Use the Internal Conversion Rates in Evaluating the Performance of the Enterprise Departments

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Abstract

The research aims to identify the possibility of using the conversion rates by the organizations in the duly accredited methods in determining the price (market-based conversion rates, cost-based conversion rates, negotiation-based conversion rates) in assessing the performance of its departments. The community of the study included the Jordan companies listed on the Amman Exchange Stock, which are (255) companies. The sample of the study consisted of (188) respondents of the financial managers and employees of Finance Departments in the public shareholding companies. A main questionnaire has been used to collect the data. The results focused on analyzing (188) questionnaires collected from the sample of the study. The results showed that the companies being studied apply the conversion prices based on the market in evaluating the performance of their different departments in high degree, while using the conversion rates in the evaluation of such departments by using the cost-based and negotiation-based in medium degree. The results also show that the conversion prices contribute to research in the reasons of deviations resulting from comparisons between the plans and the actual results of the combined centers. Moreover, the companies depend on the conversion prices in designing the future strategic planning to develop their departments. In the light of the findings a number of recommendations have been presented, most notably the companies continue using the conversion prices in evaluating performance of their departments. The study also recommended the need of the other companies, which do not use the conversion prices should use the them and provided the required capabilities for this purpose due to the direct effect on the performance assessment and delineation of responsibilities, as well as making sure that they authorize the departments to make the necessary decisions because doing so would reduce the costs of their centers, and help improve the efficiency of the company performance.

Preamble

The expansion of the enterprises works, multi functions and diversity of their activities have led to the increase the number of resolutions and the interrelationships between enterprise units. The senior management is no longer able to follow up everything in its various activities, so it is hard to take all administrative decisions centrally. The rapid technological developments in all areas created many challenges which require the increase of researching for the foundations and scientific and practical methods commensurate with those developments. The performance evaluation method is deemed one of the foundations that seek to reduce costs, on the one hand, and diagnose the strengths and weaknesses of the value chain of the production processes, and assist the management in properly planning and decision-making.

In order to achieve this purpose, this research will focus on the internal conversion prices, as one of the reliable assessment tools in assessing the performance of organization centers, in addition that I tis an important tool to achieve the goals of the accountability system appropriate to the wide size of the companies and diversity of their products. This would be an incentive to encourage employees and managers to find out the points through which the costs can be reduced while maintaining the product quality or maintain the level of costs associated with improving quality, which contributes to creating a competitive advantage to the enterprise on the one hand and achieve fair assessment of the departments' performance.

The Problem

Considering the multi accounting policies that can be applied in the enterprises, and existence of a number of divisions and departments within same company, it is required to create an effective regulatory systems for assessing the performance, motivate employees to perform the planned work, as well as to find out whether the work procedures run properly corresponding to the constituents of accountability. This requires the need for a mechanism to measure inflows between branches and centers of the products or parts thereof and services to control those flows, and evaluate the performance of the responsibility centers and to highlight their contribution to total production and total result, motivating officers to abide to the budgets and planned goals and contribute to achieve a value added to the enterprise.

The internal conversion prices method is an assessment tools which is being ignored by many enterprises, resulting to weakening their ability to achieve effective assessment which achieve the fairness between its centers regardless of the fact such organization depends on central or decentralized management system. The evaluation of these departments performance achieves balance in performance, and whether the departments have contributed to maximize returns, as a financial standard, or participated in elevating the levels of satisfaction among the shareholders of the company and increased confidence indicators with the customers, even they non-financial indicators.

Therefore, the research questions can be formulated as follows:

What is the possibility of using the market-based conversion rates by the companies in evaluating the performance of their departments?
What is the possibility of using the cost-based conversion rates by the companies in evaluating the performance of their departments?
What is the possibility of using the negotiation-based conversion rates by the companies in evaluating the performance of their departments?

The objectives of the Search

The primary objective of the research is an attempt to find out the possibility of using the conversion rates by the companies in accredited methods in determining the price (market-based conversion rates, cost-based conversion rates, and negotiation-based conversion rates) in assessing the performance of their departments through achieving the following sub-objectives:

1- Identify the main concepts related to the study approved variables, which are the conversion rates and assessing the performance of departments.
2- Identify respondents' views, finance managers and finance departments personnel, of the enterprises and pointing out the extent of the management need to adopt performance appraisal methods, and the importance of adopting the internal conversion prices as a tool to evaluate the performance of the centers.
3- The contribution to providing a database on the subject of conversion rates and performance evaluation, which would contribute to enriching the Arabic library in general, and library in Jordan particularly, on this subject.

The Importance of Search

The importance this research arises from the subject it addresses which is deemed of a great significance at the present time after changes in the use of management accounting techniques and its growing role in the development of the performance, thus giving the opportunity to managements of the companies to make the ideal decision related to the activation of accountability principle in determining the responsibilities and granting the power between the centers to prevent duplication of works; thus, selecting the most appropriate means available to make their products within the framework of competition prevailing in the market. Therefore, the results concluded will serve enterprises in general and research community in particular.

The research acquires its importance as the performance evaluation of the departments is deemed an effective tool to serve the management of these companies through their contribution in decreasing the total cost of the products while maintaining the level of quality, enhancing the competitive advantage of the companies on the one hand, and the performance assessment of the centers and determine responsibilities fairly, on the other hand, as well as to maximize shareholder profits in the companies.

