Labor Productivity Analysis and Factors Affecting Oromia Credit and Saving Share Company

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This is to certify that the thesis prepared by Jifara Mirkena, entitled: Labor Productivity Analysis and Factors Affecting Oromia Credit and Saving Share Company and submitted in partial fulfillments of the requirements for the degree of Master of Science (Mechanical and Industrial Engineering) complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Declaration

I hereby declare that the work which is being presented in this thesis entitled "Labor Productivity Analysis and Factors Affecting Oromia Credit and Saving Share Company" is original work of my own and has not been presented for a degree of any other university and all the resources of references used for the thesis have been duly acknowledged.

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This is to certify that the above declaration made by the author is correct to the best of my knowledge.

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Abstract

Now day's productivity is an issue of any organization that they talk about it and give emphasis to survive and compete in the dynamic market. Among other partial productivities, several research works indicated that the productivity of labor is the prime concern and it is considered as the engine of any kind. Because much of the success of any organization relies up on the productivity of its workforce and for many businesses the most significant cost is labor, all efforts are focused on improving workforce productivity.

Never the less the Oromia Credit and Saving Share company has been indicating reasonable growth in the first decade of its operation, its staff productivity was very low as compared to the resource allocated for the performance of its huge workforce. In an attempt to improve this, this study aims to analyze the staff productivity of OCSSCO and identify the factors affecting it. The study chosen labor productivity based on the results found from secondary data of the company and includes an analysis of statistical correlation of primary data between the factors affecting labor productivity. The study used productivity index concept to identify which partial productivity adversely affecting OCSSCO's productivity and confirmatory factor analysis to identify the vital factors affecting the staff productivity of it.

The findings of this thesis indicated that, the significantly factors impacting staff productivity of OCSSCO are motivation and commitment, staff retention and working environment factors. Even though the impact of leadership and staff training results investigated on labor productivity of OCSSCO were not significantly supported, these two factors are strongly correlated with the other three left factors which their effects directly influence these factors.

The developed conceptual frame work model helps the company to use human resource efficiently and effectively by improving the vital factors.

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List of abbrivations/acronyms

AMOS	Analysis of Moments Structure
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
C.R.	Critical Rate
DEA	Data Envelope Approach
DF	Degree of Freedom
EPA	European Productivity Agency
GOF	Goodness Fit
G.C	Gregorian calendar
HR	Human Resource
HRM	Human Resource Management
IJMSSR	International Journal of Management and Social Sciences Research
JPC	Japan Productivity Center
MFI	Microfinance Institution
MPI	Malmquist Productivity Index
MFB	Microfinance Bank
MFP	Multi Factor Productivity
NNFI	Non Normed fit Index
OCSSCO	Oromia Credit and Saving Share Company

PAR	Portfolio at Risk
PPC	Partial Productivity of Capital
PPE	Partial Productivity of Energy
PPL	Partial Productivity of Labor
PPM	Partial Productivity of Miscellaneous
ROA	Return on Asset
ROE	Return on Equity
SEM	Structural Equation Model
S.E	Standard Error
SPSS	Statistical Package for Social Scientists
RMSEA	Root Mean Square Estimation Approximation
RMR	Root Mean Square Residual
TP	Total Productivity
TLI	Tucker Luwis Index
X^2	Chi- Square

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the Study

In global market competitiveness, there is a need for organizations to ensure continual improvements (Rust & Chung, 2006). One of the major determinants of competitiveness, whether at national, industrial or organization level, is improving productivity (Spohrer & Maglio, 2010). This improvement generally involves better utilization of resources and higher level of quality. Productivity improvement requires designing and successful implementing of sound programs (Den Hartigh & Zegveld, 2011).

Productivity is a very comprehensive concept, both in its aim and also in its operational content. It can be considered in many ways and on different levels. It has also been defined in different ways by various researches and practitioners in the manufacturing and service industries. In general Productivity in microfinance industry also is a relative concept. That means productivity of a company in the present year could be measured relative to its productivity last year, or it could be measured relative to the productivity of another company in the same year. It is even possible to compare the productivity of an industry over time or across countries (Fiorentino et al., 2009).

Globally, different researchers have conducted various studies on the productivity measurement of microfinance industries and investigated the determinants that determine the performance of productivity as per their context. But little researches are conducted on labour productivity of this sector when we compare to the other sectors of whether manufacturing or other service sectors.

Thus, this study focuses on labour productivity of Oromia Credit and Saving Share Company (OCSSCO) by differentiating the gab existing between various researches have been conducted on different microfinance institutes and by comparing as per the current situations of OCSSCO's regarding the factors affecting the employee productivity of this service industry.

When various studies are conducted the employee productivity measurement in different countries of microfinance institutes are limited on loan officers' productivity measurement. However,

measuring only the loan officers' productivity in such away does not represent all productivity of all employees of the organizations. Even though direct labour productivity of microfinance institutes are mainly depend on the loan officers and other operation experts, the leadership role and other supportive staffs' roles are affecting the productivity of the organization. Because if the other operational and supportive staffs' productivity is less productive its effect will be reflected on the loan officers' productivity of the company. Hence the productivity of all individual employees should be evaluated respect to base line time. Similarly, the productivity of OCSSCO directly or indirectly depends on the human power factors and other input factors.

Thus, this research explores the relative labor productivity of OCSSCO and factors affecting its employee productivity and finally recommends on which factor(s) this company should give high attention to improve the satisfactory of its internal customers and results improved staff productivity after testing the proposed hypothesis.

1.2. Statement of the Problem

The success or failure of any organization, whether governmental or non-governmental; business institution (financial or non-financial) and others is based on effective management of its human powers and other resources. Today this world is full of competition and any business sectors have to explore methods of improving their employees' productivity so that they can compete and survive in this dynamic global market.

Oromia Credit and Saving Share Company (OCSSCO) is one of the largest institutions in microfinance industry which strives to contribute its role in the poverty reduction campaign of government. Since its establishment in 1998 G.C to 30/12/2017, OCSSCO has served over 2 million clients. In the first decade of its operation, OCSSCO has been enjoying reasonable growth such as very good amount of loan disbursed, repayment, client outreach and volume of savings mobilized which mainly have direct relationship with its employee productivity.

In 2016/17 Fiscal Year its active clients reached over 826,157, loan disbursed was 6.34 billion birr and saving mobilization achievement was over 4.83 billion birr during this fiscal year, while company's total workforce (human power) of the company during the fiscal year mentioned above was 4804 (OCSSCO, 2017). As compared to the resources available in its operational mandate area, existing number of households that can access credit and saving services, and number of

employees deployed to serve customers the company have not been in a convincing growth trend during past operation years..

Given with this huge workforce and available resource in the region, the company's staff productivity was very low. This means very recently; the company performance regarding its staff productivity has become standstill as compared to the number of its employees' increases and other resources are allocated (OCSSCO, 2017).

Therefore, this study is intended to analyze its employee productivity, identify factors that adversely affect employee productivity based on research problems discussed above and finally recommends for continuous staff productivity improvement after testing the results of these factors.

1.3. Research questions

The general research question of this research paper focuses on the labor productivity analysis and the factors affecting labor productivity in OCSSCO.

The specific questions are:

- What are the parameters that determine the productivity of OCSSCO?
- How the productivity of OCSSCO is measured?
- What are the main challenges of the OCSSCO that have hindered its employee productivity?
- How to validate the degree of affecting these factors in OCSSCO and how does it improve its staff productivity?

1.4. Objective of the Research

1.4.1. General Objective

The general objective of this study is to examine the labour productivity, to identify the factors affecting staff productivity of OCSSCO and finally develop the conceptual frame work model for the improvement of staff productivity of it.

1.4.2. Specific Objectives

The specific objectives of this research:

- To identify the determinants to analyze the employees' productivity of OCSSCO.
- To identify the measures of OCSSCO staff productivity.
- To assess and identify the factors affecting the employees' productivity of OCSSCO.
- To identify the way of justifying the vital factor (s) and propose the proper conceptual frame work model for labor productivity improvement of OCSSCO for its efficient human resource utilization and increase productivity.

1.5. Significance of the Research and Beneficiaries

This research at first benefits this company how can it properly utilize its labor resource and improve its outputs/inputs resource of productivity by applying the recommended directions to investigate the way of staff productivity improvement. It improves its internal and external customer's satisfaction. Moreover, the study can be applied to in other similar microfinance institutes to measure and improve their labour productivity. On the other hand, this research can be a source of information for other researchers to conduct further in this sector.

1.6. Scope of the Research

This research focuses on the labour productivity trends and on all assessment of factors affecting it in OCSSCO and propose its recommendation for improving staff productivity based on its properly human resources utilization. Since the time constraints and resources are limited, this study focuses only on Head Office, four Shoa Zones Office and selective branches which are found in Special Zone around Addis Ababa.

CHAPTER TWO

2. RELATED LITERATURE REVIEW

The aim of this chapter is to review various literatures which were written in the area of productivity concepts and measurement approaches, techniques to measure the labor productivity of microfinance institutes and factors affecting labor productivity in service sectors.

2.1. Definitions of Productivity

Productivity is a very comprehensive concept, both in its aim and also in its operational content. It can be considered in many ways and on different levels. It has also been defined in different ways by various researches and practitioners in the manufacturing and service industries.

According to the definition of European Productivity Agency (EPA) and Japan Productivity Center (JPC), productivity is as a social concept and introduced as an "attitude of mind". Productivity implies development of an attitude of a mind and a constant urge to find better, cheaper, easier, quicker, and safer means of doing a job, manufacturing a product and providing a service (Parastoo et al., 2012). It also aims at the maximum utilization of resources for yielding as many goods and services as possible, of the kinds most wanted by consumers at lowest possible cost (Ram Naresh Roy, 2005). According to Pritchard R. D (1995) he illustrated three definitions: (1) Productivity is output/input, in other words is measure of efficiency (techno-economic view); (2) Productivity is composition of effectiveness and efficiency points out to output/input +output/goal as productivity); and (3) It is referring to broader concept that whatever makes the organization has a better function.

Productivity is commonly defined as a ratio of a volume measure of output to a measure of input use. Productivity as well as efficient use of resources (labor, capital, land, materials, energy and information) to produce goods and services is defined. Productivity can also be used to define the relationship between outcomes and length of time (Babaeinesami et al., 2016).

Productivity is a sensitive measure, which may be used to explain why institutions having the same resources and working in the same environment, achieve varying results. It is a measure of the

efficiency and effectiveness with which resources are used to produce the output of goods and services of the quality needed by consumers and society in the long-term (Wanjiru, 2000).

Productivity shows whether the activity of an organization is efficient and effective. Though the terms like productivity, efficiency and effectiveness are used together and practicing sometimes alternate their meanings, however we must not identify productivity with efficiency and/or effectiveness. Productivity requires both efficiency and effectiveness, because a certain activity will not be productive if it is only efficient, but not effective, or effective, but not efficient (Parastoo,et al., 2012). Productivity in economic position is defined as the relation between output and input. Input element in an organization consists of resources used in the product creation process, such as labour, materials, energy. Output consists of a given product, service and the amount of both (Sahay, 2005). Even though the productivity of manufacturing and service sectors has similarities regarding to output to input concepts, many researchers; (Abhinav publication, 2014, Eimene et al., 2005 and McLaughlin, 1990) elaborated their difference as follow:

Table 2.1: The difference between manufacturing and service productivity

No.	Manufacturing productivity	Service productivity
1.	Its application concept is more simple	Its application concept is more complicated task
2.	Its product is tangible	It has heterogeneous nature and intangibility
3.	Its Productivity concept is analyzed in the scope of organization	Its scope is larger and involves an external element from the organizational position – customer
4.	Quality aspect in manufacturing is not gauged, because input and output are measured by quantity units which quality is seemingly the same.	The quality in service sector is very important. Customers often evaluate a given service not only by its amount
5.	Output in manufacturing is measured by quantity units.	Output commonly is gauged both by the quantity and quality aspects.
6.	Input elements such as materials, machines and energy are very important	Element in service sector is labor because service sector is more personnel-intensive comparing to manufacturing.

2.2. Service Productivity

Many researchers define service productivity at the outset of analysis as the ability of a service organization to use inputs for providing services with quality matching the expectations of customers (Jonas Rutkauskas, 2005).The quantity and quality of service sector cannot be treated in isolation, because it may be impossible to separate the impact of service process on conventional productivity from its impact on service quality (Kontaghiorghes, 2003). Hence, both the quantity and quality aspects must be considered together to provide a joint impact on the total productivity of the service organizations.

$$\text{Service Productivity} = \frac{\text{(Quantity of Output and Quality of Output)}}{\text{(Quantity of Input and Quality of Input)}}$$

In this ratio, the quantity aspect of service productivity is identical to the manufacturing productivity and consists of material, labor, and capital. Service business is personnel-intensive; therefore productivity of many service spheres is low compared to manufacturing sphere. The concept of productivity is also being linked with quality of output; input and the interacting process between the two.

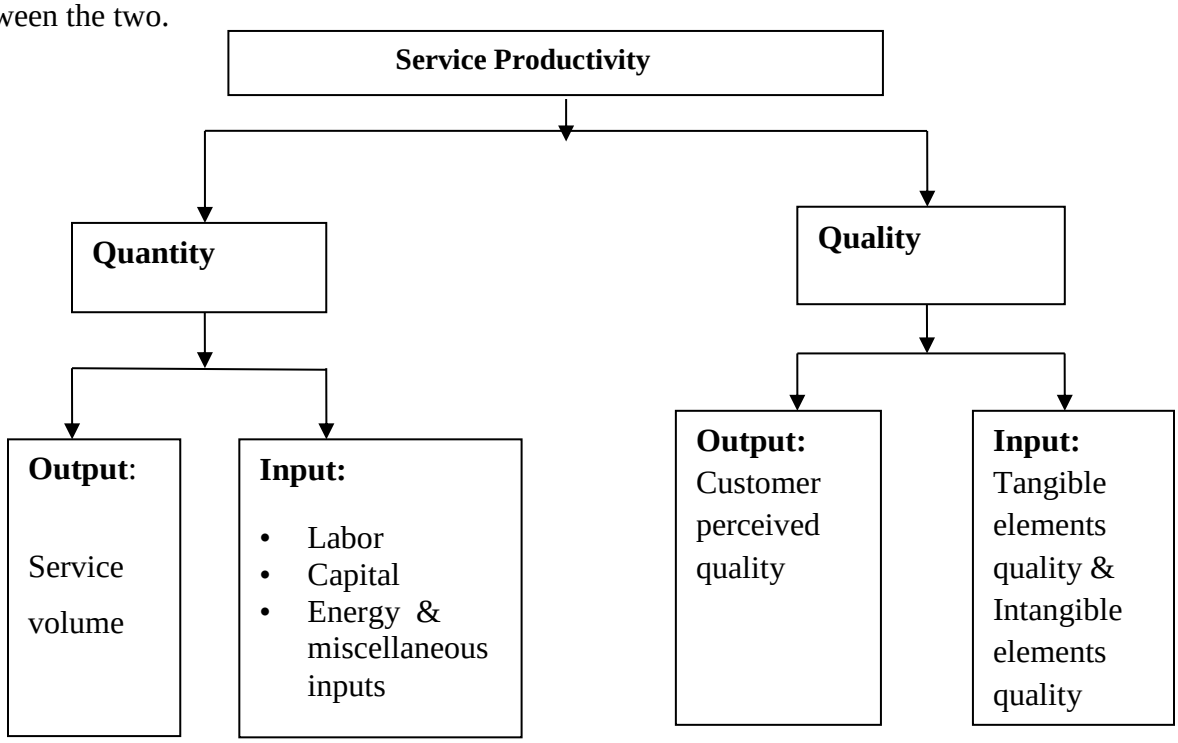


Figure 2.1: Principal Scheme of service productivity (Vourinen et.al., 1998)

An important element is the quality of the work force, its management and its working conditions as it has come to be noticed that rising productivity and improved quality of working life go hand in hand.

