BANGLADESH COST ACCOUNTING STANDARDS

BCAS - 2

Cost Estimation

BCAS 2: Cost Estimation

2.1 Introduction

All managerial decisions deal with choices among different activity levels. An understanding of cost behavior underlies all decisions that rely on cost information. Managers must estimate which costs will vary with the activity & by how much at the time of evaluating the profitability of an existing product and evaluating the potential profit of a prospective product. In addition, understanding cost behavior provides critical insights in the process of forecasting costs during budgeting and cash flow estimation.

2.2 Objectives

The objective of the standard is to provide guidance on the nature, purpose, and approaches to cost estimation. The standard will also guide the rationale of choosing the appropriate drivers of cost so that the reasons of cost incurrence can be identified properly before deriving or proposing any formula for cost estimation. Indirectly, such estimation technique will provide a hand on technique of keeping the cost under control

2.3 Scope

2.3.1 The standard shall be applied for estimating the cost.

2.3.2 However, knowing the cost in terms of behavior is important for such estimation. Thus the standard also brings the degree of changes in cost for its better understanding and advanced use.

2.3.3 The standard is to be followed by all public limited companies where cost audit is made mandatory through Government's gazette notification from time to time.

2.4 Key Features

The key features of this standard are pointed below:

a) Identifying costs in terms of behavior;
b) Differentiating flexible, capacity-related and discretionary costs;
c) Applying dependent and independent variables in formulation cost function;
d) Cost prediction and forecasting based on cost formula; and
e) Application of multiple regression to identify the most appropriate cost driver.

2.5 Definitions

The following terms are used in this standard with the meanings specified -

2.5.1 Cost estimation: It is a well-formulated prediction of the probable cost of a specific product.

2.5.2 Flexible costs: Costs that vary in the short run in proportion to some underlying level of activity. For example, fuel costs for a courier company vary in proportion to the

distance travelled by trucks.

2.5.3 Capacity-related costs: Costs that vary in proportion with the amount of capacity acquired and used. Depreciation of a machine or wages paid to supervisory labour are some examples of capacity-related costs.

2.5.4 Discretionary costs: Costs result from managers' strategic and tactical decisions, such that the expenditure levels chosen influence the production volume instead of production volume influencing the consumption of activity resources. There is, however, no obvious cause and effect relationship between costs and outputs. In other words, there may exist a remote cause and effect relationship between costs and output. Examples include: advertising, publicity and research and development.

2.5.5 Dependent variable: It is the variable to be estimated. Usually, this is the cost to be estimated.

2.5.6 Independent variable: It is the variable used to explain the behavior of the dependent variable. In cost accounting literature, the independent variable is frequently referred to as the cost driver.

2.6 Standards

2.6.1 Many alternative tools can be chosen to estimate the behavior underlying recorded costs. The method chosen should reflect the application of judgment relating to the sensitivity of the decision to the estimated cost behavior. The more sensitive the decision to the cost estimate the greater the potential loss from using an inappropriate cost estimate, the greater the value of using a formalized cost estimation tool.

2.6.2 Any tool that relies on recorded costs to estimate cost behavior is susceptible to errors arising because of inaccurate cost recording practices. In particular, inappropriate or inaccurate cost accruals can result in inappropriate or biased cost estimates. This will relate not only to accuracy in the original recording of the data but also to ensure that costs have been attributed to the proper period.

2.7 Recording and Reporting

2.7.1 Flexible costs, capacity-related costs and discretionary costs shall be presented separately.

2.7.2 Total capacity-related costs are easily identified since they are recorded in the organization's accounting system. What must be uncovered, and what requires the application of both skill and knowledge is the relationship between capacity-related costs and production.

2.7.3 Capacity-related costs reflect the amount of capacity that exists and not the underlying volume of activity using the capacity. Therefore, in the short run there is no relationship between capacity-related costs and production.

2.7.4 However, there is a need to identify the long run relationship between capacity cost and production so that planners can estimate the product's total cost, including capacity costs. This full cost estimate is needed to determine whether the price of

an existing or a proposed product is sufficient to cover all the costs associated with making the product so that when capacity must be replaced or is required it is with the understanding that the product margins will cover those costs. Therefore, there is a need to allocate capacity related costs to products.

