AGJ ARABIAN GROUP OF JOURNALS

# Social Development

NG-Journal of Social Development, VOL. 6, No. 1, February 2017

Journal homepage: www.arabianjbmr.com/NGJSD_index.php

NGJSD

# ASSESSMENT OF FOOD COST CONTROL IN THE HOSPITALITY INDUSTRY - EMPHASIS ON CATERING ORGANIZATIONS IN ANAMBRA STATE, NIGERIA

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## Abstract

*This paper focused on the assessment of food cost control in the Hospitality industry in Anambra State. Hotels witnessed low profit volumes, not able to satisfy customers demand and enhance the economic growth of the industry as investigated in this paper. The paper x-rayed perishability of foods, daily variation in food production and multiplicity of low value transactions, as some of the problems. Based on the findings, the paper, however, recommended as follows; Good customer care policy, which will be applied to both customers and staff, should be implemented. Also, a well integrated work flow be practiced among staff in charge of storing, receiving, processing and sales of the products.*

***Keywords:*** *food cost control, Hospitality Industry, Perishability of food, Good Customer care policy, food production and catering organizations.*

## Introduction

In many Hotels and Catering establishment, the expenditure on food is the largest single element of cost. The maintenance of food cost at pre-determined level are therefore, of the greatest importance in ensuring the satisfactory profitability of each establishment. Even where catering is undertaken as a welfare facility, food cost and cost ceiling are invariably imposed from above, either in total or on a per-unit basis. Therefore, efficient food cost control levels are essential to help the profitability of the hotel or catering business. However, cost can be seen from different perspective; According to oxford advanced learner's dictionary, 7th edition: cost is the amount of money you need in order to buy, make or do something. Accountants define cost as a reduction in the value of an asset for the purpose of selling benefit or gain. But in the Hospitality industry, cost is the expense to a Hotel or restaurant for goods or services when the goods or the services are rendered. To calculate the cost of any food provided, it is necessary to analyze the total expenditure under several headings. Basically, the total cost and sale of each portion of meal consist majorly of the following elements.

A) Food or material cost: This is the cost of materials used in providing the food less the cost of staff meal

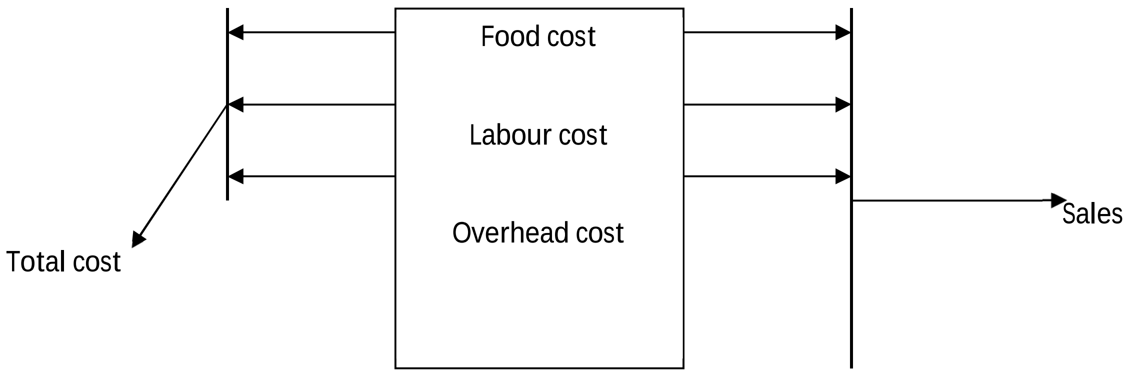
And the formula for calculating it is; OS + [P-EM]-SB-FC.

OS = Opening stock.
P = Purchases.
EM = Employees meal.
SB = Stock balance.
FC = Food cost.

B) Labour cost: This is the cost of employing staff and will include; Wages, salaries, value of staff meals supplied and value of staff accommodation.

C) Overhead: These are those cost of expenses not falling under the heading of food cost or Labour cost. They include such things as: rents, rates etc.

D) Net profit: The difference between sales and total cost is known as net profit.




Source: field study, 2016.

The above diagram illustrates the relationship between cost profit and sales. Their close relationship can be explained further through formula illustration.

