Working capital management and profitability in Pakistan's automobile industry: An analysis

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ABSTRACT

The study investigates the relationship between working capital management and profitability of explicit firms allied with the automobile sector of Pakistan. Profitability is measured by two of its proxy variables, i.e. Return On Assets (ROA) and Return On Equity (ROE). At the same time, the independence of the study is examined through the mediums of Inventory Turnover Ratio (ITOR), Account Payable Turnover Ratio (APTOR), Account Receivable Turnover Ratio (ARTOR) and Operating Profit (OP). The study occupies three liquidity ratios as well; consolidated as control variables, including Current Ratio (CR), Quick Ratio (QR), and Solvency Ratio (SR) played as a catalyst and did not impact the genuine findings. The study targets the automobile sector firms listed on the Pakistan Stock Exchange (PSX) and being actively traded there. Thus, the study highlights the impact of efficient working capital on profitability. The study also elaborates on automotive firms' actual potential, demand, and operational mechanism while assembling. Second, the study visualizes the opportunistic and enlisted current demand bidden by the resident customers to the automotive sector of Pakistan. The annual financial reports of automotive firms have been gathered for five years, from (2016 to 2020). The comprised model has been tested through the multiple regression analysis via Statistical Package for the Social Sciences (SPSS). The findings of the study ascribed that Account Receivable Turnover Ratio (ARTOR), Inventory Turnover Ratio (ITOR), and Operating Profit (OP) are statistically significant and positively related to Return on Assets (ROA) and Return on Equity (ROE). Account Payable Turnover Ratio (APTOR) is statistically insignificant and inversely linked to profitability. The study's outcomes have set a roadmap to uplift this sector to meet its true potential demanded by the local consumers. The financial managers, financial analysts, and officialdoms have to take remarkable initiatives and measures to further strengthen the profitability, erect growth, and attract the interest of captive investors so the tall figure of actual demand can be achieved.

Keywords: *Working Capital Management; WCM; Firm Profitability; Financial Ratios; Automobile Industry*

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1. INTRODUCTION

Working capital is allied with the day-to-day operative and manufacturing activities of a company. It plays a significant role in managing liquidity and promotes higher returns (A. Iqbal & Zhuquan, 2015; Tahir & Anuar, 2015). Working capital is an indicator that measures the firm's value, shareholders' wealth, liquidity, and profitability and also further ranks the company among its rivals (Lyngstadaas & Berg, 2016; Masri & Abdulla, 2018; Nguyen, Pham,

& Nguyen, 2020). In this way, firms are obligated to establish an optimal level between the aggregate of assets and liability and permit the forms to take the measures of effective management; to prevent the firms from critical disputes of liquidity (Amponsah-Kwatiah & Asiamah, 2020; S et al., 2017; Şamiloğlu & Akgün, 2016). Resources required to mitigate the short-term or due commitments are termed working capital (Kusuma & Dhiyaullatief Bachtiar, 2018).

The automobile sector of Pakistan is one of the thriving sectors comprised of a high performing set of firms. Subsequently, the sector has attained a dominant position and maintains a devastating standard at the Pakistan Stock Exchange (PSX). All the rival firms of the concerned sector had done a practice to produce an appropriate amount of profit because the disbursement of expenditure for operational activities has been fixed via a down payment incorporated by the general public. Customers have asserted their entire or partial payouts as a down payment even before assembling their desirous car.

The automobile sector of Pakistan has shielded an extensive segment in the Gross Domestic Product (GDP) since its inception in the eighties, leading manufacturing units were established, and the commencement of operations was begun. Nowadays, this sector falls under large-manufacturing sectors that spur a country's economic growth. After the victorious establishment of assembling firms, the sector achieved a sky-scraped localization. Over the globe, the development phase of automobiles entirely focused on continuous escalation by putting attention to growth in technology, growth in achieving the competitive advantages in the global market, development in human resources, development in investment and compliance linked to safety, quality, and environment standards (Guajardo, Cohen, & Netessine, 2016; Jyoti, Kour, & Sharma, 2017).

