



---

**A Study on Impact Factor of Productivity Level of Employees  
with special Reference to Maa Fruits Industries in Krishnagiri  
District**

**Mr.R.VIGNESHWARAN,**

PG-Student

Department of Management Studies

P.S.V.College of Engineering& Technology

Krishnagiri-635018, Tamilnadu, India

Mail id: [sarathkumarcsk670@gmail.com](mailto:sarathkumarcsk670@gmail.com)

Mobile No: 91-7094609149

**Prof .R.MURUGESAN**

Assistant Professor

Department of Management Studies

P.S.V.College of Engineering& Technology

Krishnagiri-635018, Tamilnadu, India

Mail id : [murugesanpsv@yahoo.in](mailto:murugesanpsv@yahoo.in)

Mobile No : 9688225826

**Chapter-I**

**1. Introduction**

Productivity level is one of the important factors which have drawn attention of managers in the organization as well as academicians; various studies have been conducted to find out the factors which determine productivity level in the organization.



IJRREM



CiteFactor  
Academic Scientific Journals



JIFACTOR



IMPACT FACTOR:1.682

### 1.1.1. Meaning:

‘Productivity’ is nothing but the reduction in wastage of resources. The resources may be men, machine, materials, power, space, time, buildings etc. The term productivity means different things to different people, and is stated as a ratio

$$\text{Labor productivity} = \text{output}/\text{input}$$

It has a comparison between the quantity of goods and services produced [output] and the quantity of resources used to produce these goods and services [input].

### 1.1.2. Definition of Productivity

**Productivity may be defined as** “The ratio between output and input, output means the amount produced or the number of items produced and inputs are various resources employed.” Through there is no conclusive evidence that productivity level is influenced by a particular factor, it is a fact that it depends on so many variables but still it is a prime concern for managers. Productivity level is the mental feeling of favorableness which an individual has about himself.

This project which has been conducted in **Maa Fruits Industries** has confined itself in analyzing in the various factors which influence the productivity level of the employees. Certain criteria’s like salary, training and development, work environment, superior/subordinate relationship, benefits, awards and rewards, workers participation in management has been used to obtain response from the respondents.

The researcher has applied chi-square & proportion test to analyze the data collected. The researcher has arrived on certain findings and based on which he has given certain suggestions which will be immense use to the company in knowing the factors influencing productivity level and to take corrective actions wherever necessary.

### 1.1.5. Productivity level of employee

INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN  
ENGINEERING AND MANAGEMENT (IJRREM)

Tamilnadu -636121, India

Indexed by

Scribd, Google Scholar, Academia



IJRREM



CiteFactor  
Academic Scientific Journals



JIFACTOR



IMPACT FACTOR:1.682

Employee productivity is the amount of goods and services that a labour produces in a given amount of time. It is one of several types of productivity that economists measure. Employee productivity can be measured for a firm, a process or a country. The OECD (Organization for Economic Co-operation and Development) defines it as "the ratio of a volume measure of output to a volume measure of input" Volume measures of output are normally gross domestic product (GDP) or gross value added (GVA), expressed at constant prices i.e. adjusted for inflation. The three most commonly used measures of input are: hours worked; workforce jobs; and number of people in employment.

Measured employee productivity will vary as a function of both other input factors and the efficiency with which the factors of production are used (total factor productivity). So two firms or countries may have equal total factor productivity (productive technologies) but because one has more capital to use, employee productivity will be higher. Output per worker corresponds to the "average product of labour" and can be contrasted with the marginal product of labour, which refers to the *increase* in output those results from a corresponding (marginal) increase in labour input.

