THE IMPACT OF SALESPERSON BEHAVIOR ON DEVELOPMENT OF NEW PRODUCT COMPLEXITY IN MEDICAL DEVICES COMPANIES

أثر سلوك مندوبي المبيعات على تطوير تعقيد المنتج الجديد في شركات الاجهزة الطبية

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Dedication

This research is dedicated to my father Ahmed, my mother Sahar, my sisters, my brother and my lovely friends for encourage me and believe in me throughout my life to achieve this stage . I would like to mention my best friend Abdul Ghani Sallah for his continuous supporting and helping in my scientific and practical life

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Mohamed Ahmed Diab Daloul.

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Abstract

This research aims to investigate the impact of salespersons behavior on development of new product complexity in Jordanian medical devices companies. That's where the population of the study includes managers of Jordanian medical devices companies, (180) questionnaires distributed as a sample of the study, only (140) questionnaires returned, where they respond rate (77.7 %) from the total distributed questionnaires. The researcher used the descriptive study method. Data collected from the responses of the questionnaires were analyzed through Statistical Package for Social Sciences (SPSS). The study explored a number of important and significant results can be summarizing as follows. This study obtained the evaluation of salespersons behavior in the Jordanian medical devices companies through three main dimensions (Motivation, Opportunity, and Ability). The study showed a medium to high level of importance with all dimensions that discussed earlier in this study. Based on study main results, it showed that there is impact of salespersons behavior on development of new product complexity. This study recommends using salesperson behaviors as a technique to develop new product complexity in medical devices companies.

Keywords: Salespersons behavior, Motivation, Opportunity, Ability, and Development of new product complexity.

أثر سلوك مندوبي المبيعات على تطوير تعقيد المنتج الجديد في شركات الاجهزة الطبية

الباحث :محمد أحمد دياب دلول

المشرف: الدكتور سمير الجبالي

الملخص

هدفت الرسالة إلى دراسة تأثير سلوك مندوبي المبيعات على تطوير تعقيدات المنتجات الجديدة في شركات الأجهزة الطبية الأردنية. تكون مجتمع الدراسة من مديري شركات الأجهزة الطبية الأردنية ،تم توزيع (180) استمارة استبيان على عينة الدراسة ، استرجع (140) استبيان فقط منهم ، حيث أصبح معدل الاستجابة (77.7٪) من مجموع الاستبيانات الموزعة.

استخدم الباحث المنهج الوصفي التحليلي وتم تحليل البيانات التي جمعت من إجابات الاستبيانات باستخدام برنامج SPSS للتحليل والنتائج.

اكتشفت الدراسة عددا من النتائج الهامة والتي يمكن تلخيصها على النحو التالي: حصلت هذه الدراسة على تقييم سلوك مندوبي المبيعات في شركات الأجهزة الطبية الأردنية من خلال ثلاثة أبعاد رئيسية (الحافز والفرصة والقدرة) وأظهرت الدراسة مستوى متوسط إلى مرتفع من الأهمية مع جميع الأبعاد التي نوقشت في وقت لاحق في هذه الدراسة. كما وصت الدراسة الى تدريب مندوبي المبيعات على زيادة قدراتهم وامكانياتهم من خلال تعليمهم المزيد من المعرفة والمهارات لزيادة مستوى ادائهم والوصول الى افضل النتائج

استناداً إلى النتائج الرئيسية للدراسة ، ظهر أن هناك تأثير لسلوك مندوبي المبيعات على تطوير تعقيد المنتج الجديد حيث توصي هذه الدراسة باستخدام سلوكيات مندوبي مبيعات كتقنية لتطوير تعقيد المنتج الجديد في شركات الأجهزة الطبية

الكلمات المفتاحية: سلوك مندوبي المبيعات ، الحافز ، الفرص ، القدرة ، وتطوير التعقيد الجديد للمنتج.

Chapter One

General Framework

1.1   Introduction.

1.2   Study Objectives.

1.3   Study Importance.

1.4   Problem Statement.

1.5   Study Hypothesis.

1.6   Study Model.

1.7   Study Limitations.

1.8   Operational Definitions.

1.1 Introduction:

Today's service industry like medicine sector is evolving rapidly because of advances such as the medical devices and hospitality, and the increasing demands of medical cases.

This may be in part due to the focus placed on salesperson behavior in development of new product complexity. In addition, since the vast majority of experimental explorations in the product observable fact have been conducted at the corporate stage, there is still considerable opportunity to understand product at the individual level. From the organizational roles associated with development of new product complexity that of a salesperson can be said to be one of the most important. The role of a salesperson as a border regulator - the screwdriver puts them in the front line of execution with clients. (Johnson, 2013).

Owners of medical devices companies have been hit hard and be faced with many challenges, such as falling demand for client goods, lower sales and lower throwaway returns when the economy is unbalanced, threatening profitability and competitive advantage (Lee & Hah, 2012). Corporate leaders may have to use new marketing tools to attract and retain clients, amplify revenue, develop products, and improve a comprehensive understanding of client requirements for growth and business preservation. The owner of these companies has to strengthen their competitive place to seek effective marketing strategies to improve productivity and exceed competitors' strategies and performance (Desai, 2013).

The purpose of this study is to enhance understanding about this necessary topic by studying the behavior that impact of development of new product complexity through salesperson.

1.2   Study Objectives:

The study draws from the **motivation**, **opportunity**, and **ability** (M O A) assumption to look into the development of new product complexity by a salesperson behavior. As the research is studying several drivers theoretically supported by a salesperson behavior (motivation, opportunity, ability) and unresolved questions in literature. Sales representative new product complexity refers to the way the seller responds, assign effort and design internal resources to developing new product complexity in a part that extends across borders. As such, the focal worry is what causes the seller to activate the behaviors. The current study seeks to identify the impact of salesperson behavior on development of new product complexity through:

1. Provide a conceptual and intellectual framework for fundamental study variables (Motivation, Opportunity, and Ability).

2. Describe the stage of Practice of developing new product complexity in the medical device companies.

3. Describe the level of Practice of front line salespersons behavior in the medical device companies.

4. Determine the impact of salesperson behavior on development of new product complexity.

1.3   Study Importance:

The literature of marketing strategy points to the importance of the need for complex models important to understand the many-sided nature of strategic issues. The important of the research is to make available an understanding of the complex components of the new product complexity by the salespeople, the factors leading to the new product complexity, the conditional impacts of the achievement behaviors by the sales representative on the success of implementation. I request to contribute the

relevant literature to the sales representative and implement the strategic by adding insight into many unknown areas. There are many gaps in the literature on how new product complexity is conceived and what this means for different parts inside the organization and linkages to motivation, opportunity and capacity. Salespeople also need to know how to deal with development of new product complexity.

1.4   Problem statement:

Some of Small and Medium Enterprises (SMEs) businesses close within the first five years among to inadequate marketing plans and poor implementation (Cronin Gilmore, 2012). The general business problem is that SMEs business faces the challenges of profitability based on development of new product complexity. After some interviews with some of mid and high level managers in medical devices companies like Green land and others, the researcher find the main specific problem of these company is the lack of developing new product complexity and the front line employ behavior. Therefore many studies like (Johnson, 2013) and (Babak Hayati, 2012) indicate that the development of new product complexity is related to many ways in the salesperson behavior. And in view of the importance of development of new product complexity as a dependent variable, this topic was selected for study. The problem of research was the lack of knowledge of the role of development of new product complexity by the salespeople behavior, so in this research will explore the impact of the salesperson behavior in the development of new product complexity for the medical device companies, Based on what have written above, the main problem can be determined by the following question:
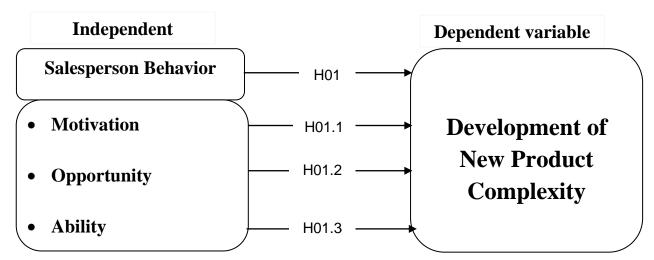
1) Does the salesperson behavior impact on development of new product complexity in medical device companies?

Based on the main this question can be divided into three sub questions:

1. Does the motivation impact on development of new product complexity in medical device companies?

2. Does the opportunity impact on development of new product complexity in medical device companies?

3. Does the ability impact on development of new product complexity in medical device companies?

1.5 Study Hypothesis:

H01: There is no impact of the Salesperson behavior (motivation, opportunity, and ability) on development of new product complexity, on medical devices companies at $\alpha \leq 0.05$. According to the main hypothesis emerged sub-hypotheses as the following:

H01.1: There is no impact of motivation on development of new product complexity, on medical equipment companies at $\alpha \leq 0.05$.

H01.2: There is no impact of opportunity on development of new product complexity, on medical equipment companies at $\alpha \leq 0.05$.

