

# AN EMPIRICAL STUDY OF RELATIONSHIP BETWEEN CUSTOMER SATISFACTION, EMPLOYEE PRODUCTIVITY AND PROFITABILITY-EVIDENCE FROM BANKING SERVICES SECTOR OF PAKISTAN

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## Abstract

*Today, many businesses considered the laying-off employees as a mean to improve their productivity and ultimately to achieve higher profits. However, in services oriented business it may not work well as customer satisfaction can be at stake. Fewer no. of employees have to handle more customers thereby customer satisfaction may be hampered. The aim of this paper is to investigate the same that whether there exists a trade off between productivity and customer satisfaction or not and how the simultaneous change in both affect the profits of the business. To conduct this research, data is taken from the banking industry of Pakistan. The regression analysis is used to find out the results. The findings suggested that there exists a trade of between customer satisfaction and productivity as both of these have a significant negative association. Further, it is explored that both of these a positively associated with the profits however their combine affects on profitability found to be negative.*

**Keywords:** Productivity, Profitability, Customer Satisfaction, Banking Services.

**JEL Classification:** Z000

## Introduction

The world is growing fast as well as businesses are growing and it is essential for the companies to create substantial difference from each other to increase their profitability and also full fill customer satisfaction. Firms always believe to have higher rate of productivity as well as customer satisfaction but compatibility between these two variables is uncertain. Customer satisfaction and

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productivity may sometimes show the inverse relationship between them because if a company is focusing on having less employees which can improve the productivity, but the quality of the product or services could be at the stake. On the other hand, if companies want to have higher rate of employee at their operation, will decrease the productivity of the company. But may increase the customer satisfaction, so it could be revealed that there is always a trade off in the level of productivity and customer satisfaction.

Profitability of any organization is depending upon the customer satisfaction and productivity. It is obvious that happy customers will retain for a longer period of time and will always have positive mouth of word and will buy product several time. From the investigator point of view that is defiantly a positive relationship among profitability of organization and customer satisfaction level.

According to Hoyer and MacInnis (2001) gratified customers makes the standing foundation of any prosperous business, as a happy and satisfied customer will may make a reappearance and may will repeatedly buy a product, that will show a positive attitude of customers towards the product and will speak positively and also recommend to others. Contemporary to this if a firm increases its productivity then it may will decreases its cost of production and input cost making profits for the company in short run but this will may decreases the customer satisfaction in long run.

This research paper has focus upon the inspect and explore the core and vital relationship among the customer satisfaction, productivity and profitability of the organizations by using the data of the companies which are using different strategies to augment their profits, so this exploration tends to examine the effects of productivity (whether increases or decreases), on company's profitability and its customer satisfaction. Hence it will be very helpful for the companies to understand this trade off between the productivity and customer satisfaction, which if not handled correctly can hamper the profits of the companies. The study is also significant in a way that very few researcher has explore this association between the variables earlier and in Pakistan no efforts has yet been put forth to examine this relationship between customer satisfaction, productivity and profitability. Hence the research work will add lots of contribution to the existing literature.

Next part of the research include link between all three variables, it include the relationship between profitability and customer satisfaction then relationship between profitability and productivity and also link between productivity and satisfaction of the customers. Further then objectives, literature review and methodology will be discussed.

## **Employee Productivity and Customer Satisfaction**

### *Customer satisfaction*

Today in the business world clients are central focus of every business and they always prefer what customer wants and how customer wants it. The procedures, plan, action and development of strategies are developed according to the need of potential customers. Today in the modern world and in era of marketing the focus of business is towards the need of customer and their satisfaction. Business has acknowledged the significance of the customer. Zairi (2002) said "Customers are the purpose of what we do and rather than depending on us, we are very much depend on them. The customer is not a source of problem; we should not perhaps make a wish that customers should go away, because our future and security will be put in jeopardy". Customer satisfaction is a sense of achievement and also the strategies focused by money businesses to increase their profit. The word customer satisfaction can be classified as the fulfillment of the need of the customer through the use of the product of that company. Kolter (2000) demarcated the term as "an individual emotions of gratification or displeasure is resultant from comparing a product's supposed performance in relation to his or her understanding".