Sales = food cost + labour cost + overhead + Net profit

Or

Sales = Gross profit [kitchen profit] + Food cost. Net profit = sales - total cost

Gross profit = sales - food cost OR

Gross profit = Overhead + Labour cost + Net profit. Cost control is the guidance and regulation of the cost of operating an undertaking. To guide and regulate cost means to ensure that they are in accordance with the pre-determined objectives of the business. Hence the notion of the guidance and regulation of cost presupposes the existence of stated objectives as expressed in the undertaking.

Food cost control is therefore, cost control as applied in the Hotels, Restaurants, Canteens, and similar establishment.

An important feature which distinguishes food cost control from one industry to another, is, its material cost orientation. In most aspect of food cost control, attention is directed primarily to the cost of materials, leaving the cost of Labour and overhead cost tend to remain fixed and are system/formula suitable for food cost control, Hotels and catering outlets have different ways of approaching their cost. But the following guideline may be helpful:

i) It is essential for all departments to co-operate.
ii) The costing system should be adapted to the business, not vice versa. If the accepted procedure in an establishment is altered to fit a costing system, then there will be danger of causing resentment among staff and as a result losing their co-operation.
iii) Clear instruction in writing must be given to staff that are required to keep record. The system must be made as simple as possible so that the amount of clerical Labour required is kept to a minimum.

In many respect, food cost control is more difficult than system of control in operation of other industries. The specific factors which make food cost control relatively difficult are:

1) Unpredictability of volume of business: Sales instability is inherent in almost all catering operations. The changes which occur in the volume of catering are of several kinds. Firstly, the intensity of demand for food and drink will be in most cases, vary during the day. As a result, in the majority of establishment, it is possible to observe more or less, peaks of activity during the weekday. Secondly, there are changes in the volume of business occurring from one day to the next. Finally, in catering establishments which are to some degree Seasonal, turnover in season will be considerably greater than in and off season.

2) Perishability of food: This present the catering business with two major problems: (i) when buying food stuff and secondly the quality/quantity of food to be purchased.

3) Daily variation in food production: addition to changes in volume of sales, there is continual changes in the assortment of meals produced by catering units. Also, there are considerable changes on emphasis from one item on the menu to another.

Multiplicity of low value transaction: the spending power of customer's will vary from one type of organization to another. Even when the customer's spending power is high, the total amount spent by the customer consist of a number of small payments for the catering establishment as a result of a number of low value transactions. This, present several control problem for Control task such as forecast of sales, stores, pricing and cash collection are therefore made more difficult.

High degree of departmentalization: this is for large hotels which have several food and beverage outlets including banquet facilities and bars. The larger the number of outlets, the greater the difficulty and more arduous the problems of control.

Food Cost and Control

A food and beverage cost control system is a means of computerizing best practice within a restaurant or catering operation. It gives managers a better idea of the flow of food through the restaurant, enabling them to plan cash flow and stock control more effectively. At the sharp end, it provides chefs with a more structured way of planning menus, taking into account financial considerations. In areas like manufacturing companies, they keep close tabs on the manufacturing cost and value of their products. And yet in dining establishments, the core product (food) is often not subjected to the same scrutiny. Matt tough, a consultant that helps caterers to refine their food control techniques, said that food control in many establishments is chaotic and unstructured. Therefore, chefs should be able to cost out each item on the menu, creating a clear picture of the cost of each sales to measure against its revenue. This helps for the understanding of the most profitable items and whether food wastage is low enough to achieve the profitability target that was been set by the industry. Proper food cost control system will help in making more intelligent decisions that will affect, stock control and purchasing, reporting, recipe management market lists etc.

Codification of recipes is very important codifying recipes helps to manage ingredient more effectively, while building standard estimation for wastage. It will also help to price food more accurately. If what a meal cost is known exactly, it can be accurately priced to undercut the competition while still making quantifiable profit.

No amount of technology will save money or provide insights into food control unless you train your staff to use it properly. Ensuring that chefs understand the importance of working with structured business tools so that they can tie margin estimates and wastage control to the product on the menu. Unless this accountability is encouraged, the industry will continue to experience loss. But if done right, food control system will enable steer of restaurant and catering business towards achieving long term goals rather than reacting to short-term conditions.

