

The Role of Target Costing in Reducing Costs and Developing Products in the Jordanian Public Shareholding Industrial Companies

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Abstract This study aimed to identify the role of target costing in products cost reduction, as well as identify the role of target costing in products development in Jordanian shareholding industrial companies. The questionnaire has been prepared for this purpose and distributed to a sample of (60) Jordanian shareholding industrial companies who responded to this study, and (51) questionnaire was subjected to analysis. The results were analyzed data showed a number of results one of the most important, It leads the application of target costing system to reduce costs in the Jordanian industrial companies, as well as the study showed that the application of target costing system leads to the development of products in the Jordanian industrial companies is reflected through the many considerations taken into account. The study recommended that there is a need to activate the necessary elements for further costing reduction, and try to use elements currently available as an initial step for the application.

Key words Target Costing, cost reduction, products development, shareholding industrial companies, Jordan

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1. Introduction

Because of the great competition and the tremendous developments in technology, it was necessary for the companies to achieve competitive advantages and therefore they started to concentrate on the cost through reducing the costs and as a result, tools as the target cost becomes so important.

Japan was one of the pioneers who used Target Cost which was one of the factors of its development particularly the motor's industry as Toyota Motor Corporation. The access into these results depends on quality of technology used in production, type of input production and its quality in terms of raw materials and goods demands plus the level of the skills of force power and the extent of their understanding of the modern technology. Additionally, it depends on the extent of achieving what is available of the high production so as to reduce the effect of the fixed cost on the total costs of the production. As a result of Jordan's movement towards globalizing its economy, there was a necessity for economic and structural adjustments programs in order to join World Trade Organization. Therefore, Jordan held some partnerships agreements with some countries and economic blocks and so the Jordanian products faced many challenges represented by its extent of ability in facing the foreign competition in the internal and external markets, especially the foreseen benefit from globalizing the economy depends necessarily on the extent of productive companies' ability to compete in international open economy.

To face the international competition, the Jordanian industrial companies have to reduce the cost of its products and to reduce the costs in the market to achieve reasonable, sufficient and continuous profitable rates so as to create new and suitable atmosphere of investment. One of the methods of reducing the costs is the target cost which will be discussed in this study and its role in reducing the costs and developing the product, especially, in the present time there is a necessity to survive and face the competition which becomes one of the significant features of the modern market. So this study aimed is identifying the role of target cost in reducing the cost of the products and identifying the role of the target cost in developing the products.

2. Hypotheses

The study seeks to test the following hypotheses:

1st hypothesis: Application of target cost system reduces cost in the Jordanian public shareholding industrial companies.

2nd hypothesis: Application of target cost system develops the products of the Jordanian public shareholding industrial companies.

3. Literature review

Almatarneh's study (2008) which study Requirements and obstacles of Target Cost in the Jordanian public shareholding industrial companies (field study). The study aimed in identifying the extent of the requirements availability to apply the Target Cost in the Jordanian industrial companies and it also aimed what obstacles facing of Target Cost application. The study found that there were necessary elements for the application of the Target Cost in the Jordanian public industrial companies as identifying profit margin which the company intended to achieve, the high speed in having the needed quantities of raw materials available, checking marketing process possibility of the product during the time. The results of the study showed some lack of strong competition and cooperation between the suppliers and company, also there is lack of sufficient experience and knowledge of the application process of Target Cost was not considered an obstacle facing the application process.

Study of Atawi (2008) "role of the target cost and value analysis in reducing the costs". This study is considered significant because it sheds light on the strategic administration's best approaches of the cost which is the target cost that strengthens the institutions' competition in facing business challenge. This study also addresses the value analysis which is a scientific method aiming to improve the product by having relations between the elements of product value and the elements of its cost to provide products with less cost. The study concluded the products' prices which were determined in the market showed a transfer from covering the costs through dealing with the high cost by increasing the prices and so the price imposes the cost. Furthermore, the environment of new international system affects designing the costs accounting in terms of many aspects as the objectives of the costs accounting, cost structure, costs theories, reports' content, ways of calculating the cost, costs monitoring, and strategic analysis plus the period of monitoring the costs. So there was a need to reconsider the traditional costs systems as this new environment requires new methods and ways to identify, measure and display the costs information that agree with the modern technology's requirements and the factors of competition.

