

The Role of Target Cost in Cost Reduction: an Empirical Case of Bazian Cement Factory in Kri

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Abstract:

Recently corporations attempt to make a fair competition in global markets, which apply different techniques and tactics to raise their industrial outputs with lower

costs and it is enhancing companies' profitability. Implementation of target costing is employed in design of products and development phases, therefore purposes at reduction costs at the first stage of the life-cycle. The enterprises might be supported by a considerable technique for seizing the highest of profit margin of the product cost and regulate prices so it is vital tool for competitive advantage. Basically, the main purpose of this study is to examine the impact of implying target costing on reduction costs in Bazian Cement Factory in the Kurdistan region of Iraq. This study collected primary data through the survey and distributed 25 forms among the participants of the sample of the study. The findings of the study indicated that dependent variable (reduction costs) and independent variable (target costing) have a strong and positive link together, this means Bazian Cement Factory is successful in using target cost strategy.

Keywords: Target Cost, Cost Reduction, Industrial Product, Bazian Cement Factory, Kri.

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1. Introduction

Since the infinite competition and the remarkable improvements in technology, it is crucial for companies to obtain competitive advantages, hence the companies attempted to focus on declining costs through using the target cost strategy. Target cost is not considered only a method of costing, but more deeply; it refers to a management methods and technique where market circumstances are going to determine the prices and future profit planning (CFI, 2021 and Sharafoddin, 2016). For example, Japan is one of those countries that used target cost. One of the innovators was Japan that used the target cost and it is the one of the factors of enhancement especially the motor's industry as Toyota Motor Corporation. The entrance to use the strategy of target cost and its outcomes rely on the quality of the technology and inputs or raw material quality and then the level of talent force power of that are required to use in production process. In addition, it is determined by the level of attaining what is accessible of the high level of production therefore to diminish total cost of production through decline the influence of the fixed cost.

Moreover, countries are able to contribute in the international market and competitive globally with other economies through using target cost strategy. So, as the consequences of using of the strategy all reasonable commodities would be available to exports then it enhances reduce deficit in balance of payments country and over all enhance economic growth of the country. Indeed ,the target cost system is one of the most important and best innovative cost management systems, because it is supposed to reduce costs and develop products without compromising the quality of the products, and it is supposed to satisfy customers continuously and achieve the highest possible percentage of sales and profits. Therefore, this study examines the role of target cost in declining the cost of production through this the producers would obtain the high level of profit. Thus, the crucial aim of the study is detecting the role of target cost in decreasing the cost of the products.

1.1 Research Objectives

It seeks to achieve the following aims:

- 1- Emphasizing the target cost method and the importance of its application as a tool of cost management in the industrial institutions.
- 2 - Declaration of the impact of the use of the target cost technique in decreasing costs and the application of the target cost method in Bazian cement factory.

1.2 Research Importance

The importance of the research comes from the aspect when it is necessary to employ target cost method to increase competition in the local and global industries. This method supports the firms to make rational decisions regarding cost reduction, development in term of quality and decrease the price of outputs and maximize the profit of them in the case of this study that is Bazian cement factory.

1.3 Research Hypotheses.

- 1- Apply target cost method leads to reduce costs in the industrial company of Bazian cement factory.
- 2- Target Cost technique provides a significant information that enhance in products improvement and increase profit as well.

1.4 Research Problem

There is no doubt that the huge scientific development has affected all global sectors, including the global industrial sector, which led to widened the gap between the target cost method of modern manufacturing and traditional methods of costing, which imposed to highlight the target cost method of calculating costs, the costing process is more flexible, convenient and accurate as manufacturing methods develop. For this purpose, the following question has been created: What is the impact of the applying of the target cost method in reducing costs Bazian cement factory of?

2. Literature review

Enterprises should offer apt products at fair prices and manage costs by enterprises to maximize profits and persist in today's international competitive market. Target costing is one of the crucial approaches advanced to attain this objective. Target costing applies assurance the quality and dependability the desirable standards through the clients from a strategy level forwards of product, but facilitating enterprises extended the profit margin that was desired (Baharudin and Jusoh, 2015).