#### 1.1.6. Measurement Issues

Employee productivity can be measured in physical terms or in price terms. Whilst the output produced is generally measurable in the private sector, it may be difficult to measure in the public sector or in NGOs. The input may be more difficult to measure in an unbiased way as soon as we move away from the idea of homogeneous labor ("per worker" or "per worker-hour"):

**INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN  
ENGINEERING AND MANAGEMENT (IJRREM)**

**Tamilnadu -636121, India**

**Indexed by**

**Scribd, Google Scholar, Academia**



**IJRREM**



**CiteFactor**  
Academic Scientific Journals



**JIFACTOR**



**IMPACT FACTOR:1.682**

- The intensity of labour-effort, and the quality of labour effort generally.
- The creative activity involved in producing technical innovations.
- The relative efficiency gains resulting from different systems of management, organization, co-ordination or engineering.
- The productive effects of some forms of labour on other forms of labour.

These aspects of productivity refer to the *qualitative*, rather than quantitative, dimensions of labour input. If you think that one firm/country is using labour much more intensely, you might not want to say this is due to greater employee productivity, since the output per labour-effort may be the same. This insight becomes particularly important when a large part of what is produced in an economy consists of services. Management may be very preoccupied with the productivity of employees, but the productivity gains of management itself might be very difficult to prove. Modern management literature emphasizes the important effect of the overall work culture or organizational culture that an enterprise has. But again the specific effects of any particular culture on productivity may be improvable.

In macroeconomic terms, controlling for hours worked (i.e. expressing employee productivity as per worker-hour) should result in readily comparable productivity statistics, but this is often not done since the reliability of data on working hours is often poor. For example, the US and UK have much longer working hours than Continental Europe - this will inflate the figures on productivity in these countries if it is not accounted for. When comparing employee productivity statistics across countries, the problem of exchange rates must be considered because differences in how output is accounted for in different countries will change labour productivity statistics, quite apart



**IJRREM**

**Scholarsteer**  
—Scholarly Information—



**CiteFactor**  
Academic Scientific Journals



**JIFACTOR**

**JOURNAL  
FACTOR**

**ISSN**  
INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER  
INDIA

**IMPACT FACTOR:1.682**

from the obvious issues surrounding converting different currency units to a standard base.

### **1.1.7. Affecting Factors of employee**

In a survey of manufacturing growth and performance in Britain, it was found that: “The factors affecting employee productivity or the performance of individual work roles are of broadly the same type as those that affect the performance of manufacturing firms as a whole.

They include:

- (1) Physical-organic, location, and technological factors;
- (2) Cultural belief-value and individual attitudinal, motivational and behavioral factors;
- (3) International influences – e.g. levels of innovativeness and efficiency on the part of the owners and managers of inward investing foreign companies;
- (4) Managerial-organizational and wider economic and political-legal environments;
- (5) Levels of flexibility in internal labour markets and the organization of work activities – e.g. the presence or absence of traditional craft demarcation lines and barriers to occupational entry; and
- (6) Individual rewards and payment systems, and the effectiveness of personnel managers and others in recruiting, training, communicating with, and performance-motivating employees on the basis of pay and other incentives.”



**IJRREM**



**CiteFactor**  
Academic Scientific Journals



**JIFACTOR**



**IMPACT FACTOR:1.682**

## **Chapter -II**

### **2.1 Objective of the study**

- To study the factors which influence the productivity level of the employees
- To study the level of satisfaction of employees with regards to the factors influencing their productivity.
- To find out the areas of dissatisfaction of employees.
- To suggest ways and means to increase satisfaction of workers this results in improved productivity.

### **2.2. Scope of the study**

- ✓ This study has focused itself towards studying the various factors which influence the productivity level of the workers
- ✓ The respondents have given their option with regard to the factors which has a direct impact on their productivity.

The study has also focused towards identifying the level of satisfaction regarding the factors influencing productivity.

- ✓ Certain criteria like salary, training & development, work environment, superiors, subordinate relationship, benefits, awards & rewards, workers participations in management has been used to analyze their impact on productivity.
- ✓ The researcher has also taken his effort in finding out the factor which has more influence on productivity & based on which he has given his suggestions.

