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# STUDY OF FACTORS AFFECTING LABOR PRODUCTIVITY AT A MANNING MARKET IN THE COLOMBO, SRI LANKA

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## Abstract:

*Sri Lanka is a labour oriented developing country. There are excess labour resources. Labour productivity is the one of the major concepts of human resource management. The purpose of this study was to determine the factors affecting labour productivity in Manning Market. Therefore, the main objective of this research is to investigate and quantify the effects and relative influence of the factors which highly affecting in determining the labour productivity. Furthermore to identify the factors this improves the labour productivity and also identifies the labour problems in Manning Market. To achieve the above objectives, the targeted population of the Manning Market is 1178 stoles for this study. Applying the random sample as a sampling technique, 100 stole has selected for further study. Primary data were collected by using the questionnaire method and analyzed has done by applying the multiple regression model and chi square analysis. As a result of the regression model, 9 variables are highly significant in the productivity. Such as salary satisfaction, absenteeism, quality of good, experience, less competition etc. The findings show the significant effects of these factors and reasons for that. As a result of the chi square test 7 variables are significant in the replacement of Manning Market in Paliyagoda area. Such as job security, government law, working environment change, lack of facility, poor working environment, storage location and shortage of water and power. The results of the chi square test help to determine the labour problems in Manning Market. Findings from this study can be used to development of labour attitudes and decision making process.*

## Keywords:

*Labour, Labour Productivity, Manning Market.*

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## 1.0 INTRODUCTION

Labour productivity is concerned with the amount of output that is obtained from each employee. It is a key measure of business efficiency, particularly for firms in which the production process is labour-intensive. Today every organization has to face highly competition, therefore organization try to do accurate thing at the right time. In that situation human resource management plays major role to achieve organizational goals. Labour productivity is the one of the major concept of human resource management. The empirically study helps to find factors affecting to determine the labour productivity in the manning market. For the purpose of this study the former definition is adopted and labour productivity is expressed as follows.

*Labour productivity = Output quantity /Work hours*

The Manning Market is located in Colombo on a three-and-a-half acre land. Vegetables and fruits transported to the city from all parts of the island are sold to wholesale at this market, which was earlier situated at Kachcheri Road Colombo. In 1983 it was shifted to the present Manning Stores, which was built during the colonical era for storing sugar. Eight store rooms there were divided into small sections and given to wholesale and retail traders to be used as vegetable and meat stalls. Currently there are nearly 1178 wholesale and retail stalls at the Manning Market. Wholesale and retail markets owned by the Municipality of Colombo are managed by the Council itself. A market supervisor, who is responsible for market management, has been appointed for each market. It was reported that he has no effective managerial skills and his presence in the manning market is rare. Similarly, some of them are vulnerable to corrupt practices. Even the Municipal council has placed little priority on market management. As a result, many markets are in a bad condition, with no cleaning or any renovation. Even previously open spaces in the markets have been occupied by illegal traders, causing physical congestion, traffic, health and environmental problems.

## 2. RESEARCH PROBLEM

Productivity is a measure of the ability to create goods and services from a given amount of labour, knowledge, time or any combination. In general, labour productivity signifies the measurement of how well an individual entity uses its resources to produce output from inputs. Productivity measurements have focused on the individual, the firm, selected industrial sectors and even entire economies. Achieving better labour productivity requires detailed studies of the actual labour cost. Various labours have different variables affecting their productivity levels. Better productivity can be achieved if the labour experiences, personal health, motivational factors, personal skills, work location etc. In today one of the biggest concern for any organization is to improve their productivity, representing the effective and efficient conversion of resources into marketable products and determining business profitability. The empirical study helps to find factors affecting to determine the labour productivity in Manning Market.
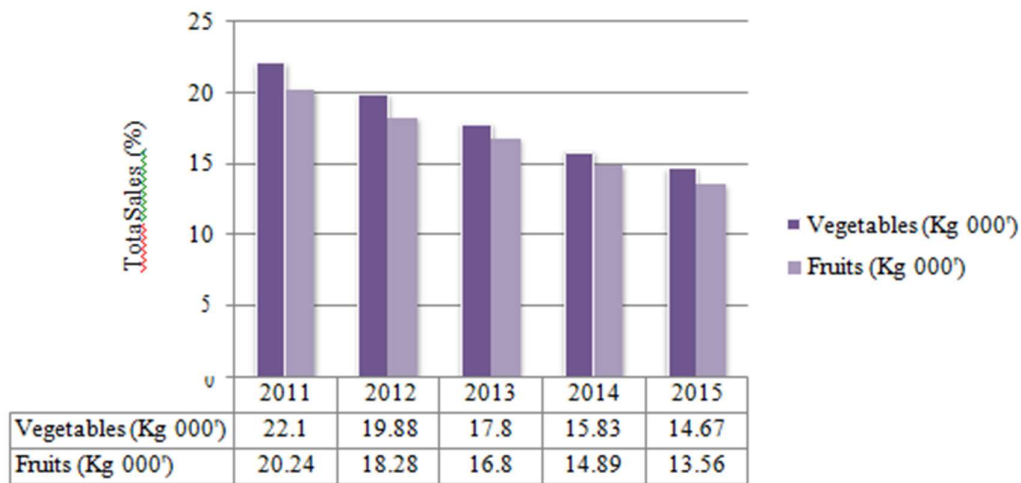
| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Vegetables (Kg 000') | 22.1 | 19.88 | 17.8 | 15.83 | 14.67 |
| Fruits (Kg 000') | 20.24 | 18.28 | 16.8 | 14.89 | 13.56 |