H01.3: There is no impact of ability on development of new product complexity, on medical equipment companies at $\alpha \leq 0.05$.

1.6   Study Model:

| Independent | | Dependent variable |

Salesperson Behavior ──── H01 ────▶

- **Motivation** ──── H01.1 ────▶
- **Opportunity** ──── H01.2 ────▶
- **Ability** ──── H01.3 ────▶

Development of New Product Complexity

Source: This model devolved by researcher depend on the following studies: for independent variable: (Johnson, 2013) and (Babak Hayati,2012) (Natalia Bächli-Bolvako,2011).for dependent variable: (Johnson, 2013) and (Götzfried, M, 2013).

1.7   Study Limitations and Delimitations:

- **Human limitations:** The domain of this research will deal with medical devices companies' managers in Jordan.

- **Place limitations:** Medical devices companies in Amman.

- **Time limitations:** This study was completed on the end of 2018.

- **Scientific Limitations:** The study ignores some important variables that might be impact on development of new product complexity.

- **Study Delimitations:**

  - Spatial: This study applied on Jordanian medical devices companies in Amman.

  - Humanity: Salesperson who works in medical devices companies in Amman.

  - **Scientific delimitations:** In this thesis, the impact of salesperson behavior (motivation, opportunity, and ability) on development of new product complexity analyzed and studied the relationship between them.

1.8   Operational Definitions:

Salesperson Behavior: This is the performance of how the salesperson deals with others that include motivation, opportunity, and ability.

Development of new product complexity: having many elements and very difficult to understand.

Medical devices companies are committed to adding value to the healthcare industry by helping healthcare service providers and practitioners to best serve their patients through the provision of excellent products, innovative solutions and timeless services.

Chapter Two

Theoretical Framework and Previous Studies.

2.1   Theoretical Framework.

2.2   Previous Studies.

2.1 Theoretical Framework:

Salesperson behavior:

Definitions:

Walker, Churchill, and Ford (1979) define the salesperson behavior as how person does the tasks and mission they expend in the course of doing the work. Walker, Churchill and Ford (1977) also talk about the set of actions or behaviors to be achieved by a person who connected to a definite role and position defined at the corporate.

Avila, Fern, and Mann (1988) suggest that salesperson behaviors refer to exacting job skills and characteristics. The work that a salesperson is predictable to do and probably lead to beneficially closing the deal.

Plank and Reid (1994) propose that salespersons behaviors shall be appeared from a macro impression and behavior should be definite as what salespersons do, which includes the implementation of selling-related actions by salespersons in the performance of their works.

Laith et al., (2012) salespersons' moral behaviors have important impacts on consumer relationship and obligation. When the salesperson explains great moral behavior, it means that clienteles will have more trust on the company. So the direct procedures of the salespersons can increase the consumer trust on salesperson as well as on company.

The salesperson's moral behaviors are to be considered as the moral aspects of salespersons from the viewpoint of the client. (Banu Külter Demirgüneşa, 2015).

Personal selling represents the strategy that salespersons use to encourage consumers to buy their products, afford them with all the information relating to the goods, and work to eliminate customer worries Yousif, R. O. (2016).

The activities of salesperson behavior:

Lamont and Lundstrom (1974):

1) Working with management.
2) Client service.

3) Ethics.
4) Straight selling.

5) Consumer relations.
6) Keeping side by side of market conditions.

7) Meeting sales goals.
8) Keeping consumer records.

Kerber and Campbell (1987):

1) Order processing
2) Customer contact

3) Dealing with co-workers
4) Miscellaneous activities

Darmon (1998):

1) Information procedures: information achievement from own firm, information achievement from field, information qualifications to consumers/prospects and to the firm.

2) Time management actions.

Marshall, Moncrief and Lassk (1999):

1) Communication.
2) Sales.

3) Relationships.
4) Team building and team selling.

5) Database administration.

Guenzi (2002):

1) promotion of sale.
2) Value adding relationship administration

3) Communication.
4) Diagnostic strategic.

Moncrief, Marshall, and Lassk (2006):

1) Relationship between selling.   2) Promotional activities and sales service

3) Entertainment.   4) Viewpoint.

5) Computers skills.   6) Travel.

7) Training and recruiting.   8) Delivery.

9) Products support.   10) Educational actions.

11) Offices.   12) Channel maintain.

Characteristic of salesperson behaviors: (Darmon, 1998)

1- Size of the information load required by the sales place:

obtain leads from the organization, learn about fresh products, train using products, read corporation literature, meet with administrators, find about challengers' products, join sales conferences/meetings/training sessions, handle back orders/shipment issues /lost orders/delayed transfers, follow-up customers' orders.

2- Extent and complexity of data processing required by the sales place:

study customer's/prospects' wants, make sales presentation/proposals to customers, Coordination with existing lines, control own price/legalities, prediction demand, learn market trends, design sales plan, choose selling strategies, Process data for time management/planning.

3- Significance of point in time management "relative to relationship management" implied by the sales place:

Plan selling actions and time allocations (forecasts/customers, various accounts…), design daily routine, make visual displays, create deliveries, travel (alone/with managers/with learners), travel in town/office, of town; work after hours, from home, plan selling tours/routes/schedules.

The dimensions of salespersons behaviors:

1- Motivation:

Motivation is the inside forces that leader's behaviour and is concerned with the action of specific activities. (Ford et. al, 2003).

Motivation is a three dimensional concepts consisting of the following:

- Strength or the magnitude of mental action and physical work exhausted towards a certain activity.

- Determination or the extension of the rational action and physical work over time.

- Way or select of specific activities in exact conditions.(Ford et. al, 2003).

Motivation should be understood at two levels: (Smyth and Murphy, 1969)

1. What is motivating salesperson? "The reasons behind the intensity in and persistence of mental and physical work used".

2. How salesperson select their activity? "The direction or decision to involve specific actions in specific environments".

Salespeople are motivated by many needs: (Smyth and Murphy, 1969)

- Need for position (e.g., need for acknowledgment and advertising).

- Need for manage (e.g., need to be in manage and affect others).

- Need for esteem (e.g., need to be understood as specialists who can give information).

- Need for practice (e.g., need to follow a practice that must not be interrupted).

- Need for achievement (e.g., need more money and experiments).

- Need for encouragement (e.g., need to seek outside motivation and experiments).

- Need for truthfulness (e.g., need to believe in the rightness of their practices).

2- **Opportunity:**

In order for a view to become an opportunity, salespersons have to agree that they have something that they want to change and they are considering you as a potential partner in helping them create that change. That change might be around a problem or an experiment. Or it might be helping them to take advantage of some future-oriented opportunity. But unless they agree that they are working to explore change and consider you, you still have a viewpoint. (anthony iannarino, 2015).

The 'qualified' opportunity is typically defined as:

- The prospect admits to cover budget.

- They own a project 'I'm still not sure what constitutes a project'.

- They own a timeline for formation a selection decision. (Gary Walker, 2002).

 Also the sales opportunities are communications or accounts which have been experienced. These individuals have entered into your sales cycle and they are committing to employs with you. You have previously communicated, met or named them and know their wants or needs. The previous sales rule says: "The opportunity is a deal that you have the possibility to close!*"* (Nikolaus kimla, 2013).

Top Characteristics of Sales Opportunities: (tenfold, 2018)

Need: This is referring to the general ideas shared by your perfect clients. The major motivation to buy is to fix this trouble and reduce it. Your salesperson's work is to assist identify the trouble.

Interest: Having a desire for your product – or a trouble point that has to be fixed. Desires do not always explain to interest. For instance, a start-up may want a CRM (Customer Relationship Management) software.

But, if they are agreed on using MS Excel for their customer management requirements, a CRM system will be hard to put up for sale.

Fit: Here, you require reflecting your product and how it fits interested in your current dealing and its size. Because you are able to reduce trouble points, a SMB is not an excellent fit if your product is in enterprise scale. Dealing with a few hundred cash to replacement is not going to be able to buy your million dollars answer.

Sales Opportunities Management (tenfold, 2018)

In many ways, the line between closed deals and lost sales depends on how you achieve sales opportunities. Here are some things to study:

1. Accurately qualify your leads: There may be cases where you help your leads to sales opportunities early. It could be that the lead needs further nurturing, and is not yet sales-ready. When you incorrectly qualify your leads, you end up devoting your efforts on opportunities that take longer to close.

2. Know your buyer: It takes trust and rapport when you want to improve business relationships from your sales opportunities. To achieve this point, you need to know your soon-to-be buyer like the back of your hand. So, do the basis and understand your viewpoint's business, their buying processes, wants/ motivations and the decision making group, among other characteristics.

3. Know your viewpoint's obstacles to ordering: There are always supposed risks when buying a product or result. Understand what might keep a viewpoint from making a purchase and address these problems.

4. Track the deal's progress: Once a lead becomes an opportunity, it becomes more significant to track deal milestones, instead of monitoring action levels.

