# IMPACT OF ACTIVITY BASED COSTING ON FIRMS' PERFORMANCE IN SAUDI ARABIA

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***ABSTRACT:*** *The Activity Based Costing (ABC) is a method of analyzing business operations that leads to cost identification and cost classifications based on activities. ABC has helped many manufacturing and service organizations all over the world to improve their competitiveness by enabling them to make decisions based on a better understanding of their cost structure. In this present research paper the authors have measured the degree of ABC implementation in the Riyadh region of Saudi Arabia. With 94% of the respondents confirming the using of ABC for accounting purposes, the study using factor analysis identifies the important elements of ABC.*

## INTRODUCTION

With the progress of business and information technologies the practice of volume based cost allocation came under criticism of being insufficient and not being able to reflect the actual cost causation pattern [19] and leading to distortions in cost and profit estimation [24]. Activity Based Costing (ABC), as suggested by Cooper and Kaplan [20] proposed for allocating overheads to each of the activities while making products. It was a replacement of the traditional method wherein overheads were allocated on the basis of time and number of units produced. With the emergence of ABC in USA in the late 1980s, it was seen that it also helped in improved overhead cost allocation but also in better product profitability evaluation and better management of operating costs [14].

Saudi Arabia is one of the largest oil producers in the world. Due to diversification in products and operations in many industries, the management accountants in the country have had to adopt new management accounting techniques to ensure that good decisions are made on the basis of the accounting records that are provided to managers. Critics have however cited that is very difficult to access management accounts in Saudi due to the family nature of firms in the country. Most of the people who access financial accounts of other companies are major financial investors of the company or financial arms of the government. Some manufacturing firms in the country cite their adoption of advanced accounting management techniques to an increase or maintenance of high production in their companies. The information that they get after using the advanced accounting management techniques is used in making decisions that affects business unit performance according to the history of such companies and in comparison to the market performance [15].

## REVIEW OF LITERATURE

In their study, El-Ebaishi [16] found ABC to be the least used and most unimportant management accounting technique with only 28% of firms in Saudi Arabia using ABC among the firms studied. The reason was that managers in Saudi Arabia are disinclined to attend training courses. Hence he asserted it is very important to improve the attitude of management towards modern management accounting techniques. They are of the view that companies in the Kingdom are neither applying management accounting techniques nor using computers for these purposes. He has given certain reasons for it like the working environment is not equipped to apply techniques, software not available in Arabic language, no peer review available as there are no examples of places where it has been used. For all these reasons the manager's attitude towards ABC assumes huge importance. Moreover, abundance of revenues because of huge oil exports has resulted in neglect of management accounting as planning and control is not very much in practice. Also, a majority of firms besides those in the oil sector are running small family businesses and remaining companies are not very big that they direly need techniques like ABC.

In a later study of top 100 firms in terms of sales revenue Khalid [21] found a positive relationship between firm size and product diversification with ABC implementation but not with level of overhead. He found accurate cost measurement and profit to customers were the most important incentives associated with ABC implementation. In another study, Al Mulhem [9] found that 14.5% of manufacturing companies in the Eastern coast applied ABC. As recent as 2010, Alblowi (2010/11) [7] in his dissertation finds that management accounting field is relatively not well researched. He studies firms in the region of Jeddah and found that there is 'some awareness and implementation' of ABC in Saudi Arabia but it is still at a 'low level'. He says this is broadly due to the prevalent business culture in the Kingdom which isn't competitive in comparison to the countries in the West. Further, he attributes this non-dynamic business environment to the economy's heavy dependence on only one sector which is the petrochemical sector. But he hopes that with the efforts of the Kingdom to diversify its economy, aggressive planning in terms of its consecutive five year plans and the education of its younger generation in Western universities, ABC will surely gain prominence in future. Two of the important findings of his study are that 70% of the respondents had general or no knowledge of ABC and only one firm had fully implemented ABC.

There is a dearth of literature on the implementation of modern accounting methods in Saudi Arabia. We found some older studies quoted in El Ebashi [16]. These quoted studies stated that in Saudi Arabia the use of modern accounting practices is very less and it also differs from company to company [3]. This was attributed to the then financial reporting statutory requirements as neither the Companies Law nor the Zakat Law specified any particular technique to

be used for management accounting [6]. In another quoted study, Al Hashim [4] goes to the extent of saying that public disclosure of financial aspects were deliberately kept to the minimum and also as many a Saudi firms were family business owned by few investors hence the managers were appointed on reasons other than qualification and experience which led to non-seriousness in accounting control. In a related study, Al Namri [5] while comparing Western joint venture companies in Saudi Arabia and fully owned Saudi companies found that the management accounting techniques were more sophisticated and comprehensive in the former.

