Determinants of profitability and productivity of Indian SMEs: An empirical study

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Abstract

The objective of the present empirical work is to study the effect of firm-specific determinants on the profitability and productivity of Indian SMEs. The study is based on secondary data, consisting of 100 Indian SMEs listed on BSE SME, for the study period 2013-14 to 2018-19. Tangible and intangible firm-specific variables are used for data analysis. Pooled OLS regression models are applied to the panel dataset. This statistical tool is used to detect the important firm-level factor(s) to enhance the financial performance of sample SMEs. After analyzing the data, it is found that human capital efficiency, working capital, leverage, and firm efficiency have a positive & significant impact on the profitability and productivity of SMEs**.** However, CEE & RCE have mixed results in profitability and productivity. CEE has the most influential factor affecting profitability, while, HCE has the most effective firm-specific variable affecting productivity. Due to increasing SMEs' contributions to the Indian economy, for employment generation and economic growth, the findings of the present study have practical implications for policymakers and managers to formulate appropriate strategies for improving financial performance.

Keywords: Firm-specific Determinants, Productivity, Profitability, SMEs, Human Capital Efficiency, Relational Capital Efficiency.

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Introduction

Financial performance measurement is a recurrent phenomenon of any firm. Financial performance destines the success or failure of firms. A healthy financial performance is considered as the foundation of the long-term survival of firms and helps firms to cope with the uncertain business environment. The advent of the knowledge economy (**Mondal & Ghosh, 2012**), intense competition (**Vyas & Jain, 2020**), economic downturns (**Egbunaik & Okerekoti, 2018**), technological advancement, (**Safari & Saleh, 2020**), flexible government regulations & market behaviors have made the business environment uncertain and unpredictable. Such encounters affect firms' financial performance. To survive in a dynamic business environment is very challenging, especially for SMEs. SMEs help to drive economic growth, employment generation, poverty reduction, inclusive growth, and so on, particularly in developing countries (**Singh & Kaur, 2019**). The growth of SMEs leads to the sustainable development of an economy (**Gupta et al., 2013**). Hence, the existence of SMEs is very crucial for any economy. A big corporate entity and SME's have different business models, in terms of access to finance, capital structure, the volume of production, and global reach, etc. The success mantra of big corporate entities is not suitable for SMEs. Indeed, it would not be correct to say that the factors which influence the financial performance of big corporate entities will also influence the financial performance of SMEs as well. To protect their existence in the competitive business environment, SMEs have to adopt bold and aggressive steps (**Vyas & Jain, 2020**) due to a lack of managerial skill & proficiency. This hasty decision has negatively affected their financial performance. It is, therefore, imperative to study the key determinants of the financial performance of SMEs, so that SMEs can grab the opportunities from the market and formulate strategic planning rationally to scale up their business.

SMEs play a pivotal role in the Indian economy in terms of export, GDP contribution, poverty reduction, and holistic development. To boost and for sustainable growth of Indian SMEs, it is indispensable to study the nexus between firm-specific determinants and the financial performance of Indian SMEs. In recent decades, the measurement of financial performance and its determinants have gained considerable attention amongst the research community. Indian SMEs have several barriers, for instance, financial constraints, marketing barriers, shortage of R&D, technological barriers, etc (**Mukherjee, 2018**). Nevertheless, they are surviving in a competitive business environment. Therefore, a comprehensive study is required, about different firm-specific determinants affecting the financial performance of Indian SMEs. The nexus between firm-level characteristics and financial performance is fairly limited in the Indian context. Only a majority of the literature has explicitly devoted attention to the issue relating to determinants of the financial performance of Indian SMEs. The present paper intends to study firm-level determinants of the financial performance of Indian SMEs.

The present study is divided into seven section sections. Section 1 contains the introduction of the study, while section 2 presents its theoretical development & review of previous literature. The research gap and relevance of the present study are also shown in this section.

Section 3 shows the purpose of the study. In Section 4 research designs & methodology (including variables description and model specification) are presented. Section 5 discusses the data analysis and Section 6 presents the conclusions, implications and scope for future study.

