



## DOES DELAY OR SCARCITY IN WORKING CAPITAL INCREASE UNEXPECTED FINANCIAL RISK FOR WOMEN ENTREPRENEURS IN THE DEVELOPING COUNTRY?

Amitab Bhattacharjee 

Toyo University, Department of Business Administration, Japan  
bhattacharjee.ar@gmail.com

Mohammad Khairul Islam Juman

CCN University of Science and Technology, Department of Business Administration, Bangladesh  
juman556@gmail.com

### Abstract

*Women entrepreneurs in the developing countries have competitive pressure in managing business operating funds (WC). Working capital is the fuel in business to enhance a firm's performance or growth in the long term. The findings suggest that any decrease in working capital causes a significant drop in firm's performance. Eventually, we also explored that working capital has a significant indirect effect on reinvestment scope. Reinvestment would be increased or maintained only by ensuring sufficient funds available in the firm. In the strategic view, entrepreneurs need operating capital (cash outflows) for new startups that later gradually returns as revenue or cash inflows (firm performance). The study results showed that around 33% respondents (women entrepreneurs) positively rated their tendency on paying bribes to grant business loans from different sources in the financial market. This issue would be one reason why women entrepreneurs may face delay in managing WC or liquidity risk or firm's performance risk in Bangladesh. This study recommends portfolio reinvestment strategy to minimize performance risk and enjoy competitive advantage in business in long term. Even though the current study has few limitations but it would add value to make strategic decisions regarding working capital, firm's performance and reinvestment management in the developing countries.*

*Keywords: Women entrepreneurs, Bangladesh, Firm performance, Working capital, Reinvestment*

## INTRODUCTION

Balanced flow in working capital management significantly increases business performance. Reasonably, upward performance indicates a wide scope of reinvestment to increase startup sustainability. Unfortunately, many women entrepreneurs in the developing countries like Bangladesh or other regions might have to face obstacles for working capital management, especially the liquidity crisis (Bhattacharjee & Jahanshahi, 2020). Due to the pandemic's effect on the world economy, small, medium and large organizations (by firm size or firm age) owned by women entrepreneurs have been suffering negative financial inflows for more than a quarter. A steady decline in return on assets is good enough for minimizing the reinvestment scope or entity growth. Therefore, many firms with below average ROA might reach the liquidation stage. The current study investigates the ongoing summary of scarcity in working capital (WC→FP; FP→RS; WC→FP→RS) of small and medium firms owned by women entrepreneurs in Bangladesh. Previously, many scholars investigated the relationship on firm's performance and reinvestment but the impact of working capital on firm's performance and reinvestment scope by two studies (financial booming period and financial crisis period) is still under the veil stage. So, the current study has been conducted to fill the existing research gap in the developing country.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

In the past few months, almost every entity has experienced unexpected declines in cash inflows (zero or negative margin after deducting the current expenses) due only to the COVID-19 pandemic. From the beginning of the second quarter, Bangladesh was unpredictably affected by COVID-19. Eventually, people of this country went through long term home-quarantine. Business entities except few categories (i. e. Banks, grocery shops, medicine shops) were suspended on scheduled business activities because the social crowd was restricted around the country. One of previous studies showed that many firms (especially women owned startups) suffered from liquidity crises that might lead those firms towards liquidation or large amounts of debt due to quarter long COVID-19 pandemic effects (Bhattacharjee & Jahanshahi, 2020). During this competitive period, women entrepreneurs who did not follow portfolio investment techniques experienced steady downward performance or negative cash balance. Therefore this study was mostly emphasized on portfolio investment (diversification strategy) (Reilly & Brown, 2011; Fletcher, 1995) and modern portfolio theory (Markowitz, 1952). These theories suggests entrepreneurs to allocate their investment (funds and assets) into multiple sectors to avoid or minimize financial risk (Markowitz, 1952; Reilly & Brown, 2011). Declining ROA below the industry average indicates a large scale of low

performance that needs to be medicated by immediate strategic changes (Gallo, 2016). Furthermore, WC with too low value denoted lower performance possibility as well as narrow scope of reinvestment (Wood, Sangster 2008).

