



## Relationship between Employee Productivity and Firm's Profitability from Shareholders' and Firm's Perspectives: A Comparative Study

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### Article Information

#### Article history:

Received: 17 February 2021  
Reviewed: 15 September 2021  
Reviewed: 24 September 2021  
Accepted: 10 October 2021

#### JEL Classification:

M120, G320

Sri Lanka Journal of Business  
Studies and Finance  
Volume I Issue I, 2021  
PP 38-49  
ISSN 2756-9381

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and Finance,  
Wayamba University of Sri  
Lanka

### Abstract

Human capital is an imperative intangible asset within an organization, which silently contributes positively to organizational performance, specially from a financial perspective. Employee Productivity is a key indicator of gauging the efficiency and effectiveness of human capital. Though human capital is recognized as a significant factor affecting organizational performance, including financial performance, Sri Lanka has a lack of empirical findings relating to this arena, indicating a research gap to be filled. Hence, this study attempted basically to find the answer for the research problem of; is there a relationship between Employee Productivity (EP) and Firm's Profitability (FP)? Thus, the purpose of this study was to explore the relationship between Employee Productivity (EP) and a Firm's Profitability (FP) from both shareholders' aspects and the firm's aspect. Return on Equity (ROE) was used to measure the profitability from the shareholders' perspective, while profitability from the firm's perspective was measured through Return on Total Assets (ROTA). Data were collected during the period from 2015 to 2019 from 25 manufacturing companies and 25 service sector companies (Hotel and travel sector). The results confirmed that there is a significant relationship of EP with both ROE and ROTA in the service sector companies. A significant relationship between EP and ROTA was found in the manufacturing sector companies, but the relationship between EP and ROE was not significant. On the other hand, high correlations were found between employee productivity and ROTA in both sectors. Therefore, it was concluded that the productivity of human capital can play a considerable role in a firm's profitability.

**Keywords:** Employee Productivity; Firm's Profitability

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## **1. Introduction**

### ***1.1 Background of the Study***

Now, the economy and business world have entered into the knowledge and information era after passing through the other two eras; the agrarian era and the industrial era. Land and machinery were the major contributors to the value creation of businesses in the agrarian era and industrial era, respectively. The knowledge and information era pay deeper attention to the intangible assets of the companies in the value creation mechanism.

Human capital, among the intangible assets of companies, is recognized as the key and crucial role player in the current knowledge and information-based business society. Human capital is conventionally identified as a cost to the companies. But, in the 21<sup>st</sup> century, human capital is given recognition not only as an important intangible asset but also as a vital strategic asset, which leads to companies' competitive advantages, enhanced performance and finally the value creation for all the stakeholders of the companies.

Due to the growing importance of human capital as a leading strategic asset in a company in the value creation process, the International Integrated Reporting Council (IIRC) pays major attention to human capital. Thus, it identifies human capital as one of the capitals identified in the Integrated Reporting (IR) Framework (International Integrated Reporting Council, 2013). It has been mentioned in its paper on Capitals: A background paper on IR, that there are six types of capitals can be identified within a company; financial capital and manufactured capital, which are usually disclosed in companies' financial statements, intellectual capital, social & relational capital, human capital, which is considered as capitals relate with the human activities and natural capital. Therefore, it can be seen that the IR framework gives more weight to the capital aroused as a result of human activities, specially, human capital which leads to the value creation of a business firm.

Thus, human capital or in other words, employees are the major source of a company's competitive advantages, performance and value creation. Therefore, the productivity of employees also gains vital attention from business organizations. Employee productivity (EP) has become an imperative objective for business organizations (Sharma & Sharma, 2014). Productivity is recognized as a performance indicator, which comprises both efficiency and effectiveness. Hence, it is imperative to identify productive workers within a business firm (Bhatti & Qureshi, 2007). The enhancement in a business firm's EP, which leads to a business firm's overall productivity effects to increases its growth and competitiveness (Banimahd & Mohammadrezaei, 2012). Employee performance is identified as a leading performance indicator, which decides the performance of an organization since the human capital of an organization plays a central and crucial role in the growth and development perspectives of such an organization (Victoria, 2019).