As many a studies on Saudi Arabia were not available, hence we looked for studies on neighboring countries. In a study on Bahrain, Al Basteki and Ramadan [8] found that although few in numbers but forms have started adopting ABC owing to increased competition and improved information technology. Besides these two, they identified two additional factors which had impacted, that is, expatriate staff and foreign education. Amongst all other things, getting an understanding into cost causation is the most important reason for applying ABC. Also, they identified two negative factors, one being that it was not on the priority list of the management and the other being that no one has come forward to initiate it. In terms of difficulties faced by the firms in implementing ABC the factors identified were accountant's not clear understanding of ABC, increase in workload and reluctance to change.

Amongst other countries in the Arab region Sander Elsahat [27] based on his study found that ABC is nearly not known in Egypt. In another study by Sangster *et al*.[28], it is seen that implementation of ABC in Jordan during the 2000s followed the typical S curve of the diffusion theory with its peak during the mid-2000s. Wherein in the primary stage the main motivation for preferring ABC were choice for efficiency and fashion outlook in the influence of consultant. And in the take off stage the main reason was the fashion perspective and not better accounting. It was just to copy others and appear authentic by following upcoming latest standards.

Many a researchers have tried to study the relationship in the firm type and ABC acceptance. Brierley [12] in a study on British accountants found that choice for ABC was significantly influenced by operating unit size. Rbab'h [26] for Jordan and Ahmadzadah *et al.* [1] for Iran and found insignificant relationship between the type of industry, company size in terms of employee numbers, diversity of products, level of overhead the company and implementation of ABC. In a related study, ABC implementation and firm size were positively related, with large firms being more inclined to ABC adoption [2].

Also, though ABC was a more effective management accounting technique still there were many a issues with the introduction of ABC like, insufficient support by the top management [18] existence of other priorities are prominent. Shields [28], Gosselin [17], Bjørnenak [11], and Krumwiede [23] identified a number of organizational and environmental aspects, like, support of the top management, consultants, and competition being the determinant factors. In Saudi context, "top management support, adequate training and linkage to performance" were identified as organization issues by Khalid [21]. So changing manager/accountant's attitude was cited an important obstacle to the acceptance of ABC [22].

The foregoing review of literature brings into the light the fact that no specific work in this area has been done in Saudi Arabian context. The present study thus aims to highlight on the implementation and awareness of ABC in the Riyadh region of Saudi Arabia with emphasis on the aspects of attitude of managers to ABC.

## METHODOLOGY

### Questionnaire and Data Collection:

A survey questionnaire meant to measure the attributes and effects of ABC costing system is developed based on the above completed literature review. The questionnaire has overall three sections. The first section of the questionnaire has questions regarding the company its product, its pricing and the competition it faces. The second section has categorical questions with Yes/No answers. Finally, the last section has 24 items on Likert's scale where the respondents have to specify how much they agree/disagree regarding ABC.

### Hypotheses Testing:

The following hypotheses have been tested in this study:

*Ho: Average for the response is equal to zero*.

*H1: Average for the response is not equal to zero.*

The significance testing would be at 5 percent level of significance. If the p value is greater than 0.05 we fail to reject the null hypothesis and if the p value is less than 0.05 we accept the alternate hypothesis. Further, the aspects of reliability and validity will also be taken care of through Cronbach Alpha.

### Principal Component Analysis:

Subsequently, the technique of factor analysis will be used for identifying various constructs, identify relationship between variables, group similar items and reduce data. Here we will be doing principal component analysis and the factors would be rotated using Varimax with Kaiser Normalization. This would lessen the number of items into a small number of dimensions called factors. Generally quite a few input variables are being used to measure the same construct which is called as a factor. The highly correlated variables are combined into specific factors. The factors form the new variables and the values for these variables are obtained by adding the values of the variables that formed the factor. These factors are used for subsequent analysis. The values for each new observation based on these new variables are called factor scores. The correlation matrix which is also known as the unrotated factor matrix that describes the relationship between variables and the factor may not help in interpreting the factors effectively, because many variables are related with many factors. Thus, using the process called rotation; the matrix is further simplified to interpret the factors. This helps the researcher to interpret the factors in a different way. Here the variamax rotation process which is a standard method for doing principal component analysis has been used.