All automobile firms, including assembling and manufacturing enterprises, are practised initiating their operative activities by taking (partial or complete) expenditures as a down payment from customers. Usually, it seems that the firms taking the advance payment of proceedings are apart from the complications related to working capital management, but its manifest facts and figures are of its reversal. Manufacturers or assemblers have not catered to the dispersion of in-flowed funds; thereupon, enormous constraints have been observed; like the firms which have to utilize their down payments as working capital may also face the abundance and leanness of working capital while assembling and manufacturing. This study is an effort to document the gap by highlighting the emerging potential of the automobile sector in both demand and safety standards.

The study aims to examine the effect of working capital management on profitability. This study has set an objective to assess whether the critical components of working capital management have a significant relation with return on assets (ROA) and return on equity (ROE) in the automobile sector. Several gigantic studies narrated that shortfalls of the automobile sector have not been studied so far. Only a few studies gathered the data from the automobile sector; later on, gathered data was assembled with other groups of various firms belonging to different sectors. The financial exploration of the entire automobile sector did not conduct so far.

This study area has enabled the researcher to develop the given research questions;

RQ1: Is there a significant relationship between the key components of working capital management and return on assets in the automobile sector?

RQ2: Is there a significant relationship between the key components of working capital management and return on equity in the automobile sector?

Our local customers have endured most of the essential features and quality standards. People demand additional units and are also willing to pay more than usual. This state of affairs favours assemblers and is quite pathetic for local customers. As a result, local car assemblers offered fewer features than a similar level of cars produced in foreign countries; available in the global market.

The computation of working capital management is measured through two sets of variables; one is control variables while the other set is for independent constructs. Control variables include adjacent proxies of Current Ratio, Quick Ratio and Solvency Ratio, while independent constructs included Inventory Turnover Ratio, Account Receivable Turnover Ratio, Account Payable Turnover Ratio and Operating Profit. Two proxy variables, Return on Assets (ROA) and Return on Equity (ROE), are the components of dependent variables used to assess profitability. This study will likely contribute to uplifting the entire sector to work with the utmost potential to overcome the deadweight loss borne by the resident customers. By taking this initiative, inclined profitability can be achieved. Further, Pakistan will come forward with a different ball game and start to be considered an automotive institute and set an example for developing countries to keep up with similar circumstances.

2.   REVIEW OF LITERATURE AND HYPOTHESES DEVELOPMENT

The trade-off theory appears to be the dominant explanation for the phenomenon of a company's liquidity (Kelly, 1994). Usually, it has seemed that the companies set an appropriate level of liquidity that targets the benefits of having cash and the cost of holding a particular cash weightage. The cost of holding the cash incurred low return as the liquidity goes into the premium. Moreover, this theory is an essential factor that maximizes each component of working capital that ultimately maximizes the overall gains of shareholders.

This study is also supported by the pecking order theory of liquidity, which explains that supplementary determinants of asymmetric information and its prevail consequences in financial markets may vary according to the business conditions (Deesomsak, Paudyal, & Pescetto, 2004). This theory found that solvency and liquidity work together, enabling the firms to execute the most stable dividend payments and maintain volatility in cash flows.

2.1. INVENTORY TURNOVER RATIO WITH PROFITABILITY

An inventory signifies the entire assets of the company. Mostly, it particularizes the segment of current assets relevant to the manufacturing concerns of the firm. An enormous risk, challenges and shortfalls are coupled with the manufacturing and assembling of goods (purchases of raw material to its completion into final goods); it is also monitored by the managers (Farooq, 2019). Inventory has been segregated into three

significant components i) raw material, ii) work-in-process and iii) finished goods which are readily available for sale (Farooq, 2019)—holding inventories for a prolonged period incurred carrying costs, which ultimately declined opportunity costs.