### **2.3. Limitations of the study**

- Due to paucity of time the sample size has been restricted to 100.





IJRREM



- A sample of employees does not form a proper representative picture For a total population of 350 employees.
- The researcher has to solely rely upon the responses given by the respondents.

### Chapter-III

#### 3.1. Review of Literature

##### Introduction

Productivity level of employees is one of the important factors which greatly influence the performance of the employees of production oriented and non-production organization especially for non-governmental organization. It is highly essential for any management to measure the employee's job satisfaction which affects the productivity to a greater extent.

**According to Pallab Bandyo**, "It an increasingly competitive and capitalistic world, the issue of work satisfaction has emerged as a critical determinant of organizational effectiveness".

**According to Lawler**, "Although the motivational optional of reward has been talked about for quite some time, it is only in the past decade that the importance of rewards money, in particular has been recognized. Lawler who has done considerable amount of research in this area also holds somewhat similar view".

**Mehta (1978) on a study** to managerial employees and workers representatives has suggested objective and subjective economic factors that appear significantly related to life satisfaction which in turn effects employees job satisfaction . The internal job satisfaction appeared to be interacting with organization factors in determining the job satisfaction .

**INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN  
ENGINEERING AND MANAGEMENT (IJRREM)**

**Tamilnadu -636121, India**

**Indexed by**

**Scribd, Google Scholar, Academia**



**IMPACT FACTOR:1.682**

**Rajappa (1978)** has highlighted the importance of working environment in the analysis of work job satisfaction. Results of his study reveal that organizations with achievement oriented climate were highly productive organizations.

**Sharma (1983)** has also emphasized the importance of organizational climate in employee job satisfaction . Based on the survey of fifty industrial organizations in India, he observed the grievance handling, recognition and appreciation, participative management and scope for advancement are important factors in an organizational climate enhancing job satisfaction of employees.

**Litwin and Stringer (1968)** found that their research gave considerable support to the theory that there is a relationship between climate and the reduction of job satisfaction factors.

**According to Kanfer's** taxonomy of motivation theories (1990) cognitive choice, or process, theories (Campbell, Dunnett, Lowlerand Weick, 1970), that the study of the mechanism of motivation is governed by Vroom's expectancy theory (1964), several models have been developed to improve on Vroom's original formulation. They describe as a process that drives the individual to voluntarily produce effort in his work.

**Jones, M.R. (1955)**, how behavior gets started, is energized is sustained is directed is stopped and what kind of subjective reaction is present in the organism while all this is going on.

**Mariya Lucy (1998)**, made a study on job satisfaction and his study shows that motivation and job satisfaction are related. This study concentrates on motivation and job satisfaction level of workers and supervisors and supervisors. It is concluded that both the factors one in moderate level for the majority of the respondents. The management can work to motivate the employees to a higher level of motivation and satisfaction.





## 3.2. Research methodology

### 3.2.1. Introduction

Methodology is defined as the specification of methods and procedures for acquiring the information needed. It is a plan or frame work for doing the study collecting the data. Research methodology minimizes the degree of uncertainty Involved in management decisions research is characterized by systematic, objective, reproducible relevance and control. Collection of data is the process of enumeration to gather with the proper recording of results. The success of an enquiry is based upon the proper collection of data.

### 3.2.2. Definition:

Research Methodology may be defined as a way to systematically solve the research problem. Research means search for knowledge.

### 3.2.3. Objectives of Research:

The purpose of research is to discover answers to questions through the application of scientific procedures. The main aim of the research is to find out the truth which is hidden and which as not been discovered as yet. Though each research study has its own specific purpose we may think of the research objectives as following into a number of following broad groupings.

### 3.2.4. Types of research:

#### 3.2.4.1. Descriptive Research:

Descriptive research has undertaken for acquiring the necessary primary data in the preliminary phase of the study

#### 3.2.4.2 Research Design:

A research design is the program the guides the investigator in the process of collecting, and analyzing interpreting observations, it “provides and systematic plan of



procedure for the researcher to follow “Research design is define as “A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure”.