### Regression:

Finally regression is done to measure the relationship between the extracted factors. The average of the items under each factor acts as variables for regression analysis. Whereby, the slope coefficient measures the average change in the dependent variable for a unit change in the independent variable. The significance testing of the individual beta coefficient is done by t-statistic and the associated p-value. And the R square which measure the portion of the total variation in the dependent variable that is explained by its relationship with the independent variable. The significance testing of the R square is done by F ratio and its associated P value. Also Durbin Watson test statistics will be used to measure autocorrelation and Variance Inflation factor to check for multicollinearity, respectively. In the following pages, an attempt has been made to present the findings of the research on the basis of data analysis:

## ANALYSIS

Items 2, 5, 9, 13, 19, 21 and 23 are having mean values of more than 3 denoting disagree part but as all of these are negative statements hence they go in favor of ABC costing. Rest all other items are being agreed upon by the respondents. Also, except for items 9, 12, 13, 15, 19 and 21 all other items are having a standard deviation of less than 1. And more importantly all items are significant at 5 percent level of significance.

***Graphical Representation:***

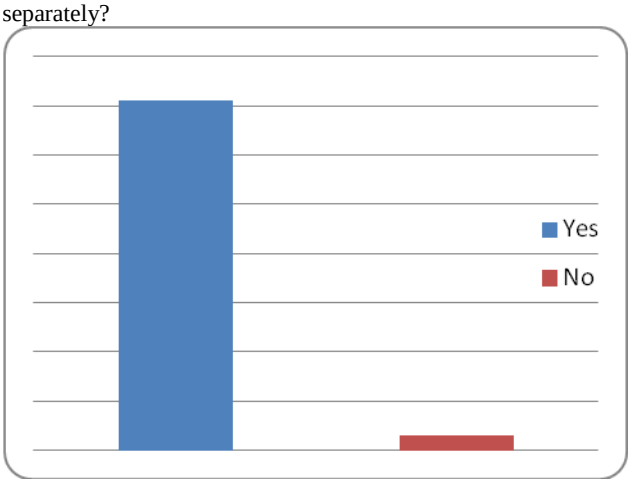
The subsequent section has the graphical representation of the questions of Section II in the questionnaire. As evident from the graphs that most of the respondents have answered in 'Yes' for the given questions.

**Table (1): Showing Respondents' Profile**

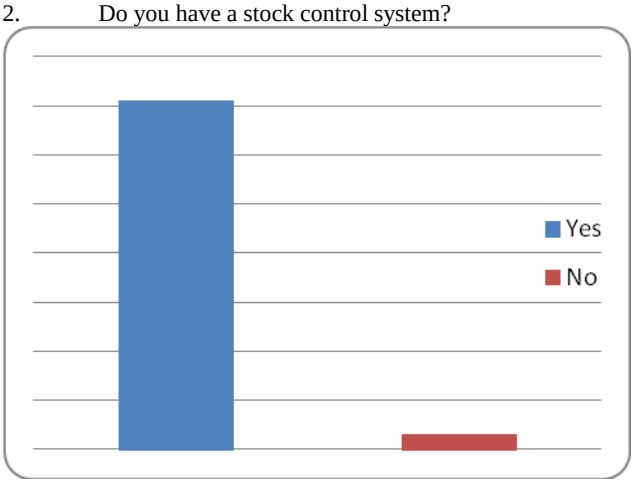
| S.No. | Demographics | | Frequency | Percentage |
|---|---|---|---|---|
| 1 | Nationality | | | |
| | | Saudi | 27 | 36.46 |
| | | Non-Saudi | 47 | 63.51 |
| | | | | |
| 2 | Educational Qualification | | | |
| | | Bachelors & above | 53 | 71.62 |
| | | Masters & above | 21 | 28.37 |
| | | | | |
| | | | | |
| 3 | Position in company | | | |
| | | Lower level | 8 | 10.81 |
| | | Middle level | 45 | 60.81 |
| | | Top level | 21 | 28.37 |
| | | | | |
| 4 | Length of employment | | | |
| | | Less than 5 years | 25 | 33.78 |
| | | 5-15 years | 43 | 58.10 |
| | | 15 years and above | 6 | 8.10 |
| | | | | |
| 5 | Type of organization | | | |
| | | Government | | |
| | | Semi-government | 1 | 1.35 |
| | | Private | 73 | 17.56 |
| | | Non-profit | | |
| | | Others | | |

