Original Research

Impact of Working Capital Management on Organizational Performance: Evidence from Small Enterprises of Bangladesh

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Abstract

The main purpose of the study is to discover the impact of working capital indices on the organizational performance of small manufacturing firms in Bangladesh. This study was mainly conducted based on a quantitative research method while data collection was performed by researchers themselves with face-to-face interviews of owners and managers from nine manufacturing sectors. Data were collected from 98 manufacturing small enterprises from four different districts conveniently based on access priority. Data analysis was performed using SPSS, and simple OLS model was developed based on regression analysis to understand the impact level, while correlation and descriptive statistics were produced to understand the scenario and relationship among the variables. This study found that days receivable outstanding (DRO), current ratio (CR), networking capital turnover (NWCT) have a direct impact on the profitability of the firm while days' inventory outstanding (DIO) is not a determining factor for the financial performance of those firms. This study has practical implications in the field of small manufacturing industries in Bangladesh as well as in developing countries for managing working capital in their firms.

Keywords: Working capital Management, small enterprise, profitability

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Introduction

In the last decade, Bangladesh got a tremendous triumph over the poverty line. In recent years, the country has become an attractive destination for manufacturing firms seeking their goods' production with the least expense. The United Nations has recently predicted that Bangladesh is going to be the third fastest-growing country in 2019 (Ahsan, 2019). Since 2015 Bangladesh has been holding GDP growth rate of more than 6.5%. Several triggers are working behind the success stories of Bangladesh. One of these triggers is the people's involvement in the mass production activities of the country. Some of the industries that started as small enterprises are now the main source of Bangladesh's export income. The garments, leather, shoes, and ship industries are some of these types of Bangladesh exports that started from zero. Therefore, creating a new manufacturing firm is new hope for the country's growing economy. Like the other Asian countries, Bangladesh is also expecting proper development of small businesses though a more significant part of the country's unemployed group will benefit. However, the failure rate among small manufacturing firms has become a concern in Bangladesh and across the world. The proper exploration of different aspects of the small business sector may help existing and new entrepreneurs. Working capital management is one of the key elements that need more focus for this sector's deployment. Working capital management is the difference between current assets and current liabilities. Current assets are cash or cash equivalents, accounts receivables, raw materials and inventories, stock in hand- those are convertible into cash in less than one year. The current liabilities are accounts payables, paid interest on long-term loans, and other short-term liabilities with less than one year. According to (Hawley, 2018), a firm's health can easily be assessed by looking at its working capital indices. A firm is said to be efficient in management if it can convert its raw materials into cash with minimum time, has more liquid assets than short-term liabilities- these factors of a firm's management are indicators of working capital management. Many previous explorations have found that businesses with efficient working capital management (shorter cash conversion cycle) have better performance (Mohamad & Saad, 2010; Ebben & Johnson, 2011; Ahmed, Mahtab, Islam, & Abdullah, 2017; Korent & Orsag, 2018; Scherr, 2014). Simultaneously, there are differences in how a large firm and a small firm manage their respective working capital, like when the average payment period is significant for large firms. Concurrently, it is very insignificant for small firms in Malaysia (Ashhari et al., 2017). The several aspects discussed above are the concern of proper working capital management. Thus, the current study will support on policy development regarding working capital management as the number of small enterprises increases in Bangladesh. Having enough studies on small enterprise sectors can help the business owners and new entrepreneurs, ultimately contributing to the economy of the country.

Theoretical Foundations

Since the ending decade of the last century, small and medium enterprises (SMEs) have been getting focus by the researchers. On the way of this study, the researchers have gone through a number of those previous studies. The scholars of this research found those previous studies broadly focused on four types of phenomenon like studies related to failure, studies related to funding issues, studies focused on performance, and studies focusing on working capital management. Several studies based on the perspective of

Bangladesh are also got reviewed by the researchers. In the following section, based on the literature review, two broad hypotheses are put forward.