2.7.5 Capacity-related costs are allocated to cost objects using the allocation basis that reflects the best judgment about how the organization's long run capacity-related costs will vary with the underlying volume of activity.

2.7.6 This important point is crucial in understanding how cost estimation should be tackled in practice. To illustrate, suppose that a piece of equipment costing BDT 2,000,000 is acquired and put into production. The equipment is expected to last for 10 years. Therefore, the decision is made to assign BDT 200,000 of the equipment's total cost to each year of its estimated productive life. Suppose the practical capacity is estimated as 2,000 hours per year, yielding an allocation rate of BDT 100 per machine hour because the machinery's total cost is directly related to its machine hours capacity. Therefore, if a unit uses 0.5 machine hours, it would be allocated BDT 50 of that machine's costs.

2.7.7 Note that there are at least four assumptions underlying this cost estimate. First, that the machine life is 10 years. Second, that it is reasonable to assign an equal share of the machine's acquisition cost to each year of its estimated lifetime. Third, that the practical capacity is 2,000 hours per year and that practical capacity is the appropriate number to use to compute the hourly rate. Fourth, that the unit uses 0.5 hours of machine time.

2.7.8 **Therefore, the process of estimating capacity-related costs per unit of a cost object, which is usually a product or service involves:**

a) Identifying the total cost of the resource;

b) Determining the periodic cost to be recognized for that resource;

c) Determining the practical capacity of the resource and the allocation rate per unit of that capacity; and

d) Identifying the units of capacity consumed by a particular cost object and the total allocation of the capacity cost to the cost object.

2.7.9 Therefore, the process of evaluating the capacity-related component of a product cost involves careful consideration of the reasonableness of the allocation rates and allocation bases of various capacities to each product. It should be noted that because of the larger number of variables or elements that can affect costs, it is rarely effective or desirable to estimate costs for the entire organization. Rather the focus of cost estimation is on subgroups or activities within the organization. For example, in the following case the object is to estimate the behaviour underlying customer costs.

2.7.10 Understanding the behavior of customer costs is critical in evaluating whether the gross margin exceeds the other costs associated with dealing the customer. This information can be used to decide whether to consider doing business with that customer or, alternatively, to reduce grocery prices and recover customer-related costs through fees. For example, many utilities now have a two part bill: a constant amount that reflects the underlying metering and billing costs and a variable amount that reflects the amount of use.

2.7.11 The total customer-related costs would be the total amount of costs arising from customer-related activities. The issue is to identify the underlying cause of these customer-related costs.

2.7.12 Any approach to estimating cost behaviour should begin by developing an understanding of the activities that create customer costs. For example, these activities might include the activities of order taking, order filling, shipping, and billing costs. This understanding will guide the process of choosing the variables to explain cost behaviour.

2.7.13 Studies of cost behaviour have identified four classes of costs:

a) Unit level - costs that are proportional to the volume of production,

b) Batch level - costs that are proportional to number of batches,

c) Product level - costs that are proportional to the number of different products, and

d) Organization level - costs that bear no apparent relationship to any of these variables.

2.7.14 There are two general methods to cost estimation with alternatives within each as mentioned below:

a) Analytical methods
   i) account analysis method
   ii) engineering method

b) Empirical methods
   i) visual fit method
   ii) high low method
   iii) regression method

2.7.15 The account analysis method chooses a variable to explain costs based on an understanding of the process for which costs are to be estimated. Traditionally, this variable is almost always a volume measure such as units produced.

2.7.16 Once the variable is chosen, the next step organizes all the costs in the account into two groups: one group accumulates all the costs thought to vary in proportion to the chosen variable. The costs put into the variable pool would be summed and divided by the volume of the chosen variable to get an allocation rate per unit of the chosen variable. This rate would then be used to allocate the cost to the cost object. The other cost group, which accumulates all the costs not deemed to be proportional to the chosen variable, would simply be treated as a fixed (unvarying cost) in the resulting explanatory cost equation.

2.7.17 Clearly this approach can be adapted to include a number of explanatory variables, a cost pool for each variable, and an allocation rate for each pool. In fact, this approach is likely the most widely practiced approach to cost determination.