The Hypotheses

Based on the components of the problem and it relevant questions, the hypotheses of the research have been formulated as follows:

HO1: the enterprises do not use market-based conversion rates in evaluating the performance of the departments.
HO2: the enterprises do not use cost-based conversion rates in evaluating the performance of the departments.
HO3: the enterprises do not use the negotiation-based conversion rates in evaluating the performance of the departments.

Search Model

Diagram 1 shows the adopted model in the design of this Study:

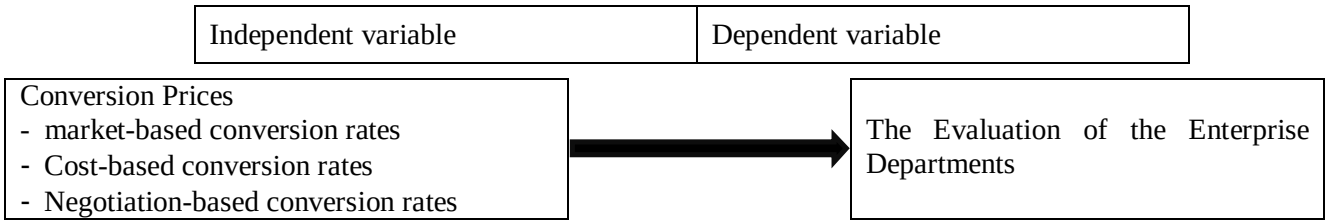

Diagram 1
Model of the Study

The Theoretical Aspect

Preamble

The Administrative and technological development in most of the economic sectors led to a higher competition between different companies, which means increasing need of decision-makers, whether internal or external, to the qualitative information to support their decisions. Since the accounting sector, in General, is involved in the financial reporting and the execution of full disclosure of important information, this sector has developed to keep pace with the requirements of other sectors and meet the requirements of information according to the required level. The expansion of accounting techniques in General, and the administrative accounting methods in particular, resulted to the emergence of the responsibility accounting, which is considered as a comprehensive system links between the management and accounting through converting the enterprise from the centralized to decentralized system, where the management powers and decision making are authorized from the senior managements to the managements of the centers, and the managers of the centers shall be held responsibility for the performance of their centers in accordance with such authorization. This would constitutes an important supporter for planning, control and providing the criteria of performance evaluation, especially with the increased need for bases and criteria for assessing the performance of departments and recognize their efficiency and effectiveness at all levels. Among these tools is the use of conversion rates between sections of the company, which would improve productivity and quality of products or services, as well as reduction of costs, especially in situation of scarcity of economic resources in the States (Mohammed, 2006). Accountability is by itself an important means towards the mitigation of negative deviation and addressing its causes, besides the development of positive deviations, as it is conducive to the development of initiative and creativity through the best use of energy and resources for the accomplishment of the planned objectives, thus playing an important role in leading the economic integration (Juma'h et al., 1999).

Decentralization and Responsibility Accounting

The organizations accorded a great attention to decentralization for the role it plays in imposing control over the performance of workers in economic integration at the various administrative levels, to be accountable for the results of their work, combined with the planned performance through the development of accounting methods that would mitigate the problems of implementation of plans at different administrative levels. Responsibility accounting has many concepts and definitions, including: The responsibility accounting in view of Basile (2007) is a system designed to collect data which reflect the system of each administrator during a certain period compared with pre-determined responsibilities and disseminate such responsibilities in the reports to evaluate the individual performance and his ability of controlling.

It is activity-based accounting or connecting the planning rates of cost elements in responsibility centres and comparing them with actual rates to these items to determine responsibility for deviations. (Radi, 2011) believes that it an accounting system depends on the collection and recording of data related to revenues, costs, profitability and investment based on the established organizational units (responsibility centres), where the follow-up and evaluation reports are linked to responsibility centres, whether departments or administrative units, where each manager of the responsibility accounting center could be held responsibility for the elements within his control. Kahhalah and Hanan (2010), believes that it is activity-based accounting; i.e. the connection of the planning rates of the activity cost elements with the responsibility centres compared to actual rates to these items to determine responsibility for deviations. Decentralization and responsibility accounting: is a regulatory accounting method serves the management in evaluating the performance of officers at the managerial levels in terms of how to achieve the pre-planned objectives.

In viewpoint of researchers, responsibility accounting is: administrative and financial system contributes to ease the burden on Central Administration by delegating powers to the directors of the centres, it contributes to provide the appropriate conditions for accounting departments at various levels through the assessment of their performance in light of the authorization size and the powers granted to them by using a different evaluation methods. .

Application Requirements of Responsibility Accounting

The application of Responsibility Accounting requires, as a tool aims to control the performance of workers in different administrative levels and the evaluation standards thereof, to identify responsibility centres; such as cost center, profit centres or investment centres where cost elements are recorded and the Director of the Centre will be responsible as standard. Evidence of actual costs arises in these centers will be proven from the reality of the financial accounting records to determine deviations and performance evaluation.

Responsibility Centres

Responsibility accounting is represented in the economic units in several types, where each type of responsibility centres produces a different kind of accounting information, which is:

1 -Cost center:
It is the Centre, which its main activity has cost-consuming nature and does not realize direct income as the director has direct control over cost only.