Organizational performance is also an imperative area of the organizations, which should pay greater attention because it is the mirror of the organizations which reflect the clear and sound picture of organizational activities and operations. Organizational performance is the actual result of an organization acquired when measured against its anticipated goals and objectives. There are three areas in organizational performance; financial performance, product market performance, and shareholder return performance (Richard *et al.* 2009). This idea proves that profitability is a comprehensive norm to assess the performance of an organization through financial performance. In the present day, with globalization and high competition in the business environment, managers are under pressure to improve their financial performance through enhancing the productivity of their companies, specially improving the productivity of their employees (Nguyen *et al.* 2019).

### ***1.2 Research Gap and Problem Statement***

EP has a substantial impact on enhancing organizational performance, specially, financial performance. EP leads to higher profitability of the organizations (Hanaysha, 2016). EP is an element that directly

affects the organization's profits (Gummesson, 1998). In accordance with Sharma & Sharma (2014), enhanced EP consequences in economic growth and higher profitability of companies.

Therefore, the productivity of human capital is one of the most influential factors in enhancing organizational financial performance, particularly in the form of profitability. Hence, it is vital to study the relationship between EP and Firm's Profitability (FP) in a practical aspect. Even though these two concepts, i.e. EP and FP, gain deeper attention among companies as well as in the empirical literature, it was found that there is a deficiency in empirical studies, which link these two aspects. Moreover, it was observed that the studies focused on the relationship between EP and FP in the Sri Lankan context are still in infancy level, though some international evidences are available (Nguyen *et al.* 2019; Salman & Yazdanfar, 2012; Parast & Fini, 2010; Stierwald, 2010; Agiomirgianakis *et al.* 2006; Smith & Reece, 1999; Schefczyk, 1993). Therefore, this study fills this contextual gap identified within the Sri Lankan context.

On the other hand, the existing international evidences in this arena considered profitability only from a firm's perspective (Salman & Yazdanfar, 2012; Parast & Fini, 2010; Stierwald, 2010; Agiomirgianakis *et al.* 2006). But, shareholders as the owners of the firms are the most important stakeholders of the companies, who expect a fair return for their investments. Consequently, the consideration of profitability from the shareholders' point of view is also an important aspect of the empirical literature. However, it is hard to find empirical evidence, which focuses on profitability from shareholders' view. Hence, it is important to find out the relationship between EP and FP from the firm's and shareholders' perspectives. Therefore, this study excessively expects to bridge the said literature gap in the existing research studies.

Further, an unresolved research gap was found in the literature that most of the previous studies on the relationship between EP and FP were based only on one sector. For example, either the manufacturing sector (Agiomirgianakis *et al.* 2006; Prakash *et al.* 2017) or the service sector (Parast & Fini, 2010; Smith & Reece, 1999). No evidence was found concerning several sectors in the same study, or no comparative studies were found on the relationship between EP and FP. Therefore, this study would be a bridge to fill this said literature gap as well, since this study is based on Public Listed Companies (PLCs) both in the manufacturing sector and in the hotel and travel sector in Sri Lanka.

Hence, the present study tried to find out the answer for the research problem of; "whether there is a relationship between EP and FP from a firm's and shareholders' perspectives in PLCs in the manufacturing sector and hotel and travel sector (service sector) in Sri Lanka?" and "Is the relationship between EP and FP in service sector PLCs favorable than the relationship between EP and FP in manufacturing sector PLCs?"

To find out the solution to the said research problem, these research questions were answered by carrying out the current study; is there a significant positive relationship between employee productivity and firm's profitability (ROTA/from the firm's perspective) in the manufacturing sector and service sector PLCs in Sri Lanka?, does there exist a significant positive relationship between employee productivity and firm's profitability (ROE/from the shareholders' perspective) in the manufacturing sector and service sector PLCs in Sri Lanka/ and is the relationship between employee productivity and firm's profitability favorable in the service sector than in the manufacturing sector PLCs in Sri Lanka? Thus, there are three objectives to be fulfilled through this study. First; to identify the relationship between EP and FP from a firm's perspective in PLCs of the manufacturing sector and service sector in Sri Lanka, second; to investigate the relationship between EP and FP from shareholders' perspective in PLCs of the manufacturing sector and service sector in Sri Lanka and third; to examine whether the relationship between EP and FP in service sector PLCs is favorable than the relationship between EP and FP in manufacturing sector PLCs in Sri Lanka.