2.7.18 The advantage of account analysis is that it is simple and straightforward and allows the application of judgment in developing the cost function. The disadvantage is that it is ad hoc and difficult to evaluate the reliability or accuracy of the estimates resulting from this approach.

2.7.19 The engineering method follows the same general pattern as the account analysis method except that the analysis is based on prospective or standard costs rather than actual costs. Proponents of account analysis argue that the primary

advantage of account analysis over the engineering method is that it allows cost estimates to be guided by experience. However, other than issues relating to using standard costs instead of actual costs, the advantages and disadvantages of the engineering method are the same as those for the account analysis method.

2.7.20 The empirical methods use programmed or graphical tools to estimate costs using recorded data. The empirical methods use the term dependent variable, which is the variable to be estimated (in this case customer-related cost), and independent variable, which is the variable used to explain the behaviour of the dependent variable. In cost accounting literature, the independent variable is frequently referred to as the cost driver.

2.7.21 In the high low method two observations are made from the set of cost quantity pairs - one is the highest activity pair and the other is the lowest activity pair. Therefore, the first step in this process is to identify the independent variable to use in the analysis.

2.7.22 **The analyst would choose the variable, based on an understanding of the process that is thought best explains customer-related cost. This understanding may be supplemented by a scatter graph analysis that plots cost against the various candidates for the independent variable.**

2.7.23 In the visual fit method, a trend line is fitted visually to the scatter graph of costs versus the dependent variable. This approach reflects a purely judgmental graphical analysis. Once the trend line has been drawn, an equation can be developed that represents the trend line.

2.7.24 Note that all the approaches described to this point estimate the relationship between cost and a single explanatory variable. As mentioned previously, this single independent variable approach can be amended if the costs accumulated for a function; such as customer-related activities are subdivided into accounts that reflect sub activities (such as order taking, shipping, delivery) and individual cost equations can be estimated for each of these sub activities.

2.7.25 Once the costs have been divided into sub accounts, a number of cost estimates for each pool can be developed based on different independent variables. This approach to cost estimation is useful where different independent variables explain different elements of the total customer-related costs. For example, suppose the objective is to predict the behaviour of support costs in a factory. An observation of factory floor operations suggests that some resources, such as supplies, are consumed in proportion to the number of units made and therefore generate costs that are proportional to the volume of production. Production is undertaken in batches and there appear to be costs, such as moving and set-up costs, that are proportional to the number of batches, and not the number of units made. Finally, there appear to be costs, such as scheduling and supervisory costs that are proportional to the number of different products made. In this setting, costs would be segregated into groups reflecting volume-related, batch-related, and product-related groups and then the appropriate independent variable for each group would be used to develop an estimate of cost behaviour.

2.7.26 While the methods described to this point rely on judgement in allocating costs to pools when using more than one independent variable; statistical models can be used systematically to estimate the nature of the effect of each independent

variable on the dependent variable.

2.7.27 It is important to note that statistical methods replace judgment with an approach that is based on statistical correlation. While some applaud replacing judgment with an objective approach to estimation, others have commented that judgment can often help in estimating cost behaviour as experience with a process may not be incorporated into the regression approach.

2.7.28 **It is important to recognize that statistical cost estimation techniques do not use either knowledge or insight but purely a correlation that fits the data best. This is particularly important to consider when dealing with capacity-related costs.**

2.7.29 Over the time periods during which data is gathered to estimate the cost relationship, changes in flexible costs will immediately reflect changes in the underlying variables that cause flexible costs to vary. However, capacity-related costs behave differently. As mentioned above capacity-related costs only change when the level of capacity changes or when the inter-period allocations of an existing capacity-related cost changes.

2.7.30 In this regard, consider two settings. In the first setting, no capacity-related costs change over the period during which data is gathered to estimate costs. Any changes in costs then will reflect changes in flexible costs and the cost estimate can be interpreted very clearly. In the second setting, some capacity-related costs change during the period as new capacity is acquired. In this situation, some or all of the change will be picked up by the estimates of the coefficient associated with one or several of the independent variables. In this case the estimated coefficient will include both a flexible component and a capacity related cost component, making the estimate one of long run cost rather than short run cost.