Figure 1: Total Sales in Manning Market 2011-2015

According to the above results the sales has been declining approximately 7.43% of vegetables and 6.68% of fruits. Due to this situation this study investigates important factors affecting labour productivity in Manning Market.

## 3. OBJECTIVES OF THE STUDY

### General objective of the study

The general objective is to analyze the factors affecting labour productivity in Manning Market in Colombo District, Sri Lanka.

### Specific objectives of the study

- ➢ To identify the factors which improves the labour productivity in Manning Market?
- ➢ To determine the labour problems in Manning Market (replacement of Manning Market in Paliyagoda area).

## 4. MATERIALS AND METHODS

The study was a cross-sectional survey among a representative sample of 100 male and female employees from manning market with varying socio-economic status and varying levels of education, from both urban and rural localities in the Manning Market, Colombo. A sample questionnaire was used by the study to labour productivity in the Manning Market, Colombo. The method was adapted Simple Random Sampling Technique for collecting the sample. Bivariate (cross-tabulation and chi-square tests) and Multiple Linear Regression (MLR) analysis were used for the analysis of the data.

### Fieldwork & Data Collection:

Data on the labour productivity of the labour were collected from the Manning Market, Colombo. In this study, a pre-structured questionnaire was used to collect primary data in the interviews with the labours.

### Factors Affecting Labour Productivity Questionnaire:

The questionnaire was prepared considering the identified factors affecting labour productivity and was sent to 100 labours that are selected in Manning Market. The questions that consisted in questionnaire are both open- ended and close-ended. It means respondents can answer freely from their own words for some questions are limited by giving two or multiple options. Questionnaire consist three sections.

- ➢ In first part questions in the respondent were created to collect information such as demographic information including respondent's age, education status, working status etc.

- In second part questions for the respondent were created to collect information such as job position, experience of the work, location of the current work place and previous work place, job satisfaction and the attitudes of the labour on his job. Likert scale questions used for this information gathered.
- In third part questions for the respondent were created to collect information such as which factors affect to labour productivity in Manning Market. e.g. lack of experience, misunderstanding among labours, lack of competition, absenteeism, poor work environment etc. Likert scale questions used for this information gathered.

**Dependent Variable:**

A dependent variable is a variable which measure in the experiment and what is affected during the experiment. In this study the dependent variable is labour productivity in Manning Market.

**5. RESULTS AND FINDINGS**

This study has been analyzed the factors affected to the labour productivity in Manning Market. Here multiple regression model and chi square analysis used as analyzing tools. Multiple regression is a process that deriving the statistical relationship between one dependent variable and few independent variables which can affect dependent variable. In addition chi square analysis used to find out the relationship between two categorical variables.