Definition of the Food Cost

Food cost is defined as the percentage of total sales spent on food product in a restaurant. This however, depends on the type of restaurant. Eg. A normal restaurant food cost is 28 - 30% while that of a steak house is 35%. The figure is useful in determining the profit of a restaurant. It can also be seen as the amount of money spent on buying food products. Fast food restaurants budget by estimating how much food they will need to sell. According to web definition; food cost is one of four main cost categories that a restaurant of food-service operation needs, to effectively manage. Food cost and control has so many benefits to hostels and restaurant and some of them are as follows;

1. Creates awareness that food cost will be analyzed and a culture amongst the staff that cost control is important.
2. It puts the restaurant in control.
3. It duplicates what the chain says or does.

Reasons Why Food Cost Control Should Be In Any Hospitality Industry

Cost or expenses are usually classified either as direct cost or overhead. Direct cost can be clearly associated, for example, with the production of meals, the departmental payroll or the maintenance of kitchen hygiene overheads are cost that cannot be charged to production, such as property insurance, rent and utility rates. Costs can also be divided into those that can be controlled by the kitchen staff and those that cannot.

Uncontrollable cost has to be paid whether the restaurant is open or closed. The focus must be on controllable costs: weekly wages, overtime, food ingredients, laundry, cleaning materials, etc. changes in the cost of ingredient and the amount of wastage that can have a huge impact of the food cost percentage and thereby can either reduce or increase profit.

Reasons for the Development of Food Costing and When It Should Be Used

Chefs and restaurant managers use cost control to keep track of the history of sales in order to predict the future of sales. The past records of seasonal activity may give a better picture of future seasonal activities in order for chefs and managers to order the correct amount of food and beverages and thereby avoid over ordering and food wastage. If the restaurant has too much food on hand, the quality of products will suffer and money will be lost. As in most, if not all business, cost control is an intrinsic part of day-to-day operations that is necessary to ensure the restaurant's profitability. Financial statements, inventory lists, purchasing and history of sales are all important component of cost control.

How Does This Food Costing Work?

By pricing the menu: Pricing the menu involves calculating the price to be charged for the various dishes and beverages served. This price is influenced by such things as the amount of table service provided, the cost of the table settings, the decor, as well as the actual cost of the food in the recipe. This same applies to beverages and alcoholic beverages as well. One way of pricing is to calculate the cost of food and add an amount to cover wages, overheads and profit. A better method is using the food cost percentage.

Food Cost: Cost is the actual cost of purchasing the raw Food materials and related ingredients. It is the amount spent on food in a food service operation. [Beverage costs could be included in the food cost or they may be separated as beverage cost/beverage cost percentage] the cost are measured and expressed in terms of a percentage, which referred to as the food cost percentage. The percentage can be achieved by the following formula. [Cost of food sold/Total food sales = food cost percentage]. The estimate of daily food cost is the best control we have. This is because, it is an up-to-date information. The field average can be used to determine the average cost for different types of restaurant cuisines.

Sales Price: The sales price for the item can be achieved by the formula: cost of food/food cost percentage - sales price before tax.

Median Purchase Price: In the first phase of restaurant planning, it is good to determine the estimated median purchase price. This can be achieved by collecting the entree (main dish) and beverage prices and their sales distribution from all the restaurant sales.

Formula: For calculating Median Price =

$$\frac{\text{Sales Distribution Food \%} * \text{Sales Price of Food} + \text{Sales Distribution Beverage \%} \times \text{Sales Price of Beverage}}{100}$$

E.g. Food sale is 45% and beverage sale is 55%. The sales price of food is ₦14 and the sales price of beverage is ₦ 6.50.

$$\frac{(45\% \text{ X ₦ } 14 + 55\% * 6.50)}{100} \qquad \frac{630 + 357.5}{100}$$

$$\frac{987.5}{100} \qquad 3 \qquad = \qquad \text{₦ } 9.88 \text{ median purchase price}$$

Gross Profit: The gross profit can be determined by the following method: Gross profit % = 100% Food cost %. The median gross profit can be determined by the following method:

Sales Distribution Beverage% x Beverage Gross Profit % = Median Gross profit

For example;

45% * 15% * 55% * 68% = 66.5% [Median Gross Profit]

Sales Forecast: by using the median purchase price, chefs and managers are able to forecast the sales per week or month. First the flow of customers or purchases need to be determined. Second, the number of purchases per day or per week is multiplied by the median purchase price. This gives the estimated sales amount for a day, per week or per month.