| | | | | |
|---|---|---|---|---|
| | | | | |
| 6 | Employment Status | | | |
| | | Almarai | 17 | 22.97 |
| | | Yamama Cement Factory | 7 | 9.45 |
| | | SABIC | 4 | 5.40 |
| | | SAFCO | 3 | 4.05 |
| | | South Cement Factory | 7 | 9.45 |
| | | Advanced Petrochemical | 6 | 8.10 |
| | | Middle East for Cable and Electrical equipment | 7 | 9.45 |
| | | Petrochemical Company | 5 | 6.75 |
| | | Others | 18 | 24.32 |
| | | | | |
| 7 | No. of Products | | | |
| | | Only one | 17 | 23.29 |
| | | Few (2-10) | 47 | 64.38 |
| | | Many (more than 10) | 9 | 12.33 |
| | | | | |
| 8 | Type of Competition | | | |
| | | High | 27 | 36.49 |
| | | Moderate | 44 | 59.46 |
| | | Low | 3 | 4.05 |
| | | | | |
| 9 | Fix the Price | | | |
| | | Market situation | 16 | 22.22 |
| | | Total cost & profit | 38 | 52.78 |
| | | Both | 13 | 18.06 |
| | | Can’t say | 5 | 6.94 |
| | | | | |
| 10 | Using ABC system | | | |
| | | Yes | 70 | 94.59 |
| | | No | 4 | 5.41 |
| | | | | |

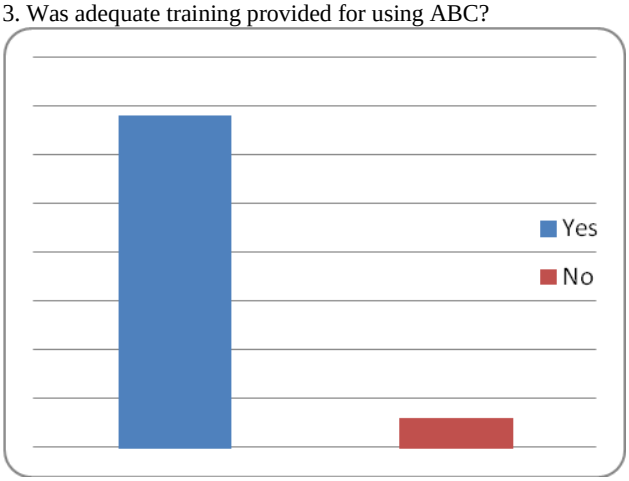
1. Are you allocating the cost for each product/order separately?