Research Works Focusing Difficulties of Small Firms

Throughout the world, small businesses are struggling with many complexities. These complications are related to money, internal and external environment, and ethical practices of those entities. According to Business Insider (Desjardins, 2017), cash flow problems and inadequacy of cash are faced by many small and medium enterprise entrepreneurs- 82% and 29% of small firms fail for these two issues, respectively. SMEs' capital structure is shaped by locality, age, size, profitability, educational background, and the gender of the own. (Abor & Biekpe, 2006). For most of the startups and small firms' nest eggs', family and friend funding, credit cards are sources of initial financing as these kinds of entities get less focus from the banks and other financial institutions. However, along with the startups- women-owned, ethnic entrepreneurs are always reluctant to finance their business from official sources (Sarker, 2017). Their reluctance is complexities and information gap, lack of trustworthiness, lack of confidence to repay the loans, and financing entity's controlling motive (Cassar, 2004; Abor & Biekpe, 2006). In UK, Italy, and Germany's context (Berger & Schaeck, 2011) demonstrated the relationship between bank financing and initial equity financing in SMEs. The study showed SMEs prefer venture capital instead of self-funding when banks don't want to finance them or if it seems bank financing is unwise in the business's deployment. A similar result was found in the study of (Opiela, 2006). Notwithstanding if it is possible to develop trustworthiness between banks and new borrowers- easy financing with reduced cost is possible for the small firms- found in a study by (Maniruzzaman, 2017). However, In China, short-term working capital issues don't influence acquiring long-term fixed assets- found in a study by Guariglia and Knight (2013) on eight years (2000-2007) data of 116,000 firms. The researchers concluded that Chinese firms adjust their short-term financing limitations by efficient working capital management, which helps them invest in fixed capital. (Ahmed & Chowdhury, 2009) figured out some drawbacks against SMEs success in Bangladesh in their desk research, such as- scarcity of resources, high turnover of the rate of employees, lack of modern technology, low physical structure, financial limitations, ambiguity in management of information system, lack of entrepreneurial and leadership skills and research, lack of ethics, cheaper foreign goods, bureaucracy, and low government initiative to promote the sector. However, small and medium firms are growing in number in Bangladesh due to good planning, improved technology, government support, improved distribution channel, and full managing bodies' management skills found by (Uddin & Bose, 2013).

Research Works Focusing Performance, Liquidity, Working Capital Management, and Capital Structure

Several studies found that elements of working capital management have a significant effect on an organization's performance. Ebben and Johnson (2011) studied 1712 firms (879 small manufacturing and 833 retail firms), focusing on the cash conversion cycle's relationship with liquidity, invested capital, and firm's performance. It showed that firms were having shorter cash conversion cycle invest less money, perform effectively and maintain more liquidity. Net Operating Income was used as a dependent variable, which

was explored with the elements of cash conversion cycle (CCC), CCC itself, and liquidity ratio. Firm size, debt ratio and ratio of financial assets to total assets were used to control the research model. In the analysis part, the researchers did Pooled Regression and General Least Squares Regression with cross-section weights. The result depicts maintaining excessive liquidity and debt financing bring negative performance in Pakistani firms. At the same time, farm size was found to impact a firm's performance positively (Niresh, 2012) explored 31 local manufacturing farms with five years of data from Sri Lanka. Current Ratio, quick ratio, and liquidity ratio were used as independent variables where Net Profit Ratio, Return on Capital Employed, and Return on Equity were used as dependent variables. The research found that the liquidity ratios have a negative or very small correlation with the selected firms' profitability ratios. A similar study was done on the banking sector of Sri Lanka by (Amirthalingam, N. & Meerajancy, 2015) and found the identical result- insignificant correlation between liquidity and profitability in Sri Lankan banks. The researchers proposed to decrease the cash conversion cycle (CCC) to raise profitability level. Based on 204 manufacturing firms of Pakistan, different working capital indicators significance on company performance revealed that the cash conversion cycle, net trade cycle, and inventory turnover in days affect firms' performance (Raheman et al., 2010). Companies with shorter cash conversion cycles meet their working capital needs from the current return and therefore do not need equity financing in Turkey (Uyar, 2009). This research also found that large farms in Turkey have a shorter CCC period than smaller farms. The theoretical concept of higher working capital brings low-level financial performance was not confirmed by the research. (Saleem & Rehman, 2011) had a study on liquidity ratios' effect on a company's profitability ratio. The independent variables were current ratio (CR), quick ratio (QR), and liquid ratio (LR). The dependent variables were returned on asset (ROA), return on equity (ROE) and return on investment (ROI). Based on six years' data (2004-2009) of 26 oil and gas companies of Pakistan the regression result of the study shows that with LR is a significant determiner of ROA. None of the independent variables has significance in fixing ROE, while all of them have importance in determining ROI. (Shubita & Alsawalhah, 2012) researched 39 Jordanian business firms to see the relationship between capital structure and firm's performance.