2.7.31 However, the way that the statistical analysis allocates the changes in capacity-related costs will not reflect insights into where or how these costs arose. The allocation will reflect the criterion of maximizing the goodness of fit of the resulting equation. It follows that it is crucial to scrutinize cost data carefully. One possible approach is to eliminate all capacity-related costs from the cost estimation process. This would allow the cost estimates to be interpreted as estimates of flexible costs. These estimates could then be combined with estimates of the capacity-related cost component of a product cost, a process described earlier in this standard, to develop the overall estimate of cost behaviour.

2.7.32 It should be noted that one of the advantages of the regression method is that it provides statistics that allow for the determination of the degree of confidence that can be placed in the cost estimates provided. Most spreadsheet packages can perform regression analysis and will provide many of the important statistics associated with the regression method. These statistics also allow for determination of whether the important assumptions that underlie regression analysis have been met by the data. These assumptions relate to the presumed linear relationship between the dependent and independent variables and the lack of correlation among the independent variables. In addition, the regression results provide information about the nature of the forecasting errors (residuals) of the estimated regression equation. Tests on these forecasting errors can be undertaken to identify evidence of regression specification errors.

2.7.33 **The integrity of any estimate depends critically on the data used to develop the**

estimate. In the case of estimating costs, some, or all, of the underlying data is accounting data and therefore is susceptible to all the problems that traditionally underlie accounting data.

2.7.34 The major problem related to the use of accounting data is the accuracy of the accruals that underlie the data. Because all the models of cost estimation rely on identifying the relationship among contemporaneous data, it is critically important that the accounting data accurately record not only the cost but also the period in which the cost was incurred. Moreover, because the data used for the independent variables often relies on nonfinancial information, (in this case the number of customers and the number of orders), that are recorded and accumulated outside the accounting model, the recording and accumulating of non-financial information should reflect the same quality standards that underlie accounting data.

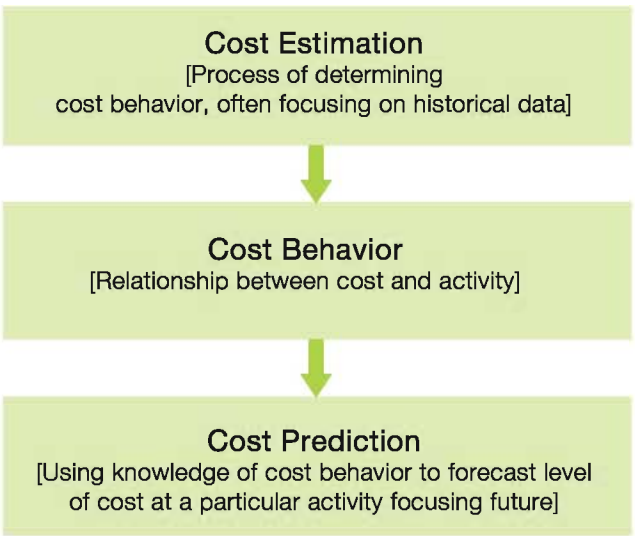
2.8 Effective Date

This standard will be effective from January 1, 2015 onwards.

Appendix 2A

Illustration of Using Different Cost Estimation Methods

This appendix presents a practical illustration of using different cost estimation methods to derive a formula underlying the behavior of cost that gives a closer insight regarding the incurrence of costs, its movement and prediction as well. Let us assume that one of the important costs in ABC Food Services is the Total Customer Cost. An analysis of activity that may cause total customer cost results three activities, viz., No. of Customers, No. of Orders and Total Order Value. The internal database produces relevant information covering 30 periods for analysis. For the analysis, the following process may be observed to derive a scientific conclusion.



The table below presents the dataset used for cost estimation and prediction by understanding its behavior. It is an example that may be replicated for any cost where management feels that the analysis is important.