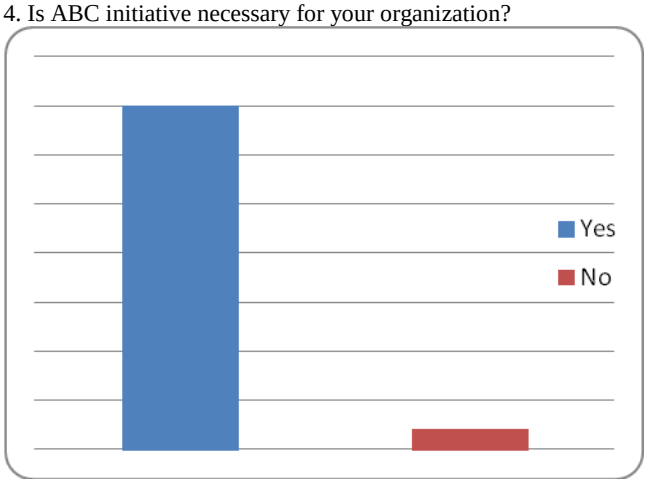

2. Do you have a stock control system?




3. Was adequate training provided for using ABC?




4. Is ABC initiative necessary for your organization?




5. Are you overall satisfied with (ABC) system of your organization?

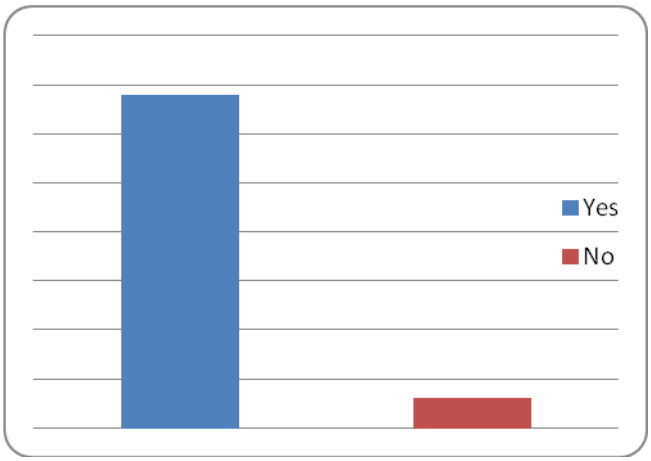



**Table (2)**

| One-Sample Statistics | | | | | |
|---|---|---|---|---|---|
| | N | Mean | Std. Deviation | Sig. (2-tailed) | Cronbach's Alpha if Item Deleted |
| ABC enhances functioning of in-house management | 70 | 1.87 | 0.48 | 0.000 | .308 |
| ABC has no gain for customers | 70 | 4.10 | 0.62 | 0.000 | .334 |
| ABC leads to reduction in overall production cost | 70 | 2.01 | 0.36 | 0.000 | .355 |

| | | | | | |
|---|---|---|---|---|---|
| ABC helps to identify major cost drivers for each product | 70 | 1.94 | 0.48 | 0.000 | .288 |
| ABC does not helps to separate costs for each category of products | 69 | 4.09 | 0.94 | 0.000 | .333 |
| ABC is a valuable overhead cost allocation system to identify real cost of products | 70 | 1.93 | 0.52 | 0.000 | .370 |
| ABC helps customers in getting a lower price | 70 | 1.96 | 0.49 | 0.000 | .341 |
| ABC helps to deliver better quality of products or services | 70 | 1.99 | 0.86 | 0.000 | .321 |
| ABC implementation does not improve overall revenue | 70 | 3.69 | 1.21 | 0.000 | .431 |
| ABC increases business profitability in a significant way | 70 | 2.19 | 0.67 | 0.000 | .344 |
| ABC gives better financial return in terms of long term customer acceptability | 69 | 2.04 | 0.47 | 0.000 | .311 |
| ABC provides better accuracy while allocating costs when its products and customers are more diverse | 70 | 2.16 | 1.26 | 0.000 | .274 |
| The information essential for ABC is not readily available | 67 | 3.43 | 1.16 | 0.000 | .432 |
| There should be sufficient number of employees in the organization for ABC | 70 | 2.21 | 0.80 | 0.000 | .361 |
| ABC can help only good managers in managing better | 70 | 2.60 | 1.08 | 0.000 | .440 |
| ABC enhances accurate profitability analysis | 70 | 1.99 | 0.79 | 0.000 | .303 |
| ABC helps in better cost control and cost management | 69 | 1.72 | 0.57 | 0.000 | .313 |
| ABC provides better understanding of cost reduction opportunities | 68 | 1.79 | 0.74 | 0.000 | .339 |
| ABC does not improve managerial decision making | 68 | 3.96 | 1.21 | 0.000 | .296 |
| The benefit of ABC exceeds its cost | 68 | 2.13 | 0.99 | 0.000 | .255 |
| ABC is not easy to execute | 69 | 3.62 | 1.26 | 0.000 | .323 |
| Continuous development & complexity of production requires adoption of ABC | 69 | 1.91 | 0.64 | 0.000 | .314 |
| Increasing competition at local & international level requires adoption of ABC | 70 | 2.24 | 0.86 | 0.000 | .367 |
| Pricing policy as offering products in low prices by other companies does not require usage of ABC | 70 | 4.09 | 0.91 | 0.000 | .311 |

There were only 4 responses from respondents of companies who do not use ABC costing system. All these 4 respondents were Saudi nationals and had educational status of masters and above. Three of them had a middle level position in the company while the fourth one was at the top level. All were working in the private sector and their company was producing more than 10 products. One of them had responded that their company was facing low competition while the fourth respondent did not respond. And in the question regarding fixing the price of the product two of the respondents did not know anything about it while the remaining two did not respond. All of these 4 respondents agreed that ABC enhances functioning of in house management; ABC had gains for the customers; It leads to reduction in overall production cost and helps in the identification of important cost drivers for each product. For remaining items these respondent had mixed responses. Hence, it can be safely deduced that those who are not implementing ABC costing system have a preference for it.