Theoretical development and review of literature:

In today's knowledge economy, the financial performance of every business organization is influenced by a myriad of factors. According to existing literature, factors that affect financial performance are classified into two categories, Micro-economic and macro-economic. Several attempts have been made to examine the effect of these variables on financial performance. The present study is entirely based on the Resource-Based View (RBV) theory. According to RBV, resources are categorized into 2 parts tangible and intangible resources. It helps to build competitive advantages to overtake rivals **(Barney, 1991)**. The RBV emphasizes on firm-level variables or microeconomic factors **(Barney 1991, Warnerfelt, 1984).** The present study applied firm-level profitability and productivity determinants, which consist of tangible and intangible variables. It is argued that internal variables or firm-specific variables have a greater influence on financial performance than external variables **(Barney 1991, Yazdanfar & Ohman, 2015)**. He also stated that to maintain long-term competitive advantages, firms should nurture and generate intangible resources. Intangible resources are treated as strategic assets, having the potential to influence financial performance, empirically demonstrated by **Mondal & Ghosh (2012), Xu & Li (2019), and Mondal (2016).**

 Literature review: There have been different empirical studies that attempted for deeper insight relating to the determinants of financial performance. On the one hand, **Yazdanfar, (2013)** focused on different determinants of profitability at the firm and industry levels of Swedish micro firms and affirmed that size, productivity growth, past year lagged profitability have a positive & significant impact on profitability, and age and industry affiliation negatively impacted on profitability. Moreover, **Yazdanfar & Ohman, (2015) examined** a similar type of study related to the impact of profitability and firm-specific characteristics on the growth of Swedish SMEs across different industries and demonstrate that profitability and size have a positive & significant linkage with growth, while age has a negative & significant association, industry affiliation also affects SMEs growth. Another study conducted by **Vyas & Jain, (2020)** assessed the prioritize of the determinants of the financial performance of Indian SMEs and concluded that market orientation is the most crucial factor followed by entrepreneurial orientation and CSR affected financial performance. **Egbunaik & Okerekoti, (2018)** studied the association among macroeconomic factors, firm characteristics, and financial performance of Nigeria based firms and

found that size, liquidity, and leverage have a positive and significant impact on profitability, in contrast, interest rate & exchange rate have negative and non-significant, while the inflation rate (negative) and GDP growth rate (positive) have a significant effect on profitability. A recent study by **Panda *et.al* (2020)** studied the impact of macroeconomic variables and working capital management on the profitability of Indian SMEs and confirmed that quick collection from debtors, delaying in payment to creditors, holding higher inventory, and minimizing working capital cycle have improved SMEs profitability, besides changes in GDP and bank advances to the firm have influential factors affect profitability**. Ledhem & Mekidiche, (2020)** researched the relationship between Islamic banks and economic growth by applying the CAMELS model and confirmed that only profitability had a positive & significant impact on economic growth. A similar type of study, conducted by **Wasiuzzaman (2018)** scrutinizes the firm-specific determinants of liquidity and the impact of changes in the GDP on the liquidity decision in Malaysia based SMEs and he found that firm status, size, age, asset tangibility, profitability, and its growth have significantly influenced liquidity decision, while leverage and changes in GDP have not any significant impact on liquidity decision. **Hoang *et.al* (2019)** analyzed the determinants of profitability of firms listed on the Vietnam Stock Exchange and found that firm size has a positive connection, and capital structure, fixed assets & short-term liquidity have a negative relationship with profitability. **Afrifa & Padachi, (2016)** documented that level of working capital affects SMEs' profitability and deviation from the optimal level of working capital reduces profitability. A further study by **Ali *et.al* (2020)** carried out a study on, the impact of firm internal characteristics on profitability measured as ROE, ROA, and Tobin's Q ratio and reported that firm size, foreign listing, and liquidity have influenced profitability, besides, asset tangibility has contradictory and fluctuating (sometimes positive or negative) impact on profitability. **Bolarinwa *et.al* (2019)** researched the impact of managerial cost efficiency on bank profitability in Nigeria and highlighted that managerial cost efficiency has a strong determinant of bank profitability. **Goddard *et.al*, (2006)** in their study examined the firm-specific determinants of profitability and arrived at conclusions that size and firm gearing ratio have a negative relation with the profit, in contrast, market share and profitability have a positive connection with profitability, he also highlighted that higher liquidity generates higher profit. A similar study conducted by **Alsharari & Alhmoud (2019)** studied determinants of profitability of Sharia-compliant corporations in Jordon and found that size, voluntary disclosure, audit firm size, ownership percentage, and level of debt have significant determinants of profitability, while, age and industrial sector have not any significant impact on profitability, they also observed that higher deposits and debt to equity increase profitability while higher loan loss provision decreases profitability. **Singh & Kumar (2017)** addressed the different factors that affect the working capital requirements of Indian SMEs and proved that operating cash flow, financial leverage, and asset tangibility have a negative link with WCR, whereas profitability and sales growth have a positive relationship with WCR. A study by **Kamasak (2017)** examined the importance of tangible resources, intangible resources, and capabilities on profitability and