Al-Amro's study (2007) entitled by: "The Effective Factors in Determining Target Cost in Jordanian Industrial Companies. This study aimed to investigate the effective factors in determining the target cost in the Jordanian industrial companies and to reveal its influence and these factors were: competition, customers' nature, product strategy and its characteristics, and sales' strategy. The results revealed some factors that affect the process of identifying target cost in the Jordanian industrial companies as: competition, customers' nature, product strategy and its characteristics plus sales' strategy.

Ibusuki & Kaminski's study (2007) entitled by: "Product Developing Process with a Focus on Value Engineering and the Target Cost: A Case Study Of The Motor Companies". The study aimed at introducing a method for developing products of the Motor companies through value engineering and the target cost and therefore work plans were developed consisting of three levels via application of value engineering: idea, plan, and confirmation. The study concluded the method was successful as it reduced the cost of the product and achieved the quality that suits the customers' needs and the company's strategy.

Ellram's study (2006) entitled by: "Achieving the Target Cost in USA: Between Theory and Application". The study aimed at showing the significance of purchasing process in achieving the target cost. The study concluded that purchasing process affected positively the process of achieving the target cost.

Al-dalabeeh's study (2012), its main goal is identifying the extent of applying T.C. in Jordanian industrial sector, the study found that the co. has capable of applying target costing.

4. Study Sample

The study sample consisted of 60 Jordanian public shareholding industrial companies. Out of sixty questionnaires which were distributed, fifty four were retrieved and three were excluded for their lack of validity of analysis and so fifty one questionnaires were analyzed representing (57.89%) of the population.

5. Study's instrument

This study relied on many studies in preparing this study's instrument as the studies of Rakhan, Matarna and Etwei and others. Lickert scale was used in designing the questionnaire and the Package of Statistical Analysis for Social Sciences (SPSS) was used. The items' alternatives in the questionnaire were coded as follows: (5 strongly agree, 4 agree, 3 neutral, 2 disagree and 1 strongly disagrees) and therefore the weighted mean was (3). If the item's mean was 3 or more this indicated the respondents' acceptance of the item or the hypothesis but if the mean was less than 3 this showed the respondents' rejection to this item or the hypothesis.

6. Theoretical Frame

The target cost is an accounting method of managing the perspective profits of the company through having target cost in the process of developing the product (Copper and Slagmudler, 2002). And the system of target cost was distinguished from other previous cost systems because its activity was not limited to managing the costs but it also pays attention to the process of organizing the managements and the departments of the projects as it addresses the productive operation starting from the planning stage till the product's arrival to the customer. Moreover, it pays attention to maintenance and operation of some products (Fellman, 1999).

The target cost aimed at reducing the cost without affecting the product's quality or features. The cost is reduced through getting rid of the activities and operations that caused costs and do not add a value to the product or cost can be reduced through substituting the machine instead of the employee or substituting the current raw materials with other low- cost materials without affecting the product's quality.

6.1. Industrial development in Jordan

Al-Ismael (2006) illustrated that the Jordanian industry's beginning was humble and away from the international competition and it was guided towards serving the local market without taking into account the international standards. And because of the changes which Jordan witnessed because of globalizing its economy and its relation to the regional and international blocks, the industry sector started to move from policy based on protection to policy based on opening and involvement in competitive affairs based on quality standard in the production and price competition. Joining the World Trade Organization, European Partnership Agreement, Greater Arab Free Trade Agreement and US FTA agreement was considered a challenge to the local industry and therefore there was a necessity to have comprehensive national competitive industrial policy that helps in activating the industrial sector's competitive capability. It was confirmed that the big industrial companies in Jordan were less than 1% and 5% of them were moderate companies and 94% were small indicating that the small and the moderate companies forms 99% of the Jordanian industrial companies in terms of quantity plus the Jordanian industry consists of mining and manufacturing industries and energy. The Jordanian industry plays a major role in the gross domestic product.