It is quite obvious that if customers expectation will meet with the performance of products and services of any company, they will ultimately satisfied and will show positive response for the company, on the other hand if the expected outcome is not fulfilled, the customer will not wish to use that products or services thereafter, which will harm in losing the potential customer. Thus, a gratified consumer can make proceeds for the business although and disappointed one can hinder company's sales. Thereafter, it can be concluded that taking in accordance the other factor, satisfaction of the consumer is connected with effectiveness and profitability of the company it is quite vital have to notify that product and services are important factor but there are certain other factors that distort level of customer satisfaction. According to Hackanson (1995) the factor that can affect the customer satisfaction generally are responsive employees, educated employees, cooperative employees, well-mannered employees bills are formed accurately. Billing relevance and on time, competitive pricing, quality of the product and services, excellence of goods and swift services from this we can conclude that employees can play vital role in the satisfaction of the customer.

### *Productivity*

The conversion of raw material input into valuable goods output can be defined as the term productivity. A firm productivity supposed to be greater if a firm consumes minimum input to generate the maximum output possible or a firm uses similarly level of inputs to generate the maximum level of output.

Here we can conclude that productivity is a ratio of specific type of input to output. We can take specified in put as our firms employees decreasing the number of work force might diminishes the cost, as increasing the profit for the organization such that reduce in cost will grow the productivity of organization. The result of the rise in productivity will directly affect the satisfaction level of the consumer as discussed earlier there are plenty of factors that distrust the satisfaction level of the consumer and many of these reason are directly related to the employees of the organization such that responsive employ, expert employees, supportive employees, well mannered employees etc.

On the other hand decreasing the quantity of employees to increase productivity means every employee of the organization has additional responsibilities under a lot of pressure, burden and responsibilities. So the managing of work can be difficult for the employees which ultimately effect the behavior of the employee, he or she can be less friendly, less helpful to his/her customer. The result of additional responsibility may affect his work regarding the work environment, replies to the e-mail, he may not handle complaints and concerned of his customer, ultimately reducing the satisfaction level of the customer which leads toward unsatisfied customer. Result of this could be upon the sales and profit such that they might reduce.

It can be concluded that there is positive relationship among satisfaction of the customer and productivity of organization .investigation and studies have shown great variance among the bounds of customer satisfaction and productivity of organization.

Reichheld and Sasser (1990) claim that decreasing faults, primes to increasing level of loyalty, which had positive effect on productivity decreasing the cost of transactions, positive word of mouth. In comparison to economic point of view this relationship is studied as to be negative.

### *Research Objectives*

The objectives of this study are:

- To examine the relationship between customer satisfaction and productivity
- To investigate the association between customer satisfaction and profitability
- To analyze the relationship between productivity and profitability
- To explore the simultaneous affect of productivity and customer satisfaction on profitability

### *Research Questions*

1. What relationship exists between productivity and customer satisfaction?
2. What is the association between profitability and productivity?
3. How customer satisfaction and profitability relates?
4. What is the instantaneous affect of employee productivity and customer satisfaction on profitability?

Hypothesis:

*H0*: There is no relationship between employee productivity and customer satisfaction.

*Ha*: There is negative relationship between employee productivity and customer satisfaction.

*H0*: There is no relationship between employee productivity and profitability.

*Ha*: There is positive relationship between employee productivity and profitability.

*H0*: There is no relationship between customer satisfaction and profitability.

*Ha*: There is positive relationship between customer satisfaction and profitability.

*H0*: Productivity, will not mediate the association between Customer Satisfaction and Profitability

*Ha*: Productivity, will mediate the association between Customer Satisfaction and Profitability.

### **Literature Review**

There are numerous studies concluded earlier to show the inter-dependence of profitability on the satisfaction level of customer and also interdependence of productivity and profitability. There have been little amount of research conducted and exist which shows the relationship between these three variables productivity, profitability and level of customer satisfaction instantaneously. The prior studies related to relationship of level of customer satisfaction and profitability and productivity with profitability are very rare in numbers.

Roger (1996) focused on connections and relations among the level of customer satisfaction, loyalty of the customers and profitability related to them. Data of approx. 12000 retail-bank customers is collected by roger to study relationship between these variables. To analyze and study the influence of level of customer satisfaction, profitability and loyalty OLS regression analysis is used. The outcome recommended that there is a constructive relation among level of customer satisfaction and loyalty of customer and further more positive relation among profitability and level of customer satisfaction.

