UNIT 11 MERCHANDISING PERFORMANCE PARAMETERS

Structure

11.0 OBJECTIVES

After studying this unit, you should be able to:

- explain various parameters to assess the performance of a store;
- discuss comparative analysis of sales percentages;
- describe productivity measures;
- explain SPF as a planning measure;
- describe sales per transaction and per employee .

11.1 INTRODUCTION

It is necessary for the buying and merchandising team to understand the performance of the products in a store environment. This helps to assess the strategy of the store. The team needs to work with various parameters of performance in order to correctly assess every aspect of the retail stores. The team requires to evaluate the retail chain's performance vis-à-vis the strategic goals decided for the store at the start of the season or sales cycle or the financial year. In this unit you will learn about various parameters generally used for assessing the performance of a retail store. You will further learn how a comparative analysis of the sales is made and how the performance of the store based on the sales per square foot (SPF) is measured. You will also be familiarised with the allocation of the space to various categories in a store on the basis of SPF and also about the sales per transaction and per employee.

11.2 UNDERSTANDING VARIOUS PARAMETERS AT THE STORE LEVEL

There are many parameters that the buying and merchandising team must keep constant watch on. These parameters are very important that need special attention of the team as well as that of the store management team. These parameters are as follows:

- Sales Percentages – Comparative Analysis
- Productivity Measures – SPF
- SPF as a Planning Measure
- Sales per Transaction
- Sales per Employee

Let us understand each one of the above parameters in the right perspective so as to gain better insight into the working of these parameters. The influence of these parameters in various decisions related to the planning of the store's merchandise, its mark-ups and cash-flows, promotions and special offers, and other administrative measures that affect final profitability has to be analysed. Each of the above statements address specific issues related to the performance of the store or the retail chain as the case may be.

11.2.1 Sales Percentages – Comparative Analysis

This is one of the basic sales analysis done by every store to understand its performance vis-à-vis last year's performance for the same period. The analysis can be done at the level of overall sales of the store for the season or on each of the important product categories. The comparative analysis is done for a particular period say weekly or monthly or quarterly as well as on cumulative basis that is from the start of the season till to-date. Let us look at the following example which depicts the format used for doing a sales comparative analysis for a kids-wear retail chain.

Example 11.1: Sales Figures for the Current Month versus Last Year Same Month

Store	Sales in Rs for June'11	Sales in Qty for June'11	Sales in Rs for June'10	Sales in Qty for June'10	% variation for value	% variation for quantity
Inorbit- Mum	550000	1000	530000	1060	3.8	-5.7
Oberoi - Mum	650000	1182	615000	1230	5.7	-3.9
Pune	400000	720	396000	792	1.0	-9.1
Hyderabad	500000	908	490000	980	2.04	-7.35
Total	2100000	3810	2031000	4062	3.4	-6.20

Let us try and analyse the above sales comparative statement for understanding the salient features represented by each of the comparisons.

Sales for the current month: From the above sales analysis statement the columns number 2 and 4 represent the sales for the current month and the previous year same month. The analysis is done both for quantity of sales as well as for value of sales. From the value of sales the retail team can immediately see if the comparison for each of the stores is representing any kind of sales trend. Whether the stores in the channel are on positive trend as compared to the previous year same month's sale value or is there any different trends being noticed for any of the stores in the chain.

If all the stores in the chain show a positive trend it means the strategy or tactics followed by the buying and merchandising team is showing positive result. If the growth in value is not positive for all the stores in the chain and there are stores with negative growth percentage, it means the tactics are not giving consistent result. Thus the buying and merchandising team will have to further analyse their current selling tactics as well as look at other factors that could be affecting the stores performance.

Similarly we need to look at the trend noticed with respect to current month's sales quantity. From columns 3 and 5 we can get this trend. Again the first thing the merchandising team or the store management team needs to look at is if there is any noticeable trend with regard to comparative analysis. If the trend is positive it means that the sales tactics adopted during the concerned month are giving positive result. If the trend is not consistent then one needs to check on the factors affecting the positive trend or causing the negative trend in such stores.

Some time it may be noticed that while on the value-wise analysis there is positive growth but on quantity-wise analysis there is negative growth. The major reason for such a trend is that due to price increase the sales value is showing positive trend but due to increase in price there is a reduction in quantity purchase. This is reflected in lower sales quantity for the month, and thereby results in negative growth trend for the stores.