At least there are two reasons for inadequacy of this type of service sector productivity measures (sahay, 2005). The first reason is the fact that input and output of service sector productivity consist not only of quantitative elements but also qualitative (Reid, 2005). The second reason is the fact that quality and productivity in all the sectors of service are strongly correlative (Gummesson, 1992). Customer involvement to the organizational activity in the service sector generates many output quality variations. Therefore, output of service sector in many cases could be measured only by measuring its quality variations.

Therefore many providers of services investing in technologies as alternative to using labor (e.g. automated teller machines replace operators, World Wide Web business replace sellers in the shops). It shows a way to increase productivity through investing in the technologies expenses of input element of capital. Though capital mostly impacts service productivity, we have no use for only this partial (capital) productivity measures. It might seem that output, amount or quantity is the primary factors to measure productivity. When a proposed service consists of one or several standardized components, output of service is easy to measure (Quinn and Paquette, 1990). Therefore output can consist of a number of standardized services adapted to individual customers (e.g. in the case of a unique service package). For example there is no consensus definition of bank output. This fact is connected with the intangible, multiple and interdependent nature of the services that banks provide to their customers. In particular, banks provide a wide range of services which are often difficult to separate and price independently, while other services are provided without any explicit charge (Panayiotis et al., 2008). Therefore defining the service output is a difficult task.

2.3. Productivity of Microfinance Institutes

Globally, different researchers have conducted numerous studies on the productivity measurement of banking industries by using different techniques and investigated the factors that determine the performance of productivity as per their context. However, in microfinance industry services, little attention has been paid by researchers to investigate this crucial factor.

As in other sectors, generally Productivity in microfinance industry also is a relative concept. That means productivity of a company in the present year could be measured relative to its productivity last year, or it could be measured relative to the productivity of another company in the same year. It is even possible to compare the productivity of an industry over time or across countries (Musa et al., 2014).

Bassem (2008), Ahmad (2011), Kipesha (2012) and Singh & Sharma (2013) are researchers that studied the efficiency of micro finances by using Data Envelopment Approach (DEA) in terms of the importance of social goals in serving the poor clients rather than the role in making profits for the institutions and investors. There are also studies that compare both efficiency using production and intermediation such as studies done by Sedzro & Keita (2009), Haq et al., (2010) and Kipesha (2013). Other approaches used include microfinance scopes and objectives (Annim, 2010), also financial and social approach (Kablan, 2012). However, this studies limited to efficiency and haven't gave the attention on the factors affecting it.

Izah and Siti (2014) examined the efficiency and productivity of Cambodian microfinance institutions during the period 2008-2011 by using non-parametric Data Envelopment Approach (DEA) and Dynamic Malmquist Productivity Index (MPI) technique and found that the MFIs in Cambodia have exhibited productivity growth of 1.7% during the period 2008-2009, a regress of 0.6% during 2009-2010 and a positive change of 0.9% in 2010-2011 and investigated as technological change had been consistently influencing the productivity change during the period of study. However, this study is limited to the technological change factor.

Nawaz (2010) studied the first attempt to measure the financial efficiency and productivity of global MFIs considering the effect of subsidies. The analysis applied consist of calculation of technical and pure efficiency scores, calculation of DEA-based Malmquist indices to analyze the inter temporal productivity change and analysis of regression to test a series of hypotheses concerning the relationship between financial efficiency and other indicators related to MFIs. Following the trade-off theory, MFIs which serve the poor tend to be less efficient than those with relatively more stable income clients. Interestingly, lending to women is efficient only in the presence of subsidies. His results also proved that MFIs in South Asia and Middle East & North Africa tend to be less efficient than the others in 2005 and 2006. Ali et al. (2014) investigated the

productivity of Pakistan microfinance institutions is an essential performance indicator that shows how well an organization is streamlining its operations by reflecting the amount of output per unit of input. This was measured in terms of work load of loan officers: the ratio, loans per loan officer, also known as loan officer productivity is calculated by dividing the number of active loans of an microfinance provider (MFP) by the total number of loan officers. Loan officers include field personnel or line officers that interact with the client, but not administrative staff or analysts who process loans without direct client contact. However, these studies are limited to the efficiency and productivity of the micro finances in terms of subsidies and work load of loan officers.

According to Abdul (2013), he explored the three broad determinants of the productivity of Indian microfinance institutions (MFIs) such as: Institutional characteristics, outreach, and efficiency. They found that institutional characteristics and outreach have both positive and negative effects on the productivity of MFIs, depending on the proxy used in the empirical analysis. However, the efficiency of MFIs affects the productivity negatively. Specifically under institutional characteristics the age of the institution positively influences the productivity, while number of offices and number of personnel negatively affect it. Of the outreach variables, numbers of active borrowers positively influence productivity, whereas average loan size appears to have an inverse relationship with productivity. Under efficiency cost per loan has a negative significant impact on the productivity of MFIs. Musa et al. (2014) investigated the Performance and productivity changes in microfinance banks(MFB) in South-West Nigeria depending on the Portfolio at Risk (PAR), Portfolio to Assets, Debt to Equity Ratio (Leverage), Cost per Client, Borrowers per Loan Officer, Return on Assets (ROA) and Return on Equity (ROE) factors. These studies limited to only the performance parameters.

Gebremichael and Rani (2012) investigated total factor productivity of Ethiopian MFIs employing the Malmquist productivity index method. They found that the main source of productivity growth is technical efficiency, particularly improvement in management practices. They also argued that further exploration of the determinants of productivity more especially in MFIs is essential notably regarding institutional and non-institutional factors such as scale and outreach. In addition, they investigated the Total Factor Productivity Change of Ethiopian Microfinance Institutions (MFIs) by employing the Malmquist productivity index based on the two input factors and three output factors; namely the number of employees, and operating expenses are specified as inputs whereas

the outputs are interests and fee income, gross loan portfolio, and number of loans outstanding. However, these studies didn't touch the other factors like internal and external factors.

These studies employed different studies conducted in different countries to analyze the productivity measurement of MFIs using different tools like a non-parametric measure method, namely the Malmquist productivity index and they investigated the factor affecting the productivity of microfinance institutions regarding an essential performance indicator that shows how well an organization is streamlining its operations by reflecting the amount of output per unit of input. They measured in terms of work load of loan officers: the ratio, loans per loan officer, also known as loan officer productivity is calculated by dividing the number of active loans of an microfinance provider (MFP) by the total number of loan officers. In addition, Oromia Credit and Saving Share Company used to measure its staff productivity through measuring only its loan officers' productivity. Loan officers include field personnel or line officers that interact with the client, but not administrative staff or analysts who process loans without direct client contact.

However, measuring the productivity of loan officers is not enough to determine the labor productivity as an institution. In the productivity increment, the involvement of all employees and leadership role are the crucial factors. This means even though the weight of different job characteristics of the employees different from job to job like loan officer and supportive experts, considering the relationship of all outputs to all inputs its labor productivity should be measured as a company. In addition, if the activities done by supportive staffs are less productive, its effect will be reflected on the operation activities of loan officers and other officers on those how have direct contact with customers. The overall staff productivity of the company is depending on all Loan officers, all administrative staffs and management's productivity. Hence the labor productivity of all company's employees/staffs should be measured totally. Leadership, motivation, skills and knowledge, behavior, promptness, response to call etc. are all employees' related factors. These factors affect the individual and organizational productivity.

2.4. Productivity Measurement

Measurement is part of the analysis process to track change and progress during an improvement program. The basic objectives of productivity measurement are: To study performance of system overtime, to have relative comparison of different systems for a given level and to compare the

actual productivity of the system with its planned productivity. There are many different productivity measures. The choice between them depends on the purpose of productivity measurement and, in many instances, on the availability of data. Broadly, productivity measures can be classified as single factor productivity measures (relating a measure of output to a single measure of input) or multifactor productivity measures (relating a measure of output to a bundle of inputs). Another distinction, of particular relevance at the industry or firm level is between productivity measures that relate some measure of gross output to one or several inputs and those which use a value-added concept to capture movements of output (Abhinav Publication, 2014).

2.4.1. Partial Productivity

The partial productivity is a type of productivity such as labor productivity (LP), capital productivity (CP), and etc. relating output to a single production factor. When the contribution of each input to the output is examined separately, then we refer to partial productivity, such as labor or capital productivity. However, partial productivity may be an inaccurate measure of the true contribution of a single input, as other factors may also interact (such as changes in input proportions, qualitative improvements and technological or organizational advances incorporated in the production process). For example, an increase in the labor productivity of an economy or an industry may partially reflect the substitution of labor by capital (Panayiotis et al., 2008).

2.4.1.1. Labor Productivity

As a partial productivity measure, labor productivity is much more often used to measure productivity compared with other partial productivity because it is significant for determining the potential growth in living standards as higher levels of per capita income or output require more output to be produced per labor (Sharpe, 2000). Labor productivity is used to capture the efficiency with which the economic system transforms labor into output (Baldwin et al., 2005). At the same time, the productivity of labor is the prime concern and all efforts are focused on improving workforce productivity. In other words, labor productivity is the engine of any kind (Abdollah & Mehdi, 2016).

Labour productivity is a revealing indicator of several economic indicators as it offers a dynamic measure of economic growth, competitiveness, and living standards within an economy. It is the measure of labour productivity (and all that this measure takes into account) which helps explain

the principal economic foundations that are necessary for both economic growth and social development (McKenzie et al., 2008).

Employee productivity (sometimes referred to as workforce productivity) is an assessment of the efficiency of a worker or group of workers. Typically, the productivity of a given worker will be assessed relative to an average employees doing similar work. Because much of the success of any organization relies upon the productivity of its workforce, for many businesses, including most small businesses, the most significant cost is labor. Salaries and wages comprise the major line-item expense for most retail and small-scale manufacturing companies, but labor also tends to be responsive to productivity improvements. To reduce labor costs, entrepreneurs should consider measuring employee efficiency and setting aggressive performance targets to get the most bangs for their labor buck (Ram, 2005). According to this researcher, labor productivity is defined in several categories as follows:

- Engineering: doing the most work with the least cost
- Scientists: Doing Business wise and informed
- Managers: Achieving everything together with effective performance
- Philosophers: knowing the work is done
- Financial Management: Save More

All these definitions emphasize the common sense and it will improve the use of resources and better sources.

Labor productivity is defined as the ratio of a volume measure of output to a volume measure of input and its identity can be written as follow:

$$\frac{Y}{N} = \frac{Y}{H} * \frac{H}{N}$$

Where Y is output, N is number of labor and H is number of working hours. Labor productivity can be volatile in the short term due to the business cycle and changes in production.

Although the ratio used to calculate labour productivity provides a measure of the efficiency with which inputs are used in an economy to produce goods and services, it can be measured in various ways. According to Berry & Richard Ross (2008), labor productivity is equal to the ratio between a volume measure of output and a measure of input use.

Labour Productivity = Volume Measure of Output

Measure of Input use

And also according to IJMSSR (2013), different selected ratios are used to compute Employee/Labor Productivity of finance institutes:

1. Deposit per employee = Deposit / No. of employees
2. Advance per employee = Advances / No. of employees
3. Business per employee = Business / No. of employees
4. Total expenditure per employee = Total expenditure / No. of employees
5. Total income per employee = Total Income / No. of employees
6. Spread per employee = Spread / No. of employees
7. Net profit per employee = Total net profit / No. of employees
8. Burden per employee = Burden / No. of employees

The nature and characteristic of the inputs and outputs used to measure and analysis labour productivity is different for different operation system. For example many researchers have measured and analyzed the productivity of banks the proposed model by Lowe (1987) which is the measure of average labor productivity is a ratio of output per labor cost.

Average Labor Productivity = Total output

Labor cost

Average labor productivity = Q/L Equation ---------- (1)

Where: Q = outputs L = Labor employed.

Labor productivity measures the quantity of bank output per unit of labor. Labor is proxied by the number of employees and alternatively, in order to capture labor quality aspects, by wages (in constant prices) (Panayiotis et al., 2008).The important influence of labor quality on productivity measurement has been widely recognized in the literature. Wages are considered in this study as the best available measure of labor quality (Schwerdt and Turunen, 2006).

According to Ahmad Nawaz (2010) and these researchers the input and output parameters used for measuring labour productivity of the finance institutions are as follow:

Output (Qt): It comprises of the quantity of total income in monetary terms from interest income and non interest income.

Interest income includes**:**

- Treasury bills
- Coupon bond
- Loan and advance government bond
- Placement with other bank
- Interest earned on corporate bond
- Interest earned on fund surrendered

Non-interest Income includes:

- Commission income
- Service and transaction fees
- Gain less arising from dealing in foreign currencies
- Rental income
- Other income

Input: In finance institutes the labor input comprises the following costs.

- Basic Salary of employees
- Fuel and transport allowance,
- Overtime.
- Housing and hard ship allowance
- Position and Representation allowance
- Wages for indirect Bank workers like drivers, electricians etc.
- Total medical treatment expenses for employees.
- Others

Tor Jansson (2003) identified the productivity and efficiency measurement indicators of personnel. He focused on developing indices that compare the ratio of composite outputs to composite inputs

in given periods. These indices represent the degree to which productivity has changed since the base period.

$$LP_{index} = \frac{TOF_c}{TO_b} \times \frac{LIF_b}{LIF_c} \quad \text{Equation ---------- (2)}$$

Where

LP_{index} = Labor productivity index

TOF_c = Total output of current period of the firm

TOF_b = Total Output of base period of the firm

LI_c= Labor input of current period of the firm

LI_b =Labor input of base period of the firm

2.4.1.2.Capital productivity

Capital productivity is usually defined in terms of a percentage return on capital invested, either using a traditional method such as average rate of return or a discounted cash flow method such as the internal rate of return method (Lowe, 1987). In order to calculate capital productivity, an estimate will be required of the value of the fixed capital stock. Capital productivity is less widely used than labor productivity. Despite this difficulty, capital productivity is a far more useful than labor productivity for judging the performance of an organization operating within a market economy. Most private organizations will seek to ensure an adequate return on capital invested to their shareholders thus a high return on capital invested is far more relevant than high outputs per operative (Lowe, 1987).

$$\text{Capital Productivity} = \frac{\text{Total Output}}{\text{Capital Cost}}$$

$$CP_{index} = \frac{TOF_c}{TO_b} \times \frac{CIF_b}{CIF_c} \quad \text{Equation ---------- (3)}$$

Where

LP_{index} = Capital productivity index

TOF_c = Total output of current period of the firm

TOF_b = Total Output of base period of the firm

CI_c= Capital input of current period of the firm

CI_b =Capital input of base period of the firm

The total capital input includes the following expenses in microfinance institutes.

- Stationary and office supplies,
- Insurance
- Rental cost of motor vehicles and building
- Depreciation cost of materials, like office furniture, table, chair, computer, printer, Motor vehicles, building etc.
- Repair and maintenance cost
- Other capital input cost

2.4.1.3.Energy Productivity

Energy input includes (Lowe, 1987).