Liquidity and profitability are connected by developing an inverse relation, where one increases and the other decreases and vice versa (Lina & Rania Al, 2015). There is a significant relationship between the inventory and the firm's profitability. Lower an inventory increases the net returns. Inventory posits a negative relation to profitability and is inversely connected to return on assets and return on equity. Based on the above-proven sentiments, the study has suggested the underneath set of hypotheses.

H1a: Inventory Turnover Ratio has a significant impact on Return on Assets (ROA).

H1b: Inventory Turnover Ratio has a significant impact on Return on Equity (ROE).

2.2. ACCOUNT RECEIVABLE TURNOVER RATIO

It is the relationship between net sales and outstanding receivables. The dependence of account receivable turnover relies on the terms and conditions of the repayment schedules made by the company to their purchasers (Kadim, Sunardi, & Husain, 2020). Most of the time, account receivables are associated with sales made on the debt. There is a direct and significant relationship between the profitability and account receivable turnover ratio. Higher the receivable turnover directed the higher returns to both assets and equity. Higher turnover is most fitted if otherwise lower is worse. Based on the justifications mentioned above, the study has illustrated the underneath hypotheses.

H2a: Account Receivable Turnover Ratio significantly impacts Return on Assets (ROA).

H2b: Account Receivable Turnover Ratio significantly impacts Return on Equity (ROE).

2.3. ACCOUNT PAYABLE TURNOVER RATIO

Accounts payables primarily represent the sales index associated with net credit purchases by their average purchase during the specific period (Tahir & Anuar, 2015). It delineates the short term credits or due accrued liabilities of the firm (Yaprak, Yosun, & Cetindamar, 2018). Usually, the financial managers make certain contracts with suppliers on terms and conditions. More excellent value of account payables indicated that the firm has more ability to pay its short term debts. There is a significant relationship between the account payables in both counts of return i.e. assets and equity. In the light of this discussion, study has sketched out the given set of hypotheses.

H3a: Account Payable Turnover Ratio significantly impacts Return on Assets (ROA).
H3b: Account Payable Turnover Ratio significantly impacts Return on Equity (ROE).

2.4. OPERATING PROFIT WITH PROFITABILITY

Operating profit margin is a degree of measuring the long term performance of the company (Choiriyah, Fatimah, Agustina, & Ulfa, 2021). Generally, operating profit should be more and more as the company has to withdraw their incurred taxes and other expenses.

There is a direct and significant relation between the operating profits and returns of the firm. Higher operating profit delivers more sophisticated returns to the firm in both counts of assets and equity. In the light of the indications above, the study lodges a particular set of hypotheses.

H4a: Operating profit significantly impacts Return on Equity (ROA).
H4b: Operating Profit significantly impacts Return on Equity (ROE).

2.5. CONTROL VARIABLES

2.5.1. Solvency ratio

According to the study conducted by (Bibi & Amjad, 2017), solvency can be expressed as the firm's ability to encounter its financial obligations when they come due immediately. It shows that the maximum risk level that the shareholders face is holding the probability of inability to pay their debts or fixed obligations (Malik, Awais, & Khursheed, 2016). This assessment is carried out by keeping the company's assets under consideration until the company would liquidate, stop its operations, or close (Rauch & Wende, 2014).

The general description of the company's debts is assessed by the computation of the solvency ratio (Zimon & Madzík, 2019). The capital financial structure of the company is a significant tool that detects the risk levels encircled by the company (Rehman & Wang, 2015). The solvency ratio has an inverse relation with profitability. The higher value of the solvency ratio denotes the higher amount of debt occupied by the firm. Higher the debt declines the profitability, and vice versa (U. Iqbal & Usman, 2018).