The main objective of this study was to identify the factors affected to the labour productivity in Manning Market. In order to determine which characteristics had a significant impact on the labour productivity. A regression essentially measures the impact of one or more independent variables on a single dependent variable. In this study, labour productivity is the dependent variable and independent variables are age of labour, experience, work environment, quality of good, salary satisfaction etc.

$$Yi = 142.6 + 18.4X1i - 26.0X2i + 20.6X3i + 24X4i + 28.8X5i - 16.9X6i - 26.6\ X7i + 38X8i + 20.6X9i - 16.7X10i - 15.3X11i + Ui$$

*Where:*

*Yi= Labour productivity*

*X1i = Transport facility (moderate level) X2i = Salary satisfaction (agree level)*

*X3i = Health security (strongly disagree level) X4i = Age of labour (Not applicable level) X5i= Quality of good (Does not affect it level) X6i = Absenteeism (Affect it level)*

*X7i=Dispute with seller (Does not affect it level) X8i = Absenteeism (Moderate level)*

*X9i = Experience (Between 4-7 level)*

*X10i = Less competition (Does not affect it level) X11i = Transport facility (Not applicable level)*

The regression equation shows the relationship between labour productivity and other selected variables. Using this equation easily identified the factors affected to the labour productivity.

Table 1: ANOVA Table

| Source | DF | SS | MS | F | P |
|---|---|---|---|---|---|
| Regression | 19 | 149939.2 | 7891.5 | 8.31 | 0.000 |
| Residual error | 80 | 75928.4 | 949.1 | | |
| Total | 99 | 225867.6 | | | |

Table 2: Model Summary

| S | R-Sq | R-Sq (adj) | Mallows C-P |
|---|---|---|---|
| 30.5 | 63.67 | 59.13 | 10.5 |

- **Transport facility:** The regression coefficient of this variable has recorded as 18.4. When the transport facility of the ones who are in moderate level increase from 1kg per hour it increase the productivity from 18.4kg per hour relative to the reference level. (Ones who are in transport facility directly affect it level)

- **Salary satisfaction:** The regression coefficient of this variable has recorded as -26.0. When the salary satisfaction of the ones who are in agree level decrease from 1kg per hour it decrease the productivity from -26.0kg per hour relative to the reference level. (Ones who are in salary satisfaction strongly agree level)

- **Health security:** The regression coefficient of this variable has recorded as 20.6. When the health security of the ones who are in strongly disagree level increase from 1kg per hour it increase the productivity from 20.6kg per hour relative to the reference level. (Ones who are in health security moderate level)

- **Quality of good:** The regression coefficient of this variable has recorded as 28.8. When the quality of good of the ones who are in does not affect it level increase from 1kg per hour it increase the productivity from 28.8kg per hour relative to the reference level. (Ones who are in quality of good directly affect it level)

- **Dispute with seller:** The regression coefficient of this variable has recorded as -26.6. When the dispute with seller of the ones who are in does not affect it level decrease from 1kg per hour it decrease the productivity from -26.6kg per hour relative to the reference level. (Ones who are in dispute with seller directly affect it)

- **Absenteeism:** The regression coefficient of this variable has recorded as 38. When the absenteeism of the ones who are in moderate level increase from 1kg per hour it increase the productivity from 38kg per hour relative to the reference level. (Ones who are in absenteeism directly affect it)

- **Experience:** The regression coefficient of this variable has recorded as 20.6. When the experience of the ones who are in between 4-7 level increase from 1kg per hour it increase the productivity from 20.6kg per hour relative to the reference level. (Ones who are in experience more than 7 years)

- **Less competition:** The regression coefficient of this variable has recorded as -16.7. When the less competition of the ones who are in does not affect it level decrease from 1kg per hour it decrease the productivity from -16.7kg per hour relative to the reference level. (Ones who are in less competition directly affect it level)

- **Transport facility:** The regression coefficient of this variable has recorded as -15.3. When the transport facility of the ones who are in not applicable level decrease from 1kg per hour it decrease the productivity from -15.3kg per hour relative to the reference level. (Ones who are in transport facility directly affect it)

Considering above table 2 show the stepwise regression tenth step was recorded the best fitted model. In this model recorded the highest R-Sq (adj) value as 59.13% that mean dependent variable explain by 59.13%, of explanatory variables in the sample. If R square (adj) > 50% the model is well fitted. It is good for the interpretation. In here this model is well fitted it is good for the interpretation. Mallows C-P is absolutely in the number of variables. In the above table 4.3 shows the value of Mallows C-P 10.5.

Chi square test has used for identify the association between dependent variable and independent variables. So, in this study dependent variable is preference of replacement of Manning Market in Paliyagoda and independent variables are job security, government law, working environment change, storage location, shortage of water and power, change order from supplier and change order from seller etc.