The most important factors supported the application of target cost were (Keun, 2005): the company's management should have a strong belief in the necessity of target cost for the survival of the company and facing the great competition which was considered as one of the characteristics of the modern market. A survey was applied on 135 Japanese companies which listed in Tokyo Stock Exchange and which used target cost. The results revealed that most important ten factors that supported the success of applying the target cost were as follows:

1. There was a good system of accounting information.
2. There was a new system for estimating the costs depending on historic costs and the market's study of the prices attitudes.

3. Senior's administration support because of the strategic nature of the target cost and its influence on the work at different managements in the entire company.
4. Providing scientific courses and practical training for the individuals on using target cost.
5. Encouraging and developing work groups which include individuals from different specializations and administrations.
6. Developing relations with the suppliers on the basis of cooperation instead of losing and winning for each part.
7. Getting benefit from all the administrations and individuals' available information.
8. Having permanent open communication channels between the company and the suppliers, or between the company and the agents, or between different administrations and the company's departments to facilitate presenting and discussing the suggestions and getting information.
9. The management's reliance on authorizing the work teams to help in the process of creativity.
10. Evaluation of the activities, businesses and the individuals in terms of their participation in achieving the company's Profit strategy.

6.2. Objectives of Target Cost

Daniel *et al.* (2007) showed that the target cost could be an effective mean to achieve the project's best value and performance through the access into financial goals which are generally compatible with the project's general goals. And Mohamed Bayou (1998) asserted that the target cost is the method that shows the leadership's creative alternative strategies to help the agents to reduce the risks and judicial suits and to present the service of added value and therefore the objective of the target cost could be as follows:

1. Target cost as a tool to reduce costs

The cost has a great significance in any company just like renewing the products as the company's stability and growing in the market link with displaying the product with an appropriate price where the traditional way was represented by developing the product and displaying it with a price determined by adding profit margin to the calculated cost which is on the contrary of the target cost where the cost of the product is determined in the market and the desired margin is taken away from this price so as to have the target cost. Therefore, developing the product according to target cost occurs when the price and the allowable cost of the product are known (Etawi, 2008).

The traditional way of developing the initial design of the product started in the company's department of research and development where a group of designers or engineers or any other group who could be responsible for developing new products. And the initial idea of the project could come from the market, or from the development efforts inside the company. And after developing the first initial product, the price is identified by collecting the costs plus the desired profit margin. The price's acceptability in the market will not be examined till the actual appearance of the product in the market and being exposed to possible customers.

And if the product's price is higher than the price which the product can achieve in the market, the product will be re-designed till it achieves the market's price or abandon the product itself. But the process of re-designing the product for less cost is considered difficult since most of the costs which include (raw materials, manufacturing, marketing and distribution) are determined during the first design stage. And the ideal estimations pointed that 70% to 80% of the product's costs are "strong" after the design stage. And the methods of the traditional standard cost are used to insure the real cost stability of with the budget limits but they have no relations with the market's events or with any effort of reducing the cost.

And it is possible to re-price the new product with low price and this may occur when the company knew that it was possible to sell the product with higher price. And the indicator for this is the high demand for the product in the market and in this case the lost profit cannot be compensated as it is difficult or even impossible to adjust or raise the prices during the product life span (Hergeth, 2002).