market performance of 1000 firms in Turkey and found that IR and capabilities have more potential to influence financial performance than tangible resources. **Xu & Li (2019)** disclosed that components of intellectual capital affect the financial performance of SMEs in China. **Eklund (2020)** demonstrated that intellectual capital and human capital have a key factors in high-growth SMEs. A study based on survey data conducted by **Singh & Kaur (2019)** to examine the determinants of financial constraints of unorganized SMEs in India and found that larger firms, educated owners, firms who maintain accounts, operational status have faced the least financially constraint, they also highlighted that firms located in rural areas faced greater difficulty to access finance in comparison to the firms located in economically better-off states. **Cucculelli & Bettinelli (2015)** advocated those changes in business models increase innovation intensity, investment in intangible assets enhance competitiveness, and reduce the risk of failure of Italian SMEs. **Kachlami & Yazdanfar (2016)** examined determinants of SMEs growth in Sweden by applying firm-specific variables and reported that profitability, short-term debt, and firm size have a positive and significant connection with growth, while long term debt had a mixed effect. **Coad & Tamvada (2011)** reported that size & age have a negative effect, while export has a positive effect on small firms' growth in India. The gender of the owner has also affected firms' growth and technical know-how helps firms' output growth. **Gupta & Batra (2016)** demonstrated that entrepreneurship orientation affected SMEs' financial performance in India in case of high demand growth and low competitive intensity. A survey-based study conducted by **Baker (2019)** to understand the practices and policies adopted to manage the working capital of Indian SMEs and found that internal funding relied on retained earnings and external funding relied on cash credit. Besides, they maintain a liquidity reserve for an emergency. **Mondal (2016)** proved that intangible assets influenced the financial performance of Indian SMEs.

Research gap & relevance of the study: The nexus between influencing factors or key determinants and SMEs' financial performance has gained considerable attention amongst the research community, academicians, management practitioners, policymakers, and decision-makers. In a globalized business environment, the pattern of conducting SME business is different in comparison to big corporate houses. After reviewing several existing literature, it is noticed that intangibles, as well as firm-specific variables, have not been considered in previous literature. In the present study, we have tried to explore this issue and examine the impact of firm-specific variables (tangible and intangible resources) on the profitability and productivity of Indian SMEs.

The objective of the study: The objective of the present empirical work is to examine the impact of firm-specific determinants on the profitability and productivity of Indian SMEs.

Research design & methodology:

Sample description: The objective of the present study is to examine the impact of firm-specific variables on the profitability and productivity of SMEs. Here, we have considered 100 SMEs

belonging to different manufacturing and service sectors in India. The criterion of selection is that SMEs must be listed on the BSE SME exchange. The duration of the present empirical study is for 6 years (2013-14 to 2018-19) and the study is based on secondary data only. Financial data of sample SMEs has been collected from respective SMEs' annual reports.

Dependent variables: For measurement of the financial performance of sample SMEs, profitability and productivity indicators are used. Profitability is proxied by ROI and productivity is proxied by employee productivity.