According to Timothy et al. (1996) data of institutional securities industry of North America is used to study and analyze the relation among satisfaction of customers and profitability of the firm. Statistical tool of correlation is used to analyze variables and concluded that negative correlation occurs among profitability and level of customers satisfaction for the customers who are un-profitable for firm and positive correlation occurs among level of customer's satisfaction and customers who are profitable for the organization.

Bernhardt et al. (2000) concluded relation among level of customer satisfaction and organizations profitability. He exhibited it and analyzed that there is no substantial correlation among the variables but instead of that these variables are tested upon time-series basis then there would be positive relation of correlation among customer satisfaction and profitability. His study further concluded that latitudinal analysis is not affective to demonstrate the true and vital relations among these variables.

According to Gyu-Chang et al. (2006) Korean firms are used to study the effect of less level of employee/workers on productivity of the firm and its financial performances. In the years 1997 to 2000 listed Korean companies are used and data of 250 companies is collected and analyzed. To study the relation among the number of employees, productivity and profitability of the organization multiple regression method is used. On the basis of results, it is concluded there exist a positive relationship between the no. of employee and profitability and there is no existence of relationship among productivity and numbers of employees.

Study indicates that relation of customer satisfaction and changing productivity is different for goods and services. Research indicated that relation is positive between satisfaction of customers and productivity for goods while negative for the services (Eugene Anderson, 1997).

Study focused on non-financial measures than can affect performance of organization. 2 years data of 78 enterprises was concluded and stated that there is positive relationship between non-financial measure customer satisfaction and long term financial position of organization. There would be increased profitability and sales if there would be higher satisfaction of customers (Zhang, 2009)

According to Mathew Yeung (2002), in today's market customer satisfaction is beneficial for the organization in two ways such that customer satisfaction creates strong loyal customers and positive word of mouth created by customer's and on the other hand increases the performance of the organization while lift in profits. It can be predicted that there is positive linear relationship between customer satisfaction and profitability. Data is used from (ASCI) American customer satisfaction index.

It is always difficult to find a relationship between customer satisfaction and profits of any organization. The result of empirical data used shows that there exists a positive relation among these two variables but existence of this relationship is not very strong. There always exist some factors those effects the nature and existence of this relation such that sales, margin etc (Wiele, 2001).

A research conducted on government department in South Africa concluded that there exist a positive relationship between different variable of customer satisfaction and organizational performance. For this purpose methodology used was correlation and regression. Data was collected from 272 customers (Mafini, 2013).

Study by Christiana and Geng (2009) was conducted for Hospitality Company and this financial health and founded the direct relation among the financial performance and customer satisfaction, among included indirect relation to the employee satisfaction. There exist a linear relation among all three variables. Data was collected from 3 and 4 star hotel both from customers and employees, further structural equation modeling with 2-step approach was used to analyze data.

## Methodology

The principal endeavor of this research work is to investigate the association between productivity, customer satisfaction and profitability. For this purpose a sample of 23 commercial banks listed at Karachi stock exchange, will be taken. The data related to productivity and profitability will be taken from the financial statements of these banks while the data related to customer satisfaction will be collected through questionnaire.

### *Sample and data set*

The scheduled commercial banks of Pakistan, listed at Karachi stock exchange are chosen as sample. Data set will be comprised of Secondary as well as primary data that will be drawn from the financial statements of these banking companies and through questionnaire. Hence the study will be cross-sectional where the data will be gathered one time from the chosen sample.

### *Variables*

To measure the productivity, usually a ratio of output to a specific input is taken. Here it will be measured through the ratio of total sales generated in a year to the total no. of labor used to produce that output. The return on asset (ROI) will serve as proxy to measure the firm's profitability. The main reason to choose ROI is that, the net income can change due to change in the assets base (or investments) therefore taking the absolute net profit or net profit margin can't capture the true picture. That is why ROI will be used by the researcher. It is calculated as a ratio of net profit available to common shareholders to total assets.

Finally customer satisfaction will be measured through a questionnaire that will be filled by the customers to determine their level of satisfaction. For, this purpose researcher will adopt the methodology used by Zhang and Pan (2009). They measured the customer satisfaction through 10 detailed measures, including: (1) Product quality (2) Service quality, and any award if company has got in recent three years in this regard (3) the warranty and guarantee system in the company, and rules regulation related to that (4) techniques used to compare the standards a company with other national and international industries (5) branding strategies, and product reputations (6) customers feedback regarding the services and the record of complaints and compliments of customers (7) marketing campaign strategies and sales record (8) services offered and delivered to the customers (9) pricing strategies, if the prices are reasonable according to customers (10) after sale services quality and performance of product. The researcher in this paper adopted the same way to measure the customer satisfaction and to analyze the association between Customer Satisfaction, Productivity and Profitability.