However, you need to concentration more on where they are in the decision making process and their wants to move this process along.

5. Don't be scared to disqualify: Not all sales opportunities transfer to the next stage. Some of opportunities become lost opportunities due to something that you learn as you involve with them. When this occurs, don not be scared to disqualify. This will be better than devoting your time to opportunities you cannot close.

3 - Ability

Carroll (1993) said that the term ability is in common usage in both everyday talk and in scientific discussions, its exact definition is not often explicated or even considered.

Ability refers to the salesperson's knowledge and skill in carrying out new marketing strategies. (Jeffrey S. Johnson 2013).

The Organizations see their human capital as an ability that can lead to competitive advantage, and thus are willing to make significant investments to increase the knowledge and skills of their salespersons (Luthans and Youssef 2004).

(Baun and Scott 2010) said that In the United States alone, over $130 billion annually is spent on employee training.

Efforts to increase the salesperson's knowledge and skill do not automatically effect in increased performance (Attia, Jr, and Leach 2005).

If the salesperson's abilities to implement strategies are already high, funds made by the organization to increase ability will have a limited effect. However, ability is in the bottom of the three salespersons behavior factors, firms will see a return from ability-enhancing action. (Jeffrey S. Johnson 2013).

Ways of ability:

1-**Ability as Trait:** The first and by far most general way in which ability is defined is as a latent trait inferred from stabilities in patterns of individual differences across responsibilities (David F. Lohman, 1997).

2-**Ability as Task Performance:** Ability is also sometimes known in terms of performance on a specific task. National Research Council, Widgor and Garner (1982) define ability as systematic observation of performance on a task. Ability is how well a salesperson implements a defined task if he does his greatest.

3-**Ability as Process:** Where ability is inferred from the relationship of one individual's performance to that of other individuals (definition 1) or to an external standard (definition 2), process is inferred from the comparison of performance in one circumstance to performance in another circumstance. Since processes occur within individuals, the inference of process is not grounded in individual changes. (David F. Lohman, 1997).

Self-ability: Even the best salesperson is a work in progress. You can always catch a way to improve your skills, work on your area, and learn a lot about the products and services you work in. But the drive to continually improve yourself has to come from inside. Your manager might teach you to make some changes if your sales start to fall, but if you are continuously working to become a better salesperson, you can start working on the problem before it affects your numbers (Wendy Connick, 2017).

Development of new product complexity:

Complexity is a condition of possessing a large quantity of rudiments manifesting relatedness.(Mark A. Jacobs, 2007).

Complexity in a product is manifested by both the multiplicity of, and relatedness among, elements contained within the product portfolio or the product itself Reducing

your product complexity can result in large savings on an annual basis and over the lifetime of products. (Mark A. Jacobs, 2007).

One of the most important thing of development of new product complexity teams is the decreasing of development cycle time. Many companies keep on staying to the structure and formality of standardized processes irrespective of the complexity of the growth task at hand (Clift, 1999).

There is a large sum of different definitions of development of product complexity and no generally accepted description. That means that the main challenge in the definition of development of product complexity will be to grow a generally applicable description of product complexity.(Pasche,2008).

Complexity drivers: "a phenomena which prompts a system to increase its complexity" This definition show the relationship between **external** and **internal** complexity.

External drivers: Company experience the external complexity as a consequence of market demands and needs which the company intends to fulfill.

Internal drivers: internal complexity is the outcome of the translation of external complexity and complexity exclusively produced internally without external pressure to do so.

External complexity effects company on three levels: product portfolio, product architecture and value-chain process.

Demand complexity: Complexity is caused by disjointed markets, number, size, diversity and power of consumer's served as well as wide country specifics and policy.

Competitive complexity: Company increases its complexity as an outcome of support to serve global, unsaturated market. It is often expected by company that these new

markets are not already full by powerful competitors and they therefore observe an opportunity to serve a big number of new clients.

Technological complexity: Technologies advance result in a high number of product functions. Top product performance as any more consequence of these advances leads to longer product strength and reliability for the client necessitating support by the industrial companies for a longer time.

In conclusion, external drivers are becoming tangible in the number and variability of products and product variants. They are caused straight by the client, by competitors and by technology advances and internal complexity has its cause in structure, communication and people related issues which are not at all in a straight line linked to external demands.

Four determinants define the level of correlated company complexity:

- Customer structure complexity is the outcome of a big number of heterogeneous client groups with small volumes for the products.

- Product portfolio complexity is driven by the breadth of the product portfolio

"Number of variants and the level of diversification of the variants".

- Development of product complexity is experienced when the architecture of the product needs

a large number of raw materials, parts and components with a high level of differentiation.

- Target complexity manifests itself in the variety of operational targets to be

achieved in parallel within the company. (Götzfried, M, 2013).

Complexity transparency:

Increasing transparency in variety induced complexity in order to understand its effect on the company represents a key element in managing complexity and choosing the correct actions.

The matter of missing transparency is highlighted by the truth that complexity costs emerge to a huge extent in expenses which are often hidden to the company.

Understanding and knowing the increase as well as the decrease of complexity in the company portfolio and in product architecture is important. With a high point of transparency on complexity, the company is able to guide complexity. On the portfolio side, this means that the company is being able to perceive a level of complexity which is most likely too high to feel efficiently. The company can then reduce its portfolio complexity by deleting "zero-seller" products. On the product architecture side, understanding of an increase in parts, components and interfaces can show the way to stress on same part rates between products or modularity and policy concepts. (Götzfried, M, 2013).

There are four overall categories of dimensions reflecting marketing implementation success:

(1) Implementation effectiveness, (2) implementation efficiency, (3) performance results, and (4) strategic embeddedness. (Herhausen, et. al, 2014)

The marketing mix (4 Ps): product, price, place and promotion

Marketing Mix is the term is used to define the combination of the fair inputs which organize the core of a company's marketing programmed. Marketing Mix basically is combination of various elements, which in their totality, organize marketing system of firm.

The marketing mix can be divided into four groups of variables commonly known as the four Ps: (Kotler and Keller, 2016).

1. **Product:** The goods and/or services offered by a company to its clients.

2. **Price:** The amount of money paid by clients to purchase the product.

3. **Place (or distribution):** The actions that make the product available to customers.

4. **Promotion:** The actions that connect the product's features and benefits and persuade clients to purchase the product.

2.2 Previous Study:

1) Brown, A., Dixon, D., Eatock, J., Meenan, B. J., & Young, T. (2008, June).**"A survey of success factors in new product development in the medical devices industry."** The goal of this research is to identify factors that are correlated with the commercial success of a product in a statistically significant manner. The sample of this study is based on 68 responses to a survey of medical device companies in the UK and Ireland. The methodology of this study is to identify new product development tools and strategies, product factors, and company factors that contributed most to the perceived commercial success of new products in the medical devices sector. In conclusion, the study results an investigation into factors which effect on product success.

2) Guohui, S., & Eppler, M. J. (2008). **"Making strategy work: A literature review on the factors influencing strategy implementation",** in this study, the researcher reviews the factors that enable or impede effective strategy implementation, and survey the state-of-the-art in this domain. He has focused on articles from the last twenty-four years (in order to include also older seminal

papers on the topic). The earliest article in our sample has been published in 1984, while the latest one is from 2007. More specifically, there are 13 papers from the 1980s", 23 papers from 1990s", and 24 papers from 2000 to 2007. There thus seems to be an increasing trend regarding the number of published studies in every period. As a result, he finds several important research needs regarding these factors and outline how they could be addressed.

3) Pasche, M. (2008, December). **"Product Complexity Reduction: Not Only a Strategy Issue."** The purpose of this study is about how plans and strategies for product complexity reduction can be derived by analyzing the actual product structure. the sample of this study was on Sweden organization to Quality Management and Organizational Development to Achieve Sustainability From Organizational Excellence to Sustainable Excellence. The study method analyzes the actual product structure according to important product complexity which is creating consumer benefits and the non-important product complexity which is not directly linked to increased consumer benefits. As result, Analyzing the product structure according to important and non-important product complexity enables an organization to improve strategies and plans to reduce product complexity while at the same time keeping consumer benefits constant.

4) Smutkupt, P., Krairit, D., & Esichaikul, V. (2010). **"Mobile marketing: Implications for marketing strategies",** the goal of this study is to provide an assessment of the potential impact of mobile devices on marketing practices in general the research use the familiar framework of the four Ps (product, price, promotion, place) and the four Cs (consumer, cost, communication, and convenience). Findings indicate that regardless of whether it is viewed from the consumer perspective or the firm's perspective, this new form of marketing has

enormous impacts across all key elements of the marketing mix. The major advantage of mobile marketing lies in its potential to enhance communications by providing customized/personalized, timely and location specific information without restriction of time and place.