### 3.2.5. Data collection method

1. Primary Data

2. Secondary Data

### 3.2.6. Sampling Technique:

, Sampling may be defined as the selection of some part of an aggregate or totality. In this study Non-Probability sampling has been adopted. Non-Probability sampling is that procedure which does not afford any basis for estimating the probability that each item in the population has of being included in the sample. In this type of sampling, items for the researcher selects the sample deliberately, his choice concerning the items remain supreme.

#### 3.2.6.1.Types of Sample:

In this project convenience sampling has been adopted. The convenient method of sampling was used for collecting data from the employees. This sampling method is used because of the time constraint and lack of knowledge about universe.

#### 3.2.6.2.Sampling Design:

A Sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or procedure, the research would adopt in selecting items for a sample. Sample design as well lay down the number of items to be included in the sample (ie.) the size of the sample. Sample design is determined before data are collected.

**3.2.6.3Population:** It refers to entire group of people. Population may finite or infinite.

**3.2.6.4.Sample:** Sample is a finite subset of the population and the number of items in a sample is called size of a sample. It may be large of small sample.



IJRREM



CiteFactor  
Academic Scientific Journals



JIFACTOR



IMPACT FACTOR:1.682

**3.2.6.5. Sample Size:** The sample size is restricted to 100 employees. The sample questionnaire consists of 23 questioners.

**3.2.6.6. Sample Unit:** The sample unit was carried out among the employees of **Maa Fruits Industries in Krishnagiri district**

**3.2.6.7. Sampling Method:** Simple random sampling method was used to select the sample from the population.

**3.2.7. Tools used for data analysis:**

**3.2.7.1. Simple Percentage analysis**

**3.2.7.2. Chi – square test**

**3.2.7.3. Kruskal walli's test**

**3.2.7.1. Simple Percentage Analysis:**

Simple percentage analysis is used for analysis of the data that is collected for research work, simple percentage are often used in data presentation for the simplify, numbers, through the use of percentages, the data are reduced in standard form with base equal to which it facilitates the relative comparisons.

**Simple percentage method = No. of respondents / Total no. of samples X 100.**

**Testing of hypothesis**

Testing of hypothesis begins with an assumption called a hypothesis that we make about a population parameter. According to Prof. Morris Hamburg, a hypothesis in statistics is simply a quantitative statement about a population. Usually, we construct two hypotheses, one of them being an optimistic assumption and the other being alternative. To test the given hypothesis one has to construct a test criterion, which involves selection of an appropriate probability test, which can properly be applied. Some probability distributions that are commonly used in testing procedures are and

**INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN  
ENGINEERING AND MANAGEMENT (IJRREM)**

**Tamilnadu -636121, India**

**Indexed by**

**Scribd, Google Scholar, Academia**



**IJRREM**



**CiteFactor**  
Academic Scientific Journals



**JIFACTOR**



**IMPACT FACTOR:1.682**

Chi-square Test of significance such as T, F requires assumption about the type of population or parameters (i.e.) population values. Hence these are commonly known as parametric tests. Sometimes, it may not be possible to make any assumption about the distribution of the population from which samples are drawn. This limitation has led to the development of another method of testing known as non-parametric test or distribution free tests.

### **3.2.7.2. Chi – Square Analysis:**

The chi-square test is one of the most useful non – parametric tests used in statistical analysis. The chi-square test was first used by Karl Pearson in 1900; it is used to compare the observed and expected frequencies. It is important to keep in mind that the chi-square test only tests whether two variables are independent. It cannot address questions of which is greater or less. Using this chi-square test, we cannot evaluate directly the hypothesis, the test (strictly speaking) can only test whether the two variables are independent or not. A set of expected frequencies is desired under the assumption that the null hypothesis is true. This test enables us to find of the deviation of the expected frequency from the theoretical ones is just by chance or due to the inadequacy of the theory to fit the data.