Moreover, the solvency ratio delineates the future survival of the firm over a longer period. This ratio has significant importance for the shareholders and long-term creditors for their corrective actions for future contracts. Shareholders and creditors have linked their interest to the retirement of the interest and face value of the debt when they come due to till its maturity (Kamar, 2017). Computation of solvency ratio is formulated as (Robinson et al., 2015).

$$\text{Solvency Ratio} = \frac{Total\ Debts}{Total\ Assets}$$

2.5.2. Quick ratio

The quick ratio is beneficial in statistical computing figures of current assets and current liabilities (Sulieman Alshatti, 2014). Thus, the financial managers have switched to sluggish measures to incline in the deprivation of current assets. Every company has to maintain an abundant and sufficient liquid resource so the liquidity may incur a positive influence over the profitability; subsequently, quick ratio is the area of concern for the investors and shareholders, especially at the time of dividend distribution. Liquidity and profitability are connected by developing an inverse relation, where one increases and the other decreases and vice versa (Sulieman Alshatti, 2014). The quick ratio is formulated under (Osisioma, 1997)

$$\text{Quick ratio} = \frac{Current\ assets - Inventories}{Current\ Liabilities}$$

2.5.3. Current ratio

The current ratio is the foremost reliable and appropriate source for measuring the liquidity of the firm. It described an apt approach of the company to oblige its short-term liabilities under each financial year; in the form of liquid assets, including cash or funds, by utilizing its current activity (Diana & Santoso, 2016). (Reference not found) As the current ratio has a direct, substantial impact on profitability. Higher liquidity or more current assets resulted in an incline in profitability (Nugroho, 2011). (Reference not found)

The current ratio has a direct and positive significant effect on return on Assets. There is also considered that an incline follows any incline in all accessible current assets in the Return on Assets and vice versa. Conversely, on the other hand, a decline in the current assets results in a decline in the return on the Assets. The current ratio is formulated as (Raheman and Nasr 2007).

$$\text{Current ratio} = \frac{Current\ Assets}{Current\ Laibilities}$$

Solvency ratio, quick ratio and current ratio have contributed as the control variables; therefore, formulation of hypotheses did not take place.

Under the guidance of reviewed literature and proposed development of hypotheses and inserted theoretical framework (Fig. 1) has been conceptualized.
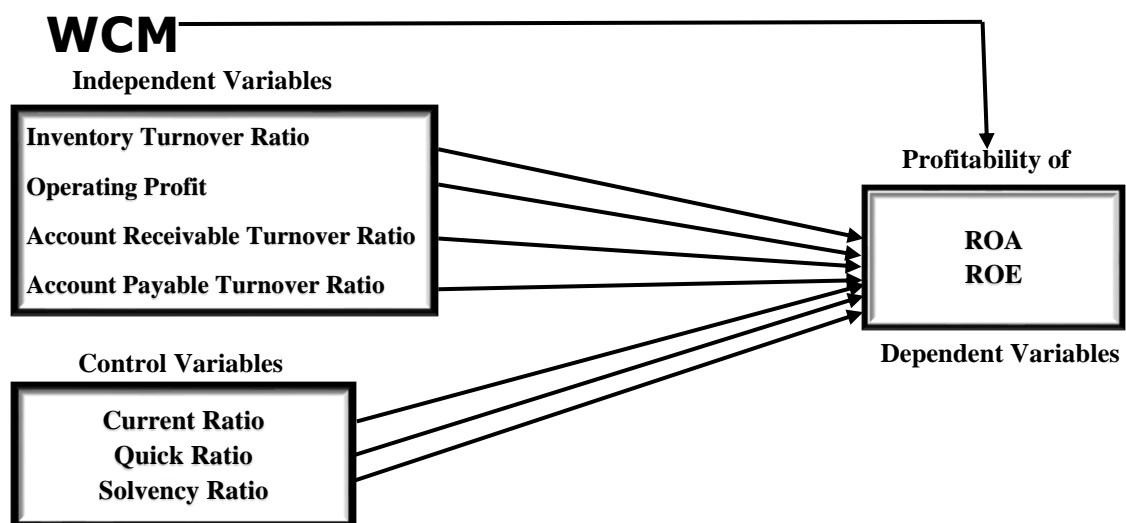

Fig. 1. Theoretical Framework

3. METHODOLOGY

The conducted study is quantitative in nature. The statistical measures are to be determined in understudy settings' normal and natural environments (Onwuegbuzie & Leech, 2005). This descriptive natured study described the relation between working capital management and profitability. Their respective proxy variables have conducted an assessment of this relation.