Labour Cost Control: Payroll cost is the total cost of employee labour. This cost can have a huge impact on the overall profit of the restaurant operation. If there are too many employees and not enough customers purchasing their meal, the labour cost could quickly reduce the overall profit controlling labour. Cost is an everyday activity of a restaurant operation.

Labour cost percentage can be achieved by the following method:

$$\frac{\text{Cost of Labour}}{\text{Sales}} \times \frac{100}{1} = \text{Labour Cost\%}$$

Employees receive their regular hourly or salaried wage. However, the restaurant operation has to add on non-wage labour costs, such as social security and holiday pay, to the regular hourly a salaried wage. The amount varies between countries and cities; from 20% to 60%. The restaurant operation has to include non-wage labour cost in it calculation in order to be able to establish accurate labour cost statistics. In some countries, working on Sundays and major holidays may increase employees' wages by up to 100%. This variable also needs to be taken into consideration.

In labour planning, it is good to calculate median hourly wage and then add other labour expense. This number can be used to calculate daily, weekly and Monthly labour expenses. Another major duty of a chef or manager is to determine the required hours for production and service; kitchen labour hours and dinning room labour hours. Once these hours are determined, the labour expenses can be calculated.

The minimum required turnover to cover labour cost can be achieved by the following formula; for minimum required turnover =

$$\frac{\text{Labour expenses}}{\text{Preferred labour cost percentage}}$$

For the minimum required sales, generally the sale tax is added and the minimum required sales amount can be carefully achieved (minimum required turnover * (100% + VAT (value added tax)] = minimum required sales). The minimum required sales can be compared to the estimated sales from the sales to compensate the labour cost or vice versa

The Restaurant Sales Statistics

The restaurant sales statistics are an important way to compare the sales activity with the industry averages to see if the operation meets industry standards. This is helpful when trying to determined the relative profitability of the restaurant operation.

Dish Costing

Calculating menu cost is a must for every restaurant serious about making profit. Costing dishes on your restaurant menu will help to achieve certain sales goals and cost targets. Effective food cost control allows managers to establish correct sales prices, gross profit targets for every dish on the menu, establish dish of the day sales and most importantly identify items that are making or not making the desired gross profit.

Restaurant managers should know what their actual gross profit margins are on each food item they are selling. This in turn will allow the establishment to charge the correct selling price and hit specific food targets.

What is being cost must be clearly defined using standard recipe. A standard recipe may be defined as written formula for producing a food item of a specified quality or quantity for use in a particular establishment. Eg. a student in the department of Hospitality management and Tourism decide to celebrate her birthday in one hotel at Awka, Anambra State. She informed the Food and Beverage Manager that, she will need a well prepared cake for 200 persons. She asked the manager for the cost. The manager immediately brought out the dish costing sheet and listed out the ingredient for cake production and the quantity that will be enough for 200 persons as follows;

6,000g of flour a #30 per kg
3,000g of sugar at #60 per kg
2,7000g of margarine at 10 per kg
3,600g of baking powder at #200 per kg
3,000ml of milk at #60 per liter
11/2 crate of eggs at #60 per liter
He did this to be able to ascertain;

a. The total cost of producing cake for 200 persons
b. The cost per portion

c. The gross profit of each portion. It they sell same portion size for N50.00 only.
d. The total gross profit the establishment will achieve after producing the cake

Dish costing sheet
Bane of dish Birthday cake date 15/Nov/2013
Portion Size:________________ No. of Cover: 200
Total cost: 2,349 Cost per Cover: 11.75
Food and beverage cost % 23.4%

| S/No | Ingredient/materials | Quantity | Unit | Price per unit | Total |
|---|---|---|---|---|---|
| 1 | Flour | 6,000g | Kg | 20 | 180 |
| 2 | Sugar | 3,000g | Kg | 60 | 180 |
| 3 | Margarine | 2,700g | Kg | 70 | 189 |
| 4 | Baking powder | 3,600g | Kg | 200 | 720 |
| 5 | Milk | 3,000ml | Liters | 60 | 180 |
| 6 | Egg | 11/2crates | Crates | 600 | 900 |
| | Total | | | | 2,349 |

Since the quantity is measured in grams but the unit for each measurement in kilogram, the grams must first be converted to kilogram i.e.