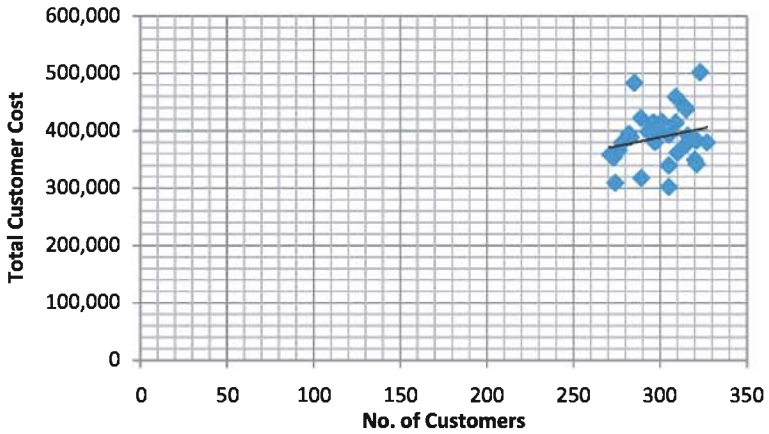
Estimating Flexible Costs
ABC Food Services

Period	Total Customer cost	No. of Customers	No. of Orders	Total Order Value
1	383,033	321	2,860	1,334,382
2	302,108	305	1,970	1,257,612
3	362,276	310	2,634	1,366,747
4	442,372	314	3,665	1,372,284
5	391,748	316	3,130	1,438,974
6	349,628	320	2,119	1,328,535
7	422,204	289	3,599	1,333,275
8	366,119	276	1,947	1,577,919
9	353,950	273	2,155	1,592,663
10	414,743	296	3,917	1,300,329
11	416,003	301	3,985	1,679,742
12	483,744	285	3,920	1,558,465
13	414,326	309	3,781	1,251,256
14	376,703	315	2,569	1,382,006
15	380,658	297	3,190	1,409,192
16	379,022	278	1,638	1,723,060
17	339,683	305	2,234	1,263,240
18	502,070	323	3,876	1,718,860
19	358,695	271	1,517	1,596,210
20	459,132	309	4,102	1,349,977
21	388,959	283	2,921	1,649,054
22	309,504	274	1,694	1,375,391
23	318,133	289	2,035	1,312,764
24	342,162	321	1,940	1,389,102
25	437,542	315	3,021	1,688,716
26	404,756	298	3,705	1,288,482
27	393,032	305	3,761	1,288,128
28	379,759	327	2,021	1,720,479
29	398,609	293	2,748	1,378,900
30	394,936	282	2,032	1,642,686

It is better to start with visual fit method which is very rough in use; however, it provides a first-hand idea regarding the cost behavior. Visual fit may be an easy way of identifying the right activity (driver) out of three which explain the cost better than others.

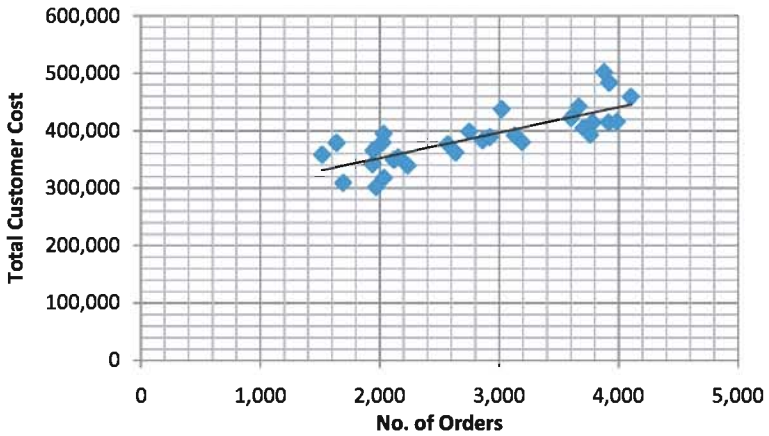
Visual Fit Method

In visual fit method, we need to plot the 30 observations in a scatter diagram. And then a linear line is drawn through the observations visually to fit the data in the plot. As we are having three independent variables (activities) to explain total customer cost, three diagrams are prepared considering each independent variable each time. For example, in first graph below, total customer cost is assumed to be caused by number of customers.



The above diagram results that most of the observations are concentrated. It may be a requirement to draw a line easily that will represent every observations, however, it is not a good symptom of cause and effect relationship between the customer cost and no. of customers.

In the diagram below, total customer cost is traced with number of orders.



The above diagram gives a good insight regarding the suitability of drawing a line visually covering every point and at the same time, the behavior of cost also seems to be properly reflected.
And finally, total customer cost is explained with the help of total order value that results the following scenario

The above diagram also doesn't reflect the true cause of the cost as most of the observations are concentrated to a certain point.