Target costing is a tool of design- dedicated and price- determined profit planning and it is expense of management system in which cross- practical groups work (Kaygusuz and Dokur, 2015). According to Kalkancı (2008) the difference between the objective price and opted profit is contained of the target cost. In target costing method, quality of products would not be unnoticed and differences between price and quality disallowed through considerate with an emphasis on the purchasers. As a concept target cost indicates a combination of mechanism where it can be found the three mentioned alignments, as it follows (Dimi and Simona, 2014). The target cost's orientation regarding the market, the prediction of the price being made including the predictable price that is able to be achieved in future through selling the items for consumption on the market; target cost can be calculated as : target costing = market price – target profit

- Forming the target costing is not made by only include the forecasted price acceptable on the market, its aims being that of evaluating the features of the newly planning products and phases' design but also by applying target cost for tracking and overtaking the real acquired expenses. Some economic resources should be accepted the functionality establishment of products by the customers, then any reducing cost would have impacted negatively: the buyers may possibly reject the products.

There are some studies that empirically support utilization of the modern strategy in management cost to reduction costs and obtain the high level of profit to industrial companies. Matarneh and El-dalabeeh (2016) examined the role of target costing in products development shareholding of the industrial companies in Jordan. The vital objective of this study was to detect the role of target costing in products cost dimension the study also use questionnaire technique for collecting data among sixty shareholders of various Jordanian industrial companies. The consequence of the study reported that applying target cost method leads to decrease costs and development Jordanian products of industrial firms. Also, a study has been carried out by. Study of Atawi (2008) concern role of the target cost and value analysis in reducing the costs. This study is reflected substantial due to shed light on the target costing of management's tactics of the costs that supports the organizations' competition toward industry difficulty.

This study also covered the value analysis that is a technical process to develop the products that have a linkage between the components of product value and the foundations of its cost to produce products with low costs. The study determined the price of products that can be detected in the market presented change from addressing costs by deal with the high costs by raising the prices and so the prices force the costs. Additionally, the designing of the accounting costs in terms of numerous characteristics as the aims of the accounting costs, configuration of cost, costs theories, reports' content, methods of calculating the costs, costs monitoring, and strategic analysis plus the period of monitoring the costs can be affected by environment of new international system. Hence, there was a requirement to review the traditional costs systems by way of this innovative environment needs new approaches and techniques to recognize, measure and demonstrate the costs data that approve with the recent technology's necessities and the aspects of competition. Another study entitled by: The Effective Factors in Determining Target Cost in Jordanian Industrial Companies. The outcomes discovered some causes that affect the procedure of determine target costing in industrial firms in Jordan as mentioned and listed already (Al-Amro, 2007).

Moreover, there is a case study of the Motor Companies concern Product Developing Process with a Focus on Value Engineering and the Target Cost. The main aim of the study was to introduce a strategy to develop products of motor firms by using not only value engineering method but also target cost method. Thus work policies were industrialized involving of three stages through applying of value engineering: idea, proposal, and validation. The study determine the technique that was activate in reduction costs of the products and obtained the quality that adapt with the customers' requirements and the business's plan (Ibusuki & Kaminski, 2007)

Celayir (2020) in the study observed that implementing modern technical method in furniture factory in Turkey leads to address buyers needs and decline costs also firms targeted their aim

which is preferred profit margin being on top. Actually, applying target costing was successful in this study.

The last not least, the case study had been done by Ellram (2006) entitled by: “Achieving the Target Cost in USA: Between Theory and Application”. The study pointed at displaying the impact of buying procedure in reaching the target cost. The study determined that buying process influenced the process of realizing the target cost positively. Similarly, another study targeted to finding the level of application of target cost of the industrial sector in Jordan, the study investigated that the industrial companies have proficient in using target costing strategy (Al-dalabeeh, 2012).

3. Methodology and Empirical Results

3.1 Research Demographic

Survey forms according to primary sources were used as a data gathering tool for the aim of this study. A sample of the study consist of accountants, auditors and administrators of Bazian cement factory to obtain required data and information concern the impact of applying one of the most effective strategy of reduction costs which target costing. Moreover, there was distribution twenty-five forms among participant of the sample. In order to reach the objectives of the study, which used the descriptive analytical method to indicate the role of targeting costs in reducing costs in Bazian cement industry? Also, there is no invalid forms in the sample all of forms were valid.

The questionnaire forms contained three main sections that were demonstrated in appendix (1):-

The first section: included the personal data of the individuals surveyed in the study community, which represented by (gender, educational qualification, specialization, number of years of service). Also, the second section: this part involved the statements that related to the independent variable (target costs). Sections of 1 to7 were devoted to this part.

The third section contained within the statements allied to the dependent variable (cost reduction), and included section 8 to 14. A five-point likert scale was used to detect and measure the response (strongly agree, agree, neutral, disagree, and strongly disagree).

3.1.1 Sample distribution according to gender group

It is clear from table number one that the participate percent of males reached (96%), while the involvement percent of females was (4%), and this indicates that the largest participation percentage of the study population were males.