Flour = $\frac{6,000}{1000} \times \frac{30}{1} = 180$

Sugar = $\frac{3,000}{1000} \times \frac{60}{1} = 180$

Margarine = $\frac{7,000}{1000} \times \frac{70}{1} = 189$

Baking Powder = $\frac{3,600}{1000} \times \frac{200}{1} = 720$

Milk = $\frac{3,000}{1000} \times \frac{60}{1} = 180$

The grams are divided by 1,000 because; 100g = 1kg. we can now go back to what the food and beverage manager planned to ascertain which are

(a) Total cost = 2,349 (Add cost of all ingredient)

(b) cost per portion = $\frac{\text{total cost}}{\text{No of cover}} = \frac{2,349}{200} = 11.75$

c) Gross profit per portion if selling price of a portion is ₦50.00 (Gross profit = Selling price - Cost per portion) = ₦50 - ₦11.75 = 38.25 ______

G.P = 38.25

d) How much gross profit will the establishment achieve after their service?

Formula = $\frac{\text{Gross profit per portion}}{\text{Number of portion}}$

Total gross profit = 38.25 x 200 = 7,650

The gross profit the establishment will get after the birthday is 7,650.

When processing the cake for the birthday, the manager bought gas for the ovum; ₦200, paid the staff that were producing the cake ₦1,000, and after fixed and variable expenses ₦2,000.

After the event, the food and beverage cashier was asked to calculate the profit and loss account of the product:

Since the gross profit is known, there will be no need to look for it again.

Profit and loss account

| | |
|---|---|
| Gross profit | 7,650 |
| Less Expenses: | |
| Gas | 200 |

| | | |
|---|---|---|
| Wages | 1.000 | |
| Fixed and variable expenses: | 2,000 | 3,200 |
| Net profit | | 4,450 |

Finally, for ease in calculation, the F & B manager converted the food cost, gross profit, Net profit into percentage. i.e Formula for calculating the; food

Cost percentage = $\frac{\text{Food cost}}{\text{Sales}} \times \frac{100}{1}$ = 23.49%

2,349 x 100 = 23.49%

Gross profit 5 = $\frac{\text{G.P.}}{\text{Sales}} \times \frac{100}{1}$ =

$\frac{7,650}{10,000} \times \frac{100}{1} = 76.5\%$

Net profit% = $\frac{\text{Net profit}}{\text{Sales}} \times \frac{100}{1}$

$\frac{4,45}{10,000} \times \frac{100}{1} = 44.5\%$

The percentage of sales is always 100%. Note: if the industry decided to go with normal 40% FC percentage, sales will be;

$\frac{FC}{FC\%} \times \frac{100}{1} = \frac{2,349}{40\%} \times \frac{100}{1} = 5,872.5$

Breakeven Analysis

It is easy to see why an instructional feeder would be interested in the breakeven level of sales. They are looking to ensure that they do not have cost overruns but they also do not want to be far under budget. As well, the cast of the meals is generally determined in advance and based on certain levels of quality. There may be some cost savings, but that is not the primary role of the manager. They must be absolutely sure not to go over budget. For a profit generating operation, you might ask; why would they have to know the point at which the operation would breakdown? It is quite simple; the operation would like to make a profit but could sustain itself in a time when it might breakdown, however, operations cannot afford to lose money; going in the "red" as it is referred to, cannot go on for an extended period of time or the business goes under. It is important to determine the sales level or number of guests that are needed to breakeven and to monitor the operation is there at a minimum.

A number of methods can be used in making critical analysis. Breakeven analysis is one of the most effective. It offers a method of using facts and figure to make business decision more effective. It also provides a good way to understand the interrelation of volume, cost and profit.

The term breakeven analysis comes from so-called breakeven point where a business is breaking even. Not making profit, but at the same time not showing a loss. This is the point at which the total expenses exactly equal the total income.

