاب/مدينة عبدالله الثاني

مـــوقـــــــــع الإدارة : العاصمة/قصبة عمان/العبدلي

2500000.000

6321 **شركةالمصانع الاردنية للادوات الصحية .ذ.م.م** **المصنع:** 6-4023616 6-4023617 228 مدينة عبدالله الثاني 11512 jsico@hotmail.com

الادارة: 6-4023616 6-4023617 jsico@hotmail.com

8000000.000

مـــوقـــــع المـــصنـــــع: العاصمة/قصبة عمان/المدينة

مـــوقـــــــــع الإدارة : العاصمة/سحاب/مدينة عبدالله الثاني

6547 **الشركة العالمية لسحب المعادن** **المصنع:** 6-4022901 6-4022427 26 مدينة عبدالله الثاني 11512 umex_jo@yahoo.com

الادارة: 6-4021723 6-4022427 26 مدينة عبدالله الثاني 11512 umex_jo@yahoo.com

مـــوقـــــع المـــصنـــــع: العاصمة/سحاب/مدينة عبدالله الثاني

مـــوقـــــــــع الإدارة : العاصمة/سحاب/مدينة عبدالله الثاني

6000000.000

12784 **مجموعة محمد ابو حلتم للاستثمارات -** **المصنع:** 6-4883187 6-4875269 340611 ماركا الشماليه / المحطة / حي هملان generald@go.com.jo www.generaldeluxe.com

/ المنارة 11134

الادارة: 6-4883187 6-4875269 340611 ماركا الشماليه / المحطة / حي هملان / المنارة 11134 generald@go.com.jo www.generaldeluxe.com

مـــوقـــــع المـــصنـــــع: العاصمة/ماركا/ماركا

مـــوقـــــــــع الإدارة : العاصمة/ماركا/ماركا

3000000.000

18250 **الشركة العالمية الحديثة لتطوير البرامج الاتصالات**

المصنع: 6-5300130 6-5300144 1786 ام السماق وخلدا / ضاحية الامير راشد 11821 jops@globitel.com www.globitel.com

الادارة: 6-5300130 6-5300144 1786 ام السماق وخلدا / ضاحية الامير راشد 11821 jops@globitel.com www.globitel.com

مـــوقـــــع المـــصنـــــع: العاصمة/الجامعة/تلاع العلي وخلدا

مـــوقـــــــــع الإدارة : العاصمة/الجامعة/تلاع العلي وخلدا

3000000.000

1004 **.شركةمصانع الاسفنج العربية م.خ.م**

المصنع: 6-4891366 6-4882602 1368 عمان الوسط 11118 arabfoam@nuqulgroup.com www.nuqulgroup.com

الادارة: 6-4652688 6-4645669 154 عمان الوسط 11118 arabfoam@nuqulgroup.com www.nuqulgroup.com

مـــوقـــــع المـــصنـــــع: العاصمة/ماركا/ماركا

مـــوقـــــــــع الإدارة : العاصمة/قصبة عمان/زهران

2730000.000

8 **شركة صناعة المعدات الكهربائية**

المصنع: 6-5727861 6-5727863 488 ناعور 11710 electric@orange.jo

الادارة: 6-5727861 6-5727863 488 ناعور 11710 electric@orange.jo

مـــوقـــــع المـــصنـــــع: العاصمة/ناعور/ناعور

مـــوقـــــــــع الإدارة : العاصمة/ناعور/ناعور

2500000.000

اد البناء محدودة المسؤولية	**المصنع:**	6-4161516	6-4622499	20717 عمان الوسط 11118	
	الادارة:	6-4621212	6-4622499	20717 عمان الوسط 11118	

مـــوقـــــع المـــصنـــــع: العاصمة/قصبة عمان/المدينة

مـــوقـــــــــع الإدارة : العاصمة/القويسمة/القويسمة والجويدة

2000000.000

1165 **شركة الابنية الجاهزة**	**المصنع:**	6-4129119	6-4129339	927161 العبدلي/قصر العدل 11190 maani@maani.com		www.maani.com
	الادارة:	6-5669466	6-5601238	927161 العبدلي/قصر العدل 11190 maani@maani.com		www.maani.com

مـــوقـــــع المـــصنـــــع: العاصمة/القويسمة/خريبة السوق وجاو

مـــوقـــــــــع الإدارة : العاصمة/القويسمة/خريبة السوق وجاو

رأس المـــــال العـــــامل: 2000000.000

يك للصناعات الانشائية	**المصنع:**	6-4711912	6-4711500	53 مدينة عبدالله الثاني 11512	wp@nol.com.jo
	الادارة:	6-4711912	6-4711500	53 مدينة عبدالله الثاني 11512	wp@nol.com.jo

مـــوقـــــع المـــصنـــــع: العاصمة/الجيزة/القسطل

مـــوقـــــــــع الإدارة : العاصمة/الجيزة/القسطل

2000000.000

7812 **شركة مجموعة ليزرالصناعية**	**المصنع:**	2-295276	2-295272	961278 المدينة الرياضية 11196	
	الادارة:	6-5518669	6-5518426		

مـــوقـــــع المـــصنـــــع: العاصمة/قصبة عمان/المدينة

مـــوقـــــــــــع الإدارة : اربد/الرمثا/مدينة الحسن الصناعية

2000000.000

8288 **شركة التقنيات الهندسية المتطورة ذ.م.م** **المصنع:** 6-4023794 6-4026897 233 مدينة عبدالله الثاني 11512