5) Lyus, D., Rogers, B., & Simms, C. (2011). **"The role of sales and marketing integration in improving strategic responsiveness to market change",** the goal of the study is a specific aspect of the connection between sales and marketing integration and good performance; specifically the integration of the sales and marketing functions in business-to-business (B2B) organizations facilitates the development and implementation of successful new strategies in response to market change. The sampling was based on a purchased B2B database, and enable a large number of respondents to be contacted in a time-efficient way. A filtered mailing list of 1483 email addresses for contacts classed as 'Senior Decision Makers' from medium-sized UK-based B2B manufacturing companies was therefore purchased for the sampling frame. The methodology of the study is depending on two constructs that were formulated to measure this: the **quality** of actionable market intelligence gathered by the organization (following Guenzi and Troilo), and the **capacity** to implement appropriate strategic responses.

The main results are:

1. Organizations that have highly integrated Sales and Marketing departments are able to gather better quality market intelligence than those who do not.

2. Organizations with highly integrated Sales and Marketing departments will be better at reacting to market dynamics by formulating and implementing effective strategic responses compared with those that do not.

6) Hayati, B. (2012). **"Implementing marketing strategies through business-to-business sales forces: a social network perspective",** this study is conducted in the context of business-to-business (B2B) firms. Our goal is to explore the role of formal and informal organizational relations and interactions in creating support and commitment to strategic marketing initiatives at different levels of an organization's sales forces. The research is going to examine social networks across multiple levels of a firm's sales function. A typical sales department within a firm consists of regional managers who are responsible for a number of sales districts. Data was collected from the sales divisions of two large companies in US: One was a leading media company and the other was a *Fortune 500* firm in the cleaning and sanitization industry. In both companies, the marketing department was in charge of analyzing the market situation and identifying the most promising market segments and customers. Results demonstrate that weak network ties between B2B sales managers and their social metrically central subordinates can have detrimental effects during the implementation of marketing strategies.

7) Johnson, J. S. (2013). **"The implementation of new marketing strategies by the salesperson",** the aim of this study is to advance understanding on this important topic by testing the factors impacting the implementation of marketing strategies by the salespersons. In this regard, the researcher draws from motivation, opportunity, and ability (MOA) theory to investigate the drivers of the implementation of new marketing strategies by the salesperson. The sample of this study is to promote generalizability to the population of salespeople implementing strategies in a variety of organizational and industrial contexts, it is necessary to select a sampling frame that provides a heterogeneous sample of

salespeople. The methodology of the study is the researcher reviews the literature pertaining strategic implementation. He also tests the type of strategies implemented by salespeople and identify issues that have been identified in various forms of marketing strategy implementation by the salesperson. Then he draws upon the extant MOA, strategic management, and sales management literature to support the proposed relationships advanced in the conceptual model. He also provides the rationale behind using a constraining factor approach in this MOA context. The main results show the value of involving the salesperson in strategy improvement and "selling the benefits" of the strategy to increase their motivation to implement new strategies. Further, open communication is essential to salespeople's perception of opportunity to implement new strategies. Next, training the salesperson in the selling process and in better 120 understanding their customers increases their ability. At the end, conditions related to the customer, competition, and technological environments proved to have no impact on the relationship between salespeople's implementation behaviors and implementation success.

8) Carvalhas, T. (2013). **"Marketing plan: the launching of a tourism agency for the surf market",** the idea is to create, from the marketing point-of-view, a modern travel agency which operates solely in the online market. And to launch of an internet-based agency focused on the surf market. Since it is impossible to access the income sheet to access their accounting value, 2 variables were used to list the 40 sites found by order of importance:

- Facebook dimension - measured by Facebook likes.

- Traffic Rank with data collected by the website Alexa.com.

He analyzed the online tourism market for surf and its key players who compete for Portugal. The main conclusion is that competitors are focusing on aspects less privileged by costumers, instead of focusing on aspects such as "finding low fares" "sorting options" and "booking flexibility", which gives the opportunity to explore those and create a distinctive positioning.

9) Wang, Y. L., Ellinger, A. D., & Jim Wu, Y. C. (2013). **"Entrepreneurial opportunity recognition: an empirical study of R&D personnel."** The aim of this study is to test the relationships between, entrepreneurial opportunity recognition, and individual level of innovation performance. The sample was senior R&D project team members with R&D managers who evaluate their employees' innovative behavior in one Science Park in Taiwan. The methodology of the study was a Questionnaire data were gathered from 268 senior R&D project team members with 83 R&D managers who evaluate their employees' innovative behaviors. In summary, This study improved a comprehensive model through exploring three individual factors and one environmental factor of entrepreneurial opportunity recognition.

10) Brinkschröder, N. (2014). **"Strategy implementation: Key factors, challenges and solutions",** the main goal of this study is to outline the challenges and problems that can arise and hinder successful strategy implementation, in connection with it the most important factors that foster it.

The study samples are:

School-Bags Company CEO (20 employees - 15 years' experience - Retail industry)

DE Advocate CEO (7 employees – 25 years' experience – Law office)

Auto garage HZ CEO (30 employees – 42 year experience – Automobile industry)

MM Software CEO (15 employees – 1 years' experience – Computer software industry)

ABC Engineering CEO (60 employees – 14 years' experience – Engineering Industry) The methodology of this study is qualitative research was conducted in form of interviews. Qualitative research, in contrast to quantitative research, acquires stronger information, because it is possible to go more into detail. The most result in all interviews was *communication* and the related strategic consensus. Strategic consensus leads the workforce into the intended direction. Communication is the instrument to reach it.

11) Alghamdi, S., & Bach, C. (2014). **"Technological Factors to Improve Performance of Marketing Strategy",** this study is aim to offer a review of literature on how information and communications technology is developing and improving marketing practices and strategies. The study uses a theoretical modeling on past and current sources on the implementation of information and communication technology in marketing practice. It focuses on modeling the factors identifies in the marketing communication framework model, by looking at communication factors and variables affected by the use of technology. For this study, the methodology begins by identifying the theories of marketing strategy affected by technology, and then it tries to find a connection between the theories to create the model. In conclusion, an integrated framework of marketing strategy formulation and implementation factors is presented along with the impact of technology on each.

12) Nielsen, J. B., & Hvam, L. (2014). **"Product complexity impact on quality and delivery performance."** The aim of this research is to focus on if there is interdependency between increases in product portfolios and cost, lead time, on time delivery and quality. The sample of this study has been carried out in a large international engineering company to investigate whether an expanding product

program can lead to longer lead times, poor on time delivery and lower quality. The research method is based on drawn from the company's PLM and ERP systems as well as internal company databases. It is found that there are trends showing that the more often a product variant is designed the lower is the cost and lead time for designing it, the ability to deliver on time is improved and the complaint related cost for the given product variant is lower.

13) Polo, O., O. (2015). **"Green Conspicuous Consumption: The Effects of Green Marketing Strategies on Consumers' Behavior",** the goal of this research is to explore the relationship between conspicuous consumption and green consumption in Austria, to analyses the effects of green marketing strategies on consumers' behavior and whether it contributes positively to sustainable development or not. The sample of this study will focus on the Austrian green market and the perception of its inhabitants about Green Consumerism. The data used in the study has been gathered through primary and secondary data collection methods in which survey questionnaires were prepared and distributed to 223 people in Austria to investigate the relationship between conspicuous consumption and green consumption along with the effect of green marketing strategies on consumers' behavior. The methodology of this research study is based on Sauder's onion model, which has provided a basic framework for the selection of the most suited research methods for the data Collection purposes in this research study. Sauder's Onion Model Provides different stages for the selection of specific research strategies in a research work. One of the most result of this research, it can be concluded that green conspicuous consumption is An aspect of green consumerism and is among the key processes of the business environment, which has social, economic and environmental implications.

14) Brohi, H., Prithiani, J., Abbas, Z., Bhutto, A. H., & Chawla, S. K. (2016). **"Strategic Marketing Plan of Nike",** the main focus is to increase the 3-4% profitability in each of its product lines (i.e. increasing sales growth by 10% annually) also to gain leading role in athletic market and increase its market share to produce quality and innovative products for target consumers Nike has segmented an age and gender group that is it has such products that serve male and female that has age range of 15-55. The methodology is to implement all the strategies very carefully to achieve the objectives. At the end, it is seen from market and company's analysis that Nike has the potential to execute its objectives and can offer new products and expand its share so by looking to Nike's overall strategies and objectives.

15) Schuh, G., Riesener, M., & Mattern, C. (2016). **"Approach to evaluate complexity in new product development projects".**The aim of this study presents an approach for complexity estimation of new product development projects during project preparation. The sample of this study is on some manufacturing companies to respond the clients's demand for more individualized products and improved functionality by growing product variety and integrating multiple technologies in their products in Germany. The methodology of the study is to measures the level complexity according to the company's place can be derived from studying the portfolio of complexity drivers taking into account their effect on first order interactions between complexity drivers in conclusion, increasing variety and

enhanced functionality of products lead to increasing complexity in product development.