The above analysis is also used to check the performance of the main product categories of the retail chain or store, again in terms of value as well as quantity. While comparative sales analysis for the month indicates the performance of the tactics for the concerned month, we also need to analyse the same for a cumulative period too.

The formula used to check sales performance of the month in terms of percentage growth or decline in terms of value or quantity is as follows:

Comparative Sales Performance for the Month = (Sales for the Current Month – Sales for the Previous Year Same Month) ÷ Sales for the Previous Year Same Month × 100*

(In the above formula multiplying the value with 100 provides the clear percentage figure, otherwise the figure will be in decimal, thus creating confusion for those not much familiar with mathematics)

Cumulative Sales: The cumulative sales figures give us the sales for the concerned period. If the cumulative sales is for the season then we need to compile sales figures from the start of the season till to-day. The comparative sales figures for the cumulative period provides us with more realistic sales performance for the season vis-à-vis the tactics or strategic inputs used for the concerned period. Generally to know performance of the strategic inputs or tactics used as part of the retail strategy, the cumulative sales figures as on date provides us with the correct status. The advantage of using cumulative sales figures is that ups and downs in a particular period of the season gets normalised or averaged out over a cumulative period. The negative trend as on date is a serious issue for the concerned merchandising or store team as it indicates something is seriously wrong with the strategy or tactics. This requires immediate correction or improvement in the strategy/tactics. The negative or positive trend on overall sales for each of the stores tell us about the overall sales performance of the concerned store and how is it expected to perform by the end of the concerned period or season.

Example 11.2: Cumulative Sales Performance for the Period April to June'11

Store	Sales in Rs for June'11	Sales in Qty for June'11	Sales in Rs for June'10	Sales in Qty for June'10	% variation for value	% variation for quantity
Inorbit- Mum	1650000	3000	1590000	3180	3.8	-5.7
Oberoi - Mum	1950000	3546	1845000	36900	5.7	-3.9
Pune	1200000	2160	1188000	2376	1.0	-9.1
Hyderabad	1500000	2724	1470000	2940	2.04	-7.35
Total	6300000	11430	6093000	12186	3.4	-6.20

You may compare the cumulative sales of the different categories of a store as compared to the sales of these categories in the previous year. The comparison may suggest that the categories with negative growth trend need urgent attention from the buying and merchandising team for improving on their tactics used in the promotion of the concerned categories. Negative growth trend also provide another important indication to the buying team. The concerned product category may not be favoured so much in the current season as compared to its attraction in the previous season. The reason for drop in the sales of concerned category will then need to be analysed by the team right from its pricing, quality, design, styling, contents. There may be other characteristics/factors that influence consumer preference for the category.

Example 11.3: Cumulative Sales Performance for the Categories

Product Categories	Sales in Rs for April to June'11	Sales in Qty for April to June'11	Sales in Rs for April to June'10	Sales in Qty for April to June'10	% variation for value	% variation for quantity
Tee-shirt	1650000	3000	1590000	3180	3.8	-5.7
Skirt	1950000	3250	1845000	3075	5.7	5.7
Dresses	1200000	2160	1188000	2376	1.0	-9.1
Leggings	1500000	3020	1470000	3555	2.04	-15
Total	6300000	11430	6093000	12186	3.4	-6.20

The formula to be used for calculating cumulative performance of the stores or categories in terms of percentage growth or decline is as follows:

Cumulative Performance of the Store/Category = (Cumulative Sales for the Current Season – Cumulative Sales for the Previous Year Same Season) ÷ Cumulative Sales for the Previous Year Same Season × 100

Comparison with the targets: Comparison of cumulative or current month's sales figures with the target sales figures provide the team with clear indication. The indication may be whether the sales are moving as per the target plan or they are deficient for any stores or any categories. The targets need to be based on certain criteria for ensuring they are not out of tune with the reality and objectivity of the current situation. Then the comparison of sales with target provides the team with the correct assessment of performance, whether with respect to overall sales of the stores or the sales of the categories. The stores or categories with negative performance will need to be studied carefully on all concerned aspects that influence performance. The targets can be revised to match with the changed situation to make the comparative analysis closer to the ground situation.