On the contrary to the traditional method in Cost-plus pricing, target cost tries to treat pricing issue by introducing the price of product before it was designed and before its initial models were suggested and so the cost is moved earlier in the stage of developing the product where the allowable cost is derived after studying the market to find out the price which the market can pay. Then, the desired profit margin which was eliminated from the estimated price, then this cost is compared with the expected cost of the price and

if the later was higher than the target one, the company will have some alternatives as: reducing the costs where it is possible to change the design of the product or the engineering process and all the members of the planning team commit to this process. These members who worked together investigated the need for adjusting the cost of all the elements of product's cost. Reaching the target cost, standards could be set for the product which will be later in the manufacturing stage. The other alternative is the company's acceptance of the profit margin which is less than what is desired and this is related to the difference between the estimated cost and the target one, so if the estimated cost was higher than the target with a small amount, this little reduction in the profit margin will be sufficient while if the difference was very big and the company did not have any opportunity to achieve profit margin, therefore, the third alternative is to abandon the product (Kwah, 2004).

Based on what was mentioned, using target cost will enforce the managements to change their way of thinking concerning the relation between cost, purchase price and profitability as the traditional method of thinking is represented by developing the product, then identify and measure the cost of its product and determine its price and there is a possibility of having profits or loss while according to the target cost method, the product is developed and the price of purchase and desired profitability are determined, then the allowable costs will be derived and therefore, the costs will be linked with price of purchase instead of the link of purchase price with the costs. As a result, all the costs should be justified and all the unnecessary costs should be excluded.

And the Japanese method has more advantages because it activates controlling the costs before, during developing the product while from traditional perspective, the company waits till late stages of the product's life cycle where the costs became something permanent and so the company will not have the great ability to change the costs or control them (Feil *et al.*, 2004). And Bayou (1998) showed the aim of the target cost is to reduce the actual costs that happened the previous year with 20% through using the standard cost which is named by the target cost. And the researcher confirmed that the process of reducing target cost has the following steps:

- Reduce shortcomings which could be avoided through the standard cost.
- Reduce shortcomings that could not be avoided through redesigning the product or restructure the stages of the production but it needs changes in the basic strategies and so the only way that helps in changing the cost would be through the fixed cost and work on production inputs to reduce the cost (20%) in terms of the quantity while the quality remains fixed. Regarding the changing cost, it reduces the quality ratio through purchasing cheap raw materials, less skilled workers, maintaining the equipment with less cost and mainly these decisions are made taking into account the total influence of the product quality or the service.

2. Target costs as a tool for developing the products

The target costs play a significant role in developing the products as the objective of applying the target costs is to reduce the products' costs to the least possible degree and to have the highest degree of quality so as to enable the company to face the great competition in light of open economies. The process of developing the products is the most important goal of the target cost and it is done automatically during the reduction process of costs. Additionally, target cost is achieved with excreting any additional efforts via the stages which the following figure illustrated (Ansari *et al.*, 1997):

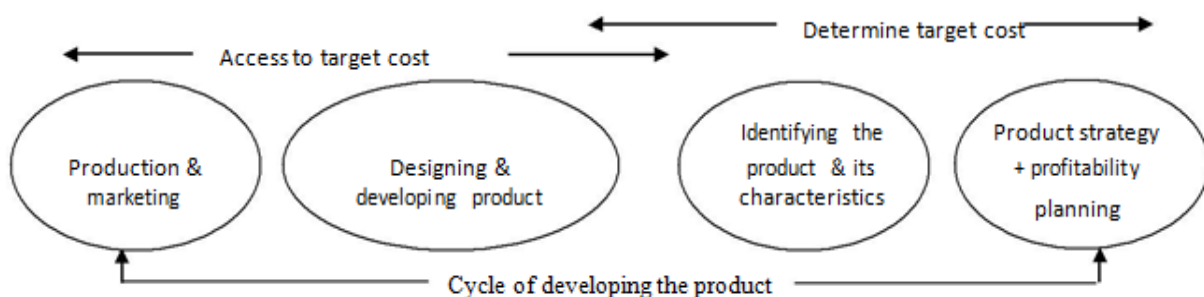


Figure 1. Cycle of Developing the Product Using Target Cost

6.3. Cycle of Developing the Product Using Target Cost

Cycle of Developing the Product Using Target Cost is explained as follows:

1. *Product strategy and profits planning*: the process of developing the product starts by studying the market and identifying the nature and quality of the product which could be produced. Later, the product's profitability is determined depending on company's management's strategic planning. The product's strategy which the company followed is considered the basic determinant of the exerted effort in the target cost because it identifies many things including number of the product in the design whether those that lead to vertical or horizontal differentiation (frequency and degree of renewing the design) and these factors are considered of the important factors because they determine the target gains of applying the target cost.

The products' number affects the gains because the target cost is applied on the product's level and therefore, the higher the number of the products offered by the company is(except slight differences as color), more gains of the application of target cost are. Additionally, the target cost has special gains according to the companies that should adjust number of its products. Similarly, repeating renewing the products' design is considered important because it determines the frequency of launching new products and whenever the introducing rate of new products into the market increases, more gains will be achieved by applying the target cost. and regarding the degree of renewing, it indicates if the products were totally new or they are similar to existed ones ; If the renewing degree was low, the target cost's gains will be higher because of the available information about similar products that could be relied on them, and the if the degree was higher, the gains of the target cost will decrease for lack of the available information concerning the costs, customers, competitors and the suppliers.

2- *Introducing the product and identifying its characteristics*: after identifying the nature and the quality of the product, the market will be studied again to identify the customers' requirements regarding the product and the characteristics of other competitive products in addition to identify the product's target cost and its virtual life span plus to estimate the necessary energy and the resources which is considered the most important stage in the process of developing the product because it transfers the customers' needs and requirements to features and characteristics of the product. It also helps a lot the technology of testing and designing the quality's significance as it facilitates its completion (Anderson and Sedatole, 1998).

The characteristics of the product according to the system of target costs includes three major ones represented by the product's complexity, pre Hugh investments, and the period needed for developing the product. The product's complexity means the number of its compounds, number of the different production steps needed to manufacture it, the difficulty of manufacturing the compounds which it includes plus the necessary types of technology to produce it. Furthermore, the degree of the product's complexity is identified according to the extent of the target cost's complexity and according to the simple products, it is possible to have to have a simple target cost strategy but concerning the products which are usually known for their complexity as cars, there is a need for further formal and complicated target cost strategies. And regarding the pre Hugh investments which mean the money used in the process of searching and developing, readiness for production and the real launching of the product because the higher the investments are, the less the number of the products which the company likes to launch to avoid risk. So the companies whose products have high pre Hugh investments have limited types of the products designed accurately to meet the market's needs. And in light of these conditions, the target cost has great gains because every product has to have great possibility of success. Finally, the period of time needed to develop the product is time which lasted from designing the product till it is produced, or in other words, the time which the product takes to be produced. The significance of this period of time lies in identifying the risk of the product's failure and if the period of designing the product was long, there is a possibility to have a change in the conditions which had imposed this design and so the product's failure degree will increase and consequently, the gains of applying target cost will get higher and be more complicated plus great interaction with marketing process.

2. *Designing and developing the product*. After finishing the formation process of the product's concept and putting its initial image, the product will be designed according to specific characteristics and

standards and developed methods of manufacturing. In this stage, the suppliers provide their ideas for improving the design and methods of manufacturing and production.

3. *Production and Marketing*. In this stage, the results were known and the extent of the success of the product was identified. Additionally, this stage revealed the possible operations of this developed product's improvement and development or for other available products in the line of production (Rajhan, 2002).

7. Data analysis and testing hypotheses

The appropriate statistical methods which were used to analyze collected data from the questionnaire were as follows:

1. Measures of Central Tendency by calculating the means for every item and to the whole items of the every hypothesis.
2. T test to investigate the study's hypotheses.
3. Alpha Cronbach of reliability to measure the study's instrument's reliability.