Return on Investment (ROI): Return on investment is one of the widely used performance indicators of any firm. It measures the efficiency of investment to generate profit. Shareholders, and manager prefer ROI in comparison to other financial performance indicators. We have calculated ROI by considering EBIT and net capital employed.

$$ROI = \frac{Operating\ profit}{Net\ Capital\ employed}$$

Productivity: Productivity is an indicator that reflects the efficiency of production. It describes how efficiently organizational resources are being used to produce goods and services. There are different ways to calculate productivity like asset turnover ratio **(Mondal & Ghosh, 2012), and** total factor productivity **(Yazdanfat, 2013).** In the present study, we have tried to calculate employee productivity. Employee productivity is generally calculated as the output divided by the number of employees. But in the present paper due to the unavailability of information about the number of employees, we have computed employee productivity as total revenue divided by employee cost. It indicates that by investing one rupee in the employee, how much sales they are generating.

$$Productivity \ = \frac{Total\ sales\ or\ revenue}{Employee\ cost}$$

Independent variables: There are different firm-specific variables used in the present study as below.

Human capital efficiency (HCE), Capital employed efficiency (CEE), Relational capital efficiency (RCE), liquidity (Lqt), leverage (Lev), and asset turnover ratio (ATO).

Human Capital Efficiency (HCE) SMEs stay in the limelight due to more job creation. Human resources are treated as a powerful weapon for SMEs. Employee skills, experience & creativity improve both profitability and productivity irrespective of organization size. Literature guided by **(Olowolaju & Oluwasesin 2016, Coleman 2019, Mondal 2016)** found a positive relationship between human capital and profitability. Many literatures have also supported that human capital and productivity have a positive association **(Fuente 2011, Backman 2014).** Human capital

efficiency is proxied by value-added divided by employee cost. Pulic's (1999) model of human capital efficiency is applied here.

$$HCE= \frac{Value\ added}{Employee\ cost}$$ (Value added= Operating revenue- operating expenses)

Capital Employed Efficiency (CEE): An efficient and well-planned use of capital leads to improvement not only in profitability but productivity as well. (**Mondal, 2016**) demonstrated that efficient use of capital increase SMEs profitability. It the present paper we have tried to observe to what extent capital efficiency affects productivity of SMEs. Capital employed efficiency is proxied by value added divided by net capital employed.

$$CEE= \frac{Value\ added}{Capital\ employed}$$

Relational Capital Efficiency (RCE): The selling & marketing expense has a direct positive connection with profitability but an indirect positive connection with productivity. Selling & marketing expenses attract current & potential buyer, aware of a new product, and helps to enter a new market. It helps to extend the market share and demand of the consumer. As a result profitability and productivity will be affected. Based on the above assumption or logic we have taken this variable. RCE is proxied by value-added divided by selling & marketing expenses. We have expected a positive relationship between RCE and profitability & productivity.

$$RCE= \frac{Value\ added}{Selling\ \&\ marketing\ expenses}$$

Liquidity: Liquidity is an important current asset of a business. Availability of liquidity facilitates the uninterrupted flow of business operations. It affects both profitability and productivity. However, conclusions of previous studies are mixed, literature demonstrated that profitability and liquidity are positively related **(Egubunike & Okerekeoti 2018,)** while **(Mohanty & Mehrottra 2018)** found a negative relationship between profitability & liquidity. In the present study, liquidity is measured as a natural logarithm of working capital.

Working capital= natural logged value of working capital. (Current asset- current liability= working capital)

Leverage: Leverage indicates the proportion of debt content in the capital structure. Higher the debt, the higher the financial risk. As a result, profit will improve. **(Egubunike & Okerekeoti 2018, Mondal & Ghosh 2012)** found a positive impact on profitability while **Ali *et.al* 2020**

observed a negative relationship with profit. **Nunes *et.al* 2007** found a negative relationship with labour productivity. Leverage is proxied by the total debt to equity ratio.

Leverage= $\frac{Total\ debt}{Equity}$

***Asset turnover ratio*:** ATO indicates the efficiency of the firm by deploying its asset to generate sales. Greater efficiency of firm indicates higher profitability & productivity, expected by authors. Asset turnover is calculated as below

Asset turnover ratio= $\frac{Sales}{Total\ asset}$

Control variables: In this study two control variables have been used. Firm age and firm size.