- Electric and water
- Fuel expenses of the organization.

$$LP_{index} = \frac{TOF_c}{TOF_b} \times \frac{EIF_b}{EIF_c} \quad \text{Equation ---------- (4)}$$

Where

EP_{index} = Energy productivity index

TOF_c = Total output of current period of the firm

TOF_b = Total Output of base period of the firm

EI_c= Energy input of current period of the firm

EI_b =Energy input of base period of the firm

2.4.1.4. Miscellaneous productivity

It includes the productivity of the following inputs:

- Advertisement
- Entertainments
- Postage & telephone
- Office rent
- Consultancy and legal fee
- Audit fee
- Penalty
- Printing and documentations
- Other

Miscellaneous Productivity = $\frac{\text{Total output}}{\text{Miscellaneous cost}}$

$$MP_{index} = \frac{TOF_c}{TO_b} \times \frac{MIF_b}{MIF_c} \quad \text{Equation ---------- (5)}$$

Where

MP_{index} = Miscellaneous productivity index

TOF_c = Total output of current period of the firm

TOF_b = Total Output of base period of the firm

MI_c= Miscellaneous input of current period of the firm

MI_b = Miscellaneous input of base period of the firm

2.4.2. Total Factor Productivity

The second one is called Total or multi-factor productivity measures, relating output to an index of two or more production factors, which is especially useful for measuring the efficiency of the use of resources. The Multifactor productivity (MFP) or Total factor productivity (TFP) basic definition is the rate of transformation of total input into total output which is a ratio of output-over-input (Diewert & Nakamura, 2003). As Diewert and Nakamura noticed, it is easy to work

with one input to one output or some production can easily aggregate to one input and one output. However, in a real business, there are multi-input and multi-output involved; some are tangible and measurable and some are intangible and immeasurable. To overcome the limitations of the single factor approaches considered above the total factors productivity measurement was developed. Total factor productivity is the ratio of net output to the sum of associated labor and capital input (Lema, 1995).

$$TFPt = \frac{\text{Output}}{(Lt + ct)} \quad \text{Equation} \quad (6)$$

Where

TFPt = total factor productivity over period t

Lt = labor input over period t and Ct = capital input over period t

From the point of view of productive efficiency under conditions of scarcity, an enterprise will have to combine the various inputs in the correct combination for optimal results to either minimize costs for a given level of production or to maximize production from available resources. From the point view of allocated efficiency, the owners of the various factors of production may be assumed to seek to maximize their return from those factors (Lowe, 1987).

2.4.3. Total Productivity

Total productivity is the ratio of total outputs to the sum of all input factors. Thus a total productivity measure reflects the joint impact of all the inputs in producing the outputs (Lema, 1995).

$$\text{Total Productivity} = \frac{\text{Total Tangible Output}}{\text{Total Tangible Inputs}}$$

$$TPt = \frac{O_t}{(L_t+C_t+E_t+M_t)} \quad \text{Equation} \quad (7)$$

Where

TP_t= Total productivity over period t

O_t = output value over period t

L_t = Labor input over period t

C_t = Capital input over period t

E_t = Energy input over period t

M_t = other expenses over period t.

Total productivity measurement is particularly useful at the company or plant level because management is concerned about saving on all cost elements and total productivity enables direct analysis of the savings achieved in the use of purchased goods and services as well as of factor inputs per unit of output (Amare & Migibar, 2015).

Productivity trends are defined by the development of the productivity level over time. Productivity trend ratios are commonly converted into an index. Indices make it possible to show the input, output and productivity rates. The productivity indices can provide some information on the causes of productivity changes are the input or the output dimensions bringing on the changes. There is an output-oriented and an input-oriented measure of change in productivity. The output-oriented productivity indices define the index as a measurement of increased outputs derived from the inputs' net growth.

Total productivity index of the firm for period t as a function of its total outputs and total inputs is given by:

$$TOF_{index} = \frac{TOF_c}{TO_b} \times \frac{TIF_b}{TIF_c}$$ Equation ---------- (8)

Where

TOF_c = Total output of current period of the firm

TOF_b = Total Output of base period of the firm

TIF_c= Total input of current period of the firm

TIF_b =Total input of base period of the firm

Therefore, to measure the change in productivity for the output oriented approach is to see how much more output has been produced, using a given level of inputs and the present state of technology, relative to what could be produced under a given reference technology using the same level of inputs. An alternative is to measure change in productivity by examining the reduction in input use, which is feasible given the need to produce a given level of output under a reference technology. This approach is referred to as the input oriented measure of change in productivity (Kendrick, 1993).

2.5. Role of Employees in Service Organization

The concepts of human resource, personnel, employees, labour force and manpower are interchangeable. We frequently use these terms one in place of the others (Vikramender, 2011). People are at the core of every organization. Without staff, organizations cannot exist. It is therefore vital that organizations do not take their staff for granted. Zorlu (2009) explains that organizations are created by the rules and resources drawn upon and created by people; and nature of organizations is a result of people's actions. Thus an organizations behavior reflects people's psychological, ethnic, racial, cultural, political and social make-up.

The role of employees in service organizations is comparable to the role of the service itself, as pointed out by Zeithaml (2006) that employees are the service and the brand. Their importance to the firm is critical to both service delivery and service production. In services it's all about the people (employees) because they appear more often to be the most tangible clue to the quality of the service. Zeithaml (2006) and Abdollah & Mehdi (2016) explain that the people factor in services is a very important element in the evaluation of that service "as all human actors who play a part in service delivery and thus influence the buyers perceptions" from the company's personnel to the other customers in the service environment. For example in MFI for the poverty alleviations Ross and Denzer (2011) found that the role of loan officers. Loan officers come lowest in the MFI organizational hierarchy, yet they build and maintain vital client interfaces that ensure institutional survival (Siwale and Ritchie, 2012). Their work is primarily field-based, premised on the assumption of self-surveillance, monitoring and discipline, yet the 'field' is often an open space where loan officers can informally shape policy as well as how microfinance practice develops. Loan officers work very long days, doing paperwork and dealing with client issues and remain by far the dominant decision makers in microloan granting.

In service banking sectors, involvement of human element is of very high. Attitude, interest, motivation, skills and knowledge, behavior, promptness, response to call etc. all are related to employees. These factors affect the individual and organizational performance. Hence, the concept of labor productivity in banking sector has great significance in present time. In present stiff competitive situation, it has become difficult to attract customers, retain and motivate them for further business. When employees give better performance then only the profitability of the banking unit will go high. Therefore, the output per person matter a lot. So the importance of productivity concept has been felt everywhere (Vikramender, 2011).

In general, efforts to improve the service quality and productivity of an organization starting from the high commitment of the management of the organization along with individual employee performance improvement, so that every organization to pay more attention to the performance of individual employees. With good internal service quality will lead to employee satisfaction in their work, which ultimately fosters attitudes and productive employee behavior that ultimately affect the quality of external services (Rita & Taher, 2013).

2.6. Factors Affecting Employee Productivity in Service Sectors

In different service sectors, involvement of human element is very high and this is application in banking service too. In present stiff competitive situation, it has become difficult to attract customers, retain and motivate them for further business. When employees give better performance then only the profitability of the banking unit will go high. In a competitive and changing business environment, the need for highly skilled and dedicated manpower is felt who can give the best output. The firm that gets the advantage over other competitors through their talented and dedicated manpower can take the lead in the market. The contribution of employees on job is the most important factor for development and excellence in business. The performance of employees on different jobs in close coordination is needed for success of the unit (IJMSSR, 2013*).*

According to many researchers and practitioners, there are certain factors individually and collectively effect on the productivity of employees in a positive or negative way (Caliskan, 2010). For example Arnold (2005) indicated that an effective employee is a combination of a good skill set and a productive work environment. To him, many factors affect employee performance that managers need to be aware of and should work to improve at all times. To get the maximum

productivity from employees, he opined that, one needs to provide them with the tools they need to succeed. Anderson (2004) also agreed that, there are a variety of factors, personal, company-based and external that affects employees' performance. Identifying these factors can help improve recruitment, retention and organizational results. Clark (2010) stated that, companies rely on employees to produce and deliver high-quality products and services. Clark (2010) also added that, employees are affected by a variety of forces both internal and external as they attempt to perform their job duties. Employers who are aware of these forces, and who are prepared to influence or counteract them, can increase productivity and loyalty. Carrol (2001) showed that, it is logical to assume that well-compensated employees would naturally be the most productive. However, various studies have proven that while money is inspiring factor, it is not the only factor that impacts employee productivity in a negative or positive way.

According to many authors there are two factors which affect service provision and staff productivity of the company; internal and external factors. The internal factors, which impede the normal functioning of organizations their productivity as well as sustainability include; limited human capital (the skills, schooling, technical know-how and motivation of employees), lack of working capital, the utilization of obsolete technology and poor location (Le Tran et al., 2012)**.** External factors are those factors out of the organization and directly or indirectly affect functioning of organization policies and regulations, interference of other bodies in internal issues of organizations, security, political instability and others. Among some of the factors affecting employees' productivity in organizations are:

2.6.1. HRM and Working Environment Related Factors

Many academics in their studies have found that HRM systems can be the source of firms' organizational capabilities that allow one to learn and benefit from new opportunities. There are many ways HRM practices can improve productivity and performance enhancement in the organizations by developing productive culture in the organizations. According to Opatha (2015), to meet the increasing demand of customers, an organization needs to improve its productivity.

The generic purpose of HRM is to generate and retain appropriate and contented workforce who gives the maximum contribution to the organizational success (Opatha, 2015). According to (Aruna & Gamage, 2015) appropriately qualified, motivated and happy staff is the main factor for

the success of any organization. And also, effective HRM system helps organization attract and hire suitably qualified people and keep their knowledge, skills and attitudes updated. De Koeijer et al., (2014) discussed that HRM is crucial in improving productivity and quality for employers (in terms of organizational performance) as well as employees (in terms of employee well-being-happiness, health and trusting relationships). According to them, enabling HRM (productivity and quality promoting HRM system, policies and practices) is crucial in creating mutual gains for both employers and employees.

Human resource executives need to consider new strategies for recruiting and retaining best fit talents for their organizations. Higher salaries and compensation benefits may seem the most likely way to attract employees. However, quality of the physical workplace environment may also have a strong influence on a company's ability to recruit and retain talented people. Some factors in workplace environment may be considered keys affecting employee's engagement, productivity, morale, comfort level etc. both positively and negatively (Sekar, 2011).

There are many organizations in which employees encounter with working conditions problems related to environmental and physical factors. Pech and Slade (2006) discussed that the employee disengagement is increasing and it becomes more important to make workplaces that positively influence workforce. According to Pech and Slade the focus is on indicators of disengagement such as distraction, lack of interest, poor decisions and high absence, rather than the root causes. The working environment is perhaps a key root causing employee's engagement or disengagement. Another research indicates that improving the working environment reduces complaints and absenteeism while increasing productivity (Roelofsen, 2002).Weiss (1990) discussed that workplace satisfaction has been associated with job satisfaction.

Although convenient workplace conditions are requirements for improving productivity and quality of outcomes, working conditions in many organizations may present lack of safety, health and comfort issues such as improper lightening and ventilation, excessive noise and emergency excess. People working under inconvenient conditions may end up with low performance and face occupational health diseases causing high absenteeism and turnover.

Guaranteeing adequate facilities are provided to employees is critical to generating countless employee commitment and productivity. The provision of insufficient equipment and opposing

working conditions has been shown to affect employee commitment and intention to stay with the organization (Weiss, 1999 and Berry, 1987) as well as levels of job satisfaction and the awareness of fairness of pay (Bockerman and Ilmakunnas, 2006). It is evident in the research findings of Patterson et al., (2003) that the more satisfied workers are with their jobs the better the company is likely to perform in terms of subsequent profitability and particularly productivity. Sekar (2011) argued that the relationship between work, the workplace and the tools of work, workplace becomes an integral part of work itself. The management that dictate how, exactly, to maximize employee productivity center around two major areas of focus: personal motivation and the infrastructure of the work environment (Sekar, C., (2011). Haynes (2008) explained the behavioral office environment behavioral components of the office environment that have the greatest impact on office productivity

Wide-ranging scientific research conducted by Roelofsen (2002) has also produced indications suggesting that improving working environment results in a decrease in a number of complaints and absenteeism and an increase in productivity. The work environment has the biggest effect on productivity in relation to job stress and job dissatisfaction. However, this effect has not been conducted in the productivity of microfinance institutes.

2.6.2. *Motivation and Commitment*

Motivation and commitment of the employees in the performance of any organization have great roles. Masud &Veronica (2015) discussed that, to get the best performance from employees, there needs to be some sort of motivation beyond the weekly paycheck. They agreed that, motivation can come in the form of financial incentives, the opportunity to get participated in company projects, a career path that leads to management and direct participation from management into the daily tasks. And also, an effective motivation can create a productive work force, but a lack of motivating factors can leave employees searching for reasons to give their maximum effort (Miller, 2007). It is important therefore that organizations give employees the needed encouragements to motivate them do more and achieve better performance for the organization. Motivation according to some academics improves the level of efficiency in the staff (Greeno, 2002). He added that when organizations improve the efficiency of employees through motivation, it will also improve overall productivity, reduce costs, and increase the efficiency of the company.

Other authors like Griffiths (2001) highlighted that, meeting personal goals help an employee stay motivated and feel about them to continue to produce. He added that, motivation can facilitate a worker reaching his/her personal goals, and can facilitate the self-development of an individual and once that worker meets some initial goals, he/she realizes the clear link between effort and results, which will further motivate him/her to continue at a high level.

In addition, Chudley (2004) opined that, motivation leads to greater employee satisfaction. He indicated that, in the absence of an incentive plan, employees will not feel ready to fulfill their objectives. Thus, managers should seek to empower them through promotion opportunities, monetary and non-monetary rewards, or disincentives in the case of inefficient employees. Pannell (2005) highlighted that, employees that feel as though the company has made a commitment to employee success tend to perform better. He added that, commitment means offering a competitive rate of pay and benefits package, offering assistance in paying for employee's higher education costs, developing a regular training schedule that keeps employees updated on company changes and given pertinent information for employees to do their jobs and upgrading equipment to make sure that employees have the most efficient technology available to do their work. Pannell (2005) concluded that, commitment shown by the company is returned in the form of commitment from employees. Jesop (2005) highlighted that, motivation brings employees closer to the organization. He added that, as long as needs of employees are met through attractive rewards, promotional opportunities, etc. employees begin to take more interest in their company. They begin to think that there is no difference between the interests of the enterprise and their interests. This helps in developing cordial relations between management and workers. However, the role of such motivation aspects were not directly conducted in microfinance institutes in the effect of employee productivity.

2.6.3. Involvement and Empowerment Related Factors

Mazin (2007) indicated that, employees are influenced by both internal and external forces, but the impact of these forces depends a great deal on their own levels of internal and external locus of control. According to him, those who have an external locus of control are looking for people to tell them what to do. These are the employees who need a great deal of direction and expect managers to give clear and detailed feedback at all times. Those with an internal locus of control

to Mazin (2007) feel empowered to make decisions and act on their own; they feel in control of their destiny rather than at the mercy of external factors. These employees may sometimes act too independently and are not as concerned about the opinions or expectations of others. In addition, Richards (2003) indicated that, *c*ompanies that can effectively build an internal culture that is based on mutual respect, teamwork and support will notice increased productivity and a sharper focus on service to customers. The Japanese Productivity Center has three main guiding principles. They are: (1) increase employment, (2) labour-management co-operation, and (3) fair distribution of productivity gains (Angelus, 2011). These principles cannot be achieved without positive employee participation as well as constructive and productive employee management relations. They believe that improvement in productivity will increase employment in the long term rather than reduce, in order to increase productivity, employee, management and other relevant stakeholders must work as a team, and the benefits of improved productivity should be distributed fairly among the employee, customers and management etc. Angelus (2011) added that, if one suspects that morale is the cause of the decrease in productivity, it's time to find out why the employees are unhappy. To Angelus (2011), long hours, insufficient training, management issues, low pay, lack of recognition and poor working conditions can lead to morale problems. Involving employees in the solution can help ensure that one has developed a workable plan that will increase both morale and productivity.

On the issues of these factors, a variety of researches were conducted in different service giving organizations by numerous researchers in different approaches regarding leadership factor, HRM factors, working environment factor, employee turnover factor and etc. These factors have the direct/indirect relations to influence the productivity of employees in any organization. In the employee productivity increment, the involvement of all employees and leadership role are the crucial factors. The overall staff productivity of the company is depending on all loan officers, all administrative staffs and management's productivity. Leadership, motivation, skills and knowledge, behavior, promptness, response to call etc. are all employees' related factors. These factors affect the individual and organizational productivity. However, various studies conducted in different countries to analyze the productivity of MFIs, they have not given the attention on these factors. Thus this research has tried to analyze the relative productivity of all OCSSCO's employees/staffs focusing on these factors

CHAPTER THREE

3. RESEARCH METHODOLOGY

In the previous chapter; the literature review, which shows different existing labour productivity measurement and factors affecting in microfinance industries gap reviewed. This chapter presents the detail methodology, data collection methods, Sample designs and explains the data analysis techniques.

