

## MEASURING THE INTERNAL EFFICIENCY OF HOTEL KITCHENS

### I Evaluation of systems

Ponder the evolution of control system. As small organization begins, personal observation is usually the dominant means of control. A manager sees, touches, smells, tastes and hears the relationship between inputs and outputs; he or she oversees the behavior of various personnel.

As the organization continues to operate, managers add historical records to their personal observations. No fancy cost benefit analysis is necessary to justify maintaining some records for internal purpose. These records help answer essential operating questions: What are the amount of sales, purchases, cash, inventory, receivables and payables? These historical records also allow managers to compare current performance with past performance. Historical records are beginning of an accounting system.

As organization matures, the next step in the growth and improvement of its accounting system, is forecasting, budgeting and documenting standardization of operations.

Do such budgeting and standardization system meet cost- benefit tests? Evidently they do. Typically, organization purchase such systems voluntarily rather than as a result of outside force. Why? Because managers regards such systems as good investments. These systems changes human behavior-and decisions- in a way sought by top management. For example the quality performance indicator may prompt manager to extend their planning horizons much further to achieve perfections. There fore, many prospective difficulties are foreseen and avoided. Without such systems, many managers may veer from one crises to another with no long-term perspective to guide them. In sum, manager plan and control with help of:

- 1 Personal observations (the basic means)  
plus
- 2 Historical records ( the accounting system means)  
plus
- 3 Budgets/Standards ( the accounting system means)

### II Organization structure

The budget presents the map towards the company goals. Its figures are the company's target. But how does the company reach these targets? To attain its goal the company must coordinate all its employees - from top executive through all levels of management to every supervised workers. Coordinating the company's efforts means assigning responsibility to managers who are accountable for their actions in planning and coordinating human and physical resources.

Each Manager, regardless of level, is in charge of a responsibility center and is accountable for specified set of activities with in segment or a sub unit outlet of the organization.

Four major types of responsibility centers are common:

- Cost center - manager accountable for costs ( expenses) only
- Revenue Center - manager accountable for revenue (sales) only
- Profit center - manager accountable for revenues and costs
- Investment center - manager accountable for investment, revenues and cost

### **III Hotel Kitchen Perspectives**

Chef of an outlet kitchen/s is accountable for cost only. For generating revenue, Restaurant Manager is accountable and also sales and marketing team. F&B Manager is accountable for generating profits from F&B business. He is also responsible for fixing price for earning desired margin in consultation with chef as chef knows the costing of various portions served at the outlets or banquets. Finance controller or G.M. is accountable for maintaining desired rate of return on investments.

Now, with above grounds, we will critically examine the practices followed for the performance appraisal of various managers at various levels of F&B business of a hotel industry.

### **IV Food Costing System**

Chef of an outlet kitchen/s is accountable for cost only but it seems that as per prevailing practices he is made responsible for profits also. As per prevailing practice chef is appraised by a relative measure of cost and revenue. Following are few reasons which attribute to this practice.

- 1** Margin of various products are more or less same over a period of time and such relative indicator serves as measure of yield, i.e. information on input output, and is helpful to ensure efficient use of various raw materials to generate optimum quantity of portions, which is sold.
- 2** As to improve the relative ratio of food cost and portion sold, chef will stress on quality of output to be served to guest, so that guest pays full for the portion served.
- 3** Also, chef will plan their requirements and requisition accordingly to discourage excess stocking in the kitchen. This will ensure more stress by chef on wastage control.
- 4** To ensure completeness of billing on a global basis, and double check on the responsibility of restaurant manager by the chef.

### **V Food Cost Reports**

There are mainly three types of food cost included in food cost reports.

- A** Daily food cost
- B** YTD food cost
- C** Monthly food cost

We will discuss about calculation of each of them hereunder:

**A Daily food cost**

Daily food cost is the percentage arrived by dividing total purchase cost of issues made to the kitchen from stores for the day minus cost of food served free of cost (cost component which is not corresponded by the revenue used as denominator), by revenue from the point of sales system (POS). Hence no credit/debit is given to kitchen for the increase/decrease in stock level at the end of day as compared to stock level at beginning of the day, respectively.

To make cost comparable with revenue, cost of food element not generating revenue, is reduced.

Total cost of issues made to the kitchen from stores is available from the material management system ( e.g. Fidelio/Shawman), which automatically calculate the weighted cost of materials purchased at different point of time available in the stock. Total revenue is available from the Point of sales system (e.g. Micros/Shawman)

Cost component not generating revenue are represented by non chargeable KOT/ Hospitality bills. To arrive at cost of such food element, there are various practices followed and no uniformity exists. Following are the few ways encountered in various hotels.