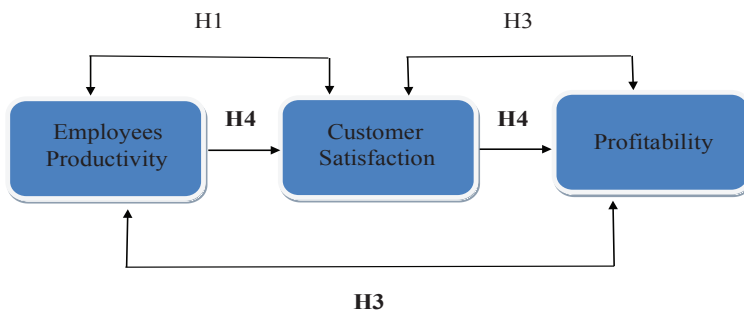


Figure 1  
The model

To examine the association among customer satisfaction, productivity and profitability, correlation and regression analysis will be used. Following are the models that will be tested through correlation and regression.

1st equation will investigate the association between productivity and customer satisfaction:

$$C.S_t = \beta_0 + \beta_1 E.PROD_t + \mu_t \dots\dots\dots(1)$$

The below stated equation will be then regressed to study the simultaneous affect of customer satisfaction and productivity on profitability.

$$ROA_t = \beta_0 + \beta_1 E.PROD_t + \beta_2 C.S_t + \beta_3 C.S_t * E.PROD_t + \mu_t \dots\dots\dots(2)$$

Where:

E.PROD = Employee Productivity

ROA = Return on Asset

C.S = Customer Satisfaction

$\mu$  = error term

### Analysis and Results

#### Testing the Hypothesis

*H0*: There is no relationship between employee productivity and customer satisfaction.

*Ha*: There is negative relationship between employee productivity and customer satisfaction.

The regression analysis showed the following results, indicating that there exists a trade off between customer satisfaction and productivity. Hence, decreasing the productivity (in terms of more employees to handle the few customers) means the customer satisfaction will improve and vice versa.



Table 1

*Estimation of equation: 1*

Dependent Variable	Coefficient
$\beta_1 E.PROD_t$	-6.7**
<b>F-statistics</b>	6.799**
<b>R<sup>2</sup></b>	0.23

The 2nd, 3rd, and 4th hypotheses are tested using the equation 2. The finding suggested that there exist a significant positive relationship between customer satisfaction and profitability that is compatible with previous studies results. There is also a significant positive association between productivity and profitability which means high productivity leads to higher profitability and vice versa. However, the simultaneous changes in customer satisfaction and productivity, leads to a significant negative association with profitability. It means to achieve profitability through productivity in services oriented industries can leads to lower profitability as it effects the customer satisfaction and reduces the sales and there by profits of a firm.

Table 2

*Estimation of equation: 2*

Dependent Variable	Coefficient
$\beta_1 E.PROD_t$	0.16**
$B_2 C.S_t$	0.12*
$\beta_1 E.PROD_t * C.S_t$	-1.08
<b>F-statistics</b>	6.799**
<b>R<sup>2</sup></b>	0.18

### Conclusion

The findings of the study confirm that there exists a trade off between customer satisfaction and productivity. It is also found that both of these measures are positively associated with the profitability. However, there simultaneous affect relate negatively with the profitability. These results help us understanding that for the services business, employees layoff to increase the productivity can

badly affect the customer satisfaction that will ultimately leads to lower profitability. Therefore it is not a wise approach to go for downsizing to improve the productivity and profitability of a firm.

Although previous studies have identified the positive association between customer satisfaction and financial performance (Miguel et al., 2004; Hassan, Elnaby & Wier, 2003; Yeung & Ennew, 2000; Ittner & Larcker, 1998; Anderson, Fornell & Lehmann's, 1994; Nelson et al., 1992). but this study makes a unique contribution to the literature as it also analyzed the trade off between customer satisfaction and productivity.

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