7.1. Instrument's reliability and validity

The reliability of the instrument means having the same results every time by applying the same instrument on the same sample within the same conditions (Sekaran, 2003). Therefore, Cronbach's alpha was used to measure the internal consistency of the respondents and their answers. The value, which was (70%), indicated reliability of the results and the recommendations of this study.

7.2. Normality Distribution Test

Kolmogorov–Smirnov Test was used to check the extent to which data followed the normal distribution as the sig. was higher than (0.05) for every hypothesis indicating following up the normal distribution.

Table 1. Kolmogorov – Smirnov

Test	1st	2nd
Kolmogorov – Smirnov	0,653	0,317

7.3. Analyzing the demographic variables of the study's sample

Frequencies and proportions were used to describe the respondents' answers in terms of their demographic characteristics which are:

Table 2. Demographic characteristics of the sample of the study

Variable	Category	N	Proportion
Job title	General manager	3	%5.88
	Manager of a factory	11	%21.57
	Fanatical manager	25	%49.02
	Head of cost department	12	%23.53
Years of experience	Less than a year	0	%0.00
	1-5	3	%5.88
	5-less than 10	15	%29.41
	10-less than 15	21	%41.18
	More than 15	12	%23.53
Specialization	Business administration	26	%50.98
	Accounting	11	%21.57
	Economy	2	%3.92
	Finance & banking	9	%17.65
	Others	3	%5.88

Table 2 illustrates the respondents' distribution according to the job title as it is noted that financial manager category was the highest with a proportion (49.02%), followed respectively by factory manager with (21.57%), Costs Department's Head with (21.57%), and general managers with (5.88%) indicating that the respondents are decision makers in the industrial companies. And regarding the experience variable, it is noted the high level of experience in the field of work as the number of respondents whose experience ranged from 10 to less than 15 was 21 with (41.18%) and the number of respondents whose years of experience was less than five years was 3 respondents with (5.88%) and this indicates the respondents' ability to understand the questionnaire's items and answer them objectively. And according to the specialization variable, most of the sample holds a degree in the business administration with (50.98%), while other specializations were distributed respectively as follows: accounting (21.57%), finance & banking with (5.88%), and economy with (3.92%). And these proportions enhance the respondents' suitability to answer the questionnaire as most of them were specialized.

7.4. Displaying Data and Testing Hypotheses

1st hypothesis: "applying target cost leads to cost reduction in the Jordanian industrial companies".

Mean of the respondents' answers was calculated as table (3) illustrates the role of target cost in reducing the costs.

Table 3. Mean of respondents on (role of T.C. in reducing costs)

N	Item	M	Rank
1	The company studies the level of technology used in the productivity process which helps in reducing the costs.	4.50	1
2	The company's investigation of the fluctuated prices of the necessary raw materials for the production process affects positively the products' costs.	4.00	8
3	The company's speed in providing the necessary quantities of raw materials in light of using target costs leads to a reduction in production costs.	4.23	5
4	The company's use of target cost in the storage process reduces the costs.	4.00	8
5	The company's continuous cooperation with the suppliers as a requirement for the application of the target cost reduces the costs.	4.20	6
6	The company relied on the continuous search for methods that reduces the costs in the manufacturing process in light of the application of the target cost.	4.00	8
7	Being guided by Competitors costs when planning for the target costs may reveal new areas to reduce the costs.	4.19	7
8	Taking part in planning for the target costs by the all the levels in the company achieved the workers' self-motive to control the costs.	3.98	9
9	The correlation between target cost and the total quality achieved savings in the cost.	4.27	4
10	The company's use of target cost in the field of preparing the research and product's development leads to cost reduction.	3.96	10
11	The company studies the effective factors in the product cost to reduce the costs to the least levels with keeping the quality of the products.	4.33	3
12	The company makes modifications on the product in the process of manufacturing to achieve further reduction in the costs.	4.35	2
13	The company uses the target cost for recycling to reduce the products' cost.	3.67	13
14	Target cost is used as a good basis for preventive control because it avoids the increase in the cost since the beginning of the design stage and before the process of the production.	3.80	11
15	The company is aware of integrating the similar activities in terms of causes of cost so as to reduce the costs.	3.74	12
16	The company makes simple modifications that lead to savings in the costs of production instead of having new innovations that add high costs.	3.23	16
17	The company did its effort to eliminate or try to limit the difficulties that affect the process of manufacturing and slow down the production rate plus increase the product's cost.	3.56	14
18	Controlling over the levels of process of the production reduces waste and achieves more reduction in the costs.	3.67	13
19	The company's use of target cost in the process of purchasing and distribution reduces the costs	3.58	15
	Mean	3.96	