16) Trattner, A. L., Hvam, L., Herbert-Hansen, Z. N. L., & Raben, C. (2017). **"Product variety, product complexity and manufacturing operational performance"** The goal of this study presents a systematic research review of the recent scholarly research on product variety, product complexity and manufacturing operational performance (MOP). the sample of this study was on the final literature sample of 30 articles from the past 25 years of research, product variety showed a negative relationship with MOP across different time, cost, quality and flexibility while product complexity showed a lack of strong relationships with the MOP. The method of this study, a search string was improved to explore the body of research regarding the three constructs of product variety, product complexity and manufacturing performance. in conclusion, The systematic research review of the recent scholarly research on variety, complexity and performance shows a distinct different relationship between product variety and manufacturing operational performance and product complexity and manufacturing operational performance.

- **What distinguishes the current study from previous studies?**

This thesis will focus on variables taken from above studies to test its impact. According to previous studies there are knowledge gaps in these variables, so this study focused to minimize these gaps. My study applied in Arabic environment for the first time. Also, I choose a very important sector which has a rapid global development and is one of the most important disciplines that help to save human life.

About Medical Devices Sector:

The use of medical devices is an increasingly important element of a healthcare professional's role. It is important that users receive regular training and learning to ensure that they are knowledgeable in the use of devices. This is chiefly relevant in the increasingly litigious society in which we live. There are 130 companies in Amman dealing with many kinds of devices. The Jordanian medical device market is planned to produce at an above average pace of 9.3 % per year until 2018, from an estimated 243.7 million dollar in 2015 to 380.9 million dollar in 2018. The overall market size and per capita spending will remain fairly small in global terms. There is a need in the next five years for new hospitals in Jordan, focusing on the cities of Amman, Zarqa, and Irbid. This new hospital construction will trigger demand for both professional services and medical products.

Medical devices companies are committed to adding value to the healthcare industry by helping healthcare service providers and practitioners to best serve their patients through the provision of excellent products, innovative solutions and timeless services.

Economic Empowerment: medical devices companies focus on running businesses that create an opportunity for profitable employment, job satisfaction and career development for employees.

The main purpose of companies is to consolidate market leadership by fostering innovation, offering best in class products, and setting regional and global benchmark for excellence service in the healthcare industry.

Chapter Three
Methods and Procedures.

3.1   Introduction.

3.2   Methodology of the Study .

3.3   Population and Sample of the Study.

3.4   Descriptive Analysis of the Demographic Variables.

3.5   Tools and Data Collection.

3.6   Statistical Treatment.

3.7   Validity and Reliability.

3.1 Introduction:

In this chapter, the researcher is going to explain in detail the methodology used in the study, and the study population and sample. Then, the researcher will describe the study model, the study tools and the way of data collection. Next, the researcher will talk about the statistical treatment that used in the analysis of the collected data. Finaly, the validation of the questionnaire and the reliability analysis is applied.

3.2 Methodology of the Study:

It is necessary to choose the method that has the best reflects on the objective of the study. Method is the tool and technique used to obtain and analyze research data, for example: questionnaires, observation, interviews, and statistical and non-statistical techniques. The best method to collect data is by using a questionnaire with formulated alternatives to answer, in order to collect the important data to achieve the main purpose of the study. The researcher gathered data through a questionnaire as a primary data which was distributed to managers of Jordanian medical device companies. The descriptive research is basically explaining the characteristics of a population. In addition, descriptive studies involve collecting data in order to test hypotheses and answer questions concerning the current status of the subject. Typical descriptive studies are concerned with the assessment of attitudes, opinions, demographic information, conditions, and procedures.

The researcher designed a special questionnaire to collect data from the study sample.

3.3 Study Population and Sample:

This study actualize, all Jordanian medical devices companies in Amman were targeted. There are 130 companies in Amman dealing with many kinds of devices. this proof the need for sampling. Study sample consists of managers with total number of (180). (180) questionnaires distributed as a sample of the study, only (140) questionnaires returned, the responds rate was (77.7%) from the total distributed questionnaires. After checking all questionnaires (16) of the returned questionnaires were excluded due to incompleteness from the statistical analysis. Therefore, (124) questionnaires were analyzed, that mean approximately (68.8%) from the total distributed questionnaires.

3.4: Demographic variables of Study Sample:

Tables (3-1), (3-2), (3-3), (3-4) and (3-5); show the demographic variables of the study sample.

Table (3-1) Description the gender of the study sample:

Table (3-1) shows that the most respondents are male (60.48%) and female only (39.52%). Male represents the highest proportion of females which means that most of the managers are from males.

Table (3-1) Gender Description

		Frequency	Percent
Gender	**Male**	75	60.48%
	Female	49	39.52%
	Total	124	100%

Table (3-2) Description the age of the study sample:

Table (3-2) show that (29.04%) of the sample range aged less than 30 Years, (18.55%) of the sample range aged between 30-35 Years, (37.9%) of the sample range Aged between 36-40Years , (14.51%) of the sample range aged more than 41 Years which means that most of age of the managers are between 36-40.

Table (3-2) Age Distribution

		Frequency	Percent
	Less than 30 years	36	29.04%
	30 – 35 years	23	18.55%
Age	36 – 40 years	47	37.90%
	More than 41 years	18	14.51%
	Total	124	100%

Table (3-3) Description the experience of the study sample:

Table (3-3) shows that most participants are have experience between 6-10 years (37.90%), followed by those with experience between 11-15 years (29.84%), then, 5 years' experience (20.16%), finally more than 15 years' experience (12.10%). This indicates that the companies have different experience years.

Table (3-3) Description the experience of the study sample

Experience		Frequency	Percent
	Less than 5 years	25	20.16%
	6 – 10 years	47	37.90%
	11-15 years	37	29.84%
	more than 15 years	15	12.10%
	Total	124	100%

Table (3-4) Description the educational level of the study sample:

Table (3-4) shows that most participants are having Bachelors degree (67.74%). Followed by masters (15.32%). Then, High School or Diploma (11.29%). Finally Ph.D (5.65%). This shows that most of the employees having bachelors and masters degree.

Table (3-4) Description the Academic degree of the study sample

Experience Level		Frequency	Percent
	High School or Diploma	14	11.29%
	Bachelors	84	67.74%
	Masters	19	15.32%
	Doctorate	7	5.65%
	Total	124	100%

Table (3-5) Description the number of employees within the firm of the study sample:

Table (3-5) show that (9.68%) of the number of employees within the firm less than 10, (55.65%) of the number of employees within the firm between 10-50 employees, (30.65%) of the number of employees within the firm between 51-100 employees , (4.02%) of the number of employees within the firm more than 100 Which means that the largest proportion of employees is between 10 and 50.

Table (3-5) Description the number of employees within the firm of the study sample

		Frequency	Percent
Number of employees within the firm	Less than 10	12	9.68%
	10 – 50	69	55.65%
	51 – 100	38	30.65%
	More than 100	5	4.02%
	Total	124	100%

3.5: Study tools and Data Collection:

The current study is of two aspects, theoretical and practical. In the theoretical aspect, the researcher depended on the scientific studies that connected to the existing study. Whereas in the practical aspect, the researcher depended on descriptive and analytical methods using the practical manner to collect, analyze data and test hypotheses.

The data collection, manner of analysis and programs used in the existing study are based on two sources:

1. Secondary sources: books, journals, and theses to write the theoretical framework of the study.

2. Primary source: a questionnaire that was made to reflect the study objectives and questions.

In this study, primary and secondary data were used. The data collected for the model was through questionnaires. After conducting a thorough review of the literature pertaining to study variables, the researcher formulated the questionnaire instrument for this study.

The questionnaire instrumental sections are as follows:

Section One: Demographic variables. The demographic information was collected with closed-ended questions, through (5) factors (Gender, Age, Experience, Educational level; and the Number of employees within the firm).

Section Two: Independent variable: **Salesperson Behavior factors (Motivation, Opportunity, and Ability)**

Motivation: The inside forces that leader's behaviour and is concerned with the action of specific activities. It was calculated through (6) items on five Likert-type scales, from item (1_6).

Opportunity: A time or set of conditions that makes it achievable to do something and a chance for employ or support. It was calculated through (5) items on five Likert-type scales, from item (7_11).

Ability: Is how the salesperson's information and skill in carrying out new marketing strategies. It was calculated through (5) items on five Likert-type scales, from item (12_16).

Section Three: Dependent variable: Development of new product complexity:

Complexity in a product is manifested by both the large quantity and relatedness among, elements contained within the product portfolio or the product itself. It was calculated through (10) items on five Likert-type scales, from item (17_26).

The scale is as follow:

Strongly Disagree	Disagree	Natural	Agree	Strongly Agree
1	2	3	4	5

3.6: Statistic Treatment:

The data collected from the responses of the study questionnaire was used through Statistical Package for Social Sciences (SPSS), the researcher used the following suitable statistical methods that consist of:

- *_ Percentage and Frequency.*

- *Cronbach Alpha reliability* (α) to measure strength of the correlation and coherence between questionnaire items.

- *Arithmetic* to identify the level of response of study sample individuals to the study variables.