A close observation of the three above graphs concludes that Number of Order is the best explanatory variables for the Total Customer Cost. It means that the movement of cost is properly reflected with regard to the changes in number of order. Thus, number of order is the best cost driver to be used for estimating and forecasting total customer cost. Base on this conclusion, we may derive a formula for total customer cost considering the linear line fitted visually to represent all the 30 observation in second graph. If the line in extended backward to find out the point in Y-axis, we will find the value that is close to BDT 180,000. Thus, this value represents fixed portion of total customer cost. Once the fixed portion is known, we can easily calculate the variable portion by considering the total cost at any number of orders which is given. For example, total customer cost for 2,634 number of order is BDT 362,276. At this number of order, variable cost will be BDT 182,276 (BDT 362,276 - BDT 180,000). Thus, variable portion of total customer cost per order will be BDT 69.20 (BDT 182,276 ÷ 2,634). This estimation results the following formula for total customer cost:

Total Customer Cost = BDT 180,000 + BDT 69.20 X Number of Orders

High and Low Method

High and Low Method of cost estimation is simple in a sense that it is guided by the minimum requirement of drawing a linear line and that is two points. To cover the every dispersion in the observation, high low method relies on the outliers, i.e., the highest and the lowest observations. A line is drawn connecting this two points and behavior is measured based on this two points. For example, from the thirty observations in our example, we have identified the highest and lowest observation and then we have drawn a figure connecting these two observations.

	Number of Orders (X)	Total Customer Cost (Y)
Highest	3,876	BDT 502,070
Lowest	1,970	BDT 302,108

The above graph is very specific and if you compare the graph with the similar graph under visual fit method, you will find that this graph is based on the lowest and highest observations only leaving all other observations from the plot. However, we can mathematically solve the situation to derive the formula explaining the line. Variable portion of the cost can be computed

by using the following equation:

$$\text{Variable Cost} = \frac{\text{Change in Expenses}}{\text{Change in Order}} = \frac{Y_2 - Y_1}{X_2 - X_1} = \frac{502{,}070 - 302{,}108}{3{,}876 - 1{,}970} = \frac{199{,}962}{1{,}906} = \text{BDT } 104.91$$

And now fixed expenses can be estimated by deducting total variable cost from total cost at either the highest or the lowest level of activity.

Fixed Expenses = Total Expenses - Variable Expenses

= BDT 502,070 - BDT 104.91 x 3,876 or = BDT 302,108 - BDT 104.91 x 1,970

= BDT 502,070 - BDT 406,631 = BDT 302,108 - BDT 206,673

= BDT 95,439 = BDT 95,435

Fixed expense at both the highest and lowest level is very close. Based on the above calculation, we can develop the formula as below:

Total Customer Cost = BDT 95,439 + 104.91 x Number of Order

Regression Methods

In visual fit, the linear line is drawn visually to fit every observation which is the roughest method. The accuracy depends on the capability of the analyzer to draw such a line that will make the gap minimal. However, this is completely impossible if the observations in the plot are not concentrated rather erratic. In high low method, an attempt was made to make the calculations more scientific; however, the biggest flaw of the method is that it does everything based on only two observations leaving all other observations outside the focus.

To make the estimation process more holistic, regression method is the best which considers every observation and the line is drawn in such a way that make the dispersion the lowest and error in estimation will be the minimum. It is advised to use the method if the extra complexity of calculation properly compensates the extra benefits derived by predicting cost more accurately.

Least square linear regression is the simplest one to use where the cost is regressed with only one independent measure. For example, we may apply least square linear regression to measure Total Customer Cost due to any changes in Number of Order.