3.1. Research Approach

This study is conducted using descriptive quantitative research approach. The Performance of seven years of productivity of OCSSCO is measured using partial and total productivity measurements proposed model. The study concerned with specific predictions, narration of facts and characteristics of the organization regarding to relative employees' productivity and factors affecting the employees' productivity in OCSSCO. The Correlation study approach and the relationship between factors affecting and employee productivity is used in the study. It is most suitable for predicting the relationship between dependent variable (employee productivity) and independent variables (factors affecting employee productivity of OCSSCO). In order to get the vital factors affecting labor productivity of OCSSCO and to test the developed hypothesis, the study used the structural equation model.

3.2. Target Populations and Sampling Technique

The survey is done in the Oromia Credit and Saving Share Company. Oromia Credit and Saving Share Company (OCSSCO) is the biggest microfinance institute in the state of Oromia Region. The study was conducted on five Shoa Zonal Offices, fifteen Special Zone Branches and at Head Quarter. The target population comprises 85 respondents at Ho, 45 respondents at Zonal Offices and 75 respondents at Branch offices. The source of population for this study is employees working in OCSCCO which are working on management, Professionals/Operations and supportive positions. The target study encompasses employees who have been experienced in microfinance works. Employee with long experience in microfinance/OCSSCO and those have the concept of staff productivity are chosen because they are well informed and know much about the factors affecting the staff productivity of OCSSCO in detail, so they are selected for this study for

convenience of the researcher. A purposive sampling is used in identifying the level of causes of productivity factors for the respondents of zonal Offices, branches, Head Office of Chief Officers and experts for questionnaires.

3.3. Data collection method

Both secondary and primary data are used for the study in the analysis of seven years total productivity of the company and analysis the factors affecting the productivity of the employees in OCSSCO respectively.

3.3.1. Secondary Data

The company's seven consecutive year's data (outputs and inputs) are collected from Finance documents. These data are used to analyze the relative total and partial productivity trends of the OCSSCO.

3.3.2. Primary Data

After secondary data analyzed the study has developed interview questions and questionnaires. Interview questions were prepared to justify the secondary data analyzed result and to link the questionnaires prepared.

First the researcher prepared questionnaires from his observation on the factors affecting the labor productivity of the company and approved by the higher managerial and experts of OCSSCO. The questionnaires are used to identify the level of the factors and their causes of employee productivity and distributed for the selected zonal Offices, branches, Head Office of Chief Officers and experts who give reliable information which is an important input for this research work in order to assess and find out all the problems and their impacts very easily.

The questionnaires were built from two sections that cover the main questions of the study. The first section is about demographic Profile of respondents: it includes Gender, Age, Educational level, work experiences in micro finances and Current position**.**

The second section is about factors affecting the labor productivity of OCSSCO. For this section a five-point Likert scale (1= strongly agree, 2 = agree, 3 =Neutral, 4 = disagree and 5 =strongly

agree) was adopted for guiding the respondents to provide their objective responses with varying degrees of agreement or disagreement.

The researcher believes that questionnaire would be much effective and easier to be understood and to get more realistic results. In each questionnaire, an explanatory letter was attached to explain the way of responding, the aim of the study and the security of the information.

3.4. Data Analysis Methods

The data collected was analyzed in two forms.

3.4.1. Secondary Data Analysis

At first the researcher used secondary data to see the performance of seven years total productivity of the OCSSCO's trend by having each partial productivity index and relative productivity measures for each year. After the researcher analyzed the result of each partial productivity of the company, the study investigated that labor productivity highly influenced the total productivity of OCSSCO. This is found from the analysis of each partial productivity result of the company in each year.

3.4.2. Primary Data Analysis

Depending on the investigation of secondary data analyzed results, the impact of labour productivity is critically observed in each consecutive year. Because of this, the researcher is highly initiated to know the factors affecting the productivity of employees of OCSSCO. Thus, the primary data analysis mainly focuses on the factors affecting the productivity of OCSSCO.

The data collected was analyzed by using descriptive and confirmatory analysis. This analysis allowed distinct Comparisons of outcomes and conclusions is made from the findings. Quantitative statistics such as Pearson correlation and model confirmatory were used to determine the relationship of the dependent and independent variable. This was achieved through the use of IBM Statistics SPSS version 23.0 and Amos version 23.0. The data from questionnaires was coded, entered and analyzed using this software. The study runs frequencies, Pearson correlation, reliability test, descriptive statistics, and path analysis. The chi-square test of goodness-of-fit was used to analyze the model of factors and structural equation model analysis was used to disentangle the complicated relationships between these factors.

3.5. Research Methodology Framework

Research methodology and procedures that this study followed is illustrated in figure 3.1. The process starts with defining the problem and ends with conclusions, recommendation and future works.

Figure 3. 1: Research Methodology Framework

CHAPTER FOUR

4. DATA ANALYSIS AND DISCUSSION

This chapter contains a summary of data findings and their interpretation of secondary data analyzed in the form of productivity index and primary data analyzed results regarding the factors affecting labor productivity and including the hypothesis testing of descriptive statistics' results of Oromia Credit and Saving Share Company.

4.1. Secondary Data Analysis

Partial and total productivity measurement models are used and applied to test the productivity status and trends of the organization for this part. The results are tested using the data of seven consecutive output and inputs years (June/2011 to June/2017) which are collected from OCSSCO's finance documents.

Accordingly, using the proposed equations in the literature review of equation (1) to equation (8) and appendix B (Total Annual Output and Resources (Inputs) used in OCSSCO) of the partial productivity ratios and total productivity ratio of the four input factors and total output (income) of the company are computed. The results are shown in table 4.1.

Table 4.1: Partial and total productivity ratios of OCSSCO for seven years

	2011	2012	2013	2014	2015	2016	2017
PPL	0.7797	0.9473	0.6438	0.6633	0.7755	0.612	0.595
PPC	3.2	3.25	3.4	3.72	5.32	5.43	5.935
PPE	18.11	16.75	17.36	19.23	23.83	27.11	33.5
PPM	2.6	2.76	3.18	3.58	3.77	3.65	4.3
TP	0.4915	0.4805	0.4505	0.4743	0.561	0.47	0.47

Source: secondary data 2018

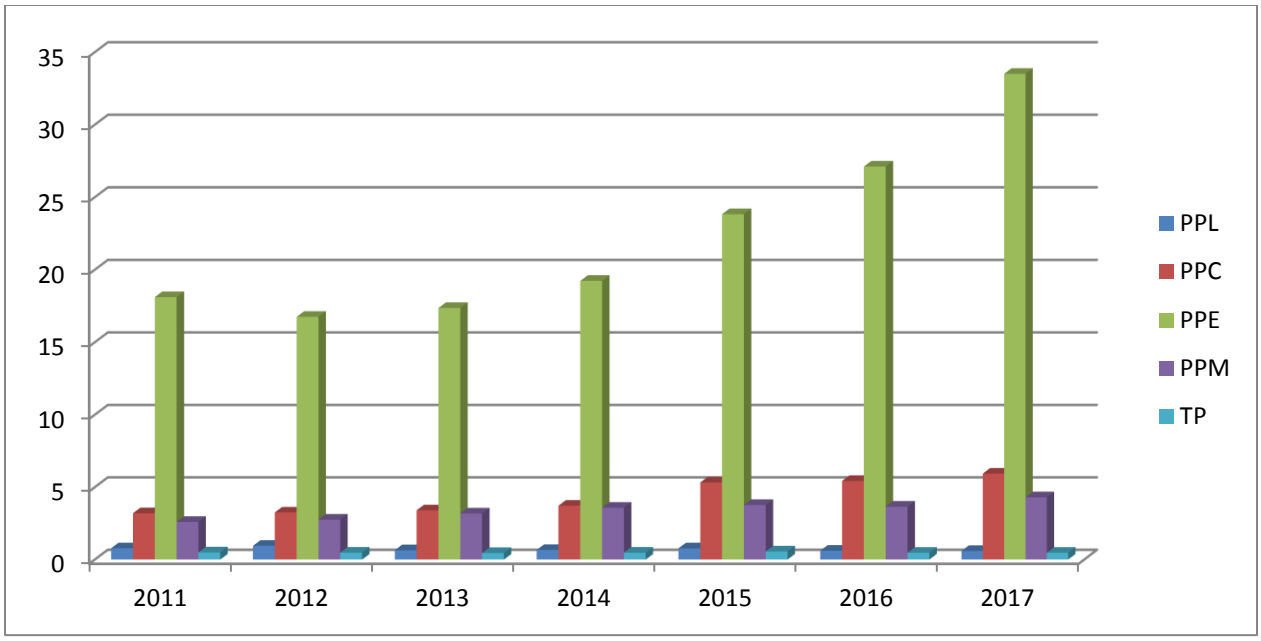


Figure 4.1: Partial productivity of each input for seven years of OCSSCO

The total and partial productivity ratios show the productivity problems in the mentioned years. The labor productivity in the year of 2011 - 2013 shows a decline. In 2013 and 2014, there is increment in labor ratio. But in 2016/2015, it decreases and also 2017/2016 it decreases. This shows that there is no better utilization of labor resource in OCSSCO. As the researcher has tried to assess the causes of this situation, the results are due to weak leadership, lack of good working environment, staffs retention and other influencing labor productivity in OCSSCO. From this result, the study indicates that the total productivity of OCSSCO is highly influenced by the partial labor productivity of it.

The capital productivity in each year indicates an increment and except in 2012/2011 year, the energy productivity shows an increment in each year. This shows that there is better utilization of energy resource in OCSSCO.

And also except 2015-2016 miscellanies productivity indicates increment. This indicates somewhat there is the healthy partial productivities of the three inputs (capital, energy & miscellanies) in OCSSCO from 2011 to 2017. So, this study does not focus on the factors affecting capital, energy & miscellanies inputs.

In addition, the partial and total productivity indices of the organization for current year (2017), as compare to base year for each input factor (Labor, Capital, Energy and Miscellaneous input factors) are measured. These productivity indices represent the relative productivity levels of OCSSCO from 2011 to 2017 years. The result of total productivity indices and the respective partial productivity indices are used to indicate the progressive changes in productivity. The total productivity indices and partial productivity indices are computed with respect to their inputs as compared to the base year. The results are shown in Table 4. 2.

Table: 4.2. Relative Productivity level of OCSSCO in 2011 to 2017 (in Percent)

RPI	2011	2012	2013	2014	2015	2016	2017
LPI	100	121.5	67.96	103.03	116.92	78.92	97.22
CPI	100	101.56	104.62	109.41	143.01	102.07	109.30
EPI	100	92.49	103.64	110.77	123.92	113.76	123.57
MPI	100	106.15	115.22	112.58	105.31	96.82	117.81
TPI	100	97.76	93.76	105.28	118.28	83.78	100

Source: Secondary Data Analysis

According to table 4.2 the measured results, the partial productivity indices of the OCSSCO for current year (2017), as compare to base year (2016), for each input factor (human, capital, energy and miscellaneous input factors) are 97.22, 109.30, 123.57, and 117.81 respectively. The total productivity index of the current year (2017) is 100. This indicates that there is no change of total productivity of OCSSCO from 2016 to 2017 years.

Moreover, the productivity measurement results are helpful for the company to know the status of its performance and to identify the potential areas for improvement. Especially, the productivity index is important to tell the relative position of the current period with respect to the base period, and links to the actual productivity story of the company. Comparison of the productivity index value with the previous productivity history of the company will enable to dig out the critical productivity problems and suggest the appropriate corrective actions that should be taken by the company. The productivity measurement and the analysis result also enable to point out the bottleneck areas where improvement actions that are to be taken at both the operational and the company levels (Amare & Migibar, 2015).

For example on the result of this analysis, the labor productivity of OCSSCO showed poor productivity during all periods with respect to other partial productivity. Depending on this investigation, the researcher inspired to know the detail facts behind these results by preparing the primary questionnaires on the factors hindering the labor productivity of company for further investigation. In addition, the study tried to identify and justify the relationship of these factors through interviewing the company's HRM & Administration, Planning, Monitoring and Evaluation Directorates. So, the results are analyzed in the primary data of titles as follow.

4.2. Analysis of Primary Data

This section presents the findings, results and discussions of quantitative data analysis of factors affecting labor productivity of OCSSCO of the study emanating from questionnaires. Out of 205 questionnaires dispatched, 183 were filled and returned. This shows the percentage of return rate was 183 (89.27%). According to Nachimais and Fincham (1985) (80%) to (90%) return rate is enough for a descriptive survey study.

This analysis part is divided into two major sections. The first section describes the demographic characteristics of the respondents, covering their gender, age, education levels, work experience and Current Occupation. The second section provides results and discussions which are based on the five major research questions of the study. This section presents the descriptive and reliability analysis of the study variables, and the developed structural model done by AMOS that highlights the results of testing of the research hypotheses..

4.2.1. Analysis of demographic characteristics of respondents

This section discusses the demographic characteristics of the respondents based on gender, age, educational level, service with OCSSCO and current occupations in OCSSCO.

Table 4.3: Demographic profile of the Respondents

Demographic variables	Frequency	Percentage
Gender of Respondents		
Male	144	78.7
Female	39	21.3
Total	183	100.0

Age of the respondents (Year)		
20-30	52	28.4
31-40	92	50.3
41-50	39	21.3
Total	183	100.0
Educational Level of Respondents		
Certificate & diploma	11	6.0
First degree	158	86.3
Master's degree & above	14	7.7
Total	183	100.0
Experience in OCSSCO (Year)		
1-5	9	4.9
6-10	155	84.7
11-15	14	7.7
above 15	5	2.7
total	183	100
Current Occupations in OCSSCO		
Management	23	12.6
professional/operational	137	74.9
Supportive	23	12.6
Total	183	100.0

Source: primary data 2018

Table 4.3 shows that majority of the respondents were male (78.7%), Followed by Female (21.3%). This showed that most of respondents are male.

The study sought to establish the age of the respondents since its findings would assist the study to categorize respondents based on the age and the findings are shown in table 4.3 above. Table 4.3 shows that majority of the respondents were aged between 31-40 years (78.7%), Followed by aged between 20-30 years (28.4%). This showed that there were more staffs aged between 31-40

years in OCSSCO. This represents that the majority of the employees are in the active, energetic and productive groups which is good if the company can properly utilize this productive work.

The study also sought to know the educational level of the respondents. In terms of educational attainment, table 4.3 shows a comparison in levels of education of respondents. This showed that most of the respondents have first degree (86.3%). It shows OCSSCO has an educated staffs and it will make the company enable to complete and achieve the desired goals with this educated staffs.

In addition, the study sought to establish the year of service of respondent's since its findings would assist the study to categorize respondents based on the service year and the findings are shown in table 4.3 above. It shows that the respondent's service year in OCSSCO. Majority respondent served between 6-10 years (84.7%), followed by 11-15 years (7.7%), 1-5 years respondent (4.9%), > 15 years (2.7%). This indicates most of respondents are serving 6-10 years. This helps the researcher to get the appropriate responses on the prepared questionnaires regarding the factors affecting the staff productivity in OCSSCO.

Furthermore, the study required to establish the current position of respondent's since its findings would assist the study to predict the results and the findings are shown in table 4.3 above. This indicates among the respondent of the study is Management (12.6%), professional/Operational (72.13%) and supportive (15.30%). This also would assist the researcher to predict the findings. Since around 72.13% is professional/operational experts in their positions, we can predict the staff productivity of OCSSCO is highly affected by this bodies.