2 – Profit Center:
It represents an organizational unit or activity department where the officer of this unit shall hold responsible for the costs and realized profits, as the revenues and costs are under his control. It should be taken into account that maximizing the profits of each profit might not lead to maximizing the profits of the entire enterprise because maximizing profits of the profit center may cause damage to other profit center(s). Such case may cause damage to the whole organization.

3 - Investment Centre:
It represents a department or activity center which its performance is measured by determining the returns on investment and the comparison between the planned and actual costs as well as the revenues. The existence of such type of responsibility centres adds an additional request on accounting information system. In such case, it is required to determine the assets precisely and accurately in the specified investment centre, so that the value of capital expenditure can be determined at these centres (Kahhalah and Hanan, 2010).

Conversion Rates

The multiplicity and diversity of the organizations departments and branches require them to create responsibility centers which have specific organization, budget, powers and duties. This needs to determine the price of products, goods, or services exchanged between the departments, which is the so-called conversion prices or concession price, to achieve the consistency and coherence in defining overall objective. This may contradict with the performance assessment policy of responsibility centres, where each department is trying to achieve the maximum profit as possible through the sales process or reduce as much as possible of cost in the case of purchase or production. (Kaplan & Atkinson, 1998).

Horngren, et al., (2012) defines conversion price: it is the price charged by a department, administrative unit or sector in the establishment to another department, administrative unit or sector in the same established for the goods or services provided. Conversion rate constitutes income to a department and expenses at the same time paid to another department. Radi (2011) refers to the conversion rates as the prices determined for goods and services that are exchanged between departments and units of the organization. Such prices represent the value on which the goods or services exchanged between the subsidiary units of the organizations, so it is internal rates.
Therefore, the conversion rate is the value on which the goods and services are transferred or exchanged between the organization sub-units. They are internal prices, representing the value charged by the responsibility centre to another responsibility centre within the same organization for the goods and services where both centres, transferor and transferee, get benefit.

Conversion Pricing Methods

There are many conversion pricing methods between the centers of an organization or between its subsidiaries, including:

First: market-based conversion rates: the price prevailing in the market is used under this method and sometimes there is a certain percentage of reduction. This method is optimal base and plays a balancing role between internal and external supply and demand, (Horngren et al., 2012). The main constraint to market-based conversions that the organization may encounter, in case of used, is that the market prices are not always available for the materials converted internally, i.e. some goods or services being converted and internal exchanged do not have prices in the market because these goods or services may have their own attributes and characteristics that make any external price just a rough estimate of the market value of these distinct and special goods and services (Ahmad, 2010).

Second: cost-based conversion prices: the price is determined under this method is based on using the costs in determining the price upon the total, partial, or standard cost with the addition of a certain margin of profit. The actual or historical cost is the basis most commonly used in determining the conversion prices, especially in the absence of market price; because the actual cost is characterized by being identified accurately as well as they are already available easy relatively.

Conversion pricing is made under this method upon the basis:

1- Total Cost: conversion rate is determined on the basis of the total cost that actually occurred. It consists of elements of fixed costs and variable costs elements. The total production cost is used as basis for determining the conversion price without calculating any profit for the seller department. Total cost is featured by relatively easy and can be used in the pricing of all products, and its defects is that once the organization can impose their prices on the basis of the total costs, it would weaken the organization willingness to control the costs (Ahmad, 2010).

2- Variable Cost: the units under this method are converted between the internal departments on the actual variable cost. The advantage of this basis is that conversion rate is determined on the basis of data already available within the organization. The disadvantages of this method is that it does not take into account the inefficiencies in the different centres, where the effects of inefficiencies, defaults and excess of the transferor center are transferred to the transferee center, leading to improper evaluation of the performance of the centres. The variable cost can be used as a basis for determining the conversion price when there is unused ability of certain department. The use of such excess capacity leads to contribute to supply other departments with their requirements of production at a reasonable price for the transferor and transferee department (Al-Anati, 2005).

3- Standard Cost: the standard costs are the costs that are determined on the scientific bases and laboratory studies reflecting what the costs must be in future. It also disclose the reasons of inefficient early, thus avoid reaching (inefficiency) to the final cost of the product which will be converted later after the (seller) unit of the product to the (buyer) unit). Therefore, it can be said that the standard costs are effective and fair base for determining the internal conversion prices compared to the actual cost base. It also provides a stimulating type that is necessary and important for high efficient work. (Horngren et al., 2012).

Third: Negotiation-based conversion prices: the appropriate price, on which the services or products are transferred, is negotiated under this method between the two centres, provided that the applicant center has the freedom to go abroad (market) in the event of failure of negotiations (Horngren et al., 2012). This method is used in the absence of a market price.

In such case, the relationship between the internal departments is a seller and buyer relationship, and the seller has the right to refuse a transaction if he finds a buyer accepts to buy at higher price. The advantages of this method are that: maintaining the freedom and independence of the centres and exclude the bad feeling arises of the rates imposed on the directors of the centre. The disadvantages: it is not useful in assessing the performance of departments as in this case they assess their ability of bargaining more than efficient performance (Al-Anati, 2005).