The conducted study has gathered the data by secondary collection mode, as per the requirement of research objectives and research questions. Particularly, assembled data has been assisted, especially from those firms akin to the automobile sector of Pakistan.

The enclosed sector holds 12 companies in total; the study selected 8 of them as per the availability of financial reports. The accomplished panel data has been compiled for five consecutive fiscal years starting from 2016 to till 2020. Annual financial reports have been taken as evidence and the primary mode of analysis. These reports had been acquired from the Pakistan Stock Exchange (PSX) website or the official websites of corresponding companies. All sampled grouped companies are listed, were being monitored at regular intervals and actively traded on the stock exchange.

3.1. MEASURES

The conceptual framework of the study consisted of nine constructs. Three of them are control variables; two are substituted for profitability and played as dependent constructs, while the rest of the four constructs are acted as independent variables. Retrieved financial reports were used for the computation of these constructs mentioned above. The ratios like current ratio (CR), Solvency Ratio (SR), Quick Ratio (QR) and Current Ratio (CR) are computed for proceeding of control variables. On the other hand, the computation of independent constructs is based on the computation of four constructs, including; Operating Profit (OP), Inventory Turn Over Ratio (ITOR), Inventory Payable Turn Over Ratio (IPTOR) and Inventory Receivable Turn Over Ratio (IRTOR). On the contemporary side, profitability is the dependent variable measured by the computation of Return On Assets (ROA) and Return On Equity (ROE). The computed data set was imported to Statistical Package for Social Sciences (SPSS) of version -24, where the data have gone through the statistical assessment of descriptive statistics, normal distribution, Pearson correlation, model fitness and hypotheses testing.

4. RESULTS

Table 1. Summary Statistics

Constructs	Mean	Maxima	Minima	Std. Deviation	Skewness	Kurtosis
ITOR	1.632	2.439	0.421	0.682	-0.470	-1.213
ARTOR	0.115	0.865	0.003	0.213	2.550	6.060
APTOR	0.620	1.712	0.017	0.488	0.844	-0.068
O.P	15.11	18.15	8.598	2.050	-1.649	3.469
CR	0.472	1.343	-1.739	0.516	-1.579	7.928
QR	0.413	0.996	0.026	0.284	0.319	-1.009
SR	0.098	0.444	0.002	0.146	1.161	-0.408
ROA	0.108	0.219	-0.037	0.08	-0.132	-1.336
ROE	0.614	2.546	0.007	0.603	1.678	3.502

The comprised data of the study is a collection of factual figures from individual firms. The representation of grouped data in individual figures is not appropriate because it does not produce any conclusion. So an overall outlook is assessed through the alignment process of summary statistics (Kim, 2013; Mishra et al., 2019). Furthermore, this technique enables the researchers to study the data's general behaviour and natural pattern. This procedure is more often practised in quantitative studies for preliminary analysis (Mishra et al., 2019). A hurried and short look at data can be attained by descriptive analysis that fascinates the researchers to proceed further for the determination process of outliers.

Table 1 sketched that all the values lie in the same range of asymmetrical patterns, and there is no probability of the presence of outliers in the data. The mean values like 1.632 (ITOR), 0.115 (ARTOR), 0.620 (APTOR), 15.11 (O.P), 0.472 (CR), 0.413 (QR), 0.098 (SR), 0.108 (ROA) and 0.614 for ROE. All obtained values of the mean fall under an acceptable range of 0.098 to 15.11 with a null outlier; equipped for further analysis. The minimum value of the first dependent variable ROA is 0.037, while the second variable ROE holds the minimum of value 0.007. At the same time, the maximum value of the first variable ROA is 0.219 while the maximum value of the second dependent variable is 2.546. Both maximum and minimum values delineated that all the values fall under an appropriate range with a normal distribution with an omission of outliers.