4.2.2. Descriptive and Statistical Analysis of Factors Influencing Employee Productivity

As shown in appendix C. table 4.13, in average 79.73% respondents disagreed and strongly disagreed on all the qualities of OCSSCO's leadership of management. According to the respondents, this represents OCSSCO leadership system highly influences the productivity of its employee. The company has to give an attention to have good quality leadership to increase its staff productivity.

According to appendix C. table 4.16 respondents' results; on the motivational and commitment factor, it is found that 45.4% of the respondents disagreed and 38.3% strongly disagreed on the

motivation and commitment of OCSSCO management for continuous improvement in the company while only 3.2 % agreed. Moreover, only about 11.5 % of the employees agreed that there is different motivational aspects such reward schemes, job rotation and employee empowerment in the company while 76.5% disagree and strongly disagree. Further more, around 8.2 % of respondents agreed as there is recognition of employee/team programs in the company while 82% of respondents disagreed and strongly disagreed. According to 9.3 % of respondents, all OCSSCO's staffs feel valued by the company & stand for customer satisfaction while around 77.7% disagreed and strongly disagreed. Generally from this respondents' results, the company first should be motivated and committed by having different satisfactory motivational chances and recognitions to increase its staff productivity.

As showed in the appendix C. table 4.14, 76.5 % of respondents believe that sufficient training needs assessment was not done in OCSSCO to fill the gap of employees periodically while only 11.5% respondents' answer were neutral. Moreover, around 83.6 % respondents disagreed and strongly disagreed as satisfactory technical training was not given on the job type. In addition, around 81.9% respondents agreed as there is no sufficient training on the company's policies and procedures while 83.6% respondents did not agree as the company give sufficient behavioral changing training. And also, 75.4% respondents did not agree that OCSCCO has given the education opportunities for its employee to upgrade their status. From these results, the researcher observed that OCSSCO has not given the attention on the issue of training to increase its employee productivity.

In addition, as indicated in the appendix C of table 4.15, it is found that 77.8 % of respondents disagreed that there was strong employee participatory & adequate empowerment while only 13.1 % respondents agreed in the company decision making. Ergonomically 79.8 % of respondents disagreed while only 8.2 % of respondents agree d on the comfortable of the office (i.e. office, like chairs, lights, etc) is comfortable for the achievement of good staff performance and productivity. In addition, 81.9 % of respondents disagreed while only 7.2 % respondents agreed that OCSSCO is technology sensitive to increase the labor productivity of company. 79.2 % of employees disagreed that there is the psychological satisfaction while 8.8 % employees agreed due to healthy communications & good working conditions in OCSSCO organization. Regarding the interference of the government, 80.9 % of employees agreed that there are the pressuring issues which

negatively influence the productivity of employees in OCSSCO. Nevertheless only 5.5 % of employees agreed that the organizational structure of OCSSCO is well designed which can encourages staff productivity and ensures company's sustainability, 75.4 % of employees disagreed on the OCSSCO's workplace environment especially at that of frontline structure is well organized, attractive and creates psychological satisfaction on staffs which in turn results in good staff productivity.

Furthermore, in appendix C Table 4.17 results found, it indicated that the dissatisfaction of high talented staffs due to technology inaccessibility & other benefits are highly influencing the retention of the OCSSCO's staffs which lead to low productivity of its employees. It also indicated that 75.9 % of respondents did not agree that company commitment to retain the experienced staff by devising different employee retention mechanisms. This rated as first cause and OCSSCO's technology inaccessibility and career opportunities are rated as second and third causes for leaving of its employees.

Table 4.4: Aggregate statistics score of the factors affecting employees' productivity in OCSSCO

	Minimum	Maximum	Mean	Std. Deviation
Leadership	2	5	4.05	.498
Motivation & Commitment	3	5	4.10	.545
Staff Training	2	5	4.07	.557
Working Environment	3	5	4.02	.500
Staff Retention	2.5	5.0	4.056	.5110

Source: primary data 2018 of OCSSCO

According to this survey, it is observed that the means of responses of the items representing leadership, motivation &commitment, staff training, working environment and staff retention stand at around 4.05, 4.10, 4.07, 4.02 and 4.056, respectively, each are falling above 4.0, which corresponds to "disagree" in the Likert scale. These results indicate that all these factors have been highly affecting the staff productivity of OCSSCO. Thus, it suggested that it needs to build strategies for improvement of all these factors.

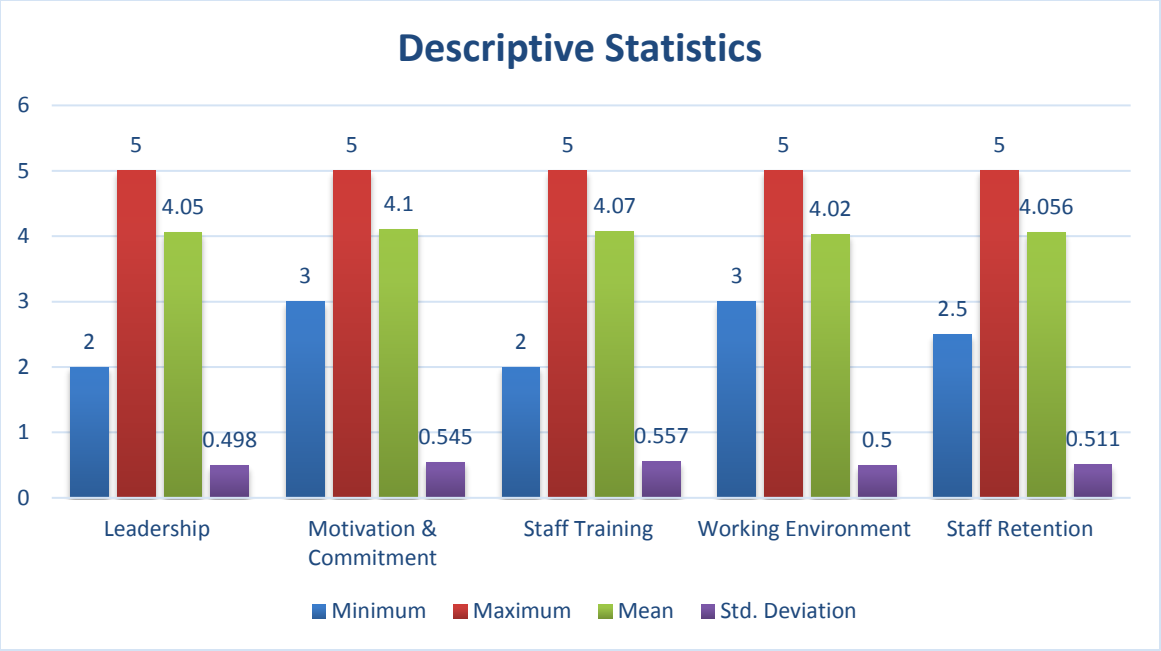


Figure 4.2: Statistics Result of each factor on labor productivity in OCSSCO

In addition, as this thesis tried to validate these results by interviewing the Directorate of Human Resource Management and Administration of OCSSCO, it agreed that, these factors effect have been seen in OCSSCO in all consecutive seven years even though their effects were vary for each year. For example the rate of turnover of employees indicated in the following table 4.5 is supported this fact that was happened in OCSSCO.

Table 4.5 staff turnover rate in OCSSCO between 2011-2017 years (source: secondary data, 2017)

	2011	2012	2013	2014	2015	2016	2017
Number of staffs in OCSSCO	2442	2627	3362	3614	4558	4643	4809
Number of staffs left OCSSCO	110	200	540	514	639	719	920
Rate of turnover in OCSSCO in percent	4.5	7.61	16.06	14.22	14.02	15.49	19.13

As this result indicates, the rate of turnover of OCSSCO was almost increasing year to year. Thus, these problem need serious improvements to enhance labor productivity in OCSSCO.

4.3. Analysis of Pearson Correlations Between Factors

Correlation was used to verify the relationships between the five factors. The correlation coefficients (r) for items within the same table 4.6 is illustrated. It is an effect size and so we can describe the strength of the correlation using the guide that Sekaran (2004) suggested for the absolute value of *r*.

- 0.0-0.19 very weak correlation
- 0.20-.39 weak correlation
- 0.40-.59 moderate correlation
- 0.60-0.79 strong correlation
- 0.80-1.0 very strong correlation

Table 4.6 correlations of independent variables

Factors		Leader ship	Motivation & Commitment	Staff Training	Working Environment	Staff Retention	Labor Productivity
Leadership	P/Correlation	1	.775**	.802**	.763**	.848**	.879**
	Sig.(2-tailed)		.000	.000	.000	.000	.000
Motivation & Commitment	P/Correlation	.775**	1	.758**	.797**	.899**	.909**
	Sig.(2-tailed)	.000		.000	.000	.000	.000
Staff Training	P/Correlation	.802**	.758**	1	.890**	.936**	.860**
	Sig.(2-tailed)	.000	.000		.000	.000	.000
Working Environment	P/Correlation	.763**	.797**	.890**	1	.918**	.874**
	Sig.(2-tailed)	.000	.000	.000		.000	.000
Staff Retention	P/Correlation	.848**	.899**	.936**	.918**	1	.945**
	Sig.(2-tailed)	.000	.000	.000	.000		.000
Labor Productivity	P/Correlation	.879**	.909**	.860**	.874**	.945**	1
	Sig.(2-tailed)	.000	.000	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

According to this table of pearson correlation tested results, there are correlations amongst all labor productivity affecting factors in OCSSCO. But the significant is slightly different for each relationship. For example it is found that the leadership, staff training, motivation and commitment and working environment are very strongly correlated to the staff retention in OCSSCO. That means the organization that concern more on staff retention focuses essentially give significant emphasis on the leadership quality, make working environment favorable, and give staff training, motivated and committed to retain its employees by devising different retaining mechanisms. Moreover, staff retention factor is very strongly positively correlated to labor productivity of OCSSCO. Meaning that if OCSSCO concerns more on the improvement of staff retention, the company can improve its labor productivity by decreasing the staff turnover in its organization. .

Furthermore, labor productivity in OCSSCO is significantly very strongly correlated to leadership, staff training, working environment, motivation and commitment, meaning OCSSCO that concern more on improvement of labor productivity must give significant emphasis to transform its leaders to well-equipped good leadership qualities, to give training for its employees, making its working environment satisfactory and should be motivated and also committed for the improvement of these factors.

4.4. Analysis of the Structural Equation Model

The structural equation modeling (SEM) is the structural component of structural equation models that enables the analyst to make substantive statements about the relationships between latent variables and the mechanisms underlying a process or phenomenon. It is used to test the causal effect among the main constructs of a hypothesized model (Kline, 2010). Using SEM, researchers can specify confirmatory factor analysis models, regression models, and complex path models. Due to these benefits, this study also selected it. The SEM consists of two processes: first, testing the measurement model and then the structural model. According to Kline (2010), the measurement model points to the suitability as measurement instrument of the observed indicators representing a latent variable. The adequacy of a measurement model is performed by confirmatory factor analysis (CFA). The purpose of the measurement model is to specify the relationships between observed variables and latent variables. Further, the structural model specifies the relationships among latent variables. It specifies which latent variables directly or

indirectly influence changes in the values of other latent variables in the model (Schumacker and Lomax, 2004).

A feasible model selected based on the recommended goodness of fit (GOF) measures and the model that satisfies both theoretical expectations and GOF of SEM analysis. Even analysis of moment of structure (Amos) program provides a number of model fit indices, Kline (2010) recommended Chi-squared test ($\chi 2$), the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), and the Root Mean Square Residual (RMR) for model fit statistics.

Chi-Square (X^2) assesses overall fit and the discrepancy the sample and fitted covariance matrices. It used to test whether the distribution of variable in a sample approximates an assumed theoretically distribution. The RMSEA theoretically follows a non central chi-square distribution where the non centrality parameter allows for discrepancies between model-implied and sample covariance up to the level of the expected value. It represents the discrepancy per degree of freedom between the population data and the hypothesized model. It is scaled as a badness-of-fit index where a value of zero indicates the best fit. It is sensitive to sample and its cut off is less than 0.08.

Tucker Lewis index (TLI) is also called non normed fit index (NNFI) that indicates the model fit and its cut off is greater than or equal to 0.95 and Comparative fit index (CFI) indicates the relative improvement in fit of the researcher's model compared with a statistical baseline model. The baseline model is typically the independence (null) model, which assumes zero population covariance among the observed variables and its recommendable cut off is greater than or equal to 0.95.

Root Mean Square Residual (RMR) is a measure of the mean absolute covariance residual. Perfect model fit is indicated by RMR = 0, and increasingly higher values indicate worse fit. It is the square root of the difference between the residuals of the sample covariance matrix and the hypothesized model.

The general guidelines of the cut-off values for such indices: Normed chi-square (x^2) and RMSEA are to be less than 5 and 0.08, respectively, while CFI and TLI values are to be above 0.9 and RMR value < 0.08 (Hair et al., 2010).

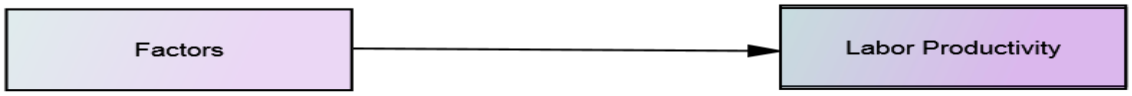
Likewise, for this study, five fit indices are checked to determine the fitting of the model with the data: normed chi-square (χ^2 test), root mean square residual (RMR), root mean square error approximation (RMSEA), comparative fit index (CFI) and Tucker-Lewis index (TLI).

For establishing a final structural model, the researcher suggested the hypothesis that the initial structural equation model is based on theoretical expectations and the above empirical findings. It is hypothesized that leadership (LF), staff training (STF), working environment (WEF), staff retention (SRF), motivation and commitment (MCF) collectively affect the labor productivity of OCSSCO. In order to explore the influences of these five key latent factors on staff productivity, the research settled out a hypothesis as follow.

Hypothesis: The occurrence of leadership (LF), staff training (STF), working environment (WEF), staff retention (SRF), motivation and commitment (MCF) influences overall impact of labor productivity (LP) in OCSSCO. It is suggested that each latent factor has a significant positive relationship with the staff productivity.

While testing the direct influences of the above key factors on staff productivity, the interdependence of one factor with another in the structural model is also an important aspect for investigation. The interdependent relationships of these factors and their potential influence on one another also have been considered.

A hypothetical diagram of the structural model is presented in figure 4.3. The arrow represents the direction of hypothesized influences in the structural model.