Example 11.4: Comparison of sales performance with targets

Product Categories	Sales in Rs for April to June'11	Sales in Qty for April to June'11	Target Sales in Rs for April to June'10	Target Sales in Qty for April to June'10	% Variation for value	% Variation for quantity
Tee-shirt	1650000	3000	1600000	2910	3.12	3.09
Skirt	1950000	3250	2000000	3075	-2.5	5.7
Dresses	1200000	2160	1250000	2376	-4.0	-9.1
Leggings	1500000	3020	1450000	3555	2.04	-15
Total	6300000	11430	6300000	11916	0.0	-4.08

So in the above example you may see the sales of the product category skirt is down by 2.5% in value terms. In quantity terms it is in positive by 5.7% as against the target figures. Similarly, we can see that performance of Dresses is in negative both in terms of value and quantity vis-à-vis target figures. One will have to check if the price has been the factor for the negative trend or if there has been lower preference of this category due to styling or fittings etc. When we look at the total values for all stores we find that the performance matches target total in terms of value while in terms of quantity it is short by 4.08%.

The formula to be used for calculating comparative sales performance with respect to monthly or cumulative target in terms of growth or decline percentage is calculated as follows:

Comparative Sales Performance with respect to Target = (Sales for the Current Month or Cumulative Sales – Target Sales for the Month or Cumulative Period) ÷ Target Sales for the Month or Cumulative Period × 100

The above analysis on overall sales for each of the stores or for each of the categories gives complete understanding to the buying and merchandising team as well as to the store management team. The correct position or trend with respect to sales for the month or for cumulative period both in terms of quantity and value is reflected. This provides the team with direction in terms of stores or categories where the corrective action is required.

11.2.2 Productivity Measures – SPF

You have learnt that the use of sales per square feet (SPF) as a measure to check productivity of the space. Let us revisit the said analysis for understanding the use of SPF to assess the performance of a store or the space utilised for a product category within a store. Let us use example 11.2 to check on this concept.

Example 11.5 Calculation of SPF for stores

Store	Carpet area in square feet	Sales in Rs for April to June'11	Sales per sq. ft. for April to June'11	Sales in Rs for April to June'10	Sales per sq. ft. for April to June'10	% variation in SPF for this year v/s last yr.
Inorbit- Mum	500	1650000	36.67	1590000	35.33	3.8
Oberoi - Mum	400	1950000	54.17	1845000	51.25	5.7
Pune	400	1200000	33.33	1188000	33	1.0
Hyderabad	400	1500000	41.67	1470000	40.83	2.06
Total	1700	6300000	41.18	6093000	39.82	3.39

Let us understand the working for calculation of the productivity of the space. The space efficiency is the sales return per square foot which is calculated as follows:

Productivity of the Space = Sales per Square Foot per Day = Total Sales of the Store or the Space Utilised ÷ Total Space Utilised in Square Feet

In the above formula the space utilised in square feet can be the carpet area (the actual space used in the store)or the built-up area (this is actual space plus the percentage addition of area to include common area used for passage, lift, stairs etc.). The SPF is calculated normally for per day.

In the example given in 11.5 we find the overall average sales per square foot for all stores put together is Rs 41.17 for the period April to June'11. This is calculated by using the formula given above as follows:

Average sales per square foot per day = (Total sales for all the stores ÷ Total carpet area for all the stores) ÷ Number of days completed in the given sales period

= (Rs 6300000 ÷ 1700 sq ft) ÷ 90 days
= Rs 3705.9 ÷ 90 days = Rs 41.18

So we can see that while the average SPF is Rs 41.18. The productivity of the space for Inorbit and Pune stores are Rs 36.67 and Rs 33.33 respectively. These are lower than the average SPF of Rs 41.18. Thus, it is a matter of concern for the buying and merchandising team for raising the SPF to the average level of Rs 41.18 by undertaking corrective steps.

When we compare the SPF for this year with that for the previous year, we find that SPF for all stores show positive growth. The growth percentages for Inorbit and Oberoi are better than the average growth rate of 3.39 for all stores. This percentage growth is calculated by using the following formula:

Percentage Growth in SPF = (SPF for Current Period – SPF for Previous Year) ÷ SPF for Previous Year

From the SPF values for the stores for the current period we can observe that Oberoi store has the best space productivity at Rs 54.17. This is followed by Hyderabad store at Rs 41.67. The space efficiency for Pune store is the lowest at Rs 33.33, and will need to be studied for improvement of its SPF.