- 1 Fixed percentage based on past behavior of non chargeable food element, is applied on sales totals available from POS for such non chargeable KOT/ Hospitality bills.
- 2 YTD food cost percentage applied on sales totals available from POS for such non chargeable KOT/ Hospitality bills. Thus every day new percentage is used based on the cumulative food costs percentage of previous days during the same month.
- 3 Percentage used is the same food cost percentage calculated for the day. That means no reduction is made of non chargeable cost element from total purchase cost of issues to the kitchen from the stores but the denominator revenue also includes notional sales, as if such non chargeable made chargeable instead.

**B YTD Food Cost**

It is same as daily food cost, but it is the cumulative food cost of previous days pertaining to the same month.

**C Monthly Food Cost**

This is YTD food cost at the last day of the month with a difference that credit/debit is given to kitchen for the increase/decrease in stock level at the end of month as compared to stock level at beginning of the month, respectively. Thus monthly food cost report is prepared after considering the physical verification of kitchen items by the F& B controllers at the month end . This report also form basis for the financial statements presented to shareholders.

There are many incorrect practices exist for preparing above food cost report across the country like taking revenue figures net of discounts given. Adding fixed component of cost every day for closing stock maintenance, Accounting for inter outlet transfers when food cost percentage calculated for all outlets together, resulting in double costing, taking double internal credit in case of package guest, when NCKOTs are raised for food served in addition to normal credit for all NCKOTs taken together. etc.

There are various mathematical aspects and practical aspects, which needs to be addressed, and are critical for determination, analyzing and understanding of the relative measure of food cost with its counterpart revenue.

Also, we need to find that the objectives of using food cost percentage as a main performance indicator of F&B business is achieved to what extent or if defeated, to what extent and in what sense. Also, what can be the possible alternative indicator or system to achieve effective and efficient planning and controls.

## VI Influence of chef in food cost reports

### A Outlet-wise ordering and food costing

Where there is outlet-wise ordering and food costing system, Chef tends to order for the high food cost items from the outlet, where the sales margin are high, compared to budgeted margin. In such cases no accounting is done for inter outlet transfers and benefit of incorrect budgeting is transferred to inefficient outlet. Thus chef manage to meet the budgeted outlet-wise food cost percentage. There is no significant revision of budgets, as no information made available on item-wise contribution and actual performance.

Chefs have arranged with the storekeepers and taken loans from them, which are allocated to outlet kitchen in such installments, so as to absorb the excess budgeted amount available to the outlet. It is need less to say that chefs will also punch system requisitions accordingly.

For example: An outlet-kitchen named A, can over-absorb food cost of Rs. 6500 on a daily basis, and still remain within the budgeted figures. Another outlet-kitchen B, requires 100 Kg of high cost meat @ Rs. 325 per Kg for next four days.

Chef will take physical delivery of 100 Kg of meat to be allocated to outlet kitchen A, in (  $100 \times 325 / 6500$  ) number of daily installments. Storekeeper will obtain physically acknowledgment of chef on copy of post dated requisitions, which are allocated on the day of requirement, as punched by the chef. This arrangement is possible where there is batch processing for making issue allocations and physical movement is not parallel to such stock allocations in the system, which is pointed out in many internal audit reports of hotels.

Thus chef will punch requisition for 20 Kg meat for Rs.6500/- for 5 days., whereby Food cost of outlet kitchen will also show rosy pictures.

### B Hiding inefficiency and food spoilage and getting leverage on quantum of non chargeable KOTs

When fixed food cost % or YTM food cost % is used to determine cost of non chargeable KOT, which is then reduced from the cost of materials issued from the stores for the day, the percentage of food cost is drastically influenced by the quantum of NCKOTs and actual food cost element as shown in **Annexure A**.

Chefs in drive to reduce the mathematical figure of food cost %, encourages following practices which are backed up by some loose controls as reported by internal auditor several times.

- 1 Taking food cost credit and leverage (as described in **Annexure A**), by routing wastage and spoilage through NCKOTs, Also situation become pathetic when NCKOTs are not approved/evidenced
- 2 Encouraging high margin food to be served on NCKOT.
- 3 Inconsistency in performance when, high food cost of one day provide leverage to reduce food cost of one good day drastically, in case of YTM food cost % used (Refer **Annexure B**), there by chef cover up the inefficiencies, if any

Above three type of practices is restricted where the same food cost % is used , which is the actual food cost % and calculated also by considering notional sales of non chargeable in denominator and without reduction in the food cost. But in such cases chef's inefficiency in production of one item is compensated by efficiency in production of other items, also quantum of sale of high margin products during the day whether chargeable or non chargeable is a factor.