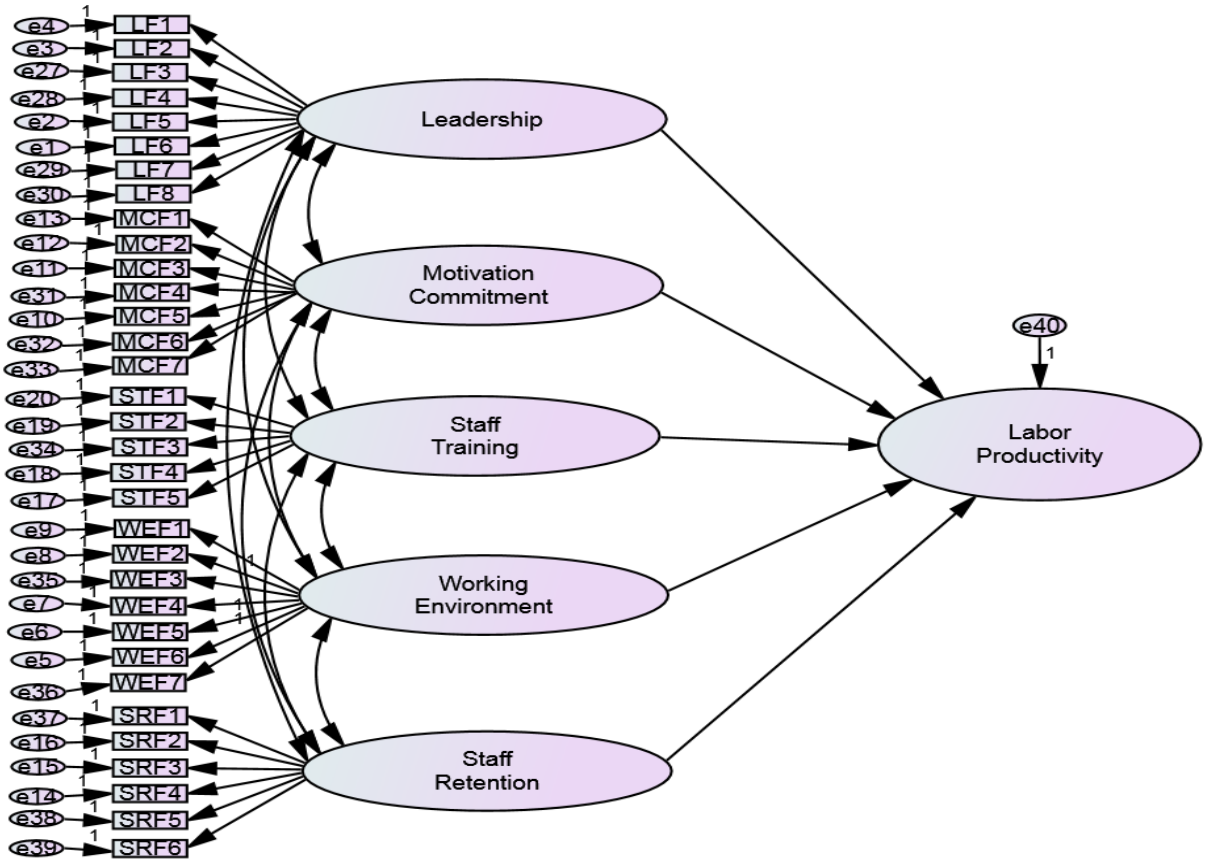


Figure 4.3: Structural Equation Predicted Model

The CFA using the AMOS program focused on the five latent variables (leadership, motivation & commitment, staff training, working environment and staff retention and 33 observed variables. The CFA provides an assessment of the reliability and validity of the observed variables for each latent variable. Reliability of the observed variable refers to the degree of variance explained by the construct rather than by error. It is measured by squared factor loadings. Observed variables are considered to have high reliability when the squared factor loading for each one is more than 0.50, moderate if between .30 and .50 and poor if below 0.30 (Holmes-Smith, 2001). Therefore, in this study any observed variables where their squared factor loadings less than 0.20 should be deleted from the model.

All the measurement models were over identified and the Maximum Likelihood estimation method was used for estimating parameters. Two procedures were used to test the fit of the measurement model: the fit of individual parameters and the fit of the entire model. To test the fit of the individual parameters, two steps were used. The first step was to determine the feasibility of their

estimates values. The assessment focused on whether their estimates values are in the admissible range or not. These include negative variance, correlation exceeding one, and Non-positive definite correlation matrix (Byrne, 2001). The second step in assessing the fit of individual parameters was to test their statistical significances. Parameters are considered statistically significant at their level of $\alpha = 0.05$. Therefore, non-significant parameters should be deleted from the model (Holmes-Smith, 2001).

In order to get a final valid model, the reliability of the new and modified items was tested carefully before evaluating the research model. And, each of the items comprising the measurement model was checked individually by separate factor analysis. The internal consistency or convergent validity is estimated to ensure that the measurement variables provide the true measures of the respective latent variables in entirety. In this research, the consistency of the measurement model was tested by Cronbach's reliability test (Field, 2005). For Cronbach's alpha, a cut-off value of 0.7 is used to indicate the acceptable level of initial consistency. Even though the threshold acceptance level is 0.70, in this study the values of alpha are 0.603, 0.546, 0.51, 0.676, 0.50 for leadership, staff training, working environment, motivation and commitment and staff retention factors respectively before modifying the model.

The initial measurement estimation of the leadership model showed did not fit the data well. First this latent variable is comprised of eight items. The chi-square of 591.147 with 20 degree of freedom was statistically significant at $p<0.05$, indicating a poor fit. The other fit statistics also indicated that the model was not acceptable (χ^2/df = 29.557, RMR= 0.179, TLI= .287, CFI= 0.0.491 and RMSEA= 0.396). Moreover, the results indicated that four observed variables (integrity of employee-leaders relationship on Item 3, the humility of the leaders on their self confidence and self awareness of Item 4, the cooperation of OCSSCO leaders and other sectors on Item 7 and the decision making capability of OCSSCO's leaders on Item 8) have very poor reliabilities. In other words, their squared factor loadings are less than 0.20. Thus, the initial model should be modified. The final modified model of leadership latent factor was developed by deleting the four observed variables from the initial model and allowing the error terms to be correlated between item 2 and item 5. The results are yielded by the acceptable values of (X^2/df = 2.365; RMR=0.005; TLI= 0.990; CFI= 0.998 and RMSEA= 0.087) in the impacting of the left four observed variables (i.e. on the visionary of item 1, the courage of OCSSCO's leaders on the willing

to take risks in the achievement of their goals with no assurance of success of item 2, having the strategic planning on item 5 and focusing on the results on what must be achieved of item 6).Thus, the model was modified.

Likewise, before modifying the model of motivation and commitment latent variable, the model indicated poor fit. The chi-square of 387 with 15 degree of freedom, (χ^2/df = 25.80, RMR= 0.174, TLI= .456, CFI= 0.611 and RMSEA= 0.369). In addition, the observed Item 4 (the educational opportunities in OCSSCO to motivate the staffs), Item 6 (the motivation and commitment of employees in OCSSCO without absenteeism), and Item 7 (OCSSCO's staffs feel valued by the company and stand for customer satisfaction) indicate poor reliabilities. Thus, the initial model should be modified. The final measurement model for the motivation and commitment has modified by deleting these three poor reliabilities observed variables. Thus, the final results were chi-square of 3.765 with 3 degree of freedom, RMR= 0.021, GFI=0.990, TLI=0.997, CFI=0.999 and RMSEA 0.037 found by the significance impacting of item 1 (as the company management have not motivated and committed for continuous improvement by having planning, implementing and evaluating the strategies), item 2 (as there is the problem of motivational aspects such as reward schemes, job rotations and employee empowerment in the company), item 3 (as there is no adequate employee/team recognition programs in the company) and item 5 (as there is strong problem regarding employees commitment to serve the company's customers by going extra mile distances).

Even though, the initial model of staff training latent variable indicate acceptable level, its model indicated moderate fit with chi-square of 73.516 with 6 degree of freedom,(χ^2/df = 12.26, RMR= 0.290, GOF= 0.877, TLI= 0.758, CFI= 0.855 and RMSEA= 0.249). Moreover, the observed Item 1 (training needs assessment to fill gab of employees) and item 3 (training on company's policies & procedures) indicate poor reliabilities. Thus, the initial model was modified. Its final measurement model has developed by deleting the item 3 observed variable and allowing the error term of item of 1 to be correlated between and item 5. Thus, final the results are chi-square of 1.648 with 2 degree of freedom, RMR= 0.028, GFI=0.996, TLI=1.002, CFI=1.000 and RMSEA = 0.000 with the significance impacts of item 2 (as the satisfactory technical training on the job types is not given in OCSSCO), item 4 (as sufficient attitude and behavioral changing training is no given in OCSSCO) and item 5 (as satisfactory educational status changing opportunity is no given in OCSSCO).

In addition, even though the reliability of the observed variable of working environment item 3 (comfortability of OCSSCO's office environment.) and item 4 (the organizational structure of OCSSCO) is poor, its initial measurement model indicate acceptable levels wit χ^2/df =1.681, RMR= 0.058, GOF= 0.961, TLI= 0.879, CFI= 0.919 and RMSEA= 0.061. But, slightly it needs modification. Thus, the modified model is developed by deleting item 3 and item 4 which is shown graphically in Figure 4.4.

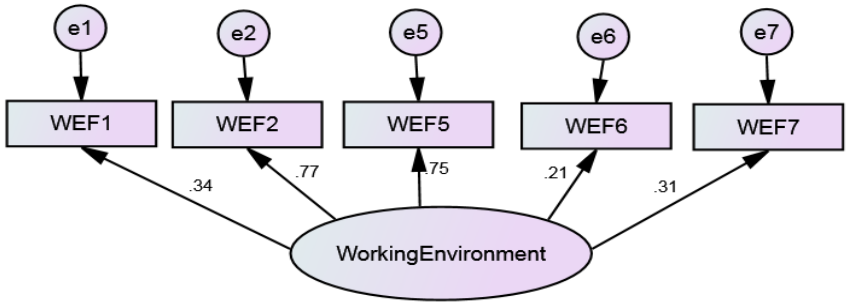


Figure 4.4: Working Environment Measurement Model

Thus, the improved model out puts are df =5, RMR= 0.043, GOF= 0.983, TLI= -, CFI= 1.00 and RMSEA= 0.059 with the significance impacting of item 1 (as there is the problem of employee participatory & empowerment in decision making in OCSSCO), item 2 (as OCSSCO is not technology sensitive to give speeded up and satisfactory services), item 5 (as there is a negative government issues interference rather than positively supporting), item 6 (as there is psychological dissatisfaction due to unhealthy of communications in the organization) and item 7 (as the OCSSCO's workplace environment at frontline office is not attractive and as not creates psychological satisfaction on staffs).

Even though the reliability of items 1 (The satisfactory salary payments and other benefits relative to banks) and item 5 (as the employees Work load and burden is good in OCSSCO relative to banks) is poor at initial model of staff retention, the other estimation of out puts were acceptable. These were: χ^2/df = 1.702, RMR= 0.051, GOF= 0.974, TLI= 0.960, CFI= 0.976 and RMSEA= 0.062. Thus, after deleting the item 1 and item 5 the final model outputs were χ^2/df = 1.870, RMR= 0.019, GOF= 0.990, CFI= 0.993 and RMSEA= 0.069 with the significance of observed item 2 (as there is no company commitment to retain the experienced staff by devising different employee retention mechanisms in OCSSCO), item 3 (as there is dissatisfaction of high talented staffs due to technology

inaccessibility), item 4 (as there is no satisfactory career opportunity and transparency in case of staff promotion) and item 5 (as OCSSCO's staffs do not want to retain in the company because of inappropriate work process and working conditions in the company).

The results of the final structural model that represented the theoretical structural model were chi-square of 603.45 with 220 degree of freedom was statistically significant at $p<0.05$, indicating an inappropriate fit. However, it has been stated that the chi-square is highly sensitive to sample size and usually suggests a poor fit with large sample sizes (Byrne, 2001). Thus, in this research, the results of final the model refinement that was performed to improve the model fit was summarized as shown in Table 4:7 by employing χ^2 test, , RMR, Tucker-Lewis index (TLI), Comparative Fix Index (CFI) and the RMSEA,

Table 4:7: Summary of the structural equation model results

Main factors	# of items (*/**)	Cronbach Alpha	DF	X^2	RMR	TLI	CFI	RMSEA
LF	8(4)	0.788	1	2.365	0.005	0.990	0.998	0.087
STF	5(3)	0.763	2	1.642	0.028	1.002	1.000	0.000
WEF	7(5)	0.702	5	8.153	0.043	-	1.00	0.059
MCF	7 (4)	0.795	3	0.744	0.021	0.997	0.999	0.037
SRF	6 (4)	0.758	2	3.740	0.019	0.980	0.993	0.069
LP	5(5)	0.943	540	2001.95	0.287			
*= number of initial observed items and ** = number of modified items								

As seen from the final structural model fig 4.5, the working environment, staff retention, motivation and commitment factors of standardized path coefficients' results of the theoretical hypothesized paths, were significant at $p<0.05$. This means the theoretical proposal of the hypothesis is supported by their finding results (data) and they exert a significant impact on the staff productivity of OCSSCO.

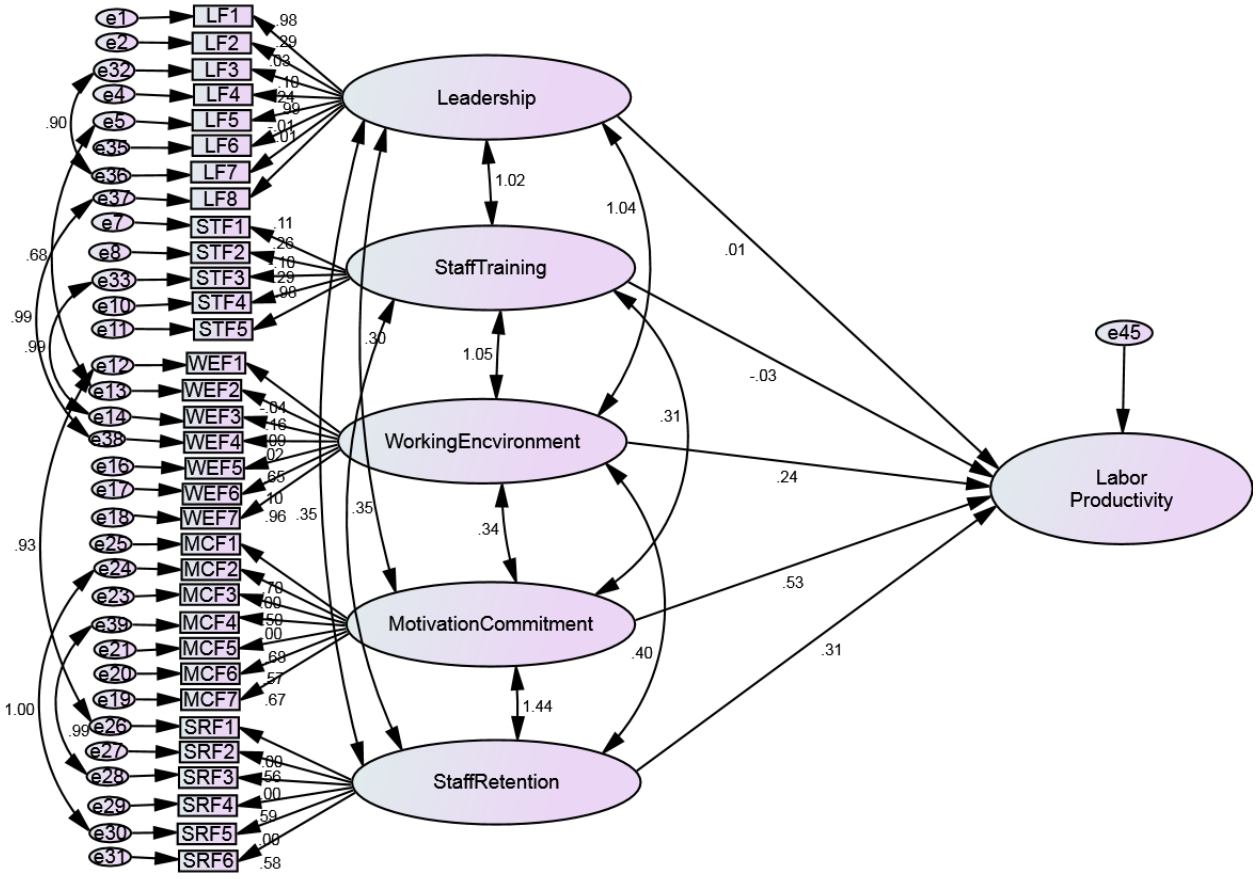


Figure 4.5: Structural Equation Model Developed

However, the impact of leadership and staff training on labor productivity of OCSSCO have not been shown in the model with statistically significant path coefficient. The hypothesis that leadership and staff training directly affects the staff productivity of OCSSCO have been found untrue with a slightly negative and insignificant path coefficient value (β= –0.03 and 0.01) in the structural equation model results. Thus, the leadership and staff training factors' paths were not significant implying they are not supported at $p< 0.05$.