The statistics of their research showed profitable firms rely more on equity rather than debt financing. And also debt is found to have negative relationship with those business firms' performances. Twelve business firms from Sri Lanka were analyzed to see the relationship between debt-equity structure and profitability by (Subramaniam & Anandasayanan, 2015). They took debt to equity ratio, long term loans to total asset, and short term loan to total asset were used as independent variables. The net profit ratio was used as the profitability index. The correlation and fixed effect regression model of the research showed profitability is negatively related to debt, which is in line with the previously discussed literature review of (Shubita & Alsawalhah, 2012) research work. These two researchers also concluded by saying more profitable firms rely on their equity capital rather than debt financing.

Research Works on Similar Topics in Context of Bangladesh

There is a little research on small businesses that were done from Bangladesh's perspective. Most of these works are on a broader perspective those includes mid-level

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firms also. The explorer of this study reviewed the available papers on SMEs and some other articles on working capital management of different sectors. Companies in Bangladesh maintain larger inventory, followed by accounts receivables and cash. At the same time, accounts receivable is declining, and it also takes a long time to be realized-found in a study (Haque et al., 2014) over 5 years' data of 38 companies under Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE). The operating sector based study shows that the cement and food industry have raised their current assets to total assets significantly, indicating inadequate performance in these two sectors due to adequate liquidity. An increasing trend of current assets is found from 2004 to 2008 in the investigation. The textile sector maintains high credit sales followed by the engineering sector, which means high accounts receivables to total assets. In case of inventory management leather industry maintains high inventory followed by food and engineering. Therefore, it can be said that big manufacturing firms of the country have to lack in their overall capital management. Working capital effect on the profitability of cement industries of Bangladesh was implied in Quayyum's, (2011) research. The study took return on assets (ROA), net profit margin (NPM), and interest coverage ratio (ICR) as dependent variables. The exploratory variables were quick ratio, cash to current liability, cash to sales, cash conversion cycle (CCC), and its elements. The study's descriptive statistics depicted a negative relationship between profitability and liquidity ratios, which means more profitable companies take less time to convert raw materials into cash. Cash to current liabilities and cash to sales showed a very positive relationship with profitability ratios, which means that profitable firms generate required money from their general operations.

Gap in the literature

Most of the previous studies reviewed above focused on different aspects of small and medium firms and, more importantly, those based on Bangladesh's places. Very few studies were done focusing only the small manufacturing sector of Bangladesh. From here, it has become evident that a gap is remaining in the literature. If we go into deep, we find that small businesses are growing in the country, jobs are getting created, but firms and innovation's performance is not up to the mark with the level of creation of small manufacturing firms. The researcher's view is to know whether working capital management affects these small manufacturing firms of Bangladesh. This study will determine the impact level of working capital management on financial performance in this regard.