### **Working capital, business performance and reinvestment scope**

To measure the working capital, current assets should be divided by current liabilities (Wood, Sangster 2008). The result is compared with the industry average. A higher value but not too higher than industry average is strategically denoted better performance of the firm whereas lower value shows negative performance of the firm (Wood, Sangster 2008). The depth indication is that WC value above the industry average describes the firm's strength against any unexpected or sudden financial crisis. As opposite, WC value below the industry average describes firm's weakness against any unexpected financial circumstances (Wood, Sangster 2008). The following is the computing formula of working capital.

$$\text{Current Ratio} = \frac{\partial \text{Current assets}}{\partial \text{Current liabilities}}$$

To increase sustainable financial gains, the firms should implement portfolio investment or reinvestment, mostly in the developing countries (Gruber, 2011; Reilly & Brown, 2011; Sharpe, 1963). Many scholars found that portfolio investment technique is positively correlated with performance and reinvestment opportunity (Gruber, 2011; Reilly & Brown, 2011; Henriksson, 1984; Sharpe, 1963). Above industry average CR indicates a better firm's performance. Higher performance advocates reinvestment scope by enhancing necessary funds. As Gallo (2016) said that increasing business performance of women entrepreneurs positively influenced business growth or reinvestment opportunity. To keep the upward growth in performance, firms owned by women entrepreneurs might be always dealing with a large scale of operating funds. Unfortunately most of them wouldn't have such facilities and therefore, they might have to experience an emergency funds crisis several times in every fiscal year. During the fund's scarcity, companies could collect expected liquid from banks, financial institutions, savings or other sources. Few researchers said in previous studies that assets in current form denote that they could be converted as liquid capital or cash by selling or exchanging within a short period of time or < 1y to manage working capital or reinvestment (Lohrey, 2018). Literature shows that women entrepreneurs in the developing countries mostly face unexpected delays to manage necessary operating funds (cash availability), such as low grant-policy in collecting long term loans. In detail, short-term loans (< 1y) from banks or other financial institutions could be the

first choice to solve small scale current liquidity crises. In short-term, firms sometimes rely on asset liquidation to collect the necessary operating funds (Lohrey, 2018). In contrast, entrepreneurs might need long term loans (>1y) or debt facility during a high scale of liquidity crisis. Generally, women entrepreneurs, operating startups in the small-medium industry in the country could not get sufficient bank loans or debt from other financial institutions due to avoiding systematic bribe pay. Literature shows that bribe paying tendency is comparatively low among female entrepreneurs than male entrepreneurs (Jahanshahi, Brem & Bhattacharjee, 2017). This might be one major reason why women entrepreneurs experience delay or rejection in granting commercial loans or other institutional loans. Therefore, any negative change in working capital flows dramatically declines the firm's performance and reinvestment scope. As a result, WC value signifies the current status of firm's operating performance ( $WC \uparrow = BP \uparrow$  and  $WC \downarrow = BP \downarrow$ ).

*H<sub>1A</sub>: Working capital is positively correlated with firm's performance.*

*H<sub>1B</sub>: Firm's performance positively influences reinvestment scope.*

### **Mediator role of firm's performance**

As discussed above, higher value or above industry average ( $> 1_{ia}$ ) WC indicates higher firm's performance. Alternatively, WC with lower value or below industry average ( $< 1_{ia}$ ) signifies lower firm's performance. Additionally, decies in firm's performance shows narrow scope of reinvestment due to insufficient funds, whereas increase in firm's performance describes wide scope of reinvestment due to sufficient funds available in cash or assets (current form). The return on assets depicts the business performance in the numeric form. Higher value of ROA indicates the firm has sufficient funds to gear up its growth, specially focus on reinvestment (Gallo, 2016). Lower value of ROA describes that the firm has not enough funds to support its growth (Gallo, 2016; Weygandt, Kieso & Warfield, 2001).

Business performance could be measured by ROA (Gallo, 2016). Return on assets is computed by net income and total assets. ROA value ( $> 1_{ia}$ ) shows how much firms efficiently as well as effectively able to utilize its assets to increase profits (Gallo, 2016). A classical growth in firm's performance is explicitly attracted to customer intention and developed consumer retention that increases sales revenues as well as entrepreneurs' image (Bhattacharjee et al., 2019; Bhattacharjee et al., 2018). The reinvestment opportunity is hooked by the firm's performance. Better performance brings sufficient cash to maintain further or reinvestment whereas lower performance decreases reinvestment opportunity. During below average performance, the firm has to maintain its working capital that excess funds retain for reinvestment. Therefore, reinvestment would be high if the firm's performance increases. In

literature, Steven Bragg (2018) said that the reinvestment scope could be evaluated by cash reinvestment ratio or CRR. The firm's performance and reinvestment scope could be measured by the following formulas.