The results from the structural equation model indicated that the variables in the final model explained 31 percent of staff retention, 53 percent of motivation and commitment, 24 percent of the working environment, 3 percent of the staff training and only 1 percent of the leadership were impacting the labor productivity of OCSSCO. These results show the direct effects of each latent variable on the staff productivity of OCSSCO. Moreover, the model further provides evidence of

statistically significant correlations among the influencing factors that indicated significantly positive impacting.

In general, among these factors conducted in OCSSCO, the company and its staffs motivation and commitment, staff retention and working environment in OCSSCO are the three factors that are vitally impacting its labor productivity. Likewise, among company and staff motivation and commitment causes the discontinuous improvement planning, evaluating and implementing strategies in company and the absence of employee/team recognition programs are also the first and second items those need important attention in OCSSCO. In addition, lack of different mechanism to retain the experienced staffs, insufficient of technology in OCSSCO and lack of transparency in case of staff promotion are investigated as the vital causes of turnover in OCSSCO. On the other hand, the insufficient technology accessibility that affect the speed of the service rate and dissatisfactory of staffs in OCSSCO and the government interference in the decision of the company are the two causes among the seven different causes developed in questionnaires which are directly impacting the staff productivity of OCSSCO.

Hence, it is very important to give emphasis on motivation and commitment, staff retention mechanism, working environment factors to achieve the continuous improvement of its staff productivity.

Never the less, the result of leadership and staff training factors are not directly significantly affecting staff productivity of OCSSCO, they are directly affecting the motivation and staff retention of this company. Thus, OCSSCO also should give emphasis on leadership and staff training.

4.5. Proposed Labor productivity improvement of OCSSCO

As seen from seven years labor productivity and other partial productivity of the company trend's results, labor productivity has been highly affecting the total productivity of it. Thus, the improvement strategy needs on the significantly impacting factors which their results were investigated in the result of path analysis of the factors affecting the staff productivity of OCSSCO. Even though their significance levels were different on the staff productivity effect, the major factors conducted in the study were leadership, staff training, working environment, staff retention,

motivation and commitment factors which need serious continuous improvements to enhance labor productivity.

Thus, to improve the labor productivity of OCSSCO, the researcher proposed the following continuous improvement strategies regarding the vital factors improvement. The proposed labor productivity improvement conceptual model for Oromia Credit and Saving Share Company needs the continuous and strategic improvements.

4.5.1. Working Environment, Staff retention, Motivation and Commitment Improvement

As seen from the results of the final structural equation model developed, the staff productivity of Oromia Credit and Saving share Company was strongly influenced by the impacts of working environment, staff retention and motivation and commitment factors.

On the other hand, among each cause of them, there are significance difference between their observed variables (items). For example, among company staff motivation and commitment causes the discontinuous improvement planning, evaluating and implementing strategies in company and the absence of employee/team recognition programs are the first and second items those need important attention in OCSSCO. In addition, lack of different mechanism to retain the experienced staffs, insufficient of technology in OCSSCO and lack of transparency in case of staff promotion are investigated as the vital causes of turnover in OCSSCO. On the other hand, the insufficient technology accessibility that affect the speed of the service rate and dissatisfactory of staffs in OCSSCO and the government interference in the decision of the company are the two causes among the seven different causes developed under working environment which are directly impacting the staff productivity of OCSSCO.

Thus, for continuous enhancement of OCSSCO staff productivity, it is very important to give emphasis to employee/team recognition programs, other mechanisms to retain experienced staff, accessibility of technology, involvement of employee and hindering the negative government interference issues. Employees want to earn reasonable salaries, as money represents the most important incentive, when speaking of its influential value (Sara et al, 2004). Financial rewards have the capacity to maintain and motivate individuals towards higher performance, especially workers from production companies, as individual may use the money to satisfy their needs. Competent salary has a significant impact in establishing employees' diligence and commitment,

being a key motivator for employees. Moreover, the non-financial factors that have a positive influence on motivation, such as rewards, social recognition and performance feedbacks. Rewards are one of the most efficient tools of management when trying to influence individual or group behavior, as to improve organization's effectiveness. OCSSCO should use promotion, bonuses and other types of rewards to motivate its employees. In order to use salary as a motivator, managers have to develop salary structures, according to the importance of each job, individual performance and special allowances.

Additionally, using a transformational leadership style and talented management it is possible to increase staff motivation and organizational commitment by satisfying its employees. In order to achieve OCSSCO's goals, the leaders should gain the employees' trust and make them follow them. Nevertheless, in order to make employees trust them and complete their tasks properly for the organization, the employees should be motivated (Baldoni, 2005). The leaders and the employees help one another to attain high levels of morality and motivation. Therefore, trust is an important factor for an organization that wants to be successful, as it has the ability to enhance employees 'motivation and foster interpersonal communication It has been said that with no customers there is no business. Thus, to improve these results OCSSCO should use talent management and to accomplish their talent management goals, organizations must be committed. Talent management has emerged as an area in which organizations and especially human resource professionals can spend time and resources to develop a workforce that gives them a competitive and strategic advantage. Organization use talent management in order to achieve some of their goals, such as competitive advantage, retention, and increase productivity (Heger, 2007).

The contribution of the employees and their participation in designing the organization are essential for the well-being of the organization, as individuals should do efforts in the environment where they are responsible for their actions. Empowerment gives people responsibility and authority to act as if they are in control of their own destinies. It is essential for an organization to recognize the quality and the results of the employees' work, as next time they will be even more efficient to get more recognition. Employee participation and empowerment is about the contributions of the employees in administration and decision-making regarding the policies, objectives and the strategies of the organization. However, a disengaged workforce is costly to an organization in this competitive global market. An engaged workforce has higher levels of

commitment to the organization, lower levels of intentions to turnover, and higher rates of satisfaction and finally results better achievement of productivity.

Moreover, as giving technical and attitude changing training highly influences the levels of productivity also the levels of motivation and commitment is influenced. Therefore, developing and implementing employee training programs is a necessary strategy to motivate workers. Because of training and development is considered as an educational process which involves the sharpening of skills, concepts, changing of attitude and gaining more knowledge to enhance the performance of employees (Josephat Stephen Itika, 2011). This implies well trained employees show both quantity and quality performance. There is less wastage of time, money and resources when employees are properly trained. Moreover, having good training and development programs help the company to keep the right people and increase productivity, it has additional benefits like job satisfaction, uncover employee potential, reduce staff turnover by creating a confidence in the mind of the employees and significantly help in the optimum resource utilization by changing the behavioral skills in the organizations. Thus, to improve the labor productivity of OCSSCO, the study proposed the following conceptual framework that needs continuous improvement regarding these vital factors.

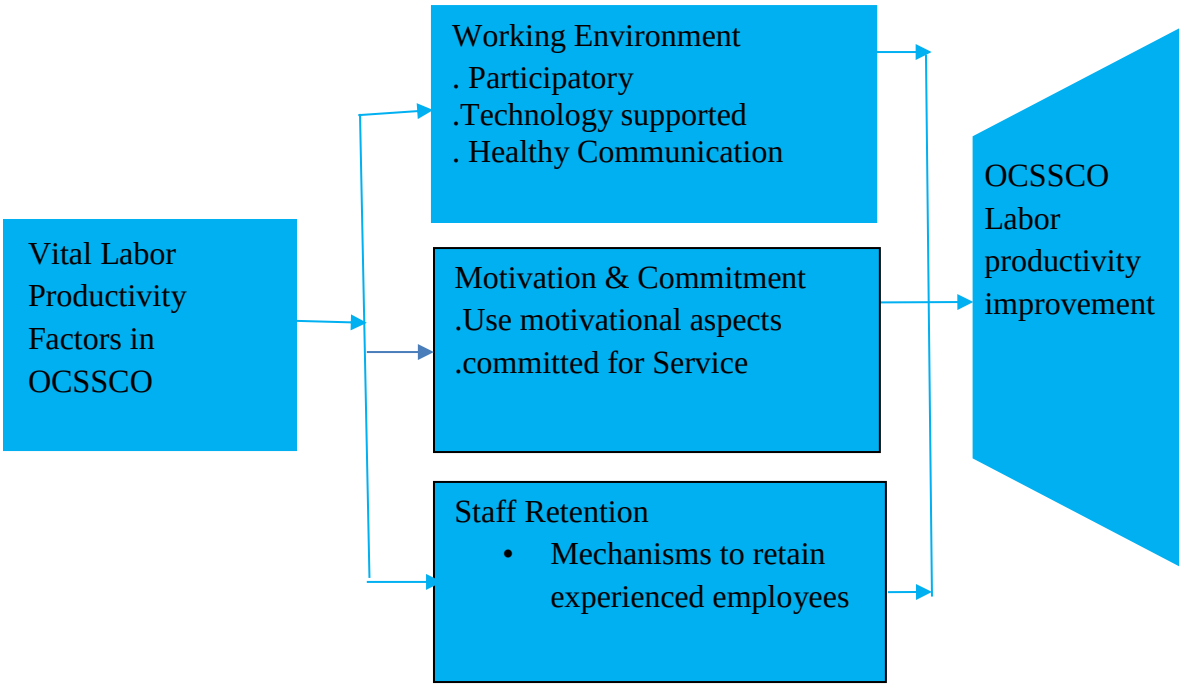


Figure 4.6. Proposed Conceptual Framework for the Labor Productivity Improvement of OCSSCO

In general as indicated in the model developed figure 4.6 above, all these vital factors has to be collaborated efficiently to improve continuously the labor productivity of OCSSCO.

Thus, the author believes that OCSSCO could get highly improved staff productivity if it to be committed to implement the following proposed improvement strategies on these vital factors.

CHAPTER FIVE

5. CONCLUSION, RECOMMANDATIONS AND FUTURE WORKS

The purpose of this chapter is to present a summary of findings of the study, deduce conclusions based on the study findings and suggests recommendations based on the study findings and conclusions. Limitations and suggestions for further research are also presented in the chapter.

5.1. Conclusions

Labor productivity is one of the most important factors affecting the overall organization productivity and the success of the organization in the competitive market nowadays. The main purpose of this thesis was to analyze the trends of staff productivity and the factors affecting employee productivity at Oromia Credit and Saving Share Company. The researcher used the secondary data to analyze the general trends of staff productivity for the last seven years by using inputs and output parameters. The study identified the main inputs affecting productivity of the OCSSCO as human resources, capital, energy and miscellaneous factors.

Among these main inputs, the researcher found that the partial labor productivity is the seriously affecting total productivity of this company. Based on the generic factors affecting the labor productivity in service sectors reviewed from various literatures and as per OCSSCO context, this study investigated the impacts of five latent factors namely motivation and commitment, staff retention, working environment, leadership and staff training on staff productivity of OCSSCO. The figures of mean values as presented in descriptive statistics results are more than 4.00, implying that it is needed for improvement regarding these factors.

Even through the results of descriptive statistics analyzed of these latent factors that indicated positive impact on labor productivity in OCSSCO, the study tested the result of hypothesis as they have different impacting significances. The results were tested by Amos software and figured out as follows.

- The results from the final structural equation model indicated were 31 percent of staff retention, 53 percent of motivation and commitment, 28 percent of the working environment were significant positively impacting the labor productivity of OCSSCO.
- In addition, the results of structural equation model produced an additional finding which was not hypothesized regarding leadership and staff training factors on the impact of staff productivity. It was supposed that leadership and staff training had strong direct effect on staff productivity of OCSSCO though the result of structural equation model does not support.
- Based on the pearson correlation of the factors' results and covariance of structural equation model results, they do not only affect the employee productivity but also they have significant impacts on each other. For example, good leadership is supposed to increase the motivation and commitment of staffs for their good performance. But the significant is different for each relationship.

Therefore, improving all these factors increases the productivity of OCSSCO and gives for its internal and external customer satisfaction and moreover achieving competitiveness with other similar institutions.

5.2. Recommendations

Among the factors analyzed in OCSSCO, the company and its staffs motivation and commitment, staff retention and working environment in OCSSCO are the three factors that are vitally impacting its labor productivity. Never the less the result of leadership and staff training factors are not directly significantly affecting staff productivity of OCSSCO, they are directly affecting the motivation and staff retention of this company. Due to these, this thesis recommends the following points to be applied and implemented in OCSSCO for its labor productivity continuous improvement and competing in markets.

- ✓ OCSSCO should be committed and use different motivational aspects such as reward schemes, job rotation and employee empowerment in order to gear staffs towards better performance

and use satisfactory reward package for best team/staff performer to appreciate and recognize for the retention of internal employees and attracting the experienced experts from others.

- ✓ OCSSCO should be motivated and committed to retain the experienced staffs by devising different employee retention mechanisms.
- ✓ OCSSCO's working place environment should be clear from the negatively affecting factors and its work place environment should be well organized, attractive and creates psychological satisfaction on staffs which in turn results in good staff productivity.
- ✓ OCSSCO should use the applications and knowledge of total quality management that the effective improvement technique for continuous improvement and total participation of employees and customers within the organization.
- ✓ OCSSCO's leadership should be transformational leadership as a process that occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and workforce commitment to the organization, lower levels of intentions to turnover, and higher rates of employees' satisfaction.
- ✓ OCSSCO should develop continuous training program and individual performance measurements periodically for all its employees according to their job characteristics.

5.3. Limitations and Future Work

The results of primary data analyzed of this study are relevant to conduct further research on the factors affecting staff productivity in microfinance institutes and help to design the improvement strategies for these factors. These findings are investigated only from a single organization (i.e. Oromia Credit and Saving Share Company) and the primary data were collected only from 183 respondents. However, the response can differ if the future study consider larger samples by taking numerous similar microfinances institutes. In addition, the study tested only the effect of five latent factors on the impact of labor productivity and found that the contradicting and insignificant result on leadership and staff training factors which were not supported by the proposed model. Thus, additional research is needed to further empirically test the validity of the proposed model and its conclusions.

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Appendix A: Questionnaires and Interviews' Questions

Questionnaires Part

Dear Sir/Madam

My name is Jifara Mirkena, M.Sc. Student at Addis Ababa University, Addis Ababa Institute of Technology, in the school of Mechanical and Industrial Engineering in partial fulfillment of M.Sc. in Industrial Engineering that is conducting a research entitled "Labor Productivity Analysis and Factors Affecting Oromia Credit and Saving Share Company." The aim of this questionnaire is to identify factors affecting staff productivity of Oromia Credit and Saving Share Company (OCSSCO).

The questions mentioned below are designed only for research purpose. The researcher has no intention to represent this information negatively in his paper. All information obtained is treated confidential and will, in no ways, be disclosed to third party.

Please provide your responses to the questions based on the instructions under each section. If you have comments or if you want to provide further explanations, please use the space provided at the end of the questionnaire.

Thank you in advance for your kind cooperation and sparing your precious time to respond to the questions.

Best Regards,

Jifara Mirkena

March 2018

Instruction

Please indicate the following by ticking (√) on the spaces in front of the response options:

Section I: Demographic Profile of Respondents

1. Gender: Male ☐ Female ☐

2. Age: 20-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐

3. Educational level: Certificate & Diploma ☐ First Degree ☐ Masters Degree & above ☐

4. Work experience in Microfinance (OCSSCO):

1-5 years ☐ 6-10 years ☐ 11-15 years ☐ above 15 years ☐

5. Current occupational position:

Management ☐ Operational /Technical ☐ supportive ☐

Section II: Questionnaires related with factors influencing labor/staff productivity

The followings are lists of statements that pertaining to factors affecting staff productivity in Oromia Credit and Saving Share Company (OCSSCO). Please indicate level of your agreement with each statement by ticking (√) on the spaces that specify your choice from the options that range from "Strongly agree" to "Strongly Disagree". Each choice is identified by numbers ranged from 1 to 5.