The rest of the article comprises; the literature relating to EP and FP, the methodology adopted to carry out the study, findings and discussion and finally, the conclusion.

## **2. Literature review**

### **2.1 Employee Productivity**

EP could be viewed both under physical and mental aspects, since it depends on the amount of time an employee is physically present at a job and similarly the extent to which he or she is mentally present at the job or in other words, efficiently functioning while presenting at the job (Wanyama & Mutsotso, 2010). EP is an assessment of the efficiency of an employee or group of employees (Hanaysha, 2016). EP is also elaborated by Nda & Fard, (2013) as the measure of output per unit of input. EP is considered as the major mechanism for achieving organizational success. Enhanced levels of employee productivity offer an organization and its employees with numerous advantages (Hanaysha, 2016). EP of a company can be utilized to evaluate its human capital (Dzinkowski, 2000). Moreover, According to Ernst (2001), EP would positively influence organizational performance.

There are qualitative as well as quantitative methods in evaluating the EP in the literature. According to Sharma & Sharma (2014), EP can be measured in terms of the amount of time that an employee is physically present at his/ her job. EP can also be evaluated based on the time spent by an employee dynamically performing the job he or she was assigned to do to meet the expected level of outcome according to the employee's job description (Ferreira & Du Plessis, 2009). Oppong & Pattanayak, (2019) have employed the net value added per employee, i.e. pre-tax profit is divided by the number of employees, as a measurement for EP. Rohan & Madhumita, (2012) indicated that EP can be evaluated as the log of net sales per employee.

### **2.2 Firm's Financial Performance and Profitability**

The success of a firm is determined by its performance over a certain period. According to Vintila & Nenu (2015), the performance of an organization is a key concept in today's economic environment, shaped by rapid changes, fierce competition and globalization. Organizational performance is a multi-faceted phenomenon that involves all categories of stakeholders and represents an essential initiative to control and implement long-term strategies.

Firm performance reflects the efficiency and effectiveness of the internal and external organizational activities, and firm performance can be identified as financial performance and non-financial performance. According to Farlex (2012), it is the actual output/results obtained when measured against its intended outputs (goals and objectives).

The non-financial performance of an organization could be measured under the criteria of internal control system, learning and growth, and innovations. The financial performance of a company is indicated through different financial characteristics or financial aspects of the companies; they are; profitability, leverage, liquidity and turnover. Based on the requirements of the different stakeholders of the company, the financial performance is assessed on these financial characteristics (Pandey, 2015). Financial performance measurements might be categorized into two categories comprising accounting-based measurements and marketing-based measurements. Accounting-based measures are usually considered as indicators of the firm's profitability in the short term, like Return on Asset (ROA) and Return on Equity (ROE) (Nguyen *et al.* 2019). Profitability plays a major role in assessing the financial performance of a firm since the ultimate objective of the firm is the profit they earn. Therefore, profitability is a comprehensive criterion to assess the performance of a firm (Banimahd & Mohammadrezaei, 2012).

Profitability is a measure of a company's operating efficiency (Pandey, 2015). The profitability could be measured with the use of different ratios. Prior research studies (e.g., Fernandes, 2008; Kamath, 2008; Ting & Lean, 2009) have applied a set of well-known proxies of a firm's performance, namely, Tobin's Q, ROA, ROE, Return on Total Assets, Earnings per Share and market valuation.

In this research, the profitability is measured by using ROE and ROTA. It is important to measure the profitability concerning the firm's perspective as well as with shareholders' perspective. Because shareholders as the fund providers or owners of the company are willing to know the return on their investment in the firm. Therefore, it is significant to measure profitability not only from the firm's side but also from the owners' side.

The ROE is calculated as net profit after tax divided by the total shareholder's equity. This ratio measures the shareholders' rate of return on their investment in the company. ROE is a representation of how well a company has utilized its owners' resources (Pandey, 2015). Further, ROTA is a ratio that measures a company's earnings before interest and taxes relative to its total assets. This measurement of profit represents how much return could be earned by the company by employing its total resources, which indicates its total capital or capital employed. It is not only based on owners' funds but also based on the total funds of the company.