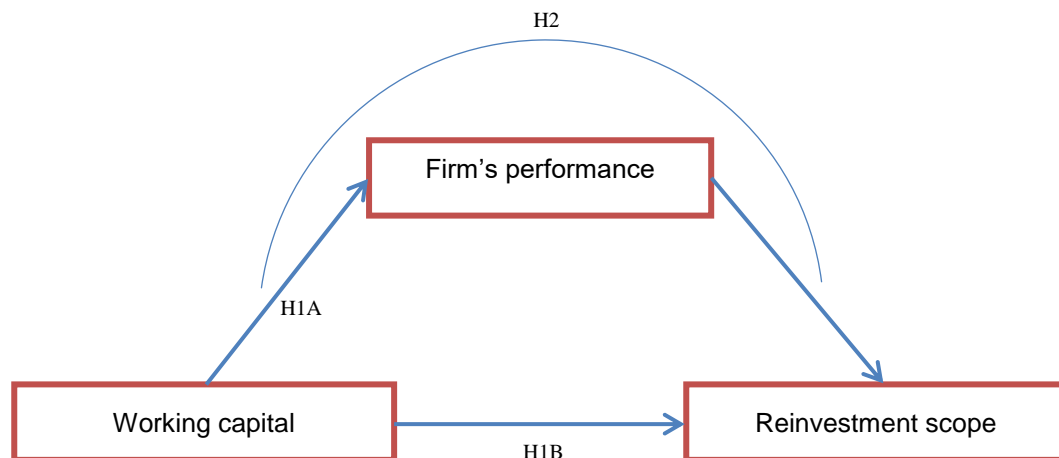
To evaluate performance: Return on assets =  $\frac{\partial \text{Net income}}{\partial \text{Total assets}}$

To evaluate reinvestment scope: CRR =  $\frac{(\text{Increase in fixed assets} + \text{Increase in working capital})}{(\text{Net income} + \text{Noncash expenses} - \text{Noncash sales} - \text{Dividends})}$

Therefore, any change in firm's performance positively moderates the relationship between working capital and reinvestment scope. Thus, we developed hypothesis two (H2).

*H<sub>2</sub>: Firm's performance moderates the relationship between working and reinvestment scope.*

Figure 1: Theoretical model of WC-FM-RS



## METHODOLOGY

### The Data

The current research surveyed 159 women entrepreneurs, doing business in Bangladesh through two studies. The Narsingdi District and Comilla District were the survey areas in Bangladesh. The entrepreneurs list was collected from the Narsingdi Pourashava (local government office) and the Comilla city corporation (local government office). The entrepreneur name and contact were written in the list based on the trade/ business license issued (active startups only). According to the list of women entrepreneurs, an interview was conducted with few women entrepreneurs to ensure the data availability and form the questionnaire. After confirming all these things, a questionnaire with contact as well as data consent was completed to conduct the final survey.

The women entrepreneurs were selected on a random basis. To test the questionnaire validity and reliability, 10% of the total expected sample was surveyed. The result summary of the 10% data sample was satisfied to move on to the final survey. The first study was conducted in July in 2019. After ten months later, we sent the questionnaire of the second study to previous respondents in June but they returned us the filled copy throughout July of the current calendar. The respondents of this study were received and sent back their feedback (on questionnaire) through online 'Google doc' portal or online media such as Emails.

### **Measurements**

In the study, working capital was inserted as a mediator, measured by current ratio (CR), adopted from Wood, Sangster (2008). The firm's performance was used as an independent variable, measured by return on assets ratio or ROA (Gallo, 2016; Weygandt, Kieso & Warfield, 2001). Cash reinvestment ratio (CRR) was computed to evaluate reinvestment scope, added as dependent variable, taken from Steven Bragg (2018). In the control variables, respondents were answered demographic levels (age, education, marital status), debt level (access to short-term loan, liquidation of current assets) and firm level (firm size, firm age) items. Finally, as a last control variable, respondents rated their tendency on paying extra money (bribe) for collecting immediate loan grants.

### **Data analysis techniques**

All respondents provided half-yearly balance sheets & income statements (from January to June, 2019) and half-yearly balance sheets & income statements (from January to June, 2020) were in the first study and second study respectively. In the statistical analysis, data collected from two studies were combined to measure the study models. The ROA value of 2019 (item one) and ROA value of 2020 (item two) were included as measurement items of the firm's performance. Then, we used the mean value of the ratio of both studies to run statistical analysis. The same technique was implemented for the rest of all. All study variables (IV, DV & Mediator) were observed as ratio results, not by likert scale technique. In the first phase, Pearson correlation analysis was implemented. After that independent and dependent variables were included with control variables to execute regression analysis on SPSS-24 plat-form. Additionally, 'Top 2 Box Score' analysis was adopted to evaluate tendency on paying extra money (bribe) only. In the second phase, PLS Algorithm (path analysis) was completed on SmartPLS-3 plat-form to check the indirect effect (mediator effect) among the study variables.