Performance Evaluation

Performance is the main axis where all organizations efforts are exerted. The organizations usually expect to perform its duties efficiently and effectively, so the performance evaluation is conducted through identifying the performance strengths and weaknesses. The evaluation of the performance, at the center or department level, aims to identify the performance of such department and introduction of this department, as well as how it should perform its work, and design a plan for the development of such department. The evaluation of the performance is not limited to the introduction of the concerned department at present but the effect on its performance in future (Abdul Sattar, 2013). Therefore, the evaluation process in essence is the identification and measurement of the activities or assessment to the actual results realized and then comparing them to the pre-established criterion, whether this criterion is what has been done in the previous period or it is a predetermined standard at the sector level in which the organization to be evaluated is involved.

The performance measurement of the departments is the way of knowledge towards great productivity and increasing profits. It would not be done unless it arises horizontally from all departments and all participants in the production and delivery stages and such stages include many parties who have connections and control to each other. The performance measurement of the departments depends on three axes, namely (quality, performance and cost). The performance measurement must be applicable to the outputs, whether they are operational, product or production phase (Basile, 2007).

To measure the performance of departments for evaluation purposes, the standards are classified as follows:

The Financial Criteria: They are important tools to measure the profits of the organization, its ability to survival and development, the distribution funds effectively, the evaluation of the department's efficiency and their effectiveness in achieving added value to the organization business. Among these criteria are the financial ratios, planning budgets, economic added value, net present value and others. The disadvantage the financial criteria is that "most of them measure the achievements or past events, and short-term achievements which may be not familiar or comprehensible to some individuals, with instability in price levels, (Atkinson et al., 2012).

Non-financial Criteria: They are the criteria that drive the future financial performance for their important and clear impact on the financial success in the organization future, especially when put to face the contemporary changes and challenges. Such criteria may be quantitative or qualitative standards, including the investigation lists to determine the degree of satisfaction, market share of the organization, time lasts for processing orders, invention standards, product development and other operational standards which is linked to the essential sensitive factors for the success and superiority of the organization, as well as its ability to survive and compete (Miswadah, 2004).

The advantages of these criteria are that they are more closely connected to the long-term strategies of the enterprise, their ability to measure intangible fixed assets, and it provides better indicators for the future financial performance. Their deficiencies can be summarized by the use of the financial and non-financial indicators of performance evaluation together takes longer time with higher cost. The foregoing indicates that the performance evaluation of the departments is designed to measure the activity of these departments, find out its results, and then indicate whether the activity is consistent with the objectives seeking to be achieved, and whether this method of this activity and means of achieving results represent the best and most efficient manner possible to achieve these results and goals.

Previous studies

The researchers found a set of literature and studies presented this subject of our study or part thereof. These studies include:

- Study of Jawad (2011), entitled: **the role of internal conversion rates in evaluating the performance of profit: it is an applied study in the Qadisiyah Dairy Plant**

This study aimed to find out a proper scientific basis in in pricing the converted products between activity centers and to make profitability as appropriate measurement in evaluating the performance of such centres. The study concluded several results, including: it is confirmed that the plant- the search sample- calculate the conversion rate of the products between its various activities on the basis of the total cost that does not reflect the earning power of the centres properly. So, the researcher proposed the use of cost-based plus margin profit as the basis to calculate products prices converted due to the role such type of performance assessment of profitability plays.

- Study of Touati, (2012), entitled: **internal concessions prices as a tool to improve the performance of the responsibility centres in economic enterprises.**

The study aimed to assess the performance of productivity centres within the same company through the profitability of each centre. The study concluded that "the concession rate or conversion price (transfer)" allows assessing the financial performance of centres, on depending on the criterion of profitability that allows knowing the responsibility centres that achieve positive profit and the centers of negative profitability. Through this knowledge we can intervene (in the case of a negative profitability) via regulatory apprenticeship of processing which would improve the performance, and then increasing the profits of the centers in particular and enterprise in general.

- Study of Abdul Sattar (2013), entitled: **the use of responsibility accounting system in evaluating the performance of profit centers at the Leather Industries Public Company**

This study aimed to identify the importance of adoption of the conversion rates (market price) in evaluating the performance of the profitability centres of the company through the identification of responsibility centres and determine the price of conversion of intermediate goods (tanned leather) between the responsibility centres considering the current price (market price) at the time of conversion as the basis for determining the conversion rate. The study concluded that the use of internal conversion price (market price) for the purpose of evaluating the performance of profit centers, which is deemed more fair and objective basis for measuring the efficiency of performance and effectiveness of these centers because conversion at the cost prices will shift the efforts of the first position centers to the last position.

- Study of (Bailey & Collins, 2005) , entitled: **Goliath Corporation : An instructional case in transfer pricing policy**

The study aimed to clarify the conversion policy of goods and services of **Goliath** Company where the proper policy will be selected among four potential mechanisms (either on the market based, cost-based, negotiation-based or double pricing basis). The study concluded that the negotiation-based conversion rates tend to induce decision-making to the comprehensive benefit of **Goliath** Company. The study also concluded that in the different conversion rates affect the size of profit and loss in the organizational units and thus have an impact on the evaluation of the managers' performance. In some cases the conversion rate may lead to disagreement in coordination between organizational units within the organization and the overall profitability of the organization on the one hand and to measure profitability and assess the performance of managers of the organizational units on other hand.