Firm age = Firm age is an important variable affecting profitability & productivity. some empirical literature claimed that older firm generates greater profit, as it has more experience about market behaviour and it can easily obtain fund. **Yazdanfar & Ohman 2015,** demonstrated that firm age and growth have a positive relationship. Again **Yazdanfar 2013** found a negative association between firm age and profitability. Firm age is proxied by the natural logarithm of the number of years of the firm since its incorporation.

Firm size =   firm size is proxied by the natural logarithm of the fixed asset of the sample SMEs.

Regression models: To empirically test the determinants of profitability and productivity of SMEs, a simple multiple regression tool has been applied. Two regression models have been formulated which are as follows.

Profitability = α + $\beta1$(HCEit) +$\beta2$ (CEEit) + $\beta3$(RCEit) + $\beta4$ (LIQTYit) + $\beta5$ (LEVit) + $\beta6$ (ATOit) +$\beta7$(Ageit)+ $\beta8$(Sizeit) +ε ………………………… (i)

Productivity = α + $\beta1$(HCEit) +$\beta2$ (CEEit) + $\beta3$(RCEit) + $\beta4$ (LIQTYit) + $\beta5$ (LEVit) + $\beta6$ (ATOit) +$\beta7$(Ageit)+ $\beta8$(Sizeit) +ε ……………………………..(ii)

 Data analysis: The sample data of SMEs have been analyzed through descriptive statistics, correlation analysis, and multiple regression models to fulfill the objectives of the present study.

Table 1: Descriptive statistics

Variables	Mean	Standard deviation	Minimum	Maximum
ROI	0.2019	0.2283	0.00025	3.5526
Productivity	70.5724	175.9456	1.2237	2221.9473
HCE	4.6686	6.1727	0.7272	73.8823
CEE	0.3397	0.3650	0.0095	5.0895
RCE	3.1176	4.2000	0.0000	41.5146
LIQTY	1.9428	1.4054	-2.9957	5.7447
Leverage	1.2482	1.4870	0.0000	13.5000
ATO	1.5924	1.7009	0.0168	26.3333
Age	2.5571	0.5769	0.0000	3.5553
Size	1.6979	1.6942	-4.6051	7.3973

Source: Authors calculation

From table 1, it is found that the mean value of ROI varies from 0.00025 to 3.5526 with a mean value of 20%. The mean value of ROI reveals that SMEs earn a satisfactory profit. The mean value of productivity is 70.5724. There is a high variation (175.9456) in productivity from its mean value. It indicates that by employing one unit of human resources, SMEs are capable to produce on average 70.5 units of production. Human capital is the valuable weapon of SMEs with the highest mean value of 4.6686, compared to other firm-specific variables CEE, RCE, liquidity, and leverage and asset turnover ratio with mean values of 0.3397, 3.1176, 1.9428, 1.2482, and 1.5924 respectively. The mean value of age and size are 2.5571 and 1.6979. CEE has the lowest mean value of 0.3397 with the least variation (0.3650) from its mean value of 4.

Table 2: Correlation matrix

	ROI	Prodty	HCE	CEE	RCE	W.C	Lev	ATO	Age	Size
ROI	1									
Prodty	0.315**	1								
HCE	0.273**	0.574**	1							
CEE	0.603**	0.024	-0.017	1						
RCE	0.198**	0.033	0.271**	0.162**	1					
LIQTY	-0.046	0.158**	0.079	-0.247**	0.035	1				
Lev	0.151**	0.187**	0.082*	0.091*	0.346	-0.148**	1			
ATO	0.234**	0.330**	0.025	0.182**	0.636	-0.016	0.073	1		
Age	-0.029	0.052	0.023	-0.146**	0.460	0.467**	-0.151**	-0.027	1	
Size	-0.039	-0.064	0.079	-0.068	0.368	0.282**	-0.026	0.007	0.237**	1

Source: Authors calculation, ** denotes significant at 1% level, * denotes significant at 5 % level