Now, let us look at calculating SPF at category level to study the productivity of the space. Let us take example 11.3 to study the SPF calculation and its effect.

Product Categories	Carpet area in square feet	Sales in Rs for April to June'11	Sales per sq. ft. for April to June'11	Sales in Rs for April to June'10	Sales per sq. ft. for April to June'10	% variation for value
Tee-shirt	500	1650000	36.67	1590000	35.33	3.8
Skirt	400	1950000	54.17	1845000	51.25	5.7
Dresses	400	1200000	33.33	1188000	33	1.0
Leggings	400	1500000	41.67	1470000	40.83	2.04
Total	1700	6300000	41.18	6093000	39.82	3.4

The SPF for Tee-shirt = (Total sales for Tee-shirt ÷ Area allotted for the category) ÷ 90 days = (Rs 1650000 ÷ 500 sq ft) ÷ 90 days = Rs36.67

So, we can observe that Skirt and Leggings give better productivity of space at Rs 54.17 and Rs 41.67. These are higher than the average SPF of Rs 41.18 for all

categories. The Dress category is lowest at Rs 33.33. The concerned buying and merchandising team will have to take some serious steps for improving the productivity of this category.

Check Your Progress A

1. List the parameters that are commonly used to assess the performance of the products in a retail store.

   .....

   .....

   .....

   .....

2. What is meant by comparative analysis of sales?

   .....

   .....

   .....

   .....

3. What do you mean by cumulative sales?

   .....

   .....

   .....

   .....

4. Define productivity measure.

   .....

   .....

   .....

   .....

5. How is percentage growth calculated?

   .....

   .....

   .....

   .....

11.2.3 SPF as a Planning Measure

You have already learnt about the various parameters at the store level such as sales percentages and productivity measures. Let us now learn about SPF as a planning measure, sales per transaction and sales per employee**.**

We can use sales per square foot per day for planning purpose too. The SPF is used for estimating the space required for a particular product category or for a department or even for estimating the space necessary for a store in a particular location. Let us understand this idea from the following example.

Example 11.6: Estimating Space Required for a New Store for Achieving Certain Sales Turnover

A ladies brand company having a chain of retail stores wants to open a new store in Pune. In order to correctly estimate the space required the buying and merchandising team compiles the following information.

Sales per square foot per day for a store in a comparable city.	Rs 41.67 for its Hyderabad store which is very much comparable to Pune as per team's assessment
The total sales revenue the team would like to achieve to meet the expenses and profitability estimates.	Rs 60 lacs per annum

Solution

The formula the merchandising team will have to use for estimating the space required for opening a store in Pune is as follows:

Space Required to Achieve the Estimated Sales Value per Annum = Estimated Sales per Annum ÷ Sales per Square Foot per Annum

Thus, the space required for store at Pune = Estimated per annum sales value for Pune store ÷ sales per square foot per annum

In order to use the formula given above we need to calculate the sales per square foot per annum, which is calculated by using the following formula:

Sales per square foot per annum for a store= Sales per square foot per day × 365 days

Therefore, sales per square foot per annum for pune store = Rs 41.67 per day × 365 days = Rs 15209.55 ~ Rs 15210

Thus, space required for Pune store = Rs 6000000 ÷ Rs 15210 SPF per annum = 394.5 square feet ~ 395 square feet

From the above working it is clear the team will have to find an area of at least 395 square feet which should be comparable to its Hyderabad store in terms of its locational characteristics.

The sales per square foot data can also be used to estimate sales for a particular department or for a product category by using the following formula. It must be remembered that for estimating the sales for a department or product category we must know the sales per square foot data for a similar type of department or product category belonging to another comparable store.

Estimated Sales Value for a Store or Department or Product Category = SPF for a Store or Department or Product Category × Space allocated to the Store or Department or Product Category

When we use the data of a comparable store or department or product category belonging to another store we must ensure there is comparability. The comparability may be in terms of market potential, target population similarity, geographical demographics of the neighbourhood areas, and level of competitor activity. If need be the buying and merchandising team should make necessary adjustment to SPF value to bring it close to the new location where it is put into use. Further it must be noted that the estimation derived will always be the approximate value expected during the terms of sale period. This will be corrected after the real sales figures become available to the team for a certain period.