Normal distribution of the data may carry out by the skewness and kurtosis (Mishra et al., 2019). The recommended criterion of skewness and kurtosis are ±1 to ±3 (Engman, 2011; Kim, 2013; Ursavaş, 2013), and its second parameter is about ±1 to ±10 (Jaff et al., 2011; Nyaupane & Graefe, 2008). The normality of the secondary data set aligned with the current study has been conducted and fell under the suggested criterion of skewness and kurtosis.

Table 2. Correlation Matrix

Constructs	ITOR	ARTOR	APTOR	O.P	CR	QR	SR	ROA
ITOR	1							
ARTOR	0.000	1						
APTOR	0.859	0.057	1					
O.P	0.004	0.480	0.124	1				
CR	0.162	0.422	0.181	0.011	1			
QR	0.000	0.000	0.507	0.164	0.900	1		
SR	0.420	0.824	0.057	0.020	0.523	0.996	1	
ROA	0.000	0.004	0.488	0.002	0.421	0.033	0.158	1

*** Significance of Correlation at 0.01 level (2-tailed)   * Significance of Correlation at 0.05 level (2-tailed)*

Table 3. Correlation Matrix

Constructs	ITOR	ARTOR	APTOR	O.P	CR	QR	SR	ROE
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APTOR	0.859	0.057	1					
O.P	0.004	0.480	0.124	1				
CR	0.162	0.422	0.181	0.011	1			
QR	0.000	0.000	0.507	0.164	0.900	1		
SR	0.420	0.824	0.057	0.020	0.523	0.996	1	
ROE	0.001	0.039	0.002	0.002	0.515	0.001	0.781	1

*** Significance of Correlation at 0.01 level (2-tailed)   * Significance of Correlation at 0.05 level (2-tailed)*

Correlation analysis delineated the degree of interdependence between two simultaneously treated variables with threshold values of -1 to +1. The extreme value of +1 means that variables are massively correlated, and there is a leading positive association among all variables. On the other hand, the second extreme value of -1 delineated that the variables are highly correlated, and there is a leading negative association among them. The zero falls on the intermediate of this recommended threshold standards, which signifies no association and connectivity between treated constructs.

The study conducted two correlation matrixes concerning both dependent constructs. Although the study has one dependent variable of profitability, its measurement has been computed by two of its proxy variables, ROA and ROE, respectively. The outcomes of both models fall under the recommended criterion of correlation.

Both proffered models are as follow:

$$ROA = \beta_0 + \beta_1 ITOR_t + \beta_2 ARTOR_t + \beta_3 APTOR_t + \beta_4 OP_t + \beta_5 CR_t + \beta_6 QR_t + \beta_7 SR_t + u_t$$

$$ROE = \beta_0 + \beta_1 ITOR_t + \beta_2 ARTOR_t + \beta_3 APTOR_t + \beta_4 OP_t + \beta_5 CR_t + \beta_6 QR_t + \beta_7 SR_t + u_t$$

Where,

ROA = Return on Assets (dependent variable)
ROE =Return on Equity (dependent variable)
ITOR = Inventory Turnover Ratio (independent variable)
ARTOR =Account Receivable Turnover Ratio (independent variable)
APATOR =Account Payable Turnover Ratio (independent variable)
OP = Operating Profit (independent variable)
CR = Current Ratio (control variable)
QR =Quick Ratio (control variable)
SR =Solvency Ratio (control variable)
β_0 = refers to the constant term
β = refers to the corresponding coefficients
u_t = refers to the error term
x_t = subscript "t" represents the panel data

Regression is a statistical technique that densely measures the relationship of one dependent variable with two or more independent variables. Regression enables the researchers to conduct an autonomous prediction of how much prologue variance is accounted for in a single response underlying the independent set of variables.