- *Standard Deviation*: to measure the responses spacing degree about Arithmetic Mean.

- Variance Inflation Factor and Tolerance to make sure that there are no Multicollinearity between independent variables.

- *Multiple and Simple Regression analysis* to measure the impact of study variables on testing the direct effects.

$$\text{Class Interval} = \frac{\text{Maximum Class} - \text{Minimum Class}}{\text{Number of Level}}$$

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

The Low degree from 1- less than 2.33

The Medium degree from 2.33 – 3.66

The High degree from 3.67 and above.

3.7 Validity and Reliability Validation:

Validation:

To test the questionnaire for clarity and to provide a coherent research questionnaire, a macro review that covers all the research constructs was thoroughly performed by academic reviewers from Middle East University and other universities specialized in faculty and practitioners of MBA, Business administrative. Some items were added, while others were dropped based on their valuable recommendations. Some others were reformulated to become more accurate to enhance the research instrument (as shown in appendix 2). Also for content validity, multiple sources of literature have been used such as journals books, articles, dissertations, thesis and websites.

Reliability:

Cronbach's alpha, was used to determine the internal consistency reliability of the elements comprising the four constructs as suggested by Gregory (2004). Reliability should be (0.70) or higher to indicate adequate convergence or internal consistency

(Hair et al., 2006). These results are the acceptable levels as suggested by (Hair, et. al., 2006). The results were shown in Table (3-6).

Table (3-6) Reliability of Questionnaire Dimensions

No.	Variable	Dimensions	No. of items	Alpha Value (α)
1	Salesperson Behavior			
(1-1)		Motivation	6	0.869
(1-2)		Opportunity	5	0.809
(1-3)		Ability	5	0.911
2	Development of new product complexity		10	0.843

For normality Test: Kolmogorov-Smirnov (K-S) Z test used for normal distribution of data. Table (3-7) shows that the value of (K-S)Z for all independent sub-variables and dependent dimensions are having significant, therefore normality of data is assumed.

Table (3-7): KS-Z Value test

	Statements	No. Items/Variables	KS-Z Value	Sig.
1	Motivation	6	0.869	0.090
1	Opportunity	5	0.941	0.094
3	Ability	5	0.778	0.071
Salesperson Behaviors		3 sub-variable	0.815	0.191
Development of new product complexity		10	0.848	0.173

Construct Validity (Factor Analysis):

Factor Analysis was used to investigate construct validity, if factor loading for each item within its group is more than 50% then construct validity assumed (Hairr, et. al.2014). While, Kaiser-Meyer-Olkin (KMO) is used to measure sampling adequacy, if KMO between 0.8 and 1 it indicates high adequacy, and if more than 70% it is accepted. Bartlett's Test of Sphericity of samples used as the indicator for sample items harmony, and should be less than 5% if the used confidence is 95%. Finally, variance shows explanatory power of each factor (Bischoff and Liebenberg, 2016).

Table (3-8) shows factor loading of each statement within motivation group rated more than 40%, therefore the construct validity was assumed. KMO has rated (83.7%) and the test produced the explanatory value of (78.451) which explains (78.451%) of the variance.

Table (3-8): Bartlett's and KMO for Motivation Statements

	Statements	F1	KMO	Chi^2	% Var	Sig.
1	Employees feel motivated by job	0.874				
2	Employees Would like to devote some more time at their work	0.784				
3	Sales Representatives perceive job as challenging	0.901				
4	The employees feel that dedication job is so strong	0.822	0.837	722.288	78.451	0.000
5	Salespersons feel that time at work goes quickly	0.864				
6	When Employees meet new tasks that they do understand, they still try to learn them	0.887				

Table (3-9) shows that factor loading of each statement within opportunity group rated more than 40% therefore the construct validity was assumed. KMO has rated (81.5%) and the test produced explanatory value of (74.669) which explains (74.669%) of the variance.

Table (3-9): Bartlett's and KMO for Opportunity Statements

	Statements	F1	KMO	Chi²	% Var	Sig.
7	Sales Representatives have ample opportunity to act	0.887				
8	Employees are enabled for success	0.842				
9	Salespersons are supported from their management	0.907	0.815	749.288	74.669	0.000
10	Employees receive assistance when necessary	0.899				
11	Sales Representatives do not receive help when needed	0.824				

Table (3-10) shows that factor loading of each statement within ability group rated more than 40% therefore the construct validity was assumed. KMO has rated (83.7%) and the test produced explanatory value of (70.783) which explains (70.783%) of the variance.

Table (3-10): Bartlett's and KMO for Ability Statements

	Statements	F1	KMO	Chi²	% Var	Sig.
12	Employees are good at carrying their tasks	0.839				
13	Salespersons are skillful in performing the job	0.928				
14	Sales Representatives know the right things to do	0.928	0.837	722.841	70.783	0.000
15	Employees know a great deal about their tasks	0.849				
16	Employees have sufficient knowledge about their job	0.807				

Table (3-11) shows that factor loading of each statement within salesperson behaviors group rated more than 40% therefore the construct validity was assumed. KMO has rated (89.7%) and the test produced explanatory value of (89.715) which explains (89.715%) of the variance.

Table (3-11): Bartlett's and KMO for Salesperson Behaviors Statements

	Statements	F1	KMO	Chi^2	% Var	Sig.
1	**Motivation**	**0.924**				
1	**Opportunity**	**0.939**	**0.897**	**784.962**	**89.715**	**0.000**
3	**Ability**	**0.948**				

Table (3-12) shows that factor loading of each statement within development of new product complexity group rated more than 40% therefore the construct validity was assumed. KMO has rated (87.2%) and the test produced explanatory value of (75.668) which explains (75.668%) of the variance.

Table (3-12): Bartlett's and KMO for Development of New Product Complexity

	Statements	F1	KMO	Chi^2	% Var	Sig.
17	The new product is not complex for salespersons	**0.888**				
18	The managers see that the new product is easy to explain to client from salespersons 'perspective	**0.892**				
19	Complexity driver when action of competitors	**0.938**				
20	Complexity driver is about production structure	**0.900**				
21	Complexity driver while product mix	**0.934**				
22	Complexity management is implemented	**0.874**	**0.872**	**851.983**	**75.668**	**0.000**
23	The product complexity is being transparent	**0.795**				
24	Complexity optimization product is based on complexity transparency	**0.849**				
25	the product complexity assess of product portfolio	**0.779**				
26	There is specific key performance to steer product complexity	**0.805**				

Chapter Four

Data Analysis

4.1   Introduction

4.2   Descriptive Statistical Analysis

4.3   Relationships between Variables

4.4   Hypothesis Analysis

4.1 Introduction:

This chapter divides three sections, descriptive statistical analysis, relationships between dependent and independent variables and the effect analysis for salesperson behaviors on development of new product complexity.

4.2 Descriptive Statistical Analysis:

Descriptive statistical analyses compromise the means, standard deviations, t-values, ranking and importance of each variable and item. Importance indicated based on the following equation:

4.2.1 Independent Variable (Salesperson Behaviors):

Table(4-1) show that the means of salesperson behaviors society sub variables were range between(3.49 to 3.65) with standard deviation ranges from (0.65- 0.74). This result indicate that the participant agree on medium important of salesperson behaviors sub-variables. The average mean of the salesperson behaviors is (3.59) this means that the participant believe that the researched companies have medium important of salesperson behaviors. However, t-value indicates that all of salesperson behaviors variable is medium important.

Table (4-1): Mean, Standard Deviation, t-Value, Ranking and Importance Of Salesperson Behaviors

No.	Sub-Variable	Mean	S. D.	t-Value	Sig.	Ranking	Important
1	**Motivation**	3.63	0.65	7.89	0.00	2	**Medium**
2	**Opportunity**	3.49	0.69	6.78	0.00	3	**Medium**
3	**Ability**	3.65	0.74	7.22	0.00	1	**Medium**
*	**Salesperson Behaviors**	3.59	**Medium**				

*The impact is significant at level ($\alpha \leq 0.05$)   *** (n-1 = 123)**   *** (T tabulated = 1.96)**

4.2.2 Motivation:

Table (4-2) shows that the means of motivation statements are ranging between (3.45 - 3.78) and standard deviation ranges from (0.54 – 0.82). This result indicates that researched companies have medium to high important of motivation statements. The average mean of motivation statements is (3.63) that mean the companies have medium important of motivation.