Illustrated example;

The food and beverages department of Tracy Hotel Awka has fixed expenses of 4,800 and variable expenses are estimated at 15% of sales and the rate of gross profit is 60%. Calculate the breakeven point. Calculate the sales required earning a net profit of (i) 1,000 (ii) 2,000. Sales = 100%, Gross profit = 60%, Food cost = 40%

Sales at breakeven point = 40% + 29% + 15% + #4,800 -80% + 4,800. Therefore 4800

Amount to 20% of sales at breakeven point, which is;

$\frac{100}{20} \times \frac{4800}{1}$ ₦2,400 = sales

(b) ₦4800 + 1,000 = 100% - 80%

$= \frac{5800}{1} \times \frac{100}{20}$ = ₦29,000

The cost expressed as a percentage still account for 80% sales, so fixed expenses ₦4800 = ₦2,000 = 20 %

$$\frac{₦6800}{1} \times \frac{100}{20} = ₦34,000$$

Storing and Issuing

Storing is another point in the system where the control process can easily go off the rails in many operations. The relieving storing and issuing procedures are handled by the same individual or group of individuals. In cases like this, it is important for the manager to keep a careful watch on things as there is a lot of responsibility for control in the hands of one or few people. In larger operations, part of the control process is that each of those functions is done by different individuals thereby ensuring checks and balances in the system. Obviously, proper storage is important from a security of assets perspective but it can be costly if goods are Stored improperly, causing damages. At this point, we encounter the physical inventory for the first time. Inventory is extremely valuable and can cost in the many thousands of dollars. It is important then to keep an appropriate amount of inventory on hand because there are large costs associated with having too much (caring costs) such as interest. Too much space for storage with the associated cost of construction and heat and light, etc) having too little, means stock out with the resultant unhappy chefs and ultimately unhappy guest.

Proper record keeping is essential here as well. A perpetual inventory system for such things as liquor is very important to keep on top of the varied and expensive inventory. Requisition slips are the purchase invoices for departments and the record of exit from the storeroom. The receiving supplier invoices are the record of entrance to the store, proper control can take place if these are well documented.

Summary

The owners of most food and beverage operations are generally concerned with the level of profit of the operation. In order to maximize profit, it is necessary to make sure that cost are kept in line with what they should have been [expenses] and that appropriate marketing is done to get customers in the door [revenues]. It is pertinent to recognize that in addition to profit centered enterprise, many food and beverage operations do not have profit as their major objectives. Many institutional operations are focused on breakeven or maintaining a particular budget level whichever approach is followed, the primary 80% of the chef, as kitchen manager, is to make sure that the quality of the product is as good as it can and that the costs are kept under-control. When we speak about keeping cost under control, we generally mean that we optimize costs, not minimize costs. Many food and beverage operation get into trouble because they think that the right approach is to have the lowest costs parable. When this happens, the customer is often less than satisfied with the product and/or service they receive. If this should happen, there will be serious marketing problems of the operations. If we choose to have optimal costs, we are then saying that we will give the customer something that cost exactly what it should cost. We are in fact giving them a 'standardized' product.

Conclusion

In conclusion, it is pertinent to be well equipped with the knowledge of food costing. As the paper has shown, its importance and how it makes our work less arduous by pointing out most, if not all areas that most hospitality industries has neglected, and see themselves struggling to make good profit.

According to the paper, much care should be given to the area of food storage and preservation, portion control, and adequate checks and balances is required among staffers in-charge of all raw materials and finished goods. For this, is where costing begins.

Recommendations

From the length of the study, the following are the drawn recommendations;

(a) The work flow among staff in-charge of storing, receiving, processing and sales of product should be well integrated so as to avoid lapses as a result of gaped communication or co-operation.

(b) Mediocres should be well trained before being assigned a function. This is to avoid set back as a result of their flexible knowledge of the work.

(c) During training, the workers characters should be well analyzed. This is to know if they possess the required qualities before they can be employed to function/work. The food and beverage department is the corner stone of most hospitality industry. Therefore if un-honest persons and criminals are employed, the industry may go 'red'.

(d) It will be helpful and wise if the food and beverage manager will strictly follow the managerial function concepts which are; planning, organizing, directing and controlling. This will invite division of labour. Specialization, pre-preparation and eradicate lack of plans.

(e) The industry should implement a customer care policy, which should not be applied only to the staff who serve the customers personally; it concerns the entire organization, all departments and all staff. This will help to promote sales and increase profit as guest/customer will love patronizing the industry.

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