- Study of (Chwolka & Simons, 2011), entitled: **The value of negotiating cost-based transfer pricing"**,

This study aimed to investigate the possibility of using internal conversion prices between the departments based on the variable or full costs, in coordinating decentralized production centers and the investment-related decisions to improve the quality. It also aimed to decentralize the management of large organizations activities. The study also tried to show the importance of the mechanism of selecting the conversion rate between the departments and its impact on the assessment of the performance of departments. The study concluded that the variable cost-based conversion rates failed to stimulate the investments, but the full cost-based conversion could provide strong investment incentives. The study also found that the process of dividing the organization into separate independent department would lead to a financial benefit for the whole organization because dividing the organization into several separate independent departments provides an incentive for managers to use the available resources to the fullest as they hold responsibility, so that conversion price should be determined properly due to its positive benefits more than negative harms.

- Study of (Stephen, 2013), entitled: "**Transfer pricing: Goals and methods among unlisted companies in Kenya".**

The study aimed to determine the conversion rate adopted in every branch of decentralized organizations in Kenya and grow in complicated operations, so that internal conversion price between departments in several different ways, including (market, cost or negotiation-based price). The study targeted a group founded in Kenya, non-listed companies in the stock exchange, where a regular questionnaire were distributed, answered by (47) managers of various decision-makers. The study found that cost-based transfers represent (88.6%), which is the most common. The hypotheses testing showed that the volume of transactions does not affect the selection of the conversion price. The results showed that these companies do not pay attention to the capacity of internal factors in their effect on pricing decision, and the conversion rate affects positively on the evaluation of the Head of Departments performance.

What distinguishes this search from the previous studies?

This research is distinguished from the foregoing studies as it is not limited to the study of conversion rate itself in terms of usability, but exceeding this objective to identify the potential use of the conversion rate by the industrial organizations in the adopted methods of determining the price in the evaluation of the departments performance and its effect on increasing the market share of the organization as well as enhancing the competitive strength. It is the first study conducting in Jordan specialized in internal conversion rates between the departments according to the knowledge of the researchers.

The Practical Aspect

Community and Sample of the Study

The community of the study includes the Jordanian Public Shareholding Companies listed on Amman Stock Exchange, which are (255) company stipulated in the annual report of Amman Stock Exchange for March 2014. The reasons which impelled the researchers to choose this community are:

1) The importance of these companies for their contribution to the national income and its significant role in the economic and social development as deemed essential tributary streams of Jordanian national economy.
2) These companies are available to the public, so it is possible to collect information from managers involved in these enterprises easier and better manner.
3) The installations are large in size and possess large, diverse and fixed financial assets, which provide a good quantity of information.

The sample of the study was selected from the finance managers and finance departments personnel who work for these companies who are responsible for monitoring the implementation of financial policies adopted by their Boards of Directors. The financial policies include: the policy of the internal conversion prices between the departments.

In respect of the manner by which the size of the sample was limited, the two researchers have selected a purposive sample representing the community in the companies being studied. (4) Respondents were approved in each of these companies. Then the researchers choose (63) industrial company, equivalent to 25% of the companies, so that the number of the respondents reached (252) to whom the questionnaires were distributed. (191) questionnaires were recovered, and after sorting the questionnaires recovered, (3) were excluded for incomplete reasons or lack of eligibility. Thus the sample consisted (188) respondents working for the organizations being studied, which have been analyzed, representing 74.6 % of the questionnaires distributed.

Sources of Data Collection

I. Primary sources: The data obtained through field study.
II. Secondary sources: The data obtained from the libraries and literature references of previous studies to develop the scientific foundations and theoretical framework.

Data collection instrument, and its validity and reliability

The questionnaire was prepared to cover the axes of the study according to five point Likert scale (strongly agree- 5 points, agree -4 points, somewhat agree - 3 points, disagree -2 points, and strongly disagree – 1 point). The questionnaire consists of two main parts:

1- Part I: allocated to identify the demographic factors of the sample members.
2- Part II: allocated to the phrases that cover the study variables and measure the potential use of conversion

Rates by the companies in assessing the performance of departments

Reliability and consistency of the questions set in the data collection instrument were tested by using (Cronbach's alpha coefficient) for internal consistency. The coefficient of all measurements and questionnaire paragraphs was extracted, and the reliability of the questionnaire was high in accordance with the Cronbach's alpha coefficient, which was 88.4% to this study. Table No. (1) Shows the Reliability Coefficients for all study variables in questionnaire. It has been noted that Cronbach's alpha values were higher than 60% which is the acceptable percent for dissemination the results of the study.

Table (1) Reliability Coefficients Value of (Cronbach's alpha) for the Study Variables

Paragraphs Seq.	Variable name	Cronbach's alpha reliability coefficient %
1 - 9	Market-based conversion rates	71.6 %
10 - 19	Cost-based conversion rates	63.9 %
20 - 26	Negotiation-based conversion rates	85.5 %
27 -37	Performance evaluation	82.8 %
1 -37	**Reliability coefficient**	**88.4%**

For the limits to be adopted on commenting on the arithmetic of the variables in the search form, and to determine the degree of the scale, three levels will be selected which are (low, medium, and high) based on the following equation:

Class Length = (maximum limit of alternative - minimum limit of alternative)/number of levels
(5 -1)/3 = 3/4 = 1.333; Thus levels will be as follows:

Low	from (1) to (2.335)
Medium	from (2.334) to (3.667)
High	from (3.668) to (5)

Methods of Statistical Analysis of Data

Statistical methods were used within Statistical Package for the Social Sciences **(SPSS)** and processing the data obtained through the field study of the sample by using the following statistical methods:

1- Measures of Statistical Dispersion: to describe the views of sample on the study variables and to determine the importance of the phrases set in the questionnaire, as well as show the extent of dispersion of answers from their arithmetic mean.