Table (1) distribution of the study population according to gender through the frequencies and percentage.

Gender	Frequency	Percentage %
Male	۲۴	۹۶
Female	۱	۴
Total	۲۵	۱۰۰

Source: prepared by the researcher based on the results of the statistical analysis of the questionnaire

3.1.2 Distribution of the sample according to qualification

According to table number two the majority of the respondents were holders of a bachelor's degree that was fifty two percent and hold advanced degrees MSc in research sample with twenty eight percent.

Table (2): Distribution of the sample according to qualification

Qualification	Frequency	Percentage %
Postgraduate	۷	۲۸
Bachelor degree	۱۳	۵۲
Diploma	۳	۱۲
High school and lower	۲	۸
Total	۲۵	۱۰۰

Source: prepared by the researcher depending on the results of the statistical analysis of the questionnaire.

3.1.3 The distribution of the sample according to the scientific specialization

The table number three stated that the majority of the respondents were from other specializations than the specialties listed in the table, as their percentage approximate 48, and then by the accounting specialization was by 28 percent.

Table (3): Distribution of the Sample According to the Scientific Specialization

Scientific Specialization	Frequency	Percentage
Accounting	7	۲۸
Project management	4	16
Banking and Finance	1	۴
Economy	1	۴
Other specialties	12	۴۸
Total	25	۱۰۰

Source: prepared by the researcher depending on the results of the statistical analysis of the questionnaire.

3.1.4 The distribution free respondents according to years of Experience

Table number 6 indicates the distribution of the respondents according to years of experience of the research sample.

Table (4): Distribution of the research sample according to experiences

years of experience	Percentage	Frequency
less than 5 years	۱۶	۴
From 5 to 10 years.	۴۰	۱۰
More than 10 years	۴۴	۱۱
Total	۱۰۰	۲۵

Source: prepared by the researcher depending on the results of the statistical analysis of the questionnaire

The data from table number four refers to the years of experiences in the study sample, which illustrates the following:

From the above table, it can be observed that the years of experiences in the field of work (more than 10 years) of the study sample ranked first, with 44%, and in the second position came years of experience 5 to 10 years by 40%, and in the third position years of experience was less than 5 years by 16%.

3.2 Data Analysis

This section is dedicated to present the data contained in the questionnaire, which was achieved through the use of the five-point Likert scale to measure the direction of the respondents' opinions, and the analysis of responses using statistical analyzes such as frequency distributions, percentages, arithmetic means, standard deviations, coefficient of variation, and correlation coefficient for each of the study variables. The main determiner represented by the indicators of target costs as an independent variable, and indicators of cost reduction as a dependent variable using the statistical program SPSS.

3.2.1 Examine and analysis of study variables

3.2.1.1 Target cost indicators: This part includes examining and describing the indicators of the target cost. Table five shows the frequency distributions, mean values, the standard deviation, and at the overall level of the study community, and in the following an analysis of them:

Table (5) Frequency distributions, means, and standard deviations of the respondents' answers against the indicators of the target cost indicators at the overall level of the study community.

Questions	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	strongly Disagree 1	Mean	Standard Deviation
X1	9	15	1	0	0	4,32	0,557
X2	10	12	3	0	0	4,28	0,678
X3	11	13	1	0	0	4,40	0,577
X4	13	10	2	0	0	4,44	0,651
X5	10	14	1	0	0	4,36	0,569
X6	14	7	4	0	0	4,40	0,764
X7	17	7	1	0	0	4,64	0,569

Source: Prepared by the researchers based on the data of the questionnaire

Table number five from appendix two show that the maximum percentage of agreement was on the indicator (X7) with a percent of (68), which guides that there is interest in completing the work in the time specified for each activity, and the mean values of the indicator have reached the total level of the study community which was (4.64), and the standard deviation of the indicator was (0.569). The minimum agreement was at the level of the study community on the indicator (X2), at a rate of 88 percent, which shows (interest in the suppliers' commitment to delivery dates), the mean of the indicator was (4.28), the standard deviation values of the indicator were (0.678), and the means ranged for the indicators The other for this variable is between the mean of the indicators mentioned above.

3.2.1.2 Reducing costs:

This part included the statements of the dependent variable "cost reduction" and included questions (8-14). The results contained in table (6) and appendix (3) indicate that the respondents' answers, the most prominent of which is (Y1), the percentage of agreement on the indicator reached (88%), and this indicator refers to (negotiating with suppliers on the prices of materials purchased from them) with a mean of (4.48) and a standard deviation of (0.714). The least agreement was at the level of the study community on the indicator (Y5) by (80%), and this indicator refers to (cancellation of activities that do not add value to the project) and the mean for this indicator was (4.20) and with a standard deviation (0.866), and the means for other indicators ranged for this variable between the mean of the indicators mentioned in the above.