## RESULTS AND DISCUSSION

In the control variable section, women entrepreneurs were rated on their tendency on paying extra money or bribe to get easy access to short-term or long term debt from funds rising sources. Based on the rating of them, we completed Top 2 Box score analysis to find the total positive tendency on paying bribes. The results are arranged in Table 1. Results describe around 11.95% women entrepreneurs ( $n=19$ ) of the study were rated 'Always' they paid bribes. The next positive score was 'sometimes' that was rated by approximately 20.75% respondents of the study ( $n=33$ ).

Table 1: Top 2 Box score of tendency on paying bribe

Rating Scale	in number	in percentage
'Always' has a tendency to pay bribe	19	11.95%
'Sometimes' has a tendency to pay bribe	33	20.75%

In the first phase of data analysis, we used the SPSS24 platform to compute correlation (Pearson), STD and mean analysis, which were composed in Table 2. The study results showed that bribe paying tendency (control variable) has positive relationship with working capital (0.276,  $p<0.01$ ), firm's performance (0.351,  $p<0.001$ ) and reinvestment scope (0.319,  $p<0.01$ ).

The control variable in the firm level, we found that firm size and firm age are significantly as well as positively correlated with all study variables. In the demographic level, education has positive correlation with working capital (0.156,  $p<0.05$ ) and reinvestment scope (0.274,  $p<0.01$ ). Among the study variables, results showed that reinvestment scope is positively correlated with working capital (0.411,  $p<0.01$ ) and firm's performance (0.517,  $p<0.01$ ). Similarly, firm's performance has significant and positive correlation with working capital (0.472,  $p<0.001$ ).

In the second part of first phase analysis, we applied hierarchical regression to examine all hypotheses. Three models were tested by regression analysis. The model one and two used to measure the direct relationship between working capital & firm's performance; working capital & reinvestment scope respectively. In the model one, we inserted all control variables, working capital as an independent variable and firm's performance as a dependent variable. The results showed that two control variables (bribe paying tendency and firm size) have positive as well as significant relation with firm's performance ( $\beta = 0.421$ ;  $p < 0.001$ ). This significant impact expressed that paying under table money or bribe or extra like a gift to the concern might make easy access to loans.

Table 2: Results of Pearson correlation, mean and standard deviation analysis

Variables	Mean	STD	1	2	3	4	5	6	7	8	9	10
1. Age	2.19	0.69	1									
2. Education	1.30	0.86	0.159	1								
3. Marital Status	1.13	0.34	0.028	-0.131	1							
4. Bribe paying tendency	2.02	0.94	0.130	0.203	0.165	1						
5. ASL	1.91	1.28	-0.140	0.056	0.347	-0.062	1					
6. LCA	1.13	0.34	0.028	-0.131	0.152	0.165	0.347	1				
7. Firm size	2.19	0.89	1.000	-0.159	0.028	0.130	-0.140	0.028	1			
8. Firm age	2.65	0.91	0.125	-0.359	0.413	0.140	0.169	0.413	0.125	1		
9. Working capital	1.50	0.82	-0.072	0.156*	0.025	0.276**	0.236	0.225	0.372	0.339**	1	
10. Firm's performance	1.42	0.88	0.084	0.079	-0.130	0.351***	0.259	-0.130	0.384	0.413*	0.472***	1
11. Reinvestment scope	1.46	0.97	0.117	0.274**	-0.083	0.319**	0.270	0.163	0.217	0.226*	0.411**	0.517*

\*p&lt;0.05, \*\*p&lt;0.01, \*\*\*p&lt;0.001

\*ASL: Access to short-term loans. \*LCA: Liquidation of current assets

Therefore, it could be one reason why some women entrepreneurs would like to pay bribes for getting loans. Thus, we accepted the first hypothesis ( $H_{1A}$ ) of the study. The next hypothesis ( $H_{1B}$ ) was evaluated in model two. This hypothesis deals with a direct effect between working capital and reinvestment scope. Results were presented in Table three. As seen in the results (Table 2), we found that reinvestment scope is positively and significantly correlated with working capital ( $\beta = .363$ ;  $F = 16.932$ ;  $p < 0.01$ ).