### **2.3 The Relationship between EP and Firm's Performance including Profitability**

The relationship between firm performance and productivity could be viewed as a phenomenon in common sense. It happens because the increase in productivity might lead to enhanced profitability since the cost per unit produced is decreased. However, this common sense is not sufficient in the modern business setting. Because there are instances for higher the firm's profitability, but lower the productivity and vice versa (Nguyen *et al.* 2019). Therefore, there is a necessity of having empirical evidence more on the relationship between productivity and a firm's performance.

There are two major variables, which affect to firm's performance according to the literature; they are internal variables and external variables. Internal variables include; firm's characteristics, financial attributes, management decision making, labour productivity, etc. External variables include the variables which relate to the market, economy and industry (Nguyen *et al.* 2019). Therefore, it proves that labour productivity, or in other words, employee productivity influences the firm's performance, including the firm's profitability.

Hence, literature provides evidence on the relationship between EP and FP in a different contextual framework. This section depicts such empirical findings on the relationship between EP and FP.

Parast & Fini (2010) investigated the relationship between a firm's productivity and the firm's profitability in the United States' Airline industry. The firm's productivity was measured in terms of EP in this study. It was found that EP is the most significant predictor of the profitability of the United States' airline industry (Parast & Fini, 2010). Nguyen *et al.* (2019) found a positive relationship between labour productivity and a firm's performance in companies listed on Vietnam's stock exchange. According to the study done by Schefczyk (1993), it has been suggested that productivity is related to ROE. Similarly, Salman and Yazdanfar (2012) also found that productivity has a significant positive impact on a firm's financial performance, which is measured using ROA.

The findings of Smith & Reece (1999) suggested that there is an association between productivity and financial performance in distribution sector companies. Further, Prakash *et al.* (2017) found that a relationship exists among productivity, quality and firm's performance through a study done using data of Indian manufacturing companies. According to Agiomirgianakis *et al.* (2006), EP, firm size, and firm age have a positive relationship with firms' ROA, and this conclusion was reached using data of Greek manufacturing companies.

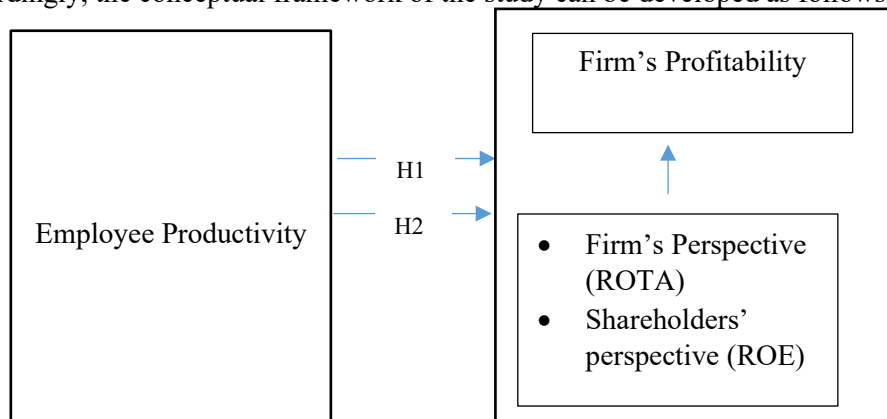
Zeithaml *et al.* (1996) stated that a simultaneous examination of the relationship between productivity and profitability is required to understand the relationship between service quality and profitability. Moreover, Stierwald (2010) has done a study to identify the determinants of profitability using 961 large Australian companies during the period from 1995 to 2005. The study revealed that productivity is one of the key indicators, which explains a firm's profitability.

### 3. Methodology

#### 3.1 Conceptual Framework and Hypotheses

Empirical evidence elaborates on the relationship between EP and Firm performance, including profitability. Wanyama & Mutsotso (2010) found that capacity building and employee productivity are positively correlated to organizational performance. Nguyen *et al.* (2019) indicated that managers of current business society are under pressure to enhance companies' financial performance by enhancing EP and the overall productivity of their companies. Profitability can be recognized as a key aspect of the financial performance of a company. Therefore, the findings of Nguyen *et al.* (2019) implied that there is an impact of EP on FP. Furthermore, most of the scholars (Hanaysha, 2016; Gummesson, 1998; Sharma & Sharma, 2014) provided empirical evidence to prove that enhanced EP directly affects to increase organizational profitability. It indicates that the EP and FP of an organization have a positive relationship. Though the literature has provided evidence for a positive relationship between EP and FP, a research gap is identified on the measurement aspect of FP, since the prior research did not pay attention to identifying the FP both from the firm's point of view and the shareholders' point of view in the same study. Therefore, to fill the said research gap, this study considers FP from both firm's perspective and shareholders' perspective.