It is noted from the previous table the respondents' attitudes towards the questions and items were positive because their means were bigger than the mean of the instrument of measurement (3). It is also noted the highest mean was for item 1(4.50) which is: "that the company studies the level of technology used in the productive process that helps in reducing the costs". It is also noted that the company made some changes to the product in the manufacturing stage to achieve more reduction in the costs as the mean for this item was (4.35%). Moreover, the mean of Item 16: "the company makes simple changes causes great savings in the production costs instead of having new innovations adding high costs," was (3.23) and the mean of the whole items, which was (3.96), was higher than mean of the measurement tool (3) indicating the respondents' agreement on the items of the first hypothesis: "Applying target cost leads to cost reduction in the Jordanian industrial companies".

2nd hypothesis: "applying target costs system leads to the development of the products in the Jordanian industrial companies".

Table 4. Mean of respondents on (role of T.C. in developing products)

N	Item	M	Rank
1	The company's application of target cost makes the product achieve features and advantages exceed the features and advantages of competitors' products.	4.98	1
2	The company trains the workers to enable them to have concurrent control over the production which affects positively developing its products.	4.19	7
3	Using target cost improves the profitability and develops the products.	4.39	4
4	The company identifies the money size which are allocated to the development process of the products in an early stage id the product circle of life which is the designing stage.	4.00	9
5	The company has a set of similar designs to the same product and every design has some similarities with different levels of costs.	4.40	3
6	The company studies the level of technology used in the productivity process to develop the product.	3.98	10
7	The company identifies the money size that is allocated to the process of products' development.	4.35	5
8	The company studies the price which the consumer can pay for the product that meets his desire in terms of quality.	3.84	11
9	When using the system of target cost, the company identifies its products' advantages.	4.33	6
10	The company develops and improves continuously the product to reduce its costs and increase its quality.	4.13	8
11	The company analyzes economic feasibility of the product's components.	4.51	2
12	The target costs help in developing the products through reducing the period of the circle of developing the product to achieve the desired cost's level.	4.00	9
13	Target cost relies on the engineering approach and value analysis to develop the creative ideas to achieve multi alternatives for the design and production.	4.13	8
14	The company makes comparisons and studies the permitted cost and the design's costs in light of the characteristics of the product.	3.64	12
15	In the company, there is a team for designing the products including members from different departments of the company which leads to products' development.	3.50	13
	M	4.16	

It is noted from the previous table, the attitudes of the respondents towards the items were positive because their means were higher than the mean of the measurement tool (3). It is also noted the first rank was for item (1): "The company's application of target cost makes the product achieve features and advantages exceed the features and advantages of competitors' products", with a mean (4.98) and the second one was for item (11): "The company analyzes economic feasibility of the product's components", with a mean (4.51) while the last rank was for item (15): "In the company, there is a team for designing the products including members from different departments of the company which leads to products' development," with a mean (3.50). And the mean of whole questions, which was (4.16), was higher the

mean of the measurement tool (3) indicating the sample’s agreement on the items of the second hypothesis which states: “Applying the target cost system leads to the development of the products in the Jordanian industrial companies”.