Conceptual Framework of the Study

Based on the literature review, this study conceptualizes the following model in Figure 1.
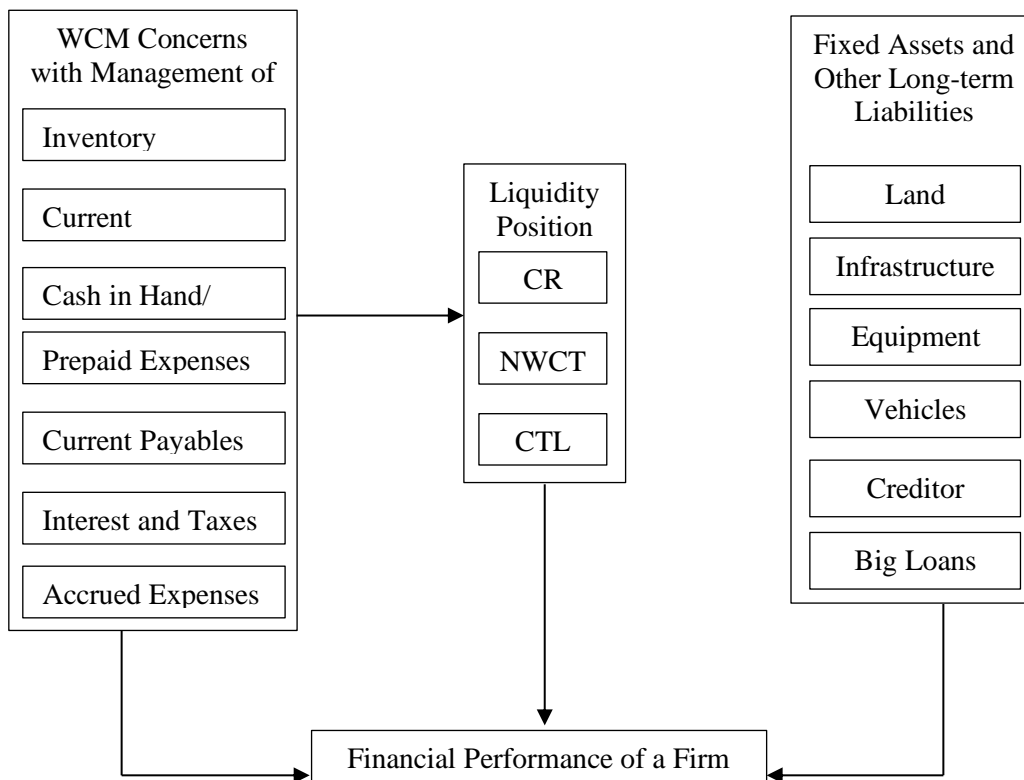
Figure 1 Conceptual Framework of the Study

Objectives and Methodology of the study

This paper aims to discover working capital indices that influence the profitability of small manufacturing firms in Bangladesh. To accomplish the objectives, the researchers had a close face-to-face interview of owners and managers from nine manufacturing sectors, and it took six months to compete for the task. This study's data were collected from 98 manufacturing firms operating in nine different production sectors from four districts of the country. Due to some inconsistency, 8 firm's data were excluded, and the analysis was done on the 90 manufacturing firms.

Variables

There are three types of variables considered for this study: dependent variable, independent variables, and controlling variables. The dependent variable is the net income of the selected firms after interest and taxes. The independent variables are days inventory outstanding (DIO), days receivable outstanding (DRO), days payable outstanding (DPO), current asset (CR), net-working capital turnover (NWCT), and cash to total liability (CTL). The model of the study is controlled by debt ratio (DR).

Hypotheses

H1a= There is a relationship between days' inventory outstanding (DIO) and firm's net income (NI).

H1b= There is a significant relationship between days receivable outstanding (DRO) and firm's net income (NI).

H1c= There is a relationship between days payable outstanding (DPO) and firm's net income (NI).

H2a= There is a relationship between the current ratio (CR) and firm's net income (NI).

H2b= There is a relationship between net working capital turnover (NWCT) and firm's net income (NI).

H2c= There is a relationship between cash to total liability (CTL) and firm's net income (NI).