Table 2 represents a correlation matrix. The above table shows that ROI is linked positively & significantly (1% level) with HCE (0.273), CEE (0.603), RCE (0.198), leverage (0.151), asset turnover ratio (0.234). The correlation between ROI and CEE has the highest value with 0.603, but the correlation value between ROI and other variables is below 0.40. However ROI and working capital have a negative relationship. HCE and productivity have a high correlation (0.574) and it is significant (at 1%) and positive. There is a positive relationship between CEE & productivity (0.024) and RCE & productivity (0.033) but not significant. While productivity has a positive and significant (at 1%) relationship with working capital (0.158), leverage (0.187), and ATO (0.330). Besides, ROI and productivity have a positive & significant (at 1%) relationship (0.315). firm age has a negative relationship with ROI but positive with productivity. While firm size has a negative relation with ROI and productivity. Since the correlation between independent variables is below 0.80, the multi-collinearity problem is not raised in our present study. The multi-collinearity problem is raised if the correlation value has to exceed 0.80 **(Kennedy 1985)**

Table 3: Regression results of the model (i)

	Dependent variable (ROI)		
	Beta value	t -value	VIF
Constant	**NA**	**-2.011****	
HCE	**0.263**	**8.418***	**1.100**
CEE	**0.600**	**18.806***	**1.143**
RCE	**0.022**	**0.705**	**1.118**
LIQTY	**0.093**	**2.620***	**1.409**
Leverage	**0.084**	**2.735***	**1.048**
ATO	**0.115**	**3.768***	**1.040**
Age	**0.037**	**1.090**	**1.314**
Size	**-0.054**	**-1.711****	**1.108**
Adjusted r²	**0.467**	**Std error** **0.166**	
F value	**66.61***		

Source: Authors calculation, * denotes significant at 1% level,** denotes significant at 1% level *** denotes significant at 10% level

Tables 3 and 4 present the multiple regression results of the model (i) and (ii). Model (i) addresses profitability (ROI) as a dependent variable. From table 3, it is noticed that the Beta value (0.600)

of CEE is higher than other independent variables. It indicates that CEE is the most crucial determinant affecting the profitability (positive & significant) of SMEs. If SMEs increase CEE by one unit, ROI increases by 18.806 (at 1% level) units. After CEE, human capital efficiency is the major factor that influences profitability positively & significantly (at a 1% level of significance). If human capital efficiency is added by one unit, as a result, profitability increases by 8.418 units. Working capital is a vital factor for increasing profit in comparison to the fixed asset (size). Working capital has a positive and significant (at a 1% level of significance) impact on ROI. If SMEs create working capital for one more unit, then their ROI increases by 2.620 units. Moreover, leverage and efficiency (ATO) have a positive and significant (at a 1% level of significance) on ROI. If leverage & efficiency increase by one unit, the ROI of SMEs increases by 2.7535 and 3.768 units respectively. Relational capital has a positive impact on profitability but it fails to show any significant impact. It is the least affecting factor that influences the profitability of SMEs. Firm size has a negative impact on profitability but it is significant at a 1% level significance. Whereas, firm age has a positive impact on profitability. Model (i) collectively explains 66.61% variation in profitability, proxied by ROI.

Table 4: Regression results of the model (ii)

	Dependent variable (Productivity)		
	Beta value	t -value	VIF
Constant	**NA**	**- 4.037***	
HCE	**0.591**	**19.431***	**1.100**
CEE	**0.026**	**0.844**	**1.143**
RCE	**-0.144**	**-4.686***	**1.118**
LIQTY	**0.179**	**5.212***	**1.409**
Leverage	**0.146**	**4.919***	**1.048**
ATO	**0.307**	**10.375***	**1.040**
Age	**0.031**	**.934**	**1.314**
Size	**-0.159**	**-5.224***	**1.108**
Adjusted r^2	**0.497***	**Std Error**	**124.84**
F value	**74.847**		

Source: Authors calculation, *denotes significant at 1% level, ** denotes significant at 10% level