$O_i$  ( $i = 1, 2, 3, \dots, n$ ) be the set of observed (or experimental) frequencies and

$E_i$  ( $i = 1, 2, 3, \dots, n$ ) be the set of expected (or theoretical) frequencies, then

### **3.2.7.3. Karl Pearson's chi-square statistics is given by**

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

This statistic has a constraint that  $\sum n = n$

# INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN ENGINEERING AND MANAGEMENT (IJRREM)

Tamilnadu -636121, India

Indexed by

Scribd, Google Scholar, Academia



IMPACT FACTOR:1.682

$$\sum_{i=1}^n O_i = \sum_{i=1}^n E_i \quad I=1$$

If the above calculated  $\chi^2$  value is less than the tabulated  $\chi^2$  value, we accept the null hypothesis. While comparing the calculated value of  $\chi^2$  with the table value we have to determine the degrees of freedom. The degrees of freedom may be considered as the number of  $n$  independent observations in the sample minus number of Observations which can be estimated using the independent observations. (i.e.) the degrees of freedom  $V=n-k$ . Since we have that  $\sum O_i = \sum E_i = N$ , the total frequency, can find one observation say  $n_{i-1}$ . Observation using the remaining  $(n-1)$  observations, (i.e.)  $n_{i-1} = n - \sum_{j=1}^{i-1} E_j = 1, 2, 3, \dots, n-1$ . Hence, the above-defined chi-square has  $n-1$  degrees of freedom. The observed chi-square value should be compared with the tabulated chi-square with  $(n-1)$  degrees of freedom.

### 3.2.7.3. KRUSKAL WALLI'S TEST

**KRUSKAL WALI'S** test is applied for the following circumstances. The problem of objectives is to compare two or more population. The data skill is internal or ordinal

$$H = \frac{12}{N(N+1)} \left( \frac{T_1^2}{n_1} + \frac{T_2^2}{n_2} + \dots + \frac{T_3^2}{n_3} \right) - 3(n+1)$$

## Chapter –IV

### Data Analysis and Discussion

**Table No.4.1.Level of Satisfaction Regarding Salary**

Level of satisfaction	Number of respondents	Percentage
Satisfaction	85	85

**INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN  
ENGINEERING AND MANAGEMENT (IJRREM)**

**Tamilnadu -636121, India**

**Indexed by**

**Scribd, Google Scholar, Academia**



**JIFACTOR**



**IMPACT FACTOR:1.682**

Moderately	10	10
Dissatisfied	5	5
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**

**Inference:** From the above table shows that 85% of respondents are satisfaction. And 5% of respondents are dissatisfied.

**Table No .4.2 .Respondents Awareness Regarding Training and Development Programmes**

Awareness	Number of respondents	Percentage
Yes	89	89
No	11	11
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**

**Inference:** The above table shows that 89% of the respondents are having awareness about training and development program, while the remaining 11% of respondents their is no aware about the training and development program.

**Table No .4.3 Respondents Opinion about Training Programmes**

Attributes	Number of respondents	Percentage
To improve productivity	70	70
To create efficiency	10	10
To educate new technology	15	15
To create confidence in the minds of workers	5	5
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**



# INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN ENGINEERING AND MANAGEMENT (IJRREM)

Tamilnadu -636121, India

Indexed by

Scribd, Google Scholar, Academia



IMPACT FACTOR:1.682

**Inference:**From the above the show that the 70% of the respondents are improves productivity. 5% of the respondents are to create confidence in the minds of workers.

**Table No .4.4.Relationship with Co- worker / Superior**

Relationship	Number of respondents	Percentage
Satisfaction	75	75
Moderately satisfied	14	14
Dissatisfied	11	11
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**

**Inference:**The data in the above table reveals the following pointers.75% of the respondents have opined that they have a satisfaction relationship with their co-worker / superior, 14% feel that the relationship is moderately satisfaction and a minimum of 11% feel it is dissatisfied.