الادارة: 6-4026898 6-4023791 233 مدينة عبدالله الثاني 11512

مـــوقـــــع المـــصنـــــع: العاصمة/سحاب/مدينة عبدالله الثاني

مـــوقـــــــــــع الإدارة : العاصمة/سحاب/مدينة عبدالله الثاني

500000.000

10719 **الشركة العامة للصناعات الهندسية م.ع.م** **المصنع:** 6-4050731 6-4050734 79 مدينة عبدالله الثاني 11512 fawazajaber@yahoo.com www.mangogroup_jo.com

الادارة: 6-4050731 6-4050734 79 مدينة عبدالله الثاني 11512 fawazajaber@yahoo.com www.mangogroup_jo.com

مـــوقـــــع المـــصنـــــع: العاصمة/الموقر/الموقر

مـــوقـــــــــــع الإدارة : العاصمة/الموقر/الموقر

2000000.000

11545 **مجموعة خليفة للصناعات المتقدمه ذ.م.م** **المصنع:** 6-4888221 6-4888223 212065 جبل الحسين الشرقي / القصور 11121 info@kalboard.com www.kalboard.com

الادارة: 6-5662737 6-5662734 212065 جبل الحسين الشرقي / القصور 11121 info@kalboard.com www.kalboard.com

مـــوقـــــع المـــصنـــــع: العاصمة/ماركا/ماركا

مـــوقـــــــــــع الإدارة : العاصمة/ماركا/ماركا

1400000.000

خصصة لصناعة الاجهزة الالكترونية **المصنع:** 6-5855520 6-5855211 831124 ماركا الشماليه / المحطة / حي هملان / المنارة 11134 KHALILIHANI@HOTMAIL.COM

الادارة: 6-5855520 6-5855211 831124 ماركا الشماليه / المحطة / حي هملان / المنارة 11134 KHALILIHANI@HOTMAIL.COM

مـــوقـــــع المـــصنـــــع: العاصمة/الجيزة/القسطل

مـــوقـــــــــع الإدارة : العاصمة/ماركا/ماركا

2000000.000

ولوجيا **المصنع:** 6-5344313 6-5333507 5094 تلاع العلي 11953 info@albahith.com m

الادارة: 6-5334680 6-5333507 5094 تلاع العلي 11953 info@albahith.com m

ـصنـــــع: العاصمة/الجامعة/صويلح

ـع الإدارة : العاصمة/الجامعة/تلاع العلي وخلدا

2000000.000

22744 **مصنع مشيل دحدل للاجهزة المنزلية-الكبرى لصناعة الاجهزة** **المصنع:** 6-4888451 6-4888452 8286 جبل الحسين الشرقي / القصور 11121 info@mds-romo.com www.mds-romo.com

الادارة: 6-4640035 6-4640035 8286 جبل الحسين الشرقي / القصور 11121 info@mds-romo.com www.mds-romo.com

مـــوقـــــع المـــصنـــــع: العاصمة/ماركا/ماركا

مـــوقـــــــــع الإدارة : العاصمة/ماركا/ماركا

200000.000

شركة المصنع الحديث لصناعة قضبان اللحام ذ.م.م **المصنع:** 6-4440745 6-4440742 114 الجيزه 16010 mef@index.com.jo

الادارة: 6-4200399 6-4202398 mef@index.com.jo

مـــوقـــــع المـــصنـــــع: العاصمة/قصبة عمان/المدينة

مـــوقـــــــــع الإدارة : العاصمة/الجيزة/الجيزة

1750000.000

ة السكب **المصنع:** 6-4022399 6-4022911 830431 زهران 11183

الادارة: 6-4022599 6-4022911 830431 زهران 11183

مـــوقـــــع المـــصنـــــع: العاصمة/سحاب/سحاب

مـــوقـــــــــع الإدارة : العاصمة/سحاب/مدينة عبدالله الثاني

1600000.000

6164 **الشركة الاهلية للصناعات المعدنية** **المصنع:** 5-3555643 5-3550875 927021 مركز التبادل الدولي 11110

الادارة: 6-4614351 6-4614635 927021 مركز التبادل الدولي 11110

مـــوقـــــع المـــصنـــــع: العاصمة/قصبة عمان/زهران

مـــوقـــــــــع الإدارة : البلقاء/قصبة السلط/السلط

1600000.000

645 **الشركة العالمية لطلاء المعادن والتجارة** **المصنع:** 6-4022901 6-4022427 26 مدينة عبدالله الثاني 11512

الادارة: 6-4021348 6-4022427 26 مدينة عبدالله الثاني 11512

مـــوقـــــع المـــصنـــــع: العاصمة/سحاب/سحاب

مـــوقـــــــــع الإدارة : العاصمة/سحاب/مدينة عبدالله الثاني

رأس المـــــال العـــــامل: 3000000.000

2411 **شركة صناعات علاء الدين م.ع.م** **المصنع:** 5-3251732 5-3241033 583 مادبا 17110 aladdin1@go.com.jo

الادارة: 6-5534289 6-5523306 183661 عمان الوسط 11118 aladdin1@go.com.jo

مـــوقـــــع المـــصنـــــع: العاصمة/قصبة عمان/المدينة

مـــوقـــــــــع الإدارة : مادبا/قصبة مادبا/مدبا

رأس المـــــال العـــــامل: 1500000.000

8829 **شركة نيزك لصناعة القوالب والمعدات** **المصنع:** 6-4023892 6-4023891 235 مدينة عبدالله الثاني 11512

الادارة: 6-4729893

الحمدلله الذي هدانا الى هذا وما كنا لنهتدي لولا أن هدانا الله