Table 4. Regression estimation

Hypotheses	Regression Weight	Beta Coefficient	R2	F	P-Value	Hypotheses supported
H1 a	ITOR ----> ROA	0.559***	0.313	17.29	0.00	Yes
H1 b	ITOR ----> ROE	0.459*	0.245	12.36	0.01	Yes
H2 a	ARTOR ----> ROA	-0.442*	0.195	9.208	0.04	Yes
H2 b	ARTOR ----> ROE	-0.328*	0.108	4.580	0.03	Yes
H3 a	APTOR ----> ROA	-0.113	0.013	0.489	0.49	No
H3 b	APTOR ----> ROE	0.456*	0.216	10.49	0.02	Yes
H4 a	O.P ----> ROA	0.484*	0.234	11.64	0.02	Yes
H4 b	O.P ----> ROE	0.481*	0.231	11.41	0.02	Yes

Note: *** <0.001; * <0.05

In the first attempt, hypotheses of ITOR have been tested and regressed to both dependent constructs of ROA and ROE. The output table narrated that both H1a and H1b are supported by regression analysis. ITOR significantly predicted ROA (F= (1,219) = 17.29; β= 0.559; P <0.001) which indicates that ITOR has a significant impact on ROA. Moreover, R^2 depicts that the ITOR explains 31% variance in ROA is due to ITOR. Next, the ITOR has been regressed against ROE where (F= (1,219) = 12.36; β= 0.459; P <0.05) indicates that ITOR has a significant ROE too.

Further, R^2 predicts that the 24% variance in ROE occurred due to ROE. Therefore, both H1a and H1b are accepted.

Afterwards, the explanatory variable ARTOR has been regressed against ROA and ROE. The output table illustrates that both H2a and H2b are supported by adopting a 5% significant level, so the value of p is lower than 0.05. ARTOR significantly predicted ROA (F= (1,219) = 09.21; β= -0.442; P <0.05) and (F= (1,219) = 04.58; β= -0.328; P <0.05) showed that H2a and H2b are true as ARTOR has a significant negative impact on ROA and ROE, respectively.

The significance of APTOR has been examined through H3a and H3b. Outcomes of APTOR against ROA (F= (1,219) = 09.21; β= -0.113; p=0.49) showed that APTOR does not have a significant impact, so H3a is not supported and being rejected, while APTOR showed a reversal of outcomes in case of ROE by (F= (1,219) = 10.49; β= 0.456; P <0.05) so H3b has met the criterion of being authentic and consequent into acceptance.

To examine the significance of O. P, H4a and H4b are designed. Hypotheses status of O.P (F= (1,219) = 11.64; β= 0.484; P <0.05) and (F= (1,219) = 11.41; β= 0.481; P <0.05) demonstrated that both H4a and H4b are fully supported by inserting the significant impact on ROA and ROE, respectively.

5. DISCUSSION

The study had set a couple of objectives to apt. At the end of the analysis study successfully achieved its established objective. The study had superiorly built two research questions. One of them is that working capital's key component has a predicted impact on return on assets. Subsequently, a researcher has successfully answered this question after getting an endorsement from already published literature and analyzing the gathered data. The control variables are identified as the liquidity ratios, played as a catalyst and do not affect the actual outcomes of independent variables (Kabuye, Kato, Akugizibwe, Bugambiro, & Ntim, 2019). Critical components of working capital were identified through several pieces of research across the world. Here, current instances delineated that efficient management of working capital utilization may enhance the firm's value, shareholders' wealth, liquidity and profitability (Lefebvre, 2020; Masri & Abdulla, 2018; Morshed, 2020).

The second and most important question addressed by the current study is the relationship between the key components of working capital management and return on equity. The study also successfully answered this question by gathering the data from allied firms and working out the process of analysis. The computed result manifested that offensive management of working capital declines the net returns in both counts of assets and equity. It may happen under the consequences of acquiring outdated technologies, inefficient labour, and traditional arrogating methods of manufacturing and assembling. In Pakistan, only a few firms have assimilated advanced and up-to-date production methods and compete with the international standards like comfort and efficient consumption of fuel (reference). It is an adverse reality that the rest of the firms in the entire sector are still Inflicted upon old traditional methods. As a result, the automobile sector's demands for domestic consumers are not thoroughly entertained. The previous spread of technologies over the last few decades has become dead and buried under the current

circumstances; such technologies are old-fashioned and incur more costs while manufacturing and assembling the cars.