**Table No .4.5.Opinion Regarding Input of Superior / Subordinator Relationship towards Productivity**

Opinion	Number of respondents	Percentage
Great Extent	70	70
Partial Extent	25	25
Some Extent	5	5
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**

**Inference:** The above table depicts the opinion of the employees regarding the impact of superior / subordinates relationship towards the productivity of the employees. About 70% of t he employees feel that their relationship with superior / subordinates influences

# INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN ENGINEERING AND MANAGEMENT (IJRREM)

Tamilnadu -636121, India

Indexed by

Scribd, Google Scholar, Academia



IMPACT FACTOR:1.682

productivity to a great extent, 25% of them opined to a partial extent and 5% feel to some extent.

**Table No .4.6.Awareness Regarding Awards and Rewards given by the Company**

Opinion	Number of respondents	Percentage
Yes	90	90
No	10	10
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**

**Inference:** From the above table shows that 90% of respondents are awards and rewards given to the company.10% of the respondents their is no awards and rewards.

**Table No .4.7.Influence of Awards and Rewards**

Suggestion	Number of respondents	Percentage
Yes	65	65
No	35	35
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**

**Inference:** From above the table 65% of the respondents feel that the awards and influence their productivity level and the rest of 35% of the respondents do not think so.

**Table No .4.8.Level of Satisfaction Regarding the Benefits provided by the  
Organization**

Attributes	Number of respondents	Percentage
Satisfied	70	70
Moderately Satisfied	17	17

**INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN  
ENGINEERING AND MANAGEMENT (IJRREM)**

**Tamilnadu -636121, India**

**Indexed by**

**Scribd, Google Scholar, Academia**



**IMPACT FACTOR:1.682**

Dissatisfied	13	13
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**

**Inference:** Regarding the benefits provided by the organization 70% of the respondents are satisfied, 17% of them are moderately satisfied.13% of the respondents are dissatisfied with the benefits provided to them.

**Table No .4.9.Participation in Management Activities**

Attributes	Number of respondents	Percentage
Yes	75	75
NO	25	25
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**

**Inference**

From the above table shows that 75% Of the respondents participation in management activities. 25% of the respondents their is not participation management activities

**Table No .4.10.Opinion Regarding Impact of Worker Participation in Management towards Productivity**

Attributes	Number of respondents	Percentage
Yes	85	85
NO	15	15
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**

**INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN  
ENGINEERING AND MANAGEMENT (IJRREM)**

**Tamilnadu -636121, India**

**Indexed by**

**Scribd, Google Scholar, Academia**



**IJRREM**



**JIFACTOR**



**IMPACT FACTOR:1.682**

**Inference**

The above table depicts the opinion of the employees about the impact of worker participation in management towards their productivity. About 85% of the employees feel that their productivity can be improved by allowing them to participate in management activities and 15% of them feel them it does not have much impact.

**Table No .4.11.Influence Level of Certain Factors towards Productivity**

Attributes	Number of respondents	Percentage
Salary	60	60
Training & Development	15	15
Benefits	15	15
Workers participation in management	10	10
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**

**Inference**

60% of the employees feel that salary their productivity level. 15% employees feel that the benefits provided have more influence, followed by 15% Employees favoring Training and Development programmes about 10% feel their participation in management activities have an impact on productivity.

**Table No .4.12.The Present Productivity Level of the company**

Attributes	No of respondents	Percentage
Excellent	60	60
Good	25	25
Average	15	15
Poor	0	0

# INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN ENGINEERING AND MANAGEMENT (IJRREM)

Tamilnadu -636121, India

Indexed by

Scribd, Google Scholar, Academia



IJRREM



CiteFactor  
Academic Scientific Journals



JIFACTOR



IMPACT FACTOR:1.682

Total	100	100
-------	-----	-----

### Source: Primary Data

**Inference:** From the above table shows that 60% of the respondents state that they have good productivity level.15% of the respondents state that they have average productivity level of the company.