Accordingly, the conceptual framework of the study can be developed as follows;



**Figure 1: Conceptual Framework**

Source: Compiled by authors

Based on the discussion above, in the prior literature, the following hypotheses can be formulated for the study.

H1: There is a significant positive relationship between employee productivity and firm's profitability (ROTA/from the firm's perspective) in the manufacturing sector and service sector PLCs in Sri Lanka

H2: There is a significant positive relationship between employee productivity and firm's profitability (ROE/from the shareholders' perspective) in the manufacturing sector and service sector PLCs in Sri Lanka

EP is a major component in service-based companies than in manufacturing-based companies. Since, the employees' knowledge, attitudes and participation should be in a higher position in service sector companies since employees in the service sector have a direct link with customers and clients than the employees in manufacturing sector companies. Therefore, the following can be hypothesized.

H3: The relationship between employee productivity and firm's profitability is favorable in the service sector than in the manufacturing sector PLCs in Sri Lanka

#### 3.2 Operationalization

Table 1 illustrates the operationalization of the variables of the study.

**Table 1: Operationalization of the Variables**

Variable Type	Variable Name	Measurement Method	Source
Independent	Employee productivity (EP)	Earnings before Interest & Tax/Number of employees	Oppong & Pattanayak, 2019; Chen <i>et al.</i> , 2005;
Dependent	Return on Total Assets (ROTA)	Earnings before Interest & Tax/Total Assets	Chen <i>et al.</i> , 2005; Clarke, 2011; Pandey, 2015
	Return on Equity (ROE)	Profit after tax/Net worth	Chen <i>et al.</i> , 2005; Clarke, 2011; Pandey, 2015

Source: Compiled by authors

### 3.3 Population, Sample and Data

There are 37 PLCs listed under the manufacturing sector and 37 PLCs listed under the hotel and travel sector (hotel and travel sector PLCs are considered for this study to represent the service sector) in Colombo Stock Exchange as at 31<sup>st</sup> December 2019. The total manufacturing PLCs and PLCs in hotels and the travel sector (service sector) are considered as the population of this study. 25 manufacturing PLCs and 25 service sector PLCs were selected randomly as the sample of the study.

The secondary data were collected from the audited financial statements in the annual reports of selected 50 PLCs covering the period from 2015 to 2019. The collected data were analyzed using Pearson Correlation analysis.

## 4. Findings and Discussion

### 4.1 Descriptive Statistics

Descriptive statistics are employed to express the behavior of the data collected. Accordingly, the mean, median, mode and standard deviation of the variables are presented in Table 2 for manufacturing sector PLCs and Table 3 for service sector PLCs below;

**Table 2: Descriptive Statistics – Manufacturing Sector**

Variable	Minimum	Maximum	Mean	Std. Deviation
Employee Productivity	-357.45	1728.39	407.85	400.74
Return on Equity	-13.45	169.91	16.05	22.39
Return on Total Assets	-8.89	98.35	11.00	10.84

Source: Compiled by authors

**Table 3: Descriptive Statistics – Service Sector**

Variable	Minimum	Maximum	Mean	Std. Deviation
Employee Productivity	-722.86	10496.30	278.43	1075.49
Return on Equity	-90.94	41.95	0.78	15.13
Return on Total Assets	-7.71	42.45	3.44	6.64

Source: Compiled by authors

It is observed that the mean EP is higher in the manufacturing sector than in the service sector. The profitability from both firm's perspective and shareholders' perspective is also in a higher position in

the manufacturing sector than in the service sector. It proves by having 16% ROE and 11% ROTA in the manufacturing sector compared to 0.77% ROE and 3.4% ROTA of service sector PLCs.

#### 4.2 Correlation Analysis and Hypotheses Testing

Table 4 depicts the results of correlation analysis.