## VII Possible leakage of revenues

We have seen that in new era of computers, F& B bills are not serially controlled by pre-numbered stationery but by system generated numbers. Also, number of duplicate bills printed of same number, is not verified and reasoned, in almost all occasions. Some systems do not provide details of non executable KOTs and corresponding invoice raised, popularly called " Ignore KOTs". Above situations are prone to possible risk of leakage of revenue, where by chef, restaurant manager & company, present bills to guest and collect money, which are not captured by the system and controllers. Here one can argue that still chef and restaurant manager and company to make money without presenting a bill and preprinted number or controls on duplicate invoice or ignore KOTs do not serve the purpose. Also, chef may change the portion size, and no system can stop that from doing a cover-up adjustment later on. But here onwards, we need to understand the broad responsibility of F&B controllers, which is not yet understood, exercised and imposed upon.

Thus, we have seen that how all the four objective of food costing system is defeated. Now we will discuss about the possible solution and fool proof reporting system, where by better planning and controls can be exercised.

## VIII Possible Solution

Monthly Cost report prepared currently serve the purpose of external reporting, but does not measure the element of efficiency and inefficiency separately and do not facilitate for performance improvement and realistic forecast and budgeting,

Hotel industry has used static budgets till current period providing Level 0 and level 1 analysis.

In level 0 Analysis, actual operating profit is compared to budgeted operating profit, and variance found is called static budget variance for operating income.

In level 1 Analysis actual revenue and actual cost (variable and fixed) are compared to budgeted revenue and cost.

By definition a static budget is not adjusted or altered after it is drawn up, regardless of changes in volume of sale, sales mix, cost drivers like price, quality of input unit, or other conditions during the budget period.

The Analysis level can be gradually increased to level 2 (introduction of sub budgets), level 3 (Detailed variances) and introduction of standard costing.

We will discuss on variances in food cost percentage , which can be analyzed into following sub variance.

Price variance

Mix variance

Sub usage variance

Yield/Efficiency variance

**A Before analysis can be started following are essential pre-requirements of the system**

- 1 Cost center and revenue center should be identified and transfers from one center to other center should be documented. The system should ensure completeness of recording inter departmental transfers. The individuals should be made responsible for performance of each cost or revenue center in very clear manner so that all become accountable and controller of actions of others.
- 2 Now, question arises that at what cost transfer should take place, actual quantity at actual price or standard price, actual usage at standard price, or actual output at standard price. As, each department is responsible for their performance, and hotel work as single organization all transfer should be at standard cost for the actual material issued from one department to other department.
- 3 All centers should recognize the material transferred: as raw, fully processed, half processed. And standard recipe should be documented with the standard price of such materials transferred.
- 4 For processing with in the department, Standard yield should be defined and input and output should be reconciled accordingly. Also, when transfer are priced at standard inputs cost as said above, efficiency of cost center can be easily measured with availability of input (issue/receipt from stores/suppliers) and output (Issue to other department) details. There are very less chances of having WIP at the end of the day, as all work are done on the day itself, but If WIP exist, they are going to be minimal and measurable.
- 5 Standard recipe should be made for all the portions to be sold. Banquets should be made separate revenue center and should have proper documentation of recipe served (with details of item requisitioned from stores and returned/transferred) and priced. Also any returns should be documented as inter departmental transfers.
- 6 Popular open food/ off menu item should be properly defined and standard recipe should be documented to the extent possible.

**B Steps**

- 1 Sales report should be taken out from the POS and should be spooled to an excel work sheet. This sales summary will provide sale of various portions with the quantitative details.
- 2 All standard recipe should be stored in the computer system, which should be used to calculate standard cost of such portion served regardless of chargeable or non chargeable. This should also give, the details of item wise consumption of main ingredients used to prepare such portions.
- 3 Total consumption of an ingredient through out various portions should be worked out. This should be mainly of main ingredient forming largest part of the portion.
- 4 Actual issues from stores to an outlet kitchen after adjusting increase/decrease of such material at the end of the period compared to the beginning of the period at such outlet kitchen, should be compared with the standard consumption to arrive at efficiency or yield variance.
- 5 This exercise can be done every day, when it is possible to take inventory every day. It has been seen that chef take daily inventory of materials for planning next day and timely requisitioning. F& B controller can rely on the consumption documents of chef, and can make surprise check on fortnightly basis to facilitate carrying such exercise on daily basis. Monthly exercise also will serve the purpose.
- 6 Budget should be made for categories ( should be predefined and documented) of items, so that mix variance can be calculated and the efficiency and effectiveness of menu engineering can be established by comparing actual sales of various categories. At present no such analysis is carried out by independent controllers.
- 7 The price variance should be calculated, so that correct picture of efficiency at various levels can be established. Currently weighted cost of purchase is considered and high food cost due to emergency purchase, local purchase, purchase other than central purchase are not considered separately.
- 8 In above exercise, normal standard costing methods be used.
- 9 Gradually, normal percentage of Spoilage/wastage should be defined and the abnormal variances should be enquired in to.
- 10 It is also required that F & B Controller should keep watch on the portion served as per standards, although this new method will curb such practices. As also, it is difficult to cheat high profile customers of five star hotels every time. ( Refer Annexure C for standard cost variance analysis)