Model Specification

The model developed in this research as follows:

$$NI = \beta_0 + \beta_1\,DIO + \beta_2\,DRO + \beta_3\,DPO + \beta_4\,CR + \beta_5\,NWCT + \beta_6\,CTL + \beta_7\,DR + \varepsilon$$

The net income is regressed on DIO, DRO, DPO, CR, NWCT, and CTL in the model. DR. controls the whole model. The abbreviated terms are expanded as below:

β_0= Intercept

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$= Regression Coefficients

NI= Net Income

DIO= Days Inventory Outstanding

DRO= Days Receivable Outstanding

DPO= Days Payable Outstanding

CR= Current Ratio

NWCT= Net Working Capital Turnover

CTL= Cash to Total Liability

DR= Debt Ratio

ε= Error Term

Result and Discussions

Descriptive Statistics

Considering the descriptive analysis, small manufacturing firms are relatively slow in inventory management (average DIO is 25 months (approx.). The firms are comparatively active in the collection of receivables (average DRO < 1 month). And the average payable period is 7 months. The average current ratio for those businesses is 5.793 (approx.), which effectively depicts the firms not using short-term financing tools. The net working capital turnover (NWCT) value of 1.27 indicates that investing 100 Tk. in working capital 127.0522 can be collected as revenue. The average cash to total liability (CTL) of the sector is 0.514, which is relatively higher. It indicates the selected small manufacturing firms are good enough to pay their total debts from the cash generated by regular operation.

Table 1 Descriptive Statistics

Mean	DIO	DRO	DPO	CR	NWCT	CTL	DR	NI
	762.9048	23.83577	207.0163	5.792574	1.270522	0.513905	0.338217	2.212920
Median	669.6361	9.130000	159.6478	4.306349	1.046039	0.370053	0.193183	1.482000
Maximum	4461.110	140.3846	990.0000	40.00000	5.378000	2.400960	1.584362	10.40000
Minimum	186.2245	0.000000	0.000000	1.329640	0.309957	0.071910	0.036684	0.152500
Std. Dev.	519.2333	29.90837	179.1612	5.239698	0.776049	0.431337	0.338532	2.177894
Skewness	4.179730	1.484685	2.053191	4.109529	2.405769	2.046343	1.704966	1.796826
Kurtosis	29.80342	4.936603	8.172675	24.63951	11.44799	7.652499	5.218555	5.849376
Jarque-Bera	2956.139	47.12848	163.5710	2009.330	354.4479	143.9844	62.06109	78.87478
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	68661.43	2145.220	18631.47	521.3317	114.3470	46.25145	30.43950	199.1628
Cronbach's α = 0.673								

Correlation Analysis

The correlation statistics of the study is presented in table 2. Here the statistics were controlled by debt ratio. The result of the correlation statistics shows among the six predictor variables- days receivable outstanding (DRO), and current ratio (CR) has a statistically positive correlation with net income (NI) of the selected firms. It means the more receivables generated- the more DRO and more receivables bring more profitability. Simultaneously, with more receivable current attest increases, that is a good reason for increasing the current ratio. Days payable outstanding (DPO) and net working capital turnover (NWCT) have a statistically negative relationship with net income (NI). With the increase of payable days, we can say that the firms are struggling to generate cash flow, which is lingering the payment days- resulting in unsatisfied creditors- ultimately responsible for decreasing profitability. In case of NWCT, increasing NWCT means more sales from less investment in net working capital. Firms achieve higher sales when they allow greater credit sales that may lead more uncollected revenue and result in less profitability. Days inventory outstanding (DIO) and cash to total liability (CTL) are not statistically correlated with the net income (NI) of the selected firms. Here we can say that as the chosen firms in this exploration were found maintaining excess inventory than any other short-term assets- irrespective of production sector- inventory conversion

period doesn't affect financial performance. Cash to total liability (CTL) is not correlated with net income (NI) in the sense that- whether a firm will be profitable or not in case of Bangladeshi small firms- it doesn't depend on that firm's cash position- more relies upon sale.