Example 11.7 Estimating Sales for a Product Category in a New Store

For a department store started in a new city Bangalore, the retail team estimates the SPF per day for the product category Men's wear as Rs 60. This is based on its assessment of the locational characteristics after studying the characteristics for the departmental stores in other cities. The area it proposes to allocate to this category is 200 square feet. So, what is the estimated sales it can expect per annum for men's wear category?

Solution

Estimated sales for men's wear per annum = SPF per day for men's wear x area allocated for men's wear category × 365 days

= Rs 60 per day × 200 sq ft. × 365 days

= Rs 4380000

So, we can see how SPF value provides us with proper way to estimate the sales for a department or product category or store. This helps us to estimate the space required for a particular department or a store or a product category.

11.2.4 Sales per Transaction

This is another very important parameter which helps the buying and merchandising team in assessing the demand for store's sale or for a product category. A sale per transaction is defined as "average sales value per bill". The amount of sales per transaction is equal to total amount paid per bill; because every transaction is equivalent to per bill made in the store. This is irrespective of number of items purchased per bill or transaction. The formula for calculating sales per transaction is given below:

Sales per Transaction = Total Sales for a Period ÷ Total Number of Transactions / Bills made during the Given Period

The average sales value can be used to estimate sales for a department or for a store or for a product category as explained in the example below.

Example 11.8 Calculation of Sales per Transaction and Estimation of Sales for a Store or Product Category

A retail team of a department store wanted to estimate the sales for the next season for its ladies department. It found that the total number of transactions during the previous year for the same season was 200 and the total sales turnover was Rs 400000. It estimates that the number of transactions for the next season will increase by about 10 per cent and the average value per transaction will also increase by 10 per cent. So what will be the total sales for the next season for the ladies department?

Solution

Sales per transaction for the ladies department = Rs 400000 ÷ 200 bills

= Rs 2000

The number of transactions is expected to increase by 10 per cent

Thus, total number of transactions expected during next season = 200 + increase in number of transactions

= 200 + 200 × 10%

= 200 + 20 = 220

The average value per transaction is expected for the next season = current average transaction value per bill + increase in average transaction value

= Rs 2000 + Rs 2000 × 10%
= Rs 2000 + Rs 200 = Rs 2200

Thus, estimated sales of ladies department = total number of transactions expected during the season x sales value per transaction expected during the season

= 220 × Rs 2200
= Rs 484000

11.2.5 Sales per Employee

This is also an important criterion to monitor productivity of the employees and to check if the employees in each of the retail stores are working to their full potential. It is calculated by dividing the total sales of the store or department or of a product category by the number of employees for a given period. You may check these criteria at per hour or per day level too. The formulas for checking the employee productivity are as follows:

Sales per Employee per Day =(Total Sales for a Given Period ÷ Number of Employees) ÷ Number of Days in a Given Period

Some retailers even calculate sales per employee per hour, which is calculated as follows:

Sales per Employee per Hour = Total Sales for a Given Period ÷ Total Number of Employee Work Hours

In case there are temporary part time workers besides full time permanent employees then the retailer can add the total hours worked by part time workers with that of permanent employee hours during a given period. Then the retailer should divide the total sales turnover for a given period with the total worked hours including part time and permanent employee hours to arrive at the productivity per employee hour during a given period.

Let us understand this concept with the help of an example as given below:

Example 11.11: To Calculate Productivity per Employee Hour

A super market has 10 permanent employees who work for 8 hours per day; and 4 employees who are temporary part time employees who work for 4 hours per day. In a quarter of 90 working days the super market achieves a sales turnover of Rs 10 lacs. What is the productivity achieved by the super market per employee hour?

Solution

Let us first calculate the total employee hours:

Total employee hours for a given period = Total permanent employee hours for a given period + Total temporary employee hours for a given period

= 10 permanent employees × 8 hrs × 90 days
+ 4 temporary employees × 4 hrs × 90 days
= 7200 hrs + 1440 hrs
= 8640 hrs

Therefore, the sales per employee worked hour = Rs 1000000 ÷ 8640 hours
= Rs 115.74 ~ Rs 116

Thus, we saw how the retail team can check on the employee productivity for the concerned department or store or product category. The team may take effective steps for improving the performance of the weak employee group.