Table 3: Results of Regression analysis

	Firm's Performance (Model 1)	Reinvestment scope (Model 2)	Reinvestment scope (Model 3)
	Direct effect ( $H1A$ )	Direct effect ( $H1B$ )	Indirect effect ( $H2$ )
1. Age	-.125	.107*	.169
2. Education	.297†	.252	.171*
3. Marital Status	-.115	.047	-.086
4. Bribe paying tendency	.256*	.159**	.164**
5. ASL <sup>†</sup>	.116†	-.157†	-.180†
6. LCA <sup>†</sup>	.123	.177	-.278



7. Firm size	.204*	.196**	.255*
8. Firm age	.192†	.175*	.219†
8. Working capital	<b>.421***</b>	<b>.363***</b>	<b>-.285</b>
9. Firm's Performance			<b>.591***</b>
<b>R<sup>2</sup></b>	<b>.469</b>	<b>.372</b>	<b>.537</b>
<b>Adj. R<sup>2</sup></b>	<b>.393</b>	<b>.212</b>	<b>.465</b>
<b>F</b>	<b>19.771**</b>	<b>16.932**</b>	<b>25.991***</b>

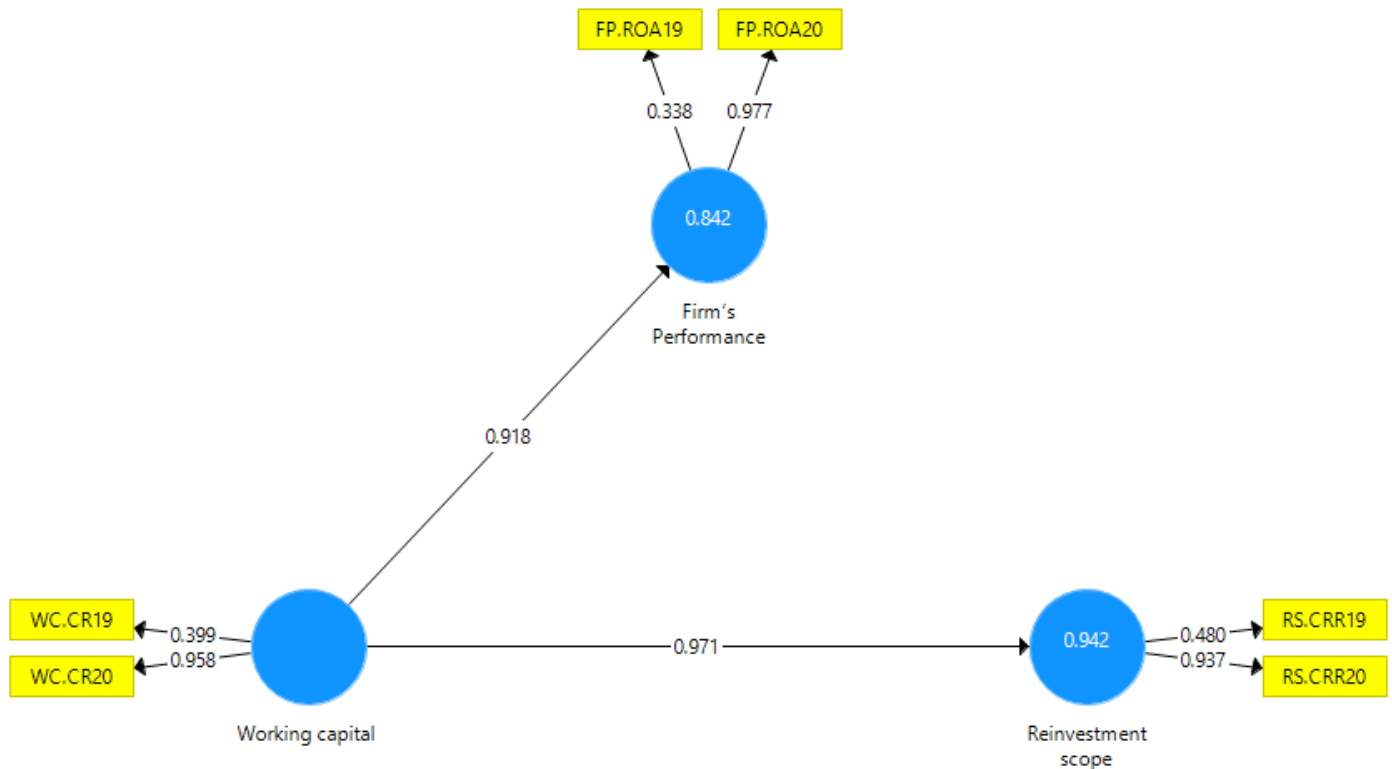
Table 3...

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001; †p<.10

\*ASL: Access to short-term loans. \*LCA: Liquidation of current assets

Furthermore, dependent variable (RS) has positive relationship with age ( $\beta = .107; p < 0.05$ ), bribe paying tendency ( $\beta = .159; p < 0.01$ ), firm size ( $\beta = .196; p < 0.01$ ) and firm age ( $\beta = .175; p < 0.05$ ) but negative correlation with access to short-term loans ( $\beta = -.157; p < 0.10$ ).