2- Test t-test: (One sample t-test): to test the study hypotheses and ensure of the statistical significance of the results.

3- Cronbach's alpha test: to test the reliability of the instrument of the study and the extent of the data reliability provided in measuring the variables included in the study.

The following are the results concluded:

Properties of the Study Sample

A range of personal and career variables were tested by using descriptive statistics method to find out some facts related to this category through extracting the frequencies and percentages of questions relevant to the demographic factors, then the analysis of the results according to the answers obtained, as follows:

Sex:

Table (2) Sample distribution by sex

Category	Frequency	Percentage%
Male	129	68.6 %
Female	59	31.4%
Total	**188**	**100%**

Table (2) shows that the percent of males is higher than females. This explains that the socialization which give wider opportunity for males to engage in Jordanian society and enter and work in the market. Although the proportion of females was 31.4 % but it is still high taking into consideration the nature of society.

Years of experience:

Table (3) Sample distribution by years of experience

Category	Frequency	Percentage%
5 Years or less	20	10.6%
6 - 10 years	77	41.0%
11 - 15 years	44	23.4%
16 – 20 years	20	10.6%
20 Years and above	27	14.4%
Total	**188**	**100%**

Table (3) shows that the sample has the appropriate experience in their field, which indicates that they are qualified to perform their duties according to the nature of work, that its impacts will be reflected on their performance; i.e. they have the capability which qualified them to fill the questionnaire addressed to them.

Academic Qualification:

Table (4) Sample distribution by academic qualification degree

Category	Frequency	Percentage%
Diploma intermediate	17	9.0%
BA	154	81.9%
Master	14	7.5%
PhD	3	1.6%
Total	**188**	**100%**

Table (4) shows that the respondents have the right academic qualification to perform their jobs, so by examining this property, we note that the high educational level of the study sample. This indicates that the community of the study is scientifically qualified to answer the study questions.

Specialization

Table (5) Sample distribution by specialization

Category	Frequency	Percentage%
Accounting	96	51.1%
Finance and banking	62	33.0%
Business Administration	13	6.9%
Different specializations	17	9.0%
Total	**188**	**100%**

Table (5) shows that all respondents hold scientific specializations in their area. This indicates that the communities of the study are eligible to answer the study questions.

Descriptive analysis of the search variables

I: results related to the independent variable: conversion rates

Table (6) Arithmetic averages and standard deviations of conversion rates

ser.	Area	Arithmetic mean	Standard deviation	Rank	Level of use
1	Market-based Conversion rates	3.7691	.46642	1	High
2	Cost-based conversion rates	3.6581	.51017	2	Average
3	Negotiation-based conversion rates	3.4721	.65257	3	Average
	Grand Total of scores	3.5977	.42559	Average	

The table (6) indicates that the arithmetic means and standard deviations of the conversion rates ranged between high and average level. The market-based conversion rates was at high level with arithmetic mean amounted (3.7691)) and a standard deviation of (.46642), then cost-based conversion rate came at average level, and finally negotiation-based conversion rates came at average level respectively.

The overall result indicates the existence of an average level of use of conversion rates in the industrial organizations to assess the performance of departments, where the general arithmetic mean was (3.5977) and the standard deviation was (.42559). The following tables show in details those results as per the variables:

1 -Conclusions concerning the market-based conversion:

Table (7) Arithmetic means and standard deviations of market-based conversion rates

Ser.	Area	Arithmetic mean	Standard deviation	Ranked	Usage level
1	The organizations use the price applied in the market on exchange and transfer between their departments	4.0426	.74453	2	High
2	Departments reduce certain percentage of the price compared to the market price	3.9149	.89753	4	High
3	The price applicable in the market provides an incentive for efficient production	3.4787	1.08691	9	Average
4	The price applicable in the market stimulates the Heads of seller departments to reduce the costs of to realize the greatest possible profits	3.7766	.75508	6	High
5	The adoption of market-based price between the internal departments leads to achieve independence principle in decision-making.	3 930	.9649	3	High
6	The seller department is free to choose either to sell to external customers or transfer to the internal departments or both	3.6223	.71719	8	Average
7	The departments use the revised market price if the market provides the price of the goods and services exchanged and transferred between the internal departments of the organization.	3.7979	.73970	5	High
8	If the market price is not available for the goods or services exchanges because it is unique and distinct, usually the market price is chosen and determined to the nearest alternative commodity actually exhibited in the market.	3.6155	.77558	7	High
9	Market price in case of conversion between the departments is deemed an objective standard to assess commodities and services converted.	4.1649	.86491	1	High
	Grand total of scores	**3.7691**	**.46642**	**High**	

The table (7) shows the arithmetic means and standard deviations, ranged between (4.1649) and (3.4787). Paragraph (9) was ranked first with arithmetic mean (4.1649), which is higher than the general arithmetic mean and standard deviation was (0.86491). Paragraph (3) was ranked the last with arithmetic mean (3.4787), which is lower than the overall arithmetic mean, and standard deviation was (1.08691). The General result of this variable indicates that the arithmetic means and standard deviations were high whereas the arithmetic means was (3.7691) and the standard deviation was (0.46642).