Consequently, firms charged more following their production level—it upshots potential local customers' wrongdoers, resulting in a massive debacle of imports. The study proposed significant results at a 1% significance level (Engman, 2011).

6. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

The conducted study has some limitations as well. As mentioned earlier, the study analyzed the secondary mode of data and had kept prior errors and omissions apart from the analysis process, such as an error in inventory or any other numerical error in erstwhile financial analysis underlying the financial and statistical measures. The measures became part of a designated study and blend into the data set; inappropriately, the study does not unfold and elaborate on such errors and omissions. Human error and negligence of manufacturing and assembling firms managers are mistreated throughout the entire process.

The current study was conducted in the contextual framework of the automobile sector of Pakistan; future researchers are recommended to study the same sector by adding the data from foreign stock markets of similar sectors or broadening by adding more Pakistani firms belonging to manufacturing units.

The current study apt only listed firms because of the unavailability of financial reports of non-listed firms, so such were kept apart from the conduct of the study; future researchers are suggested to create a mechanism for the incorporation of the non-listed firms to attain the outcomes on a broader level. However, it is pretty difficult to access non-listed companies' data because there is no organized mechanism where non-listed firms exhibit their financial reports. The current model can be manipulated by adding and dropping the constructs to accomplish a new framework. Likewise, the conducted study selected ROA and ROE as dependent constructs; future researchers may switch towards ROI (Return On Investment) to assess investment returns. Meanwhile, several constructs can be parked on the independent side of the study.

7. CONCLUSION

This paper aims to analyze whether the relationship between working capital management and profitability affects the operational activities of the firms, and its significance is further determined in the automobile sector of Pakistan, where operative activities primarily rely on down payments of the customers. Data were assembled using an annual financial report consisting of eight firms with direct associations with this sector. The study had put an entire focus on investigating the relationship between working capital management to the firm's profitability. This relation is studied under the contextual framework of the automobile sector of Pakistan. The study amalgamates three sets of variables, i.e. control, independent, and dependent variables. Working capital management is measured with the help of its proxy variables, i.e. Inventory Turnover Ratio (ITOR), Account Receivable Turnover Ratio (ARTOR), Account Payable Turnover Ratio

(APTOR) and Operating Profit (OP). In contrast, the proxies of the dependent variable of profitability are Return On Assets (ROA) and Return On Equity (ROE). In addition, Current Ratio (CR), Quick Ratio (QR) and Solvency Ratio (SR) played as control variables in the entire study.

The target segment of the study is the automobile sector of Pakistan, where eight companies from a total of 12 were selected for the composition of the data set. The data has been collected by secondary means and had apt the span of last five consecutive days started from 2016 to 2020. The data is analyzed with the help of the statistical tool of SPSS, where enormous tests and techniques were applied to find meaningful results. Proposed hypotheses resulted in actual and supported by the study expect APTOR to ROA. APTOR has no significant influence over the return on assets. The rest of the hypotheses are fully supported by the study. Outcomes of the data are significant and follow a 1 % significance level of probability (p-value). The study is also apart from hitches of multi-collinearity, homoscedasticity and heteroskedasticity. The study successfully answered its research questions and achieved its objectives; in the light of these uplifts, the study deployed a guiding pattern for financial managers, financial analysts and shareholders. Firms are encouraged to work with full potential and capabilities, so the performance of the entire sector is boosted. Customers started to take more interest in deprived units. Furthermore, both new and existing potential investors (domestic and foreign investors) prefer to come in with more interest and straighten the automobile sector to the forefront. Soon the automobile sector of Pakistan stands and competes with its rivals in the global market and is ahead of an economy of scale.

Reference:

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