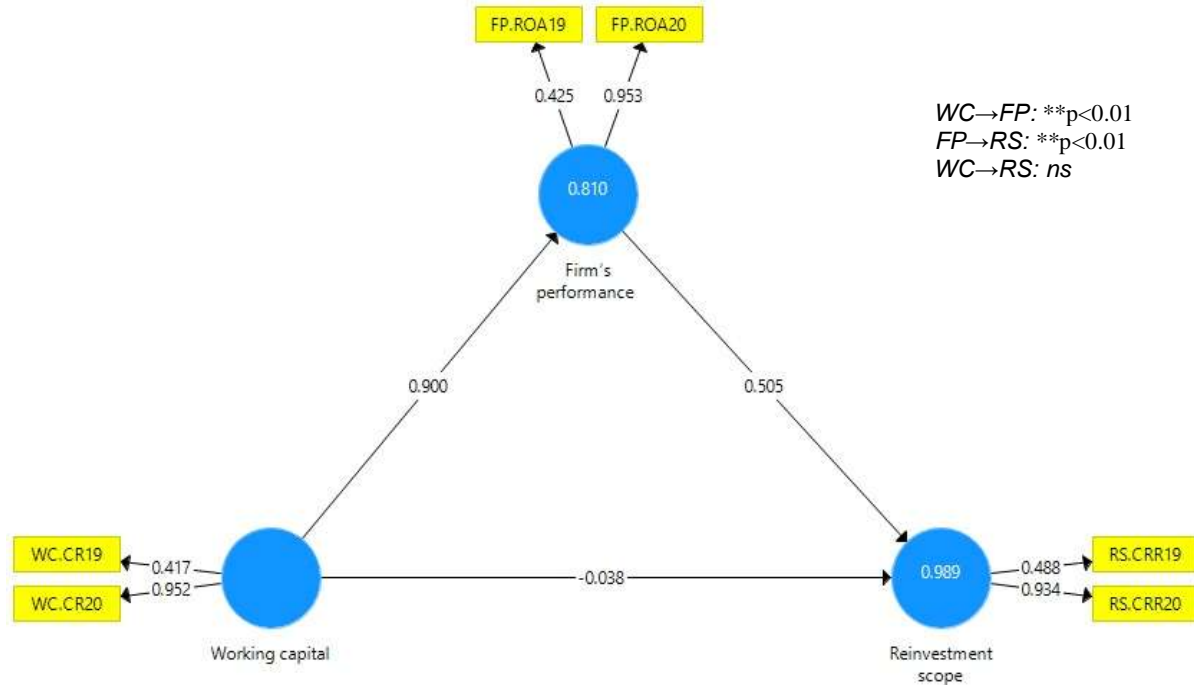
Figure 2: The model-illustration of path analysis (direct effects, H1A & H1B)



The positive-direct effect between WC and RS shows that scarcity or delay in working capital management would influence reinvestment procedures in the firm. Therefore, women entrepreneurs could enjoy a wide scope of reinvestment if they arrange or maintain working

capital flow in the business on time. Based on the results and assumptions developed (H1B) found positive and significant.

Figure 3: The model-illustration of path analysis (direct and indirect effects, H2)



Hence, we accepted the hypothesis, H1B. We tested the last hypothesis in model three and results were arranged in Table 2. This hypothesis deals with an indirect effect between WC and RS. This relationship was mediated by the firm's performance. Even though WC has a direct effect on RS but it could be negative if the firm's performance entered in between. The summary of regression results depicted that the indirect path (WC→FP→RS) is positive ( $\beta = .591$ ;  $p < 0.001$ ) and significant and direct path (WC→RS) is negative ( $\beta = -.285$ ;  $p > 0.05$ ). Considering the indirect effects, women entrepreneurs should emphasize on working capital and firm's performance to increase firm's growth or reinvestments. Thus, our last hypothesis (H2) was fully supported.

In the second phase data analysis, we evaluated direct and indirect effects by path analysis (PLS Algorithm) on SmartPLS3 platform. The results (direct effects) of path analysis were illustrated by figure 2. As seen in this figure, we found that working capital has a positive-direct effect on firm's performance ( $\Gamma = 0.918$ ;  $R^2 = 0.842$ ). Additionally, WC has a positive and direct relationship with reinvestment scope ( $\Gamma = 0.971$ ;  $R^2 = 0.942$ ).