Conclusions of the study: SMEs are always remained in the limelight due to their vulnerability & vibrant nature. SMEs are one of the most vulnerable segments but have a lot of potential to scale

up their business. The present paper addresses a major concern relating to SMEs operating in developing countries (India) and examines the determinants of profitability and productivity of Indian SMEs for the study period 2013-14 to 2018-19. We have considered 100 Indian SMEs belonging to different manufacturing & service sectors. Multiple regression analysis tools have been used for data analysis. Two proxy measures have been used as financial performance indicators (dependent variables), ROI for profitability, and total revenue to employee cost for productivity. Six firm-specific variables (impendent variables) have been used, HCE, CEE, RCE, liquidity, leverage, and asset turnover ratio respectively. Two control variables are also used firm size (logged value of the fixed asset) and firm age.

The overall conclusions of the present study can be summarized as follows. Capital employed efficiency has an important contribution to improving profitability and it has a positive & significant impact on profitability. Except for relational capital efficiency, all other firm-specific variables have a positive and significant impact on profitability. Human capital efficiency is the most crucial firm-specific determinant to magnifying productivity. Relation capital efficiency has a negative impact on productivity. Liquidity, leverage, and ATO have a positive & significant impact on profitability & productivity. Firm size has a negative but significant impact on profitability & productivity; in contrast, firm age has a positive effect on profitability & productivity.

The empirical results demonstrate that HCE and profitability & productivity have a positive association and confirm previous findings in the literature **Mondal, (2016); Xu & Li, (2019); Olowolaju & Oluwasesin (2016), Coleman (2019); Fuente (2011), Backman (2014).** It suggests that SMEs can improve their financial performance by effective utilization of human resources. Moreover, CEE has a positive connection with profitability & productivity, which states that those SMEs who effectively use their capital, tend to improve their profit & productivity more in comparison to other SMEs who are not using their capital effectively. It is consistent with **Mondal (2016).** In line with previous findings of **Khan & Ali, (2020),** our study confirms that with the increase of selling & marketing expenses, profitability would also increase. But we found that RCE has a negative relationship with productivity, which is beyond our expectations. It might be the case that selling & marketing is not so much product to generate consumer demand. Furthermore, the other firm-specific determinants like liquidity, leverage & ATO have a positive impact on both profitability & productivity. Our results have many similarities with **Xu & Li, (2019); Egubunike & Okerekeoti (2018); Mondal & Ghosh (2012).** Firm age has a positive impact on profitability and productivity, which reflects that as the firm gets older, its profit and productivity have also increased. It may be because of its experience, well awareness of market behavior, and easy access to finance. The above finding supports previous findings in the literature **Ali *et.al*, (2020)** but refutes previous results reported in the literature **Yazdanfar, (2013).** Firm size has a negative impact on profitability & productivity; it may be due to the unavailability of technological

equipment or unable to take advantage of economies of scale due to unskilled human resources. This is contrary to **Yazdanfar & Ohman, (2015); Egubunike & Okerekeoti (2018); Hoang, (2019); Ali** *et.al*, **(2020)**. But it confirms previous findings in the literature **Margaretha & Supertika, (2016)**.

8: Implications and scope for further study: The present paper has also several implications for managers and policymakers of SMEs. A positive relation of HCE with profitability & productivity indicates that if proper training is provided to the human resources of SMEs, they can improve financial performance. It may also help SMEs to focus on innovation, help them to compete with global SMEs, and be able to use organizational resources very efficiently & effectively. Study results indicate that selling & marketing efficiency is not very effective. The negative relation of RCE and productivity indicates that the selling & marketing strategy is not so helpful to increase sales volume. The managers should evaluate their marketing strategy to make them effective and should try to maintain a balance between selling & marketing expenses and liquidity position. We have also found that firm size has a negative association with profitability & productivity. SMEs are unable to obtain the benefit of economies of scale due to outdated technology. They must possess the latest technological equipment otherwise, it will be a big hurdle to scale up their business.

There are some limitations to the present study. Besides the above firm-specific variables, many other variables influence the financial performance of SMEs. There are lots of scopes to extend this study by considering other firm-specific variables.

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