2 - The results of cost-based conversion rates:

Table (8) the arithmetic means and standard deviations of the cost-based conversion prices

Ser.	Area	Arithmetic mean	Standard deviation	Ranked	Usage level
10	The departments depend on pricing the internal conversion rate on the cost.	3.6915	.85314	2	High
11	The departments depend on pricing the conversion rates on the cost-based plus certain margin of profit	3.6330	.73009	3	Average
12	The departments use the actual or historical cost in pricing the conversion rates	3.7181	.74596	1	High
13	The conversion rates between the internal departments are determined on the variable industrial cost only	3.4043	.89943	9	Average
14	The departments determine the conversion price on overall cost base	3.4255	1.10409	8	Average
15	The units are converted between the internal departments on the variable total cost basis	3.5691	1.04983	4	Average
16	The departments use the conversion price equal to the overall cost plus certain percent of profit	3.5106	.90447	6	Average
17	The departments use the conversion rate equal to the variable cost plus certain percent of profit	3.4947	1.01590	7	Average
18	The departments use the conversion rate equal to the standard cost plus certain percent of profit	3.5266	1.11112	5	Average
19	The departments use the double price (dual) under which two different prices are used on converting goods and services; the buyer departments are charged at the variable cost of unit plus fair percent of fixed costs.	3.2234	1.02539	10	Average
	Grand Total of scores	**3.6581**	**0.51017**	**Average**	

The table (8) shows the relevant arithmetic means and standard deviations ranged between (3.7181) and (3.2234). Paragraph (12) ranked as the first with arithmetic (3.7181) and standard deviation amounted to (0.74596). Paragraph (20) was ranked the last with arithmetic means (3.2234), which is below the overall arithmetic mean and a standard deviation (1.02539). The general result of this variable indicates that the arithmetic means and standard deviations were average, as the arithmetic mean was (3.6581**)** and the standard deviation was (.51017).

3- The Results relevant to the negotiation-based conversion rates

Table (9) Arithmetic means and standard deviations of the negotiation-based conversion rates

Ser.	Area	Arithmetic mean	Standard deviation	Ranked	Usage level
20	The departments negotiate the appropriate price at which the products and service are converted	3.3245	1.2691	7	Average
21	The applicant department is free to seek outside party (the market) in the event the negotiations failed.	3.3936	1.1595	6	Average
22	The departments use the negotiation-based conversion price in the absence of a market price.	3.8245	1.003	1	High
23	The departments use their right to refuse purchase from each other if the commodity is available in the market at lower price	3.4255	1.2537	5	Average
24	The departments seek outsources for purchase if the purchase size is too large that allow quantitative discount.	3.5638	.96526	3	Average
25	The departments use the negotiation-based conversion price if the seller department has idle power.	3.5851	1.0372	2	Average
26	The departments use the negotiation-based conversion price when the price is lower than the market price due to the reduced sales and administrative expenses which become less because of the internal sales.	3.4521	1.0200	4	Average
	Grand Total of the scores	**3.4721**	**0.65257**	**Average**	

Table (9) shows the relevant arithmetic means and standard deviations, ranged between (3.8245) and (3.3245). Paragraph (22) was ranked first with arithmetic mean (3.8245), which is higher than general arithmetic mean and the standard deviation was (1.0058). Paragraph (20) ranked the last with arithmetic mean (3.3245), which is less than the general arithmetic mean, and the standard deviation was (1.2691). The General result of this variable indicates that the arithmetic means and standard deviations were at average, with arithmetic mean (3.4721) and a standard deviation (0.65257).

II: The Results Related to the Dependent Variable: The Evaluation of Departments Performance

Table (10) Arithmetic means and the standard deviations for the dependent variable: The Evaluation of the Performance of the Departments

Ser.	Area	Arithmetic mean	Standard deviation	Ranked	Assessment level
27	The conversion rates contribute to the evaluation of the departments performance in the light of specific performance indicators for each Department	3.4468	1.1577	6	Average
28	The conversion rates contribute to design the development plan of the department.	3.6383	.97948	3	Average
29	The conversion rates contribute to the evaluation of the departments performance of each responsibility centre through analyzing the causes of deviations from the planned performance	3.1862	1.0907	11	Average
30	The conversion rates contribute to compare the planned results for each responsibility center	3.4468	1.1725	6	Average
31	The conversion rates contribute to that the reports of the departments performance prepared by the organization contain detailed information on the actual and planned performance and the deviation of each responsibility centre separately.	3.3723	1.0991	9	Average
32	The conversion rates contribute to research in the causes of deviation resulting from the comparison between the planned and actual results of the centres collectively.	3.7287	1.1214	1	High
33	The conversion rates contribute to reward the Heads of departments in case of positive deviation as planned compared to the actual deviation	3.5426	1.0613	4	Average
34	The conversion rates contribute to determine the executives and penalize them for negative deviation in each responsibility center	3.3830	1.019	8	Average
35	The organization adopt the financial standards relevant to the conversion rates in assessing the performance of the departments	3.3723	.81410	9	Average
36	The organization adopt non-financial standards because they are the basic future drive of the organization to face the variable and contemporary challenges.	3.6702	.92370	2	High
37	The organization adopt financial and non-financial standards in evaluating the performance of departments in general.	3.4947	1.1210	5	Average
	Grand Total of the scores	**3.5743**	**.72897**	**Average**	

Table (10) shows answers of the sample respondents on the paragraphs concerning the variable of departments' performance evaluation, means and standard deviations ranged between (3.7287) and (3.1862). Paragraph (32) ranked first with mean (3.7287), which higher than the general arithmetic mean, with a standard deviation (1.1214). Paragraph (29) ranked last with an arithmetic mean (3.1862), which is less than the general mean, with standard deviation (1.0907).