Therefore, the path analysis (direct effects, figure 2) results and regression model statistics (model 1 & model 2; Table 2) described similar assumptions. Thus, hypothesis H1A

and H1B are statistically evidenced. Now, the indirect effect (mediation role of firm's performance) was evaluated by PLS Algorithm. The results were demonstrated by figure three. As seen the figure 3, we confirmed that indirect path ( $WC \rightarrow FP \rightarrow RS$ ) between the study variables is positively significant ( $WC \rightarrow FP: \Gamma = 0.900; FP \rightarrow RS: \Gamma = 0.505; p < 0.01; R^2 = 0.810$ ) while direct path between working capital and reinvestment scope is negative and non-significant ( $WC \rightarrow RS: \Gamma = -.038; p > 0.05; R^2 = 0.989$ ). According to Hayes (2017) said that full mediation effect would be established if indirect effects are positive & significant while direct effect is negative or non-significant. So, in this study, the positive & significant indirect effects and negative direct effect(s) advocated full mediation effect ( $WC \rightarrow FP \rightarrow RS$ ) between the study variables. Therefore, the assumption of hypothesis H2 is fully accepted. So, a sustainable firm's performance would consequent upon a balanced flow of working capital that might positively influence reinvestment scope of any firm. As such, women entrepreneurs should manage as well as allocate sufficient funds for working capital management.

## CONCLUSION AND LIMITATIONS

Women entrepreneurs operating business in the small and medium industry might face lower working capital due to the liquidity crisis. The current study fulfills the existing research gap regarding the impact of working capital on firm's performance as well as reinvestment scope. Results of this study show that higher value of working capital has a significant and positive relationship with a firm's performance. Above average WC is also denoted firm's ability in reinvestment scope. Furthermore, women entrepreneurs could achieve competitive advantage by implementing portfolio reinvestment strategy (Jahanshahi & Bhattacharjee, 2019). Similar to previous studies, the current paper found that below average working capital value indicates insufficient funds for reinvestment. The study results also describe that women entrepreneurs having a tendency to pay bribes could easily access loans from different financial sources but those who have zero tendency on paying bribes could not easily arrange loans. Similar to other studies, this research had also few shortcomings, such as geographical area and entrepreneurial actions (Jahanshahi, Brem & Bhattacharjee, 2017).

The current study surveyed only two business districts of Bangladesh. So, the demonstration of the study findings would be much more effective in regards to strategic decisions on WC management in the other country or region than Bangladesh. For example, women entrepreneurs might have to experience a high level of complications for collecting or granting bank loans that grows a tendency to pay bribes, which would be different in other developing countries. Therefore, geographical location (survey area) was considered as the first limitation of the study. The second limitation of the study was identified as the gender category

of respondent. In this study, women entrepreneurs were only selected as the study participants. As of this, the study results elaborated based on female gender. So, the outcomes would be more specific if all genders (cisgender- male, cisgender- female, and transgender entrepreneurs) included in the same study. In addition, the third limitation of the study is tenure of financial data. Specially, measuring financial data of multiple years would be more accurate to find future financial gains or threats at the industry level (Bhattacharjee & Jahanshahi, 2020; Lohrey, 2018). Lastly, even though the study has several limitations, the contribution of this research would generalize the business directions on strategic actions of women entrepreneurs that provide literally appropriate sustainable outcomes to make firm/corporate level strategies in the long term.

### **FUTURE DIRECTIONS AND RECOMMENDATIONS**

The current paper evaluated impacts of working capital on firm's performance and reinvestment scope based on half-yearly financial data. Therefore, the future-research could be conducted to measure the WC and BP relationships based on a year ending or multiple year's financial data to evaluate more in depth. The further study would have a scope to measure, "how the availability of bank loans does or entrepreneur's loans influence working capital management (WC→BP) or business performance". Additionally, research scholars could conduct further study to examine the factors affecting on collecting short-term or long-term working capitals for business without paying bribes.

Besides, conducting comparative study between two countries or including both cisgender and transgender entrepreneurs would be interesting to find strategic assumptions on working capital or firm's performance issues in the developing country or developed country as well. Additionally, further study should find the factors affecting a tendency to pay bribes for business purpose loans or a relationship between a green corporate facility and entrepreneur's benefits. However, after analyzing the study data, we found that availability of loans for women entrepreneurs is literally complicated and that there is a growing positive tendency on paying bribes or extra commission. So, the tendency to pay bribes would be decreased if women entrepreneurs get a green corporate facility that ensures a wide opportunity of getting business operating loans from different financial institutions easily. Henceforth, women entrepreneurs should allocate current funds between working capital and fund rising (savings for future or emergency purpose). The reason is, delay or imbalanced working capital management might dramatically decline the firm's performance. If performance drops in the long term would increase explicit barriers for the firm's sustainability. Therefore, priority based funds allocation and emergency funds reservation would be best practice for women entrepreneurs to achieve

sustainability. Finally, portfolio-reinvestment strategy (diversification) practice might wipe out unexpected loss of firms in the long term.