### Chi square Test

Ho: All the suggestion expressed by the respondents to improve the productivity level is having equal importance.

H1: All the suggestion expressed by the respondents to improve the productivity level is not having equal importance. Let O be the observed frequency and E be the expected frequency.

H0: The die is unbiased

H1: The die is biased

The assumption Ho expected frequency for each face.

Particular	O	E	O-E	(O-E) <sup>2</sup>
Excellent	60	25	35	1225
Good	25	25	0	0
Average	15	25	-10	100
Poor	0	25	-25	625
Total	100	100		1950

# INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN ENGINEERING AND MANAGEMENT (IJRREM)

Tamilnadu -636121, India

Indexed by

Scribd, Google Scholar, Academia



IJRREM



JIFACTOR



IMPACT FACTOR:1.682

$$X^2 = \sum \left[ \frac{(O-E)^2}{E} \right] = \frac{1950}{25} = 78$$

Number of digress of freedom = 4-1 = 3

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i} = \frac{9.524}{1}$$

At 5% level of significance the tabulated value of  $\chi^2$  3 at degrees of freedom is **7.815**. Since the calculated value is greater than the tabulated value the null hypothesis is rejected.

**Inference :** All the suggestion expressed by the respondents to improve the productivity level are having equal importance

**Table No: 4.13 Training Programme Improve the Productivity Level of Employees**

Factor	No of respondents	Percentage
Yes	85	85
No	15	15
Total	100	100

**Source: Primary Data**

**Inference:** From the above table shows that 85% of the respondent's state that the training programme is improve the employees' quality. Other state that their is no improvement.

**Table No: 4.14. Training Programme Improve the Productivity Level of Employees**



**INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN  
ENGINEERING AND MANAGEMENT (IJRREM)**

**Tamilnadu -636121, India**

**Indexed by**

**Scribd, Google Scholar, Academia**



**IMPACT FACTOR:1.682**

**Kruskal Wallis Test**

Particular	Satisfaction level Regarding salary	Relationship with co-works superior	Employee benefit provided by organization
Satisfaction	85	75	70
Moderately satisfied	10	14	17
Dissatisfaction	5	11	13
Total	100	100	100

Confidence level 5%

H0: There is some difference in productivity level.

H1: There is no difference in productivity level.

Particular	Satisfaction level Regarding salary	R1	Relationship with co-works superior	R2	Employee benefit provided by organization	R3
Satisfaction	85	9	75	8	70	7
Moderately satisfied	10	2	14	5	17	6
Dissatisfaction	5	1	11	3	13	4
Total	100	12	100	16	100	17

# INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN ENGINEERING AND MANAGEMENT (IJRREM)

Tamilnadu -636121, India

Indexed by

Scribd, Google Scholar, Academia



IJRREM



JIFACTOR



IMPACT FACTOR:1.682

$$\begin{aligned}
 H &= \frac{12}{N(N+1)} \left( \frac{T_1^2}{n_1} + \frac{T_2^2}{n_2} + \dots + \frac{T_3^2}{n_3} \right) - 3(n+1) \\
 &= \frac{12}{9(9+1)} \left( \frac{144}{3} + \frac{256}{3} + \frac{289}{3} \right) - 3(9+1) \\
 &= 0.133 \left( 229.66 \right) - 30 \\
 &= 30.54 - 30 \\
 H &= 0.544 \text{ Calculated,}
 \end{aligned}$$

Table value:  $r=k-1 = 3-1=2$  and Tabulate value at 5% level of Significance for 9 degree of freedom is = 5.991

**Table No: 4.15.Respondents Suggestion to Improve Productivity Level**

Suggestions	Number of respondents	percentage
More improvement in safety measures	10	10
Loan for children education	15	15
More facilities in working place	25	25
Relaxation time to be increased	50	50
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Primary Data**

**Inference:** To improve the productivity level 50% of the respondents expecting relaxation time to be increased 5 – 10 minutes, 25% of them suggest more facilities in



**IJRREM**



**IMPACT FACTOR:1.682**

working place, 15% of them anticipating educational loan for children and 10% of them expecting more improvement in safety measures.