**Table 4: Results of Correlation Analysis**

	Manufacturing Sector	Service Sector
	EP	EP
ROE	-0.031	0.362**
Sig. value	0.725	0.000
ROTA	0.725**	0.799**
Sig. value	0.000	0.000

Source: Compiled by authors

In the manufacturing sector, the relationship between EP and FP from the shareholders' perspective, which is measured through ROE, is a negative and weak relationship that is not significant. But, it can be observed that the correlation between EP and FP from a firm's perspective (ROTA) in the manufacturing sector is a significant positive one and it is also a strong correlation. The relationship between EP and FP from both shareholders' and firm's point of view in the service sector provide evidence for positive and significant correlation. The profitability from the shareholders' perspective has a positive, significant, but weak relationship with EP in the service sector. Further, the correlation between EP and FP from a firm's perspective in the service sector is a strong and positive one.

According to the results of the correlation analysis, the hypotheses of this study can be tested. Accordingly, the first hypothesis of the study, i.e. There is a significant positive relationship between employee productivity and firm's profitability (ROTA/from a firm's perspective) in the manufacturing sector and service sector PLCs in Sri Lanka, can be accepted for both sectors. Since the correlation coefficients between EP and ROTA (Profitability from the firm's perspective) of both sectors (0.799 in the service sector and 0.725 in the manufacturing sector) are positive and strong correlations, and also they are significant (sig. value = 0.000 for both sectors).

The second hypothesis of the study, which is, there is a significant positive relationship between employee productivity and firm's profitability (ROE/from shareholders' perspective) in the manufacturing sector and service sector PLCs in Sri Lanka, can be accepted only for service sector PLCs. The correlation coefficient between EP and ROE (profitability from shareholders' perspective) is positive and significant in service sector PLCs, though it is a weak correlation. Therefore, the second hypothesis can be accepted for the service sector. But, it has to be rejected for the manufacturing sector PLCs, because the correlation between EP and ROE in the manufacturing sector is a negative, insignificant and weak one.

According to the findings of correlation analysis, the third hypothesis of the study, i.e. The relationship between employee productivity and firm's profitability, is favorable in the service sector than in the manufacturing sector PLCs in Sri Lanka can also be accepted. Because, it is evidenced from the results of correlation analysis that the relationship between EP and FP from both firm's point of view (ROTA) and shareholders' point of view (ROE) in the service sector is significant and positive. However, in the case of the manufacturing sector, it is found that the relationship between EP and FP only from the firm's perspective is positive and significant. Further, the correlation coefficient values are higher in the service sector than in the manufacturing sector. Therefore, it can be seen that the relationship between EP and FP (ROTA and ROE) in the service sector is favorable than in manufacturing sector PLCs in Sri Lanka.



The following table illustrates the summary of the hypotheses testing of this study.

**Table 5: Summary of Hypotheses Testing**

Hypothesis No.	Hypothesis	Sector	Decision
H1	There is a significant positive relationship between employee productivity and firm's profitability (ROTA/from the firm's perspective) in the manufacturing sector and service sector PLCs in Sri Lanka.	Manufacturing	Accepted
		Service	Accepted
H2	There is a significant positive relationship between employee productivity and firm's profitability (ROE/from the shareholders' perspective) in the manufacturing sector and service sector PLCs in Sri Lanka.	Manufacturing	Rejected
		Service	Accepted
H3	The relationship between employee productivity and firm's profitability is favorable in the service sector than in manufacturing sector PLCs in Sri Lanka.	Accepted	

Source: Compiled by authors

Accordingly, the hypothesis one of the studies is accepted for both manufacturing and service sector PLCs. And also, hypothesis two is accepted only for service sector PLCs, while it is rejected for the manufacturing sector PLCs. Finally, the third hypothesis of the study is accepted based on the results of the correlation analysis.

## 5. Conclusion

Employees or human capital are now recognized as valuable strategic assets of an organization, which leads to sustainable competitive advantages, organizational performance and ultimately to the value creation for all the stakeholders of the organization. Therefore, enhancing the productivity of human capital gains substantial attention among the companies' management as well as among scholars. Because, the enhanced productivity of employees is a vital factor affecting enhancing organizational performance, specially from a financial perspective. Financial performance is a leading indicator of the success of any organization. Financial performance can be measured based on different financial characteristics; like profitability, liquidity, leverage and turnover. Out of these characteristics, profitability gets prominence as the key aspect of company performance. Thus, there is a significance of searching the relationship between employee productivity on organizational profitability as employee productivity is identified by a related factor with organizational performance and profitability in the prior literature (Hanaysha, 2016; Gummesson, 1998; Sharma & Sharma, 2014). Even though it is identified this positive relationship between employee productivity and a firm's profitability is an obvious one based on common sense, there might have some contradictory evidence in the practical scenario concerning this relationship. Hence, it was found in the literature that, there are some attempts have been taken to prove this relationship (Nguyen *et al.* 2019; Salman & Yazdanfar, 2012; Parast & Fini, 2010; Stierwald, 2010; Agiomirgianakis *et al.* 2006; Smith & Reece, 1999; Schefczyk, 1993).