**Financial disclosure:** The current study does not have any intentional bias link with other individuals or firms/organizations, which might incongruously affect their works.

**Declaration of interests:** The authors of the current study declare no competing interests.

## REFERENCES

- Aghion, P., Angeletos, G.M., Banerjee, A., & Manova, K. (2010). Volatility and growth: Credit constraints and the composition of investment. *Journal of Monetary Economics*, 57 (3), 246-265.
- Bhattacharjee, A., & Jahanshahi, A. A. (2020). The COVID-19 outbreak brings spring season for translucent activity. Does it result in exogenous uncertainty for entrepreneurs and bound-less commodity pricing! *Asian Journal of Multidisciplinary studies*, 8(7), 20-32. Retrieved from: <http://www.ajms.co.in/sites/ajms2015/index.php/ajms/article/view/3810>
- Bhattacharjee, A., Jahanshahi, A. A., Polas, M. R. H., Hossain, M. I., & Asheq, A. S. (2019). Customer Care Service Management is Moving Forward to Achieve Sustainable Customer Retention in Every Industry. Does it play a Role to Increase Brand Retention. *International Journal of Management and Sustainability*, 8(2), 88-97. DOI: 10.18488/journal.11.2019.82.88.97
- Bragg, S., (2018). Cash reinvestment ratio. *Accounting Tools*. Retrieved from: <https://www.accountingtools.com/articles/2017/5/13/cash-reinvestment-ratio>
- Bhattacharjee, A., Rashedhasanpolas, M., & Moin, M. (2018). The Effects of Broadband Service Quality on User's Value And Loyalty: A Study on Foreign Customers In Malaysia. *IOSR Journal of Business and Management*, 20(2), 48-58. DOI: 10.9790/487X-2002024858
- Chakravarty, S., & Xiang, M. (2011). Determinants of Profit Reinvestment by Small Businesses in Emerging Economies. *Financial Management*, 40(3), 553-590. Retrieved from [www.jstor.org/stable/41237917](http://www.jstor.org/stable/41237917)
- Fletcher, J. (1995). An examination of the selectivity and market timing performance of UK unit trusts. *Journal of Business Finance & Accounting*, 22(1), 143-156.
- Gruber, M. J. (2011). Another puzzle: The growth in actively managed mutual funds. In *Investments And Portfolio Performance* (pp. 117-144).
- Gallo, A. (2016). A refresher on return on assets and return on equity. *Harvard Business Review*, April 2016.
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.
- Henriksson, R. D. (1984). Market timing and mutual fund performance: An empirical investigation. *Journal of business*, 73-96.
- Jahanshahi, A. A., & Bhattacharjee, A. (2019). Competitiveness improvement in public sector organizations: What they need? *Journal of Public Affairs*, 1-10. <https://doi.org/10.1002/pa.2011>
- Jahanshahi, A. A., Brem, A. and Bhattacharjee, A. (2017). Who takes more sustainability-oriented entrepreneurial actions? The role of entrepreneurs' values, beliefs and orientations. *Sustainability*, 9(10): 1636. DOI: <https://doi.org/10.3390/su9101636>
- Lohrey, J. (2018). Importance of Ratio Analysis in Financial Planning. Retrieved from: [smallbusiness.chron.com/importance-of-ratio-analysis-in-financial-planning](http://smallbusiness.chron.com/importance-of-ratio-analysis-in-financial-planning)
- Markowitz, H. (1952). The utility of wealth. *Journal of political Economy*, 60(2), 151-158.
- Reilly, F. K., & Brown, K. C. (2011). *Investment analysis and portfolio management*. Cengage Learning.
- Sharpe, W. F. (1963). A simplified model for portfolio analysis. *Management science*, 9(2), 277-293.
- Wood, F., & Sangster, A. (2008). *Frank Wood's Business Accounting UK GAAP (Vol. 1)*. Pearson Education.
- Weygandt, J. J., Kieso, D. E., & Warfield, T. D. (2001). *Intermediate Accounting: Rockford Corporation, an Accounting Practice Set*. John Wiley & Sons.

**APPENDIX**

Abbreviations	Full meaning	Abbreviations	Full meaning
< 1y	Less than one year	CL	Current liabilities
> 1y	More than one year	CRR	Cash reinvestment ratio
> 1 <sub>ia</sub>	'1' or industry average	FP	Firm's performance
ASL	Access to short-term loans	LCA	Liquidation of current assets
BP	Business performance	ROA	Return on assets
CA	Current assets	RS	Reinvestment scope
CR	Current ratio	WC	Working capital