Table (4-2): Mean, Standard Deviation, t-Value, Ranking and Importance of Motivation

No.	Sub-Variable	Mean	S. D.	t-Value	Sig.	Ranking	Importance
1	Employees feel motivated by job	3.62	0.78	7.88	0.00	4	Medium
2	Employees Would like to devote some more time at their work	3.45	0.54	6.78	0.00	6	Medium
3	Sales Representatives perceive job as challenging	3.57	0.82	6.57	0.00	5	Medium
4	The employees feel that dedication job is so strong	3.69	0.61	7.22	0.00	2	High
5	Salespersons feel that time at work goes quickly	3.67	0.68	6.12	0.00	3	High
6	When Employees meet new tasks that they do understand, they still try to learn them	3.78	0.78	7.89	0.00	1	High
*	Motivation	3.63	Medium				

*The impact is significant at level ($\alpha \leq 0.05$)   * (n-1 = 123)   * (T tabulated = 1.96)

4.2.3 Opportunity

Table (4-3) shows that the means of opportunity statements are ranging between (3.39 - 3.72) and standard deviation ranges from (0.62 – 0.85). This result indicates that researched companies have medium to high important of opportunity statements. The average mean of opportunity statements is (3.49) that mean the companies have medium important of opportunity.

Table (4-3): Mean, Standard Deviation, t-Value, Ranking and Importance of Opportunity

No.	Sub-Variable	Mean	S. D.	t- Value	Sig.	Ranking	Importance
1	Sales Representatives have ample opportunity to act	3.42	0.82	9.18	0.00	4	**Medium**
2	Employees are enabled for success	3.52	0.79	8.74	0.00	2	**Medium**
3	Salespersons are supported from their management	3.72	0.85	8.22	0.00	1	**High**
4	Employees receive assistance when necessary	3.42	0.69	7.89	0.00	3	**Medium**
5	Sales Representatives do not receive help when needed	3.39	0.62	6.65	0.00	5	**Medium**
*	**Opportunity**	3.49			**Medium**		

*The impact is significant at level (α ≤ 0.05)   * (n-1 = 123)   * (T tabulated = 1.96)

4.2.4 Ability

Table (4-4) shows that the means of ability statements are ranging between (3.58 - 3.69) and standard deviation ranges from (0.55 – 0.94). This result indicates that researched companies have medium to high important of ability statements. The average mean of ability statements is (3.65) that mean the companies have medium important of ability.

Table (4-4): Mean, Standard Deviation, t-Value, Ranking and Importance of Ability

No.	Sub-Variable	Mean	S.D.	t-Value	Sig.	Ranking	Importance
1	Employees are good at carrying their tasks	3.69	0.64	8.74	0.00	1	High
2	Salespersons are skillful in performing the job	3.64	0.57	7.92	0.00	4	Medium
3	Sales Representatives know the right things to do	3.58	0.55	8.45	0.00	5	Medium
4	Employees know a great deal about their tasks	3.65	0.94	6.38	0.00	3	Medium
5	Employees have sufficient knowledge about their job	3.69	0.77	6.02	0.00	2	High
*	**Ability**	**3.65**			**Medium**		

*The impact is significant at level (α ≤ 0.05)   * (n-1 = 123)   * (T tabulated = 1.96)

4.2.5 Dependent Variable (Development of New Product Complexity):

Table (4-5) shows that the means of development of new product complexity ranges between (2.89 -3.55) with standard deviation ranges from (0.52 - 0.94). This indicates that the participant agree on medium important of development of new product complexity statements. The average mean of development of new product complexity dimensions is (3.24) this means that the participant believe that the research companies have medium important of development of new product complexity.

Table (4-5): Mean, Standard Deviation, t-Value, Ranking and Importance of Development of New Product Complexity

No.	Sub-Variable	Mean	S. D.	t-Value	Sig.	Ranking	Importance
1	The new product is not complex for salespersons	3.33	0.74	11.84	0.00	4	Medium
2	The managers see that the new product is easy to explain to client from salespersons ' perspective	3.14	0.57	9.27	0.00	8	Medium
3	Complexity driver when action of competitors	3.28	0.75	8.45	0.00	5	Medium
4	Complexity driver is about production structure	3.35	0.77	8.65	0.00	3	Medium
5	Complexity driver while product mix	3.42	0.52	7.16	0.00	2	Medium
6	Complexity management is implemented	3.55	0.79	7.24	0.00	1	Medium
7	The product complexity is being transparent	3.17	0.94	9.44	0.00	7	Medium
8	Complexity optimization product is based on complexity transparency	3.09	0.65	10.89	0.00	9	Medium
9	the product complexity assess of product portfolio	2.89	0.84	10.59	0.00	10	Medium
10	There is specific key performance to steer product complexity	3.19	0.79	9.42	0.00	6	Medium
*	**New Product Complexity**	**3.24**	**Medium**				

4.3 Relationships between Variables:

Researcher used Bivariate Pearson Principles method to test the relationship between mean and sub variable variables. Table (4-6) shows that the relationships between Salesperson Behaviors sub-variables are strong to very strong, where (r) ranges between (0.69- 0.73) and the relationships between Development of New Product Complexity is also strong to very strong, where(r) ranges between (0.67 and 0.82). Table also shows that the relationships between Salesperson Behaviors sub-variables and Development of New Product Complexity are strong to very strong, where 0.67 and 0.82. Finally, table shows that the relationship between Salesperson Behaviors and Development of New Product Complexity is very strong, where r equals 0.76.

Table (4-6): Bivariate Pearson Principles Method Test for Relationships between Variables

No.	Variable	1	2	3	4	5
1	Motivation	----				
2	Opportunity	0.71	----			
3	Ability	0.69	0.73	----		
4	**Salesperson Behaviors**	**0.79**	**0.82**	**0.85**	----	
5	**Development of new Product Complexity**	**0.67**	**0.82**	**0.78**	**0.76**	----

4.4 Hypothesis Analysis:

Multiple regressions test used to investigate the impact of salesperson behaviors (Motivation, Opportunity and Ability) on development of new product complexity at Jordanian Medical Devices Company. After confirming normality and validity, reliability and relationships between variables, the following tests carried out to be able to use multiple regressions: Skewness, Durbin-Watson and multicollinearity (Sekaran 2003).

Durbin-Watson used to ensure independence of errors, If Durbin-Watson test value is about 2 the model does not violate this assumption. Table (4-7) shows that Durbin Watson value is (d=1.726), which is about two and this shows that the residuals are not correlated to each other. Therefore, the independence of errors not violated.

Multi-collinearity:

Variance Inflation Factor (VIF) and tolerance are used to test multicollinearity. If Variance Inflation Factor is less than 10 and tolerance is more than 0.1, the multicollinearity model does not violate this assumption. Table (4-7) shows also that the Variance Inflation Factor (VIF) values are less than 10, the tolerance values are more than 0.10 and Skewness between (_+1).This indicates that there is no multicollinearity within the independent variables of the study.

Table (4-7) Multicollinearity, Skewness and Durbin-Watson Tests

Sub variable	VIF	Tolerance	Skewness	Durbin-Watson
Motivation	1.777	0.562	0.455	
Opportunity	1.582	0.632	0.375	1.726
Ability	1.678	0.595	0.386	

Main Hypotheses:

H01: There is no impact of the salesperson behavior (motivation, opportunity and ability) on development of new product complexity of medical devices companies at $\alpha \leq 0.05$.

Table (4-8) shows that when regression the three independent variables of salesperson behavior associate against dependent variable development of new product complexity.

R^2 shows the conformity of the model for multiple regressions and explanations the variance of salesperson behavior on development of new product complexity. Since R^2 is 55.5% then the salesperson behavior variable can explain 55.5% of variance on development of new product complexity variable, since (R^2=0.555, F=47.856, Sig.=0.000). Therefore, the null hypothesis rejected and the alternative hypothesis accepted, which states that salesperson behavior (motivation, opportunity and ability) impact on development of new product complexity at medical devices companies at ($\alpha \leq 0.05$).

Table (4-8): ANOVA Test Regressing for Salesperson Behavior Together against Development of New Product Complexity

Model	R	R^2	Adjusted R^2	F	Sig.
new product complexity	0.745[a]	0.555	0.544	47.856	0.000[b]

a. Dependent Variable: Development of New Product Complexity

b. Predictors: (Constant), motivation, opportunity and ability

Table (4-9) shows the impact of each salesperson behavior sub variable on development of new product complexity.

Table (4-9): ANOVA Test - Regression the Three Salesperson Behavior Sub-Variable Together against Development of New Product Complexity

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	0.030	0.057		0.526	0.588
Motivation	0.264	0.024	0.274	11	0.020
Opportunity	0.162	0.032	0.198	5.06	0.014
Ability	0.355	0.036	0.156	9.86	0.030

*The impact is significant at level ($\alpha \leq 0.05$)   * (n-1 = 123)   * (T tabulated = 1.96)

H$_{01.1}$: There is no impact of motivation on development of new product complexity of medical equipment companies at $\alpha \leq 0.05$.

Table (4-9) shows that there is a significant impact of motivation on development of new product complexity, where (Beta=0.274, t=11, sig.=0.020, p<0.05). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted which states that motivation impacts development of new product complexity of medical devices companies at ($\alpha \leq 0.05$).

H$_{01.2}$: There is no impact of opportunity on development of new product complexity of medical equipment companies at $\alpha \leq 0.05$.