Note: SA- Strongly Agree, A- Agree, N- Neutral, DA- Disagree, SD- Strongly Disagree

The followings are major factors considered to influence staff productivity in OCSSCO		SA	A	N	DA	SD
		1	2	3	4	5
	1. Leadership					
1.1	All leaders of OCSSCO have clear, exciting ideas of where they are going & what they are trying to accomplish (Visionary)					
1.2	All OCSSCO leaders are willing to take risks in the achievement of their goals with no assurance of success (Courage)					
1.3	Employee – leader relationship in OCSSCO is at its acceptable level, so that they trust each other or employees trust the leadership (Integrity).					
1.4	All company leaders have adequate self confidence and self awareness to recognize the value of the others without feeling threatened (humility)					
1.5	All OCSSCO leaders are outstanding at strategic planning. They have the ability to look ahead, to anticipate with some accuracy where the industry and the markets are going					
1.6	All OCSSCO Leaders focus on results, on what must be achieved by themselves, by others, and by the company. They focus on the strengths of the organization, on satisfying demanding customers in a competitive marketplace.					

1.7	All OCSSCO leaders have equal cooperation of others by making a commitment to get along well with each key person and sectors					
1.8	All OCSSCO's leaders have enough the ability to take the right decision at the right time (Decision making capability)					
	2. Motivation and commitment					
2.1	The company management is motivated and committed for the continuous improvement by having planning, designing, implementing & evaluating strategies.					
2.2	There is adequate different motivational aspects such reward schemes, job rotation and employee empowerment in order to gear staff towards better performance.					
2.3	There is sufficient encouraging trainings and educational opportunities in OCSSCO					
2.4	There is a satisfactory employee/team recognition programs in OCSSCO					
2.5	There is a satisfactory employees' commitment to go extra mile distances to serve customers					
2.6	Every employee is motivated & committed for his/her duty without absenteeism in OCSSCO					
2.7	All staffs of OCSSCO feel valued by the company & stand for customer satisfaction					
	3. Staff training					
3.1	There is sufficient training needs assessment to fill gab of employees					
3.2	Satisfactory technical training on the job types is given in OCSSCO					
3.3	Sufficient training on company's policies & procedures are given periodically					
3.4	Sufficient attitude and behavioral changing training is given in OCSSCO					
3.5	Satisfactory educational status changing opportunity is given in OCSSCO					
	4. Working Environment					
4.1	There is strong employee participatory & empowerment in decision making in OCSSCO					
4.2	There is a comfortable office environment (i.e. office, like chairs, lights, etc.) for the achievement of good staff performance and productivity.					
4.3	OCSSCO is technology sensitive to give speeded up and satisfactory services					
4.4	There is psychological satisfaction due to healthy communications in the organization					
4.5	There is a positive government issues interference rather than negatively affecting					
4.6	Organizational structure of OCSSCO is designed in good manner that encourages staff productivity and ensures company's sustainability					

4.7	OCSSCO's workplace environment at frontline office is attractive and creates psychological satisfaction on staffs which in turn results in good staff productivity.					
	5. Staff Retention					
5.1	There is a satisfactory salary payments and other benefits relative to banks					
5.2	There is a company commitment to retain experienced staff by devising different employee retention mechanisms in OCSSCO					
5.3	There is good satisfaction of high talented staffs due to technology accessibility & other cases in OCSSCO					
5.4	There is a satisfactory career opportunity and transparency in case of staff promotion					
5.5	Employees Work load and burden is good in OCSSCO relative to banks					
5.6	OCSSCO's staffs want to retain in the company because of appropriate work process and working conditions in the company					

Interview Questions

1. Do you have the measuring strategy/tool for your company's staff/employee/labor productivity? If yes, how do you measure your company's staff productivity?

   _____
   _____
   _____
   _____

2. Do you think that company's employees were productive during past seven operational years consistently? If no, Please mention the reasons.

   _____
   _____
   _____

Appendix B: Total Annual Output and Resources (Inputs) used in OCSSCO

Table: 4.8 Total in puts consumed by labor in OCSSCO (L)

In Birr	2011	2012	2013	2014	2015	2016	2017
Salary & other Benefits	202829499.8	206838130.5	401396773.8	622971542.3	773014637	1024217875.8	1289859230

Table: 4.9 Total inputs expended on capitals in OCSSCO (C)

In Birr	2011	2012	2013	2014	2015	2016	2017
Stationary & Office Supplies, Repair & maintenance, Insurance, Depreciation	49420675.3	60288541.9	76005659.7	111079845.2	112682867	115436711	129311919

Table: 4.10 Total Energy used In OCSSCO (E)

In Birr	2011	2012	2013	2014	2015	2016	2017
Electric, Water & Fuel	8732532.56	11697776.8	14885901	21488144.8	25156225.4	23121406.9	22909470

Table: 4.11 Total Miscellaneous in puts used in OCSSCO (M)

In Birr	2011	2012	2013	2014	2015	2016	2017
Advertisement, Entertainment Postage, Audit, telephone Office rent, Consultancy, legal fee, Penalty, Printing & documentations, Inauguration, Member fee & other	60825446.5	70991942.34	81263912.9	115423749.7	159011366.3	171731874	178480521

Table 4.12.Summary of Total Annual output and resources (inputs) used in OCSSCO

(Birr)	2011	2012	2013	2014	2015	2016	2017
Total Income (Q_t)	1581461 61	195937761	258419243	413217024	599472851	626821340	767466242
labor (L)	202829499.8	206838130.5	401396773.8	622971542.3	773014637	1024217875.8	1289859230
capital (C)	49420675.3	60288541.9	76005659.7	111079845.2	112682867	115436711	129311919
Energy (E)	8732532.56	11697776.8	14885901	21488144.8	25156225.4	23121406.9	22909470
Miscellaneous (M)	60825446.5	70991942.34	81263912.9	115423749.7	159011366.3	171731874	178480521
Total input	321762280.77	407778899	573627620.4	871214471.9	1068579057	1333662425.5	1632906897.9

Source: Secondary data 2018

Appendix C. Frequency of the Factors Influencing Employee Productivity in OCSSCO

Table 4.13: Frequency of Leadership relationship with OCSSCO's Employee Productivity

		SA(1)		A(2)		N(3)		DA(4)		SD(5)	
Leadership Factor and its Causes		Fr	%	Fr	%	Fr	%	Fr	%	Fr	%
1	All leaders of OCSSCO have clear, exciting ideas of where they are going & what they are trying to accomplish (Visionary)	9	4.9	11	6.0	28	15.3	70	38.3	65	35.5
2	All OCSSCO leaders are willing to take risks in the achievement of their goals with no assurance of success (Courage)			7	3.8	23	12.6	85	46.4	68	37.2
3	Employee – leader relationship in OCSSCO is at its acceptable level, so that they trust each other or employees trust the leadership (Integrity).	5	2.7	7	3.8	23	12.6	80	43.7	68	37.2
4	All company leaders have adequate self confidence and self awareness to recognize the value of the others without feeling threatened (humility)	1	.5	12	6.6	21	11.5	84	45.9	65	35.5
5	All OCSSCO leaders are outstanding at strategic planning. They have the ability to look ahead, to anticipate with some accuracy where the industry and the markets are going	4	2.2	6	3.3	20	10.9	86	47.0	67	36.6
6	All OCSSCO Leaders focus on results, on what must be achieved by themselves, by others, and by the company.	7	3.8	14	7.7	23	12.6	75	41.0	64	35.0
7	All OCSSCO leaders have equal cooperation of others by making a commitment to get along well with each key person and sectors	7	3.8	14	7.7	16	8.7	80	43.7	66	36.1
8	All OCSSCO's leaders have enough the ability to take the right decision at the right time (Decision making capability)	5	2.7	12	6.6	22	12.0	81	44.3	63	34.4

Table 4.14: Frequency of staff training relationship with OCSSCO's Employee Productivity

	Staff Training and its causes	SA(1)		A(2)		N(3)		DA(4)		SD(5)	
		Fr	%	Fr	%	Fr	%	Fr	%	Fr	%
1	There is sufficient training needs assessment to fill gab of employees	8	4.4	14	7.7	21	11.5	74	40.4	66	36.1
2	Satisfactory technical training on the job types is given in OCSSCO	0	0	6	3.3	24	13.1	86	47.0	67	36.6
3	Sufficient training on company's policies & procedures are given periodically	2	1.1	11	6.0	20	10.9	85	46.4	65	35.5
4	Sufficient attitude and behavioral changing training is given in OCSSCO			5	2.7	25	13.7	85	46.4	68	37.2
5	Satisfactory educational status changing opportunity is given in OCSSCO	9	4.9	12	6.6	24	13.1	73	39.9	65	35.5

Table 4.15: Frequency of working environment relationship with OCSSCO's Employee Productivity

	Working Environment and its causes	SA(1)		A(2)		N(3)		DA(4)		SD(5)	
		Fr	%	Fr	%	Fr	%	Fr	%	Fr	%
1	There is strong employee participatory & empowerment in decision making in OCSSCO	9	4.9	15	8.2	21	11.5	74	40.4	64	35.0
2	OCSSCO is technology sensitive to give speeded up and satisfactory services	5	2.7	8	4.4	20	10.9	85	46.4	65	35.5
3	There is a comfortable office environment (i.e. office, like chairs, lights, etc.) for the achievement of good staff performance and productivity.	5	2.7	10	5.5	22	12.0	81	44.3	65	35.5
4	Organizational structure of OCSSCO is designed in good manner that encourages staff productivity and ensures company's sustainability			10	5.5	28	15.3	80	43.7	65	35.5
5	There is a positive government issues interference rather than negatively affecting	5	2.7	9	4.9	21	11.5	83	45.4	65	35.5
6	There is psychological satisfaction due to healthy communications in the organization	6	3.3	10	5.5	22	12.0	82	44.8	63	34.4
7	OCSSCO's workplace environment at frontline office is attractive and creates psychological satisfaction on staffs which in turn results in good staff productivity.	10	5.5	11	6.0	24	13.1	73	39.9	65	35.5

Table 4.16: Frequency of Motivation and Commitment relationship with OCSSCO's Employee Productivity

	Motivation & Commitment and its causes	SA(1)		A(2)		N(3)		DA(4)		SD(5)	
		Fr	%	Fr	%	Fr	%	Fr	%	Fr	%
1	The company management is motivated and committed for the continuous improvement by having planning, designing, implementing & evaluating strategies.	1	.5	5	2.7	24	13.1	83	45.4	70	38.3
2	There is adequate different motivational aspects such reward schemes, job rotation and employee empowerment in order to gear staff towards better performance.	7	3.8	14	7.7	22	12.0	75	41.0	65	35.5
3	There is a satisfactory employee/team recognition programs in OCSSCO	3	1.6	12	6.6	18	9.8	82	44.8	68	37.2
4	There is sufficient encouraging trainings and educational opportunities in OCSSCO	5	2.7	7	3.8	22	12.0	85	46.4	64	35.0
5	There is a satisfactory employees' commitment to go extra mile distances to serve customers	1	.5	4	2.2	25	13.7	86	47.0	67	36.6
6	Every employee is motivated & committed for his/her duty without absenteeism in OCSSCO	5	2.7	15	8.2	21	11.5	78	42.6	64	35.0
7	All staffs of OCSSCO feel valued by the company & stand for customer satisfaction	4	2.2	13	7.1	22	12.0	81	44.3	63	34.4

Table 4.17: Frequency of staff retention relationship with OCSSCO's Employee Productivity

	Staff Retention and its causes	SA(1)		A(2)		N(3)		DA(4)		SD(5)	
		Fr	%	Fr	%	Fr	%	Fr	%	Fr	%
1	There is a satisfactory salary payments and other benefits relative to banks	7	3.8	15	8.2	20	10.9	75	41.0	66	36.1
2	There is a company commitment to retain experienced staff by devising different employee retention mechanisms in OCSSCO	0	0	8	4.4	22	12.0	86	47.0	67	36.6
3	There is good satisfaction of high talented staffs due to technology accessibility & other cases in OCSSCO	3	1.6	10	5.5	20	10.9	84	45.9	66	36.1
4	There is a satisfactory career opportunity and transparency in case of staff promotion	3	1.6	5	2.7	22	12.0	85	46.4	68	37.2
5	Employees Work load and burden is good in OCSSCO relative to banks	8	4.4	13	7.1	23	12.6	74	40.4	65	35.5
6	OCSSCO's staffs want to retain in the company because of appropriate work process and working conditions in the company	6	3.3	11	6.0	22	12.0	81	44.3	63	34.4

Appendix D: The Result of Structural Equation Model testing

Table 4.18: Regression Weights by Maximum Likelihood Estimates

Paths			Estimate	S.E.	C.R.	P
Labor Productivity	<---	Staff Retention	.216	.021	10.055	***
Labor Productivity	<---	Motivation & Commitment	.312	.033	9.490	***
Labor Productivity	<---	Working Environment	.088	.022	4.026	***
Labor Productivity	<---	Staff Training	-.010	.024	-.421	.673
Labor Productivity	<---	Leadership	.003	.027	.107	.915
L1	<---	Leadership	1.000			
L2	<---	Leadership	.214	.052	4.118	***
L3	<---	Leadership	.023	.065	.361	.718
L4	<---	Leadership	.086	.060	1.431	.152
L5	<---	Leadership	.228	.059	3.891	***
L6	<---	Leadership	.977	.017	55.882	***
L7	<---	Leadership	-.009	.072	-.127	.899
L8	<---	Leadership	.008	.020	.402	.688
SR3	<---	Staff Retention	-.008	.008	-1.041	.298
SR4	<---	Staff Retention	1.000			
SR5	<---	Staff Retention	.004	.005	.782	.434
SR6	<---	Staff Retention	1.000			
SR2	<---	Staff Retention	.814	.077	10.527	***
SR1	<---	Staff Retention	.031	.049	.629	.530
MC1	<---	Motivation & Commitment	.861	.080	10.815	***
MC3	<---	Motivation& Commitment	.727	.082	8.830	***
MC2	<---	Motivation & Commitment	-.001	.007	-.213	.831
MC4	<---	Motivation & Commitment	.002	.010	.238	.812
MC6	<---	Motivation &Commitment	.891	.094	9.461	***
MC5	<---	Motivation &Commitment	.819	.077	10.620	***
MC7	<---	Motivation & Commitment	1.000			
ST1	<---	Staff Training	.114	.071	1.615	.106
ST2	<---	Staff Training	.190	.050	3.830	***
ST3	<---	Staff Training	-.084	.025	-3.404	***
ST4	<---	Staff Training	.210	.049	4.302	***
ST5	<---	Staff Training	1.000			
WE7	<---	Working Environment	1.000			
WE6	<---	Working Environment	.086	.053	1.618	.106
WE5	<---	Working Environment	1.000			
WE4	<---	Working Environment	.023	.019	1.244	.214
WE3	<---	Working Environment	-.087	.025	-3.458	***
WE2	<---	Working Environment	.208	.060	3.451	***
WE1	<---	Working Environment	.066	.070	.949	.343

Table 4.19: Covariance: (Group number 1 - Default model)

Paths			Estimate	S.E.	C.R.	P
Leadership	<-->	Working Environment	1.142	.121	9.456	***
Staff Training	<-->	Motivation Commitment	.218	.063	3.441	***
Working Environment	<-->	Staff Retention	.228	.058	3.900	***
Leadership	<-->	Staff Training	1.176	.124	9.464	***
Staff Training	<-->	Working Environment	1.148	.121	9.477	***
Staff Retention	<-->	Motivation & Commitment	.512	.064	8.045	***
Working Environment	<-->	Motivation Commitment	.231	.062	3.720	***
Staff Training	<-->	Staff Retention	.207	.059	3.487	***
Leadership	<-->	Staff Retention	.205	.059	3.477	***
Leadership	<-->	Motivation Commitment	.212	.063	3.388	***
e28	<-->	e39	.841	.089	9.479	***
e14	<-->	e33	.844	.089	9.476	***
e37	<-->	e38	.964	.102	9.473	***
e24	<-->	e30	1.141	.120	9.517	***
e32	<-->	e36	.895	.099	9.035	***
*** = Indicates significance						