Periods	Total Customer cost (Y)	No. of Orders (X)	X2	Y2	XY
1	383,033	2,860	8179600	146714279089	1095474380
2	302,108	1,970	3880900	91269243664	595152760
3	362,276	2,634	6937956	131243900176	954234984
4	442,372	3,665	13432225	195692986384	1621293380
5	391,748	3,130	9796900	153466495504	1226171240
6	349,628	2,119	4490161	122239738384	740861732
7	422,204	3,599	12952801	178256217616	1519512196
8	366,119	1,947	3790809	134043122161	712833693
9	353,950	2,155	4644025	125280602500	762762250
10	414,743	3,917	15342889	172011756049	1624548331
11	416,003	3,985	15880225	173058496009	1657771955
12	483,744	3,920	15366400	234008257536	1896276480
13	414,326	3,781	14295961	171666034276	1566566606
14	376,703	2,569	6599761	141905150209	967750007
15	380,658	3,190	10176100	144900512964	1214299020
16	379,022	1,638	2683044	143657676484	620838036
17	339,683	2,234	4990756	115384540489	758851822
18	502,070	3,876	15023376	252074284900	1946023320
19	358,695	1,517	2301289	128662103025	544140315
20	459,132	4,102	16826404	210802193424	1883359464
21	388,959	2,921	8532241	151289103681	1136149239
22	309,504	1,694	2869636	95792726016	524299776
23	318,133	2,035	4141225	101208605689	647400655
24	342,162	1,940	3763600	117074834244	663794280
25	437,542	3,021	9126441	191443001764	1321814382
26	404,756	3,705	13727025	163827419536	1499620980
27	393,032	3,761	14145121	154474153024	1478193352
28	379,759	2,021	4084441	144216898081	767492939
29	398,609	2,748	7551504	158889134881	1095377532
30	394,936	2,032	4129024	155974444096	802509952
Total	**11,665,609**	**84,686**	**259,661,840**	**4,600,527,911,855**	**33,845,375,058**

Based on the values calculated on the above table, the fixed component (intercept of the line at Y-axis, a) and the variable component (slope of the linear line, b) can be easily computed by using the formula as given below:

$$b = \frac{n(\sum XY) - (\sum X)(\sum Y)}{n(\sum X^2) - (\sum X)^2} = \frac{(31 \times 33,845,375,058) - (84,686 \times 11,665,609)}{(31 \times 259,661,840) - 84,686^2} = \frac{61,292,863,024}{877,798,444} = 69.83$$

$$a = \frac{(\sum Y) - b(\sum X)}{n} = \frac{11,665,609 - 69.83(84,686)}{31} = \frac{5,752,352}{31} = 185,560$$

Thus, the linear regression results the following formula for explaining total customer costs:

Total Customer Cost = BDT 185,560 + (BDT 69.83 X Number of Orders)

Even regression analysis can be helpful to identify the best activity out of several as in our case where we have three activities selected primarily to explain total customer cost. In that case, one should proceed for **Multiple Regression Analysis** which provides the opportunity of considering more than one independent variable. Any statistical package (like SPSS) or simple spreadsheet analysis can be used for doing multiple regression analysis. For example, if we conduct multiple regression analysis for our example through SPSS, it will provide following result:

1. The value of R and R Square below is the coefficient of correlation and coefficient of determination respectively. These are used to evaluate the strength of the regression model. Here 0.832 R square denotes that about 83.2% of the variability of customer cost is explained by the independent variables which are good enough.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.912[a]	.832	.812	20415.180
a. Predictors: (Constant), Customer Value, No. of Orders, No. of Customers				

2. The ANOVA table below indicates the level of significance. The significance level is .000 which is statistically significant.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.348E10	3	1.783E10	42.770	.000a
	Residual	1.084E10	26	4.168E8		
	Total	6.431E10	29			
a. Predictors: (Constant), Customer Value, No. of Orders, No. of Customers						
b. Dependent Variable: Total Customer Cost						

3. The coefficient table below results the significance of each independent variables with reference to the dependent variable. The beta value and level of significance results that number of orders and number of customers are statistically significant. However, the beta value of Number of Orders is the highest (0.854) and if we have to choose only one parameter out of three, no. of order is the best.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	F	Sig.
		B	Std. Error	Beta		
1	(Constant)	11170.108	83590.568		.134	.895
	No. of Customers	165.626	239.501	.059	.692	.495
	No. of Orders	47.701	4.751	.854	10.041	.000
	Customer Value	.133	.024 .460	5.547	.000	
a. Dependent Variable: Total Customer Cost						

Based on the above multiple regression analysis, we can choose the best cost driver and then we can perform linear regression analysis to derive a cost formula that will help us to estimate the cost. To ensure more accuracy and bring versatility in analysis, multiple regression offers different types of analysis where the analyzer is free to accommodate any complexity depending on the requirements.