Though there is an emerging interest in identifying the relationship between EP and FP in Accounting and Finance literature and some empirical evidence was found in an international setting, the studies relating to this arena is still in the infancy level in Sri Lanka. Further, even though there is evidence in the international context, the consideration of profitability from both firm's point of view and shareholders' point of view is also paid less attention. Thus, this study was arranged to fill the existing identified research gap in the Sri Lankan context concerning the relationship between EP and FP.

Therefore, this study attempted to find the relationship between EP and FP in two perspectives, i.e. ROTA, which is a measure of profitability from the firm's perspective and ROE, which the measure of profitability from shareholders' perspective. Further, the study was carried out as a comparative study between the manufacturing sector and service sector PLCs listed in CSE in Sri Lanka, since one objective of this study was to find out whether the relationship between EP and FP is favorable in the service sector PLCs than in manufacturing sector PLCs. This objective was formed because there are more knowledge workers in the service industry as the employees directly link with the clients and the customers than in the manufacturing industry.

It was found that there is a strong and significant positive relationship between EP and FP from a firm's perspective in both sectors and the findings are consistent with previous studies (Nguyen *et al.* 2019; Salman & Yazdanfar, 2012; Parast & Fini, 2010; Stierwald, 2010; Agiomirgianakis *et al.* 2006; Smith & Reece, 1999; Schefczyk, 1993). However, a significant positive relationship between EP and FP from shareholders' perspective was found only in the service sector PLCs. Further, it was found that the relationship between EP and FP is favorable in service sector PLCs than in manufacturing sector PLCs in Sri Lanka.

These findings provided the expected answers to the research questions of the study. First, *is there a significant positive relationship between employee productivity and firm's profitability (ROTA/from the firm's perspective) in the manufacturing sector and service sector PLCs in Sri Lanka?* was answered through the findings by revealing a significant positive relationship between employee productivity and firm's profitability, in terms of ROTA in both sectors. Further, based on the findings, the second research question, i.e. *does there exist a significant positive relationship between employee productivity and firm's profitability (ROE/from the shareholders' perspective) in the manufacturing sector and service sector PLCs in Sri Lanka?* was partially answered, since the relationship between employee productivity and ROE is significant only in the service sector. Finally, the third research question, *is the relationship between employee productivity and firm's profitability favorable in the service sector than in the manufacturing sector PLCs in Sri Lanka?* was answered by the study's findings.

Therefore, it can be concluded that there is a positive relationship between EP and FP from the firm's point of view in both the manufacturing sector and service sector PLCs in Sri Lanka, and there is a positive relationship between EP and FP in shareholders' point of view in service sector PLCs in Sri Lanka. Moreover, it was concluded that the relationship between EP and FP is favorable in the service sector than in manufacturing sector PLCs in Sri Lanka, which highlights the importance of enhancing both efficiency and effectiveness of human capital in service providing companies.

The findings of the study are important to several parties. First, the findings are significantly can be used by scholars and academics in Accounting and Finance discipline for their research and academic purposes. Second, the practical implications of the findings are more important to company management, specially in formulating strategies for enhancing both employee productivity and the firm's profitability. And, finally, the findings of the study will be important for future researchers who are interesting in this area.

Future research studies can be extended by enlarging the sample size and considering other sectors as well, which are not taken into account in this study. Moreover, the conceptual model of the study can be modified by adding some control variables, which affect to organizational profitability, such as the firm's size and liquidity. Furthermore, the conceptual model can be further improved by considering more dependent variables representing other financial characteristics, like, leverage, liquidity and turnover as well. In addition to that, this kind of study can be spread beyond the domestic setting by carrying out studies in this nature in an international context.

Note: There is no conflict of interest

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