**C Recommendations: over and above the method described herein.**

- 1 Writer is of the view that, Total food cost ( cost of materials issued from the stores) without any adjustment for cost of non chargeable, should be compared to revenue generated, so that such relative measure can be used to gauge profitability instead of establishing input/output ratio.
- 2 The F& B bills should be pre-numbered and every single stationery check should be preserved or alternatively, in case of computer numbering, number of bills reprinted/duplicates of same bill number should be made known from the system and should be verified, reasoned and preserved. Also, the check printed with "Ignore KOT" function should be made known and be reasoned.

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**proteus**

The logo for Proteus Advisors Private Limited features the word "proteus" in a bold, lowercase, sans-serif font. A thick, orange horizontal line is positioned directly beneath the text, extending slightly beyond the left and right edges of the word.

<b>Annexure A</b>										
	<b>Situation 1</b>		<b>Situation 2</b>		<b>Situation 3</b>		<b>Situation 4</b>		<b>Situation 5</b>	
<b>Type of Sales</b>	<b>Sales</b>	<b>Actual Food Cost</b>								
<b>Chargeable</b>	80	17.6	75	16.5	80	17.6	80	17.6	75	16.5
<b>Non Chargeable</b>	20	4.4	25	5.5	20	4.4	20	4.4	25	5.5
<b>Total (%)</b>	100	22	100	22	100	22	100	22	100	22
<b>Less: Reduction For NC food Cost</b>	25	5	25	6.25	35	7	15	3	15	3.75
<b>Food cost for Reporting</b>		17		15.75		15		19		18.25
<b>Food cost percentage in report</b>		21.25		21.00		18.75		23.75		24.33
<b>Actual Food Cost</b>		22		22		22		22		22

\* When Actual food cost is less as compared to % food cost element usec to derive cost of non chargeable food element, food cost drastically reduces as element of non chargeable increases in total sales. If actual food cost is high compared to such % used than the food cost reported boost drastically. Thus chef prefers a higher % used than his average food cost %.

**Annexure B**

Annexure B	Day 1		Day 2		Day 3		Day 4		Day 5		Avg
	Sales	Actual Food Cost									
<b>Type of Sales</b>											
<b>Chargeable</b>	80	22.4	80	17.6	80	17.6	80	17.6	75	15	
<b>Non Chargeable</b>	20	5.6	20	4.4	20	4.4	20	4.4	25	5	
<b>Total (%)</b>	100	28	100	22	100	22	100	22	100	20	
<b>Less: Reduction for NC food Cost (Cumulative food cost %)</b>	28	5.6	25	5	24	4.8	23.5	4.7	22.8	5.7	
<b>Food cost for Reporting</b>		22.4		17		17.2		17.3		14.3	
<b>Food cost percentage in report</b>		28.00		21.25		21.50		21.63		19.07	22.29
<b>Actual Food Cost</b>		28		22		22		22		20	22.80

Also, chef in same way encourages NCKOTs on good days followed by a bad day, as done in case of fixed % Used  
 Chef compensate bad days by goods days and off set the inefficiencies as explained.

**ANNEXURE C**

**YIELD VARIANCE**

**ITEM: MEAT**

<b>NAME OF DISH SOLD DURING THE DAY CONTAINING MEAT</b>	<b>NUMBER</b>	<b>STD. PORTION OF MEAT per PORTION (KG)</b>	<b>TOTAL STD CONSUMPTION (KG)</b>
A	5	0.95	4.75
B	6	0.75	4.5
C	2	0.5	1
D	3	0.25	0.75
<b>TOTAL STD. CONSUMPTION OF MEAT</b>			<b>11</b>
<b>ACTUAL ISSUE FROM THE STORES</b>			<b>17</b>
<b>INCREASE IN STOCK DURING THE DAY</b>			<b>3</b>
<b>ACTUAL CONSUMPTION</b>			<b>14</b>
<b>YIELD VARIANCE ( ADVERSE)</b>			<b>3</b>
<b>STD COST RS 150/-</b>			<b>RS. 450</b>