Table (6) Frequency distributions, means, and standard deviations of the respondents' answers about cost reduction at the overall level of the study population.

Questions	Strongly agree	agree	Neutral	Disagree	Strongly disagree	Mean	Standard Deviation
Y1	5 10	4 7	3 3	2 0	0	4,48	0,714
Y2	13	9	3	0	0	4,40	0,707
Y3	11	9	0	0	0	4,24	0,779
Y4	9	12	4	0	0	4,20	0,707
Y5	11	9	4	1	0	4,20	0,866
Y6	10	11	4	0	0	4,24	0,723
Y7	13	8	2	2	0	4,28	0,936
Mean						4,2914	0,73826

Source: Prepared by the researchers based on the data of the questionnaire

3.2.1.3 Analyzing the correlation between variables: In this section to measure and test the significance of the correlation between variables of the study that included in the research hypothesis, the researchers used for this purpose the simple correlation coefficient (Pearson Correlation) to measure the strength of the relationship between the study's variables which are cost reduction and target cost. This approach is based on covariance thus it is the best method to measure the connection between two mentioned variables. In simple words, Pearson's correlation coefficient calculates the effect of change in one variable when the other variable changes. That means calculate the effect of using target cost method to reduce in cost. The research hypothesis shows that there is a strong positive correlation between the study's variables which are target costs and of cost reduction. This means applying target cost technique leads to decline costs, increase the amount of cement in the Bazian cement factory

as a result profit increase. Hence, the result accepts the alternative hypothesis of the study. This can be concluded that Bazian cement factory is one of the successful industries in applying target cost technique. Table number seven demonstrates the outcomes of the above analysis and interpretation.

Table (7) the correlation between the indicators of target costs and indicators of cost reduction

Independent variable Dependent variable	Target cost	significant
Reduction costs	*۷۹۳.۰	۰,۰۵

Source: Prepared by the researchers based on the data of the questionnaire

4. Conclusion and recommendations

4.1 Conclusion

Recently improvement products through having affordable price that rely on using modern strategy that is target costing replaced the traditional methods. The research confirmed that the target costing system is concerned with planning and organizing all stages of production in order to provide high quality and low cost products. Moreover, there are many factors affecting the process of determining the target costs and the possibility of achieving them and reaching them, which are market conditions, the nature of customers, the product strategy, the characteristics of the product and the strategic resource base. Applying the target costing system and following its principles correctly from the start of the project planning process and the production process will reduce costs. The results showed that the agreement of participants of survey came in a large proportion to the question (interest in completing the work within the specified time for each activity). Also, outcomes of the descriptive analysis investigate that the response involvement individual response with tending to approve with a small percentage concern (cancellation of activities that do not add value to the project). Indeed, the results of the analysis revealed a strong significant correlation between the variable of target costs and variable of cost reduction and move from the current level of costs to a lower level that lead to increase production efficiency.

4.2 Recommendations

This study recommended the followings:

1. Activation the necessary aspects to decline costs and employ the accessible reasons as a main step in the applying procedure.
2. It is required to be aware that the industrial companies of the significance of the target cost method by governments' parties' organizing and arranging of seminars and training courses.
3. All companies should have a team to design the outputs with members from different sections in the company for its vital impact in simplifying the target of cost reduction among the employees of company.
4. The consistency of further studies and field researches concern the effective factors in the process of performing the target cost method in the industrial companies and studying the influence of target costs on the profitability of the company. Additionally, to run a comparative study between the impact of target cost method and the traditional costs method on the cost of product and detect the performance or profitability of the industrial companies.

رۆلی تیچووی دیاریکراو له کهمکردنهوهی تیچوو: کارگهی چیمهنتۆی بازیان وهکو نمونه

ئاراز محمد محمود سعید^۱ - که نار که مال صالح^۲ - بژار نصرالدیم مجید^۳

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پوخته:

تازهگی، کۆمپانیاکان لهههولی ئهوهدان که کۆمپانییهکی دروست بکهن له بازاری جیهاندا و ریگه و تهکنیکی جیاواز بهکاردههینن بۆ بهرهممی زۆر و دابهزاندنی تیچوو، که دهبیته هۆی زیادبوونی قازانجی کۆمپانیاکه. جیهه جیکردنی تیچوووی دیاریکراو بهکاردههینیت بۆ دیزاین کردنی کالاو بهرهو پیشبردنیان، بۆیه تیچوووی دیاریکراو له سههرهتاکانی ئهم کارهدا دادهنریت. کۆمپانیاکان بهگشتی به کۆمهلیک تهکنیک پالپشتی دهکرین بۆ بهرزکردنهوهی قازانج له کالاکه و ریکخستنهوهی نرخ، بۆ یه ئهمه گرنگه بۆ قازانج له کۆمپانیاکان. بۆیه ئامانجی سههرهکی ئهم نووسینه پهیوهسته به جیهه جیکردنی تیچوووی دیاریکراو له کهمبونهوهی تیچووندا له کارگهی چیمهنتۆی بازیان ئهم توێژینهوهیه داتای دووهه مینی بهکارهیناوه و ۲۵ فۆرمی دابهشکردوه به سههر کهسانی پهیوهندیار بهم باسهوه. ئهجامهکانی ئهم توێژینهوهیه ئهوه دیاریدهکهن که گۆراوی پشتبهستوو (تیچوو کهمکردنهوه) وه گۆراوی سههرهخۆ (تیچوووی دیاریکراو) به پۆزاتیف و بههیزی پهیوهستن پیکهوه، که ئهمه ئهوه دهگهیهنیت کارگهی چیمهنتۆی بازیان سههرکهوتوو بوه لهو پلانهیدا.

کلێله وشهکان: تیچوو دیاریکراو، کهمکردنهوهی تیچوو، بهرهممی پیشهسازی، کارگهی چیمهنتۆی بازیان، کوردستانی عێراق.

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Appendices

Appendix 1: Research Questionnaire

First: General Information

Name of the company

Gender: Male Female

Age

Less than 25 from 26 to 30 from 31 to 35

From 36 to 40 from 41 to 45 46 and above

Education:

High school and less Diploma

Bachelor High diploma

Master PhD

Specialist

Accounting Business management Economic Banking others

Experience:

Less than 5 years 5 to 10 years More than 10

Second: Role of target cost on cost reduction

	Questions	strongly agree 5	Agree 4	Neutral 3	Disagree 2	Strongly disagree 1
1	We are accused of directing the cost to necessary activities that add value.					
2	We care about suppliers' commitment to delivery times.					
3	We always strive to reduce excessive operating errors.					
4	We care about the requirements of the modern industrial environment					
5	We always care about the optimal use of available economic resources					
6	We are interested in completing the work on time for each activity					
7	We focus on getting healthy products without defects the first time					
8	Negotiate with suppliers the prices of materials purchased from them.					
9	Avoiding errors and defects and maintaining machines before production.					
10	Creating a balance between the necessary materials and the number of products required.					
11	Maximizing the utilization of waste materials by re-manufacturing or selling them.					
12	Eliminate activities that do not add value to the project.					
13	Store in the appropriate amount.					
14	Striking a balance between the number of workers and the tasks required of them, so that there is no room for wasting time by workers or additional wages.					

Appendix 2: Percentages of respondents' answers to target cost indicators at the overall level of the study community

	Questions	strongly agree 5	Agree 4	Neutral 3	Disagree 2	Strongly disagree 1
1	We are accused of directing the cost to necessary activities that add value.	36%	60%	4%	0%	0%
2	We care about suppliers' commitment to delivery times.	40%	48%	12%	0%	0%
3	We always strive to reduce excessive operating errors.	44%	52%	4%	0%	0%
4	We care about the requirements of the modern industrial environment	52%	40%	8%	0%	0%
5	We always care about the optimal use of available economic resources	40%	56%	4%	0%	0%
6	We are interested in completing the work on time for each activity	56%	28%	16%	0%	0%
7	We focus on getting healthy products without defects the first time	68%	28%	4%	0%	0%

Appendix 3: Percentages of respondents' answers to cost reduction indicators at the overall level of the study community

	Questions	strongly agree 5	Agree 4	Neutral 3	Disagree 2	Strongly disagree 1
1	Negotiate with suppliers the prices of materials purchased from them.	60%	28%	12%	0%	0%
2	Avoiding errors and defects and maintaining machines before production.	52%	36%	12%	0%	0%
3	Creating a balance between the necessary materials and the number of products required.	44%	36%	20%	0%	0%
4	Maximizing the utilization of waste materials by re-manufacturing or selling them.	36%	48%	16%	0%	0%
5	Eliminate activities that do not add value to the project.	44%	36%	16%	0%	0%
6	Store in the appropriate amount.	40%	44%	16%	0%	0%
7	Striking a balance between the number of workers and the tasks required of them, so that there is no room for wasting time by workers or additional wages.	52%	32%	8%	8%	0%