**Hypothesis:**

H1A :    There is an association between preference of replacement of Manning
         Market in Paliyagoda area and selected independent variable.

Table 3: Chi-Square Analysis Summary

| Variable | P- value | Conclusion |
|---|---|---|
| Job security | 0.030 | There is an association between preference of replacement of Manning Market in Paliyagoda area and job security. |
| Government law | 0.006 | There is an association between preference of replacement of Manning Market in Paliyagoda area and government law. |
| Working environment change | 0.020 | There is an association between preference of replacement of Manning Market in Paliyagoda area and working environment change. |
| Lack of facility | 0.018 | There is an association between preference of replacement of Manning Market in Paliyagoda area and lack of facility. |
| Poor working environment | 0.023 | There is an association between preference of replacement of Manning Market in Paliyagoda area and poor working environment. |
| Storage location | 0.020 | There is an association between preference of replacement of Manning Market in Paliyagoda area and storage location. |
| Shortage of water and power | 0.022 | There is an association between preference of replacement of Manning Market in Paliyagoda area and shortage of water and power. |
| Organization culture | 0.775 | There is no association between preference of replacement of Manning Market in Paliyagoda area and organization culture. |
| Change order from supplier | 0.243 | There is no association between preference of replacement of Manning Market in Paliyagoda area and change order from supplier. |
| Change order from the seller | 0.287 | There is no association between preference of replacement of Manning Market in Paliyagoda area and change order from the seller. |

According to the table 3 shows the association between preference of replacement of Manning Market in Paliyagoda area and other explanatory variables. In here 7 explanatory variables such as job security, government law, working environment change, lack of facility, poor working environment, storage location, shortage of water and power have an association with dependent variable (Preference of Replacement of Manning Market in Paliyagoda) at 5% significance level and other remaining variables such as organization culture, change order from supplier and change order from the seller have not association with dependent variable.

## 6. SUMMARY

The main objective of this study was to identify factors affecting to labour productivity in Manning Market. This study investigates all possible factors through a pre - determined structured questionnaire. It is often used to measure respondents' attitudes by using likert scale questions. The target population of the Manning Market is 1178 stoles for this study. Sample of 100 stole drawn from the population. The survey results are analyzed by using multiple regression analysis and chi square analysis. In addition to determine the labour problems in Manning Market and test whether it has any association between selected independent variables. (Job security, working environment change, etc). Following results and findings are based on the factors affecting labour productivity in Manning Market.

➢ According to the working experience level of the labour is also significantly and positively related with productivity. As well as majority of the labours represent the more than 7 years working experience. It was 45% of the total respondents. This happens because when working experience increase, the productivity also tends to increase.

➢ Considering salary satisfaction level of the labour is also significantly and negatively related with productivity. As well as majority of the labours represent low attitudes of their salary payments. It was 43% of the total respondents. Because they work with low attitudes so their productivity also tends to decrease.

➢ According to the less competition among labours is also significantly and negatively related with productivity. In here majority of the labours represent low attitudes of less competition between among labours. It was 60% of the total respondents. Because they work with less competition so their productivity also tends to decrease.

➢ Considering variable dispute with sellers is significantly and negatively related with productivity. It was 44% of the total respondents. As the dispute may cause lot of problems among sellers. Sometimes they may not like to work because of the stressful situation. So when the disputes increase among sellers the productivity decrease.

➢ According to the variable of quality of good is significantly and positively related with productivity. In here majority of the labours high attitudes of the quality of the goods. It was 49% of the total respondents. This happens because when quality of good increase the productivity also tends to increase.

➢ According to the variable of absenteeism is significantly and positively related with productivity. It was 69% of the total respondents. As the absenteeism directly affected their productivity. So when the absenteeism decreases the productivity also tends to increase.

Majority of the respondents disagree to replacement of Manning Market in Paliyagoda area. It was 55% of the total respondents.
Following results and findings are based on the replacement of Manning Market in Paliyagoda area.

➢ Affected to the job security
➢ Should follow the government low
➢ Working environment change

- ➢ Lack of facilities
- ➢ Storage location
- ➢ Shortage of water and power

In the above problems generate by the replacement of Manning Market in Paliyagoda area. If the markets replace far away from the Colombo town area, sales decrease due the distance problem. If the markets replace the new location or working environment changes, employees can't adjust to the new location easily.

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