Table (4-9) shows that there is a significant impact of opportunity on development of new product complexity where (Beta=0.198, t=5.06, sig.=0.014, p<0.05). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted which states that opportunity impacts development of new product complexity of medical devices companies at ($\alpha \leq 0.05$).

H$_{01.3}$: There is no impact of ability on development of new product complexity at medical equipment companies at $\alpha \leq 0.05$.

Table (4-9) shows that there is a significant impact of ability on development of new product complexity where (Beta=0.156, t=9.86, sig.=0.030, p<0.05). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted which states that ability impacts development of new product complexity of medical devices companies at ($\alpha \leq 0.05$).

Chapter Five

5.1 The Main Result of Study

5.2 Study Conclusion

5.3 Study Recommendations

5.1 The main results of the study

The researcher finds many of significant results that lead to add new contributions to theory and relevant literature and to the medical devices industries. The researcher also wishes the results will prompt a number of significant decisions by owner of medical devices companies. Also wish that such these results help the managers and salespersons to take right decisions that will be reflected positively on their career bath. Based on the data analysis and hypotheses shown in previous chapter, the study results show this part of sets can be summarizing as follows:

- The importance level of salespersons behaviors in medical devices companies have medium important of salesperson behaviors. This result is from managers' perspective on their employees and that has agreement with the study of Hayati, B. (2012) and study of Johnson, J. S. (2013).

- The importance level of motivation in medical devices companies have medium to high important of motivation. This result is from managers' perspective on their employees and that has agreement with the study of Lyus, D., Rogers, B., & Simms, C. (2011) and study of Johnson, J. S. (2013).

- The importance level of opportunity in medical devices companies have medium to high important of opportunity. This result is from managers' perspective on their employees and that has agreement with the study of Wang, Y. L., Ellinger, A. D., & Jim Wu, Y. C. (2013) and study of Johnson, J. S. (2013).

- The importance level of ability in medical devices companies have medium to high important of ability. This result is from managers' perspective on their employees and that has agreement with the study of Alghamdi, S., & Bach, C. (2014) and study of Johnson, J. S. (2013).

- The importance level of development of new product complexity in medical devices companies have medium important of development of new product complexity. This result is from managers' perspective on their employees and that has agreement with the study of Brown, A., Dixon, D., Eatock, J., Meenan, B. J., & Young, T. (2008) and study of Pasche, M. (2008).

- Salespersons behaviors have a positive impact on development of new product complexity in medical devices companies at the level ($\alpha \leq 0.05$). (r) was (0.745) at level ($\alpha \leq 0.05$), whereas the (R^2) was (0.555). This means the (55.5%) of development of new product complexity among Jordanian medical devices companies' changeability results from the changeability in Salespersons behaviors.

- Motivation has a positive impact on development of new product complexity in medical devices companies at the level ($\alpha \leq 0.05$). As Beta is (0.274) and t calculated (5.668) is greater than the T tabulated (1.96) according to the result showed in chapter 4.

- Opportunity has a positive impact on development of new product complexity in medical devices companies at the level ($\alpha \leq 0.05$). As Beta is (0.198) and t calculated (4.299) is greater than the T tabulated (1.96) according to the result showed in chapter 4.

- Ability has a positive impact on development of new product complexity in medical devices companies at the level ($\alpha \leq 0.05$). As Beta is (0.156) and t calculated (2.834) is greater than the T tabulated (1.96) according to the result showed in chapter 4.

5.2 conclusions:

This study investigates the impact of salespersons behaviors on development of new product complexity. It aims to find out the key of salespersons behaviors that impacts development of new product complexity such as: (motivation, opportunity, and ability).

This study is trying to get the best explanation between the salespersons behaviors and development of new product complexity. The relationships between salesperson behaviors sub-factors and development of new **p**roduct **c**omplexity are strong to very strong.

Salespersons behaviors have a positive impact on development of new product complexity in medical devices companies. This means the development of new product complexity among Jordanian medical devices companies' changeability results from the changeability in Salespersons behaviors.

5.3 Recommendations:

In the current research results, the recommendations can be found as following:

Recommendations for managers of Jordanian medical devices companies:

- This study recommends using salesperson behaviors as a technique to develop the new product complexity in medical devices companies.

- Training the salespersons to increase their abilities by teaching them more knowledge and skill in carrying out new performance.

- Enhance salespersons motivation by giving them commission when they achieve their target.

- Salespersons must be learned how to take advantage of opportunities.

- Training the salespersons how to explain the product features to their clients.

- The company must work on increasing transparency in variety induced in order to understand its impacts on the company represents. As a key element in development of managing the product complexity and choosing the correct actions.

- Complexity management for products must be managed by research and development department in the companies.

- Companies must enhance and choose the best practice of carrying Employees tasks and missions.

- Managers must give assistance to their Sales Representatives when needed, in order to increase their performance.

Recommendations for Academics and Future Research:

- This research is directed towards medical device companies and it recommends implementing to other industries such as telecom and Pharmaceutical.

- Then, there is a need to analyze data of other companies over other period in order to test the assumptions of salespersons behaviors.

- Also this research recommends implementing with new variables that can impact of developing new product complexity such as R and D budget, technology, and competitive advantages.

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Appendixes:

Appendix 1: Questioner

Dear Responder,

The researcher is in the process of conducting a field study regarding the impact of salespersons behavior on development of new product complexity: from managers of Jordanian medical devices company Perspective.

Being a part of the requirement to acquire a master's degree in MBA.

This questionnaire is intended only for the purposes of scientific research.

Please note that basis of the questionnaire measurement would be a five point Lekart scale, employed accordingly:

Strongly disagree	Disagree	Natural	Agree	Strongly agree
1	2	3	4	5

Researcher: Mohamed Ahmed Daloul

Supervisor: Dr. Sameer Aljabaly

Section 1: General Information.

Please tick the appropriate response box:

1. **Gender**: ○Male ○Female

2. **Age**: ○Less than 30 ○30 – 35 ○36 - 40 ○41 and older

3. **Experience**: ○Less than 5 years ○ 6 – 10 ○11-15 ○more than 15 years

4. **Educational Level:** ○High School or Diploma ○Bachelors ○ Masters ○Doctorate

5. **Number of employees within the firm:**
○ Less than 10 ○10 – 50
○51 – 100 ○More than 100

Section 2: Please tick the appropriate response box.

Statements	Strongly Disagree (1)	Disagree (2)	Natural (3)	Agree (4)	Strongly Agree (5)
SALESPERSON BEHAVIORS (motivation)					
The extent to which the salesperson has the desire or willingness to act on development of new product complexity. (These questions are from managers' perspective on their employees)					
1 Employees feel motivated by job					
2 Employees Would like to devote some more time at their work					
3 Sales Representatives perceive job as challenging					
4 The employees feel that dedication job is so strong					
5 Salespersons feel that time at work goes quickly					
6 When Employees meet new tasks that they do not understand, they still try to learn them					
SALESPERSON BEHAVIORS (Opportunity)					
The extent to which the salesperson perceives their organizational environment as conducive of carrying out on development of new product complexity.(These questions are from managers' perspective on their employees)					
7 Sales Representatives have ample opportunity to act					
8 Employees are enabled for success					
9 Salespersons are supported from their management					
10 Employees receive assistance when necessary					

Statements		Strongly Disagree (1)	Disagree (2)	Natural (3)	Agree (4)	Strongly Agree (5)
11	Sales Representatives do not receive help when needed					
SALESPERSON BEHAVIORS (Ability)						
The extent to which the salesperson has the desire or willingness to act on development of new product complexity.(These questions are from managers' perspective on their employees)						
12	Employees are good at carrying their tasks					
13	Salespersons are skillful in performing the job					
14	Sales Representatives know the right things to do					
15	Employees know a great deal about their tasks					
16	Employees have sufficient knowledge about their job					
Development Of New Product Complexity						
The extent to which the salesperson directs their energy to the development of new product complexity.(These questions are from managers' perspective on their employees)						
17	The new product is not complex for salespersons					
18	The managers see that the new product is easy to explain to client from salespersons' perspective					
19	Complexity driver when action of competitors					
20	Complexity driver is about production structure					
21	Complexity driver while product mix					

Statements		Strongly Disagree (1)	Disagree (2)	Natural (3)	Agree (4)	Strongly Agree (5)
22	Complexity management is implemented					
23	The product complexity is being transparent					
24	Complexity optimization product is based on complexity transparency					
25	the product complexity assess of product portfolio					
26	There is specific key performance to steer product complexity					

Appendix 2: Names of arbitrators.

No.	Name	Specialization	Work Place
1	Prof. Ahamed Ali Saleh	Business Administration	MEU
2	Dr. Abdaziz Sharabati	Business Administration	MEU
3	Dr. Mohammed Adaileh	Business Administration	MEU
4	Dr. amjad tweqat	Business Administration	MEU
5	Dr. Murad Attiany	Business Administration	Al- IsraaUni
6	Dr. Faisal Abu Roub	Business Administration	Petra uni
7	Dr. Sima Maktef	Business Administration	Petra uni