The general result indicates that the arithmetic means and standard deviations of the paragraphs related to the depend variable (departments performance assessment), at average level, with arithmetic mean (3.5743) and standard deviation (0.72897).

Hypothesis testing

The First Hypothesis Test

"The Industrial Organizations do not use market-based conversion rates in evaluating the department's performance".

Table (11) T-Test results for the First Hypothesis

Independent variable	T - Calculated value	T- indexed value	Moral value of T – Sig.-t	Statistical decision
Market-based Conversion rates	110.802	1. 668	0.000	Rejecting null hypothesis

It is obvious that sig. value in Table (11) is zero, which is statistical significance. Therefore, null hypothesis is rejected and the alternative hypothesis is acceptable, which states that "the industrial organizations use the market-based conversion rates in assessing the department's performance". .

The Test of the Second Hypothesis

"The Industrial organizations do not use cost-based conversion rates in assessing the performance of the departments".

Table (12) T-Test results of the Hypothesis II

Variable	t-calculated value	Indexed t-value	Moral t-value Sig- t	Statistical decision
Cost-based conversion rates	98.314	1.671	0.000	Rejecting null hypothesis

It is clear in Table (12) that the Sig. moral value is zero, which is a statistical significance. Therefore, the null hypothesis is rejected and the alternative hypothesis is acceptable, which states that "the industrial organizations use the cost-based conversion rates in assessing the performance of the departments".

Test the Third Hypothesis

"The industrial organizations do not use negotiation-based conversion rates in assessing the performance of the departments".

Table (13) Result of t-test for Hypothesis III

Variable	t-calculated value	Indexed t-value	Moral t-value Sig- t	Statistical decision
Negotiation-based conversion rates	72.952	1. 671	0.000	Rejecting null hypothesis

It is clear in Table (13) that the Sig. moral value is zero, which is a statistical significance. Therefore, the null hypothesis is rejected and the alternative hypothesis is acceptable, which states that "the industrial organizations use the negotiation-based conversion rates in assessing the performance of the departments".

Conclusions

1. The results of the study indicated that industrial enterprises tend to use conversion rates based on market in assessing the performance of departments with high degree. The results showed that the answer to paragraph (9) of the table (7) ranked first, whereas the answer to Paragraph (3) ranked the last in the mean; i.e. the organizations prefer the objective standards (non-financial) along with other financial standards. Therefore, the two researchers believe that the use of the market-based conversion rates is more widely used than other methods for being help in assessing the performance of each department separately according to profitability. This is corresponding to the results concluded by Study of Jawad (2011), Touati (2012), and Abdul Sattar (2013).

2- The results of the study indicated that industrial installations use cost-based transfer prices in assessing the performance of departments and the degree of use was average. The results showed that the answer to paragraph (12) of table (8) ranked first, and the answer to Paragraph (19) ranked the last. This indicates that the organizations depend on easy application regardless of the accuracy of the results, because obtaining the actual or historical cost is easier than any other methods in this area.

Therefore, the two researchers believe that the use cost-based conversion rate is objective method in certain cases; such as idle power in the organizations. This result corresponds to the conclusions of the studies of both Chwolka & Simons (2011), and Stephen (2013).

3- The results of the study indicated that industrial organizations use negotiation-based conversion rates in evaluating the performance of departments. The degree of use was average. The results showed that the answer to Paragraph (22) of the table (9) was ranked first, while the answer to Paragraph (20) ranked last. It is clear that a number of enterprises tend to use negotiation-based price between their departments in the absence of an appropriate market price of the goods or services transferred between such departments. In other words, they prefer the market price if available to the negotiation-based price method. This also was the conclusion of the study of Bailey & Collins (2005).

4 The results of the study indicated that conversion rates contribute to research into the causes of the deviations resulting from the comparison between plans and actual results of the centres collectively. It was also found that the organization adopt the non-financial standards because they are the main future drive to face the contemporary changes and challenges, along with the adoption of the conversion rates in the design of development plans for the department. Table (10) shows that to the interest of the organization in adopting causes deviations from plans developed as a basis for assessing the performance of departments was ranked last in this area. Therefore, the two researcher believe that the use of non-financial standards in assessing the performance of the departments provides better indicators for the performance and maintain the market share of the organizations, as well as maintaining the quality of the product through the investigation of the customer's satisfaction degree on the quality of the commodity and services provided by the organizations. This is corresponding to the conclusions of the studies of Jawad (2011), Touati (2012), Chwolka & Simons (2011), and Stephen (2013).

Recommendations:

In the light of the findings of the study the researchers recommend the following:

1: The industrial enterprises continue using the conversion rates because of its impact on evaluation of performance of the departments.

2: The industrial enterprises increased coordination between the centers of responsibility, and work to clarify relations with such centres, along with the awareness of personnel of the importance of the application of responsibility accounting.

3: Conducting courses for the finance department's personnel in the industrial organizations in conversion rates area, which would contribute to elevate their efficiency in managing the centres and enhancing their ability on decision-making.

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