7.5. Testing hypotheses

1st hypothesis: Applying the target cost system leads to costs’ reduction in the Jordanian industrial companies.

Table 5. Results of T test of 1st hypothesis

Calculated T	Tabulated T	M	Result
10.81	1.977	3.96	Reject

It is noted from the table the value of the calculated T is 10.81 and the tabulated T is 1.977 and since the decision rule is to accept the null hypothesis if the calculated value is less than the tabulated one, and to reject the null hypothesis if the calculated T is bigger than tabulated one. Therefore, we reject the null hypothesis and accept the alternative one which stated: “ Applying the target cost system leads to costs’ reduction in the Jordanian industrial companies”.

2nd hypothesis: Applying the target cost system leads to the development of the products in the Jordanian industrial companies”.

Table 6. T Test Results

Calculate T	Tabulated T	M	Result of null hypothesis
18.313	1.977	4.16	Rejection

It is noted from the table the value of the calculated T is 18.813 and the tabulated T is 1.977 and since the decision rule is to accept the null hypothesis if the calculated value is less than the tabulated one, and to reject the null hypothesis if the calculated T is bigger than tabulated one. Therefore, we reject the null hypothesis and accept the alternative one which stated: “ applying the target cost system leads to the development of the products in the Jordanian industrial companies”.

8. Results and recommendations

8.1. Results

The study came up with some results as follows:

1. Applying the system of target costs leads to a reduction in the costs in the Jordanian industrial companies taking into account some factors as :

- Studying the level of technology used in the productivity process that helps in reducing the costs.
- Getting benefit from the competitors’ costs when planning the target cost to find out new areas for reducing the costs.
- Making some changes to the product in the process of manufacturing to achieve more reduction in the costs.
- Linking the target cost with the total quality method achieves savings in the cost.
- Studying the effective factors on the product cost looking for a reduction in the costs to the lowest level with maintaining the quality of the products.

2. Applying the system of target costs leads to products development in the Jordanian industrial companies taking into account some of the following:

- Applying the target cost achieves more advantages characteristics of the product than the competitors’ products.
- The company prepares a set of designs to the same product where every design has similar features but with different degrees of cost.
- The company analysis the economic feasibility of the product’s components.

- The company develops and improves continuously the product in order to reduce its costs and increase its quality.

3. Target cost system is not a process for calculating the cost but it is an integrative system for the strategic planning of the companies' costs and profits taking into account the market to determine the competitive price and the customers' requirements so as to identify the product's characteristics and the company's strategic profit.

4. The product's planning is a basic factor in the company's successful performance as it considered an open system that works in a unstable environment where adjustment to its innovations is a necessity.

5. Target cost system is considered a planning and control tool over the operations and production management since it is an integrative system taking into account the company's internal capabilities and the external circumstances that surrounded it.

8.2. Recommendations

The study recommended the following:

1. It is necessary for the Jordanian industrial companies to apply the target cost for its benefits and advantages and for developing their products so as to face the competition of other companies in light of developments and the open economy.

2. It is necessary to activate the needed factors to reduce the costs and use the available factors as an initial step in the application process.

3. It is necessary to aware the industrial companies of the importance of the target cost system through the responsible governments' parties' organization of seminars and training courses.

4. It is necessary to have in every company a team for designing the products including members from different departments in the company for its important role in generalizing the aim of reducing the costs among the company's employees.

5. Carrying out further studies and field researches about the effective factors in the process of determining the target cost in the industrial companies plus studying the impact of target costs on the company's profitability in addition to carrying out a comparative study to the impact of target cost's application and the traditional costs system on the product's cost and its profitability.

6. The necessity to attract foreign or Arab investments that applied this system to encourage the Jordanian industrial companies to apply target cost system which helps in reducing the cost and achieving more profitability with high degree of quality of the product which in turn will affect positively the Jordanian economy.

7. It is necessary for decision makers to get benefit of the industrial companies' experience in applying this system to achieve less cost and more profits supporting the company's continuity.

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