***Hypotheses Testing:***

As the p value is lower than 0.05 we accept the alternate hypothesis that all the items are significant at 5 percent level of significance

***Reliability Analysis:***

A check for reliability is done to assure that we would be getting same results if measurements are to be repeated. A common method for checking this is by split-half reliability where high reliability is associated with the value of Cronbach alpha being close to 1. In this case the value of Cronbach's alpha is 0.349, which point to a fair amount of internal consistency.

**Table (3): Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .349 | .468 | 24 |

***Factor Analysis using Principal Component Analysis***

Though Kaiser-Meyer-Olkin measure of sampling adequacy has value of 0.45 which is less Bartlett's test of sphericity is significant as the chi square value associated with it is 564 at 276 degrees of freedom which is significant at 5 percent level of significance.

**Table (4)**

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling | | 0.457450545 |

| | | | | | |
|---|---|---|---|---|---|
| Adequacy. | | | | | |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 564.735239 | | Df | 276 |
| | | | | Sig. | 5.20553E-22 |

**Table (5)**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | |
|---|---|---|---|---|---|---|---|---|
| | Total | percent of Variance | Cumulative percent | Total | percent of Variance | Cumulative percent | Total | percent of Variance |
| 1 | 3.62 | 15.07 | 15.07 | 3.62 | 15.07 | 15.07 | 3.08 | 12.82 |
| 2 | 3.06 | 12.73 | 27.81 | 3.06 | 12.73 | 27.81 | 2.60 | 10.84 |
| 3 | 2.18 | 9.10 | 36.91 | 2.18 | 9.10 | 36.91 | 2.12 | 8.82 |
| 4 | 2.04 | 8.51 | 45.42 | 2.04 | 8.51 | 45.42 | 1.99 | 8.30 |
| 5 | 1.98 | 8.24 | 53.65 | 1.98 | 8.24 | 53.65 | 1.94 | 8.07 |
| 6 | 1.47 | 6.13 | 59.79 | 1.47 | 6.13 | 59.79 | 1.85 | 7.71 |
| 7 | 1.36 | 5.65 | 65.44 | 1.36 | 5.65 | 65.44 | 1.67 | 6.97 |
| 8 | 1.13 | 4.69 | 70.13 | 1.13 | 4.69 | 70.13 | 1.59 | 6.61 |

**Table (6)**

| Rotated Component Matrixa | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Component | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| VAR00001 | | | | | | | | 0.61 |
| VAR00002 | | | | -0.62 | | | | |
| VAR00003 | | | | 0.73 | | | | |
| VAR00004 | | 0.82 | | | | | | |
| VAR00005 | | | | | | 0.77 | | |
| VAR00006 | | | | | | -0.68 | | |
| VAR00007 | 0.5 | | | | | | | |
| VAR00008 | 0.64 | | | | | | | |
| VAR00009 | -0.7 | | | | | | | |
| VAR00010 | | | | 0.46 | | | | |
| VAR00011 | | 0.67 | | | | | | |
| VAR00012 | | | 0.81 | | | | | |
| VAR00013 | | | -0.84 | | | | | |
| VAR00014 | | | 0.48 | | | | | |
| VAR00015 | | | | | -0.74 | | | |
| VAR00016 | | | | | | | 0.49 | |
| VAR00017 | | 0.73 | | | | | | |
| VAR00018 | | | | | | | | 0.83 |
| VAR00019 | | | | | | 0.53 | | |
| VAR00020 | 0.68 | | | | | | | |
| VAR00021 | | | | | 0.63 | | | |
| VAR00022 | 0.77 | | | | | | | |
| VAR00023 | | | | | | | | -0.51 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| VAR00024 | | | | | | | 0.72 | |

Next using principal component analysis the number of factors has been done which explains for maximum variance in the data. In the table of communalities it can be seen that under the label "Initial" the communality for all the variables is 1.0 and is different from label 'Extracted' as the latter relates to the variance of only the retained variables.

Total Eigen values which stand for the quantity of variance related to individual factor decrease as we go down the table and only those factors are taken which has Eigen values are more than 1. Here, 8 retained factors are having Eigen values more than 1.0, have a cumulative percent of variance extracted of 70.13% and it is more than the recommended 60% percent of variance.