Check Your Progress B

1. Depending on the target sales, how is the required space for the store estimated?

   .....

   .....

   .....

   .....

2. How are the sales for a particular product category in a store estimated?

   .....

   .....

   .....

   .....

3. Define sales per transaction.

   .....

   .....

   .....

   .....

4. What do you mean by sales per employee.

   .....

   .....

   .....

   .....

5. Which of the following statements are True or False?
   i) Comparative analysis gives an idea about the growth of a retail store.
   ii) The advantage of using cumulative sales figures is that ups and downs in a particular period of the season get averaged out.
   iii) SPF cannot be used to assess the performance of a store.
   iv) It is difficult to calculate sales per transaction.
   v) Sales per employee indicates the efficiency of the employees.

11.3 LET US SUM UP

It is necessary for the buying and merchandising team to understand the performance of the products in a store environment. This helps the team to correctly assess if the tactics with which they are working are giving proper boost to the store's strategy decided for the season or the year.

Comparative sales analysis is one of the basic sales analyses done by every store to understand its performance vis-à-vis its last year's performance for the same period.

The analysis can be done at the level of the overall sales of the store for the season or on each of the important product categories within the store.

If all the stores in the chain show a positive trend it means the strategy or tactics followed by the buying and merchandising team with regard to the concerned month is showing positive result. If the growth in value is not positive for all the stores in the chain and there are stores with negative growth percentage, it means the tactics are not giving consistent results.

Some time it may be noticed that while on the value-wise analysis there is positive growth but on quantity-wise analysis there is negative growth.

The comparative sales figures for the cumulative period provide us with more realistic sales performance for the season vis-à-vis the tactics or strategic inputs used for the concerned period. Generally to know performance of the strategic inputs or tactics used as part of the retail strategy, the cumulative sales figures as on date provide us with the correct status. You should compare the cumulative sales of the different categories of a store as compared to the sales of these categories in the previous year. The comparison reflects that the categories with negative growth trend need urgent attention from the buying and merchandising team for improving on their tactics used in the promotion of the concerned categories.

Comparison of cumulative or current month's sales figures with the target sales figures provides the team with clear indication if the sales are moving as per the target plan or they are deficient for any stores or any categories.

The space efficiency refers to the sales return per square foot. The SPF is used for estimating the space required for a particular product category or for a department or even for estimating the space necessary for a store in a particular location.

A sale per transaction is defined as average sales value per bill. The amount of sales per transaction is equal to total amount paid per bill. It happens so because every transaction is equivalent to per bill made in the store irrespective of the number of items purchased per bill or transaction.

Sales per Employee is an important criterion to monitor productivity of the employees. This helps to check if the employees in each of the retail stores are working to their full potential.

11.4 KEY WORDS

Comparative Analysis : The item-by-item comparison of two or more comparable alternatives, processes, products, qualifications, sets of data, systems, or the like.

Cumulative Sales : Increasing or enlarging by successive addition.

Parameters : A factor that determines a range of variations.

Performance : The accomplishment of a given task measured against preset known standards of accuracy, completeness, cost and speed.

Planning Measures : A procedure or course of action taken to design, organize or prepare for the future.

Productivity Measures : Productivity is an overall measure of the ability to produce a good or service.

Sales Cycle : The sales cycle is the sequence of phases that a typical customer goes through when deciding to buy something.

Strategic Goals : It is the milestone the organization aims to achieve that evolves from the strategic issues.

11.5 ANSWERS TO CHECK YOUR PROGRESS

B5: i) True; ii) True; iii) False; iv) False; v) True

11.6 TERMINAL QUESTIONS

1. Describe important parameters used for assessing the performance of a retail store.
2. Explain the concept of comparative analysis. How does it help in assessing the growth of a store?
3. What do you mean by cumulative sales? How does it indicate the performance of a store?
4. What does SPF mean? Explain how can you use it as a productivity measure.
5. Explain the concept of sales per transaction with the help of an example.
6. How can you calculate sales per employee? Discuss the benefits of calculating sales per employee.

Activities

i) Visit a retail store and study the parameters which they use to assess the growth.

ii) Calculate their transactions per bill and per employee.