## **Chapter –V**

### **5.1. Findings**

The average age level of the respondents is 40 years. The average monthly income of the respondents has been found to be above 25000. The average 45% of the respondents have the diploma and IT courses and 30% of them a of them have completed SSLC and 10% of them have completed engineer. The 45% of the respondents are having 15 years above of experience. It can be inferred about 70% that majority of the employees about 70% feel that training program will improve their productivity level. The 70% of the respondents feel that their relationship with superior's, co-workers, influences their productivity to a great extent. The 90% of the respondents are unaware about the awards and rewards given by the company. The 65% of the respondents feel that the awards rewards influence their productivity level. The 75% of the respondents feel that there is no scope for the employees to participate in management activities. The 85% of the respondents feel that their productivity can be improved by allowing them to participate in management activities.

### **5.2 Suggestion**

Since majority about 70% feel that training program me improves their productivity the company can take farther steps to increase the number of training program me in a constructive manner. Having a better relation with superior/subordinate influences the productivity level of employees to a great extent. The HR department can take steps to maintain a good human relation among the employees. Majority about 75% of the employees feel that there is no scope for the employee to participate in

**INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN  
ENGINEERING AND MANAGEMENT (IJRREM)**

**Tamilnadu -636121, India**

**Indexed by**

**Scribd, Google Scholar, Academia**



**IMPACT FACTOR:1.682**

management activities. Measures can take to allow the employees to participate as it has a more impact on improving the productivity level of employees. Steps can be taken to improve the safety measures, loan for children, facilities and relaxation time provided to the employees.

### **5.3 Conclusion**

Satisfaction of employees towards his job has an impact towards their productivity. This study has been conducted in **Maa Fruits Industries in Krishnagiri District** to analyze the various factors which influence the productivity level of the employees. It has also focused itself towards analyzing the level of the satisfaction of employees towards the factors influencing their productivity level and also their areas of dissatisfaction.

### **References**

- 1) David M. Levine – BUSINESS STATISTICS MANAGEMENT –2005(3<sup>rd</sup> edition) Dorling Kindersley Delhi – 110092.
- 2) John. M. Ivance vich – HUMAN RESOURCE MANAGEMENT –2008(10<sup>th</sup> edition) Tata Mc Graw – Hill Delhi – 110032.
- 3) S. Chand – PRODUCTION MANAGEMENT –2005(5<sup>th</sup> edition) New Delhi – 110055.
- 4) N.G. Nair - PRODUCTION MANAGEMENT –1996(3<sup>rd</sup> Edition) Delhi – 110032
- 5) Kothari – RESEARCH METHODOLOGY – 1998(3<sup>rd</sup> edition) New Delhi – 110058.

**Web site**

[www.ijrrem.in](http://www.ijrrem.in)

ISSN (Online)No:

INTERNATIONAL JOURNAL OF RESEARCH REVIEW IN  
ENGINEERING AND MANAGEMENT (IJRREM)

Tamilnadu -636121, India

Indexed by

Scribd, Google Scholar, Academia



IJRREM

Scholarsteer  
—Scholarly Information—



CiteFactor  
Academic Scientific Journals



JIFACTOR

JOURNAL  
FACTOR

ISSN  
INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER  
INDIA

IMPACT FACTOR:1.682

- 1) [www.google.com](http://www.google.com)
- 2) [www.bhel.com](http://www.bhel.com)