The next important table of factor matrix has the coefficient or the factor loadings. A large value signifies a close association between the variable and the factor which is used to understand the factors. Rotation of factors is done as sometimes a variable may be related to several factors by using the varimax procedure with Kaiser Normalizations. The variables in the rotated component matrix having large loading on the same factor are taken as factors.

Factor 1 has high coefficient for variables V7 (lower price), V8 (quality), V9 (implementation), V20 (benefit) and V 22 (development). Factor 2 is associated with V 4 (identification), V11 (acceptability) and V17 (control). Factor 3 is associated with V12 (allocating cost) and V 13 (information) and V 14 (employees). Factor 4 is related with V2 (gain), V10 (profitability) and V23 (continuous). Factor 5 is related with V15 (managing), and V21 (execution). Factor 6 is related with V 5 (separate), V6 (identify) and V19 (decision making). Factor 7 is associated with V16 (accuracy) and V24 (pricing policy). And, lastly Factor 8 is associated withV1 (in house management), V18 (understanding of opportunities) and V23 (increased competition).

***Regression***

Factor score coefficients are similar to the beta coefficients in multiple regression. To examine the effects of factor2, factor 3, factor 4, factor 5, factor 6, factor 7 and factor 8 on factor 1 we perform regression. Factor 1 can be taken as the overall performance indicator. Here, based on factor loadings we identify and segregate the items according to their dimensionalities and calculate their averages and then regression is performed on these averages.

**Table (7)**

**Model Summary[a]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .533[a] | 0.284 | 0.203 | 0.34211 | 1.626 |

a. Predictors: (Constant), VAR00008, VAR00006, VAR00007, VAR00005, VAR00002, VAR00003, VAR00004

b. Dependent Variable: VAR00001

**ANOVA[b]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 2.882 | 7 | 0.412 | 3.518 | .003[a] |
| | Residual | 7.257 | 62 | 0.117 | | |
| | Total | 10.138 | 69 | | | |

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 1.774 | 0.485 | | 3.657 | 0.001 | | |
| | VAR00002 | 0.32 | 0.113 | 0.331 | 2.837 | 0.006 | 0.847 | 1.18 |
| | VAR00003 | 0.336 | 0.098 | 0.411 | 3.442 | 0.001 | 0.811 | 1.234 |
| | VAR00004 | -0.069 | 0.121 | -0.069 | -0.567 | 0.573 | 0.781 | 1.28 |
| | VAR00005 | -0.06 | 0.06 | -0.11 | -1.001 | 0.321 | 0.949 | 1.054 |
| | VAR00006 | -0.138 | 0.09 | -0.178 | -1.533 | 0.13 | 0.853 | 1.172 |
| | VAR00007 | 0.119 | 0.067 | 0.199 | 1.788 | 0.079 | 0.934 | 1.071 |
| | VAR00008 | -0.223 | 0.129 | -0.221 | -1.733 | 0.088 | 0.709 | 1.411 |

| a. Dependent Variable: VAR00001 | | | | | |
|---|---|---|---|---|---|

Factor 1= 1.774 + 0.320 Factor 2 + 0.336 Factor 3 – 0.069 Factor 4 – 0.060 Factor 5 – 0.138 Factor 6 + 0.119 Factor 7 – 0.222 Factor 8. Amongst the independent factors Factor 2 and Factor 3 are significant at 5 percent level of significance. ANOVA statistics has a p-value of 0.03 for F statistic is less than 0.05, which indicates that the R Squared is significant. The total variation in the dependent variable explained by the independent factors is around 28 percent.

## CONCLUDING OBSERVATIONS

This study finds a very high usage of ABC costing systems amongst the firms particularly the private companies operating in the Riyadh region of Saudi Arabia. Around 94 percent of the respondents confirmed that they were using this costing system. This system was, more or less equally popular amongst the mangers at the top, middle and lower level. Also, this system was being used in almost all the companies including reputed companies like Almarai, SABIC etc.

Moreover this method was popular with companies having more products, that is, product diversification and working in a competitive environment. Even for those who are not using ABC costing system till date, this costing system has positive perceived impact and they identify that ABC costing system could help in house management, identify major cost drivers, reduce production cost and has an overall gain for customers. The overall perception of managers is that ABC costing system leads to lower price, higher quality, improved implementation and is beneficial for the development of the product. The important thing for this perception is the identification and control over cost. For this accuracy, information and employee is crucial. Overall it is vital for pricing policy to ensure profitability.

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