Table 2 Correlation Statistics

Control Variable: DR		DIO	DRO	DPO	CR	NWCT	CTL	NI
DIO	Correlation	1.000						
	Sig (2-tailed)	.						
DRO	Correlation	-.164	1.000					
	Sig (2-tailed)	.125	.					
DPO	Correlation	.477	-.123	1.000				
	Sig (2-tailed)	.000	.252	.				
CR	Correlation	-.092	.205	-.486	1.000			
	Sig (2-tailed)	.389	.054	.000	.			
NWCT	Correlation	-.145	-.223	.239	-.284	1.000		
	Sig (2-tailed)	.175	.036	.024	.007	.		
CTL	Correlation	-.138	.267	-.156	.244	-.129	1.000	
	Sig (2-tailed)	.198	.011	.145	.021	.230	.	
NI	Correlation	-.193	.515	-.252	.449	-.405	.203	1.000
	Sig (2-tailed)	.069	.000	.017	.000	.000	.057	.

Regression Analysis

Regression model of this study was controlled with debt ratio (DR). The model summary of the regression result shows adjusted R-square of the model is 0.536, which indicates that the selected independent variables can explain 53.6% of the dependent variable.

Table 3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.451[a]	.204	.195	1.9542984
2	.756[b]	.572	.536	1.4839888
a. Dependent Variable: NI				
b. Predictors: (Constant), DR				
c. Predictors: (Constant), DR, DPO, DRO, CTL, CR, DIO, NWCT				

The ANOVA table shows the p-value of the model is $0.000 < 5\%$ level of significance. It means the selected independent variables are good predictors to anticipate net income (NI) or the model is a good one.

Table 4 ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	86.050	1	86.050	22.530	.000[a]
	Residual	336.097	88	3.819		
	Total	422.147	89			
2	Regression	241.564	7	34.509	15.670	.000[b]
	Residual	180.582	82	2.202		
	Total	422.147	89			
a. Dependent Variable: NI						
b. Predictors: (Constant), DR						
c. Predictors: (Constant), DR, DPO, DRO, CTL, CR, DIO, NWCT						

The regression analysis indicates days receivable outstanding (DRO), current ratio (CR), and net working capital turnover (NWCT) are the statistically significant independent variables to fix net income (NI) and their p-values are 0.000, 0.001 and 0.002 respectively. However, in correlation statistics, it is found that DRO, DPO, CR, and NWCT share a statistically significant correlation with net income (NI). Based on the correlation and regression statistics, it can be concluded that DRO, CR, and NWCT are essential financial performance factors for the selected small manufacturing firms.

In another case days' inventory outstanding (DIO), days payable outstanding (DPO), and cash to total liability (CTL) are not significant in determining net income (NI) as their p-values are $0.046 \approx 0.05$, 0.287, and 0.776, respectively. From the unstandardized coefficients B-value it is seen that with the increase or decrease of days' inventory outstanding (DIO), net income doesn't change. Increase of one day in collecting receivables- increases net income by Tk. 25000 (B-value= 0.025), while an increase of one day in payable increases Tk. 1000 in net income (B-value= 0.001). In the case of current ratio (CR) – increase of one unit of CR- net income increases by Tk. 131,000 (B-value= 0.131). With the increase of one unit in net working capital turnover (NWCT), net income (NI) becomes decreased by Tk. 971,000 (B-value= - 0.971). And one-unit increase of cash to total liability (CTL) ratio- net income (NI) decreases by Tk. 123,000 (B-value= -0.123).

Table 5 Regression Statistics

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.231	.292		4.214	.000
DR	2.905	.612	.451	4.747	.000
2 (Constant)	1.246	.696		1.789	.077
DR	3.775	.769	.587	4.909	.000
DIO	.000	.000	-.203	-2.030	.046
DRO	.025	.006	.349	4.213	.000
DPO	.001	.001	.109	1.072	.287
CR	.131	.038	.315	3.432	.001
NWCT	-.971	.306	-.346	-3.167	.002
CTL	-.123	.433	-.024	-.285	.776
a. Dependent Variable: NI					

From the above discussion, the following decisions regarding the elaborated hypotheses can be drawn:

Table 6 Decisions about hypotheses

Variables	P-value	Decision	Interpretation
DIO	$0.046 < 0.05$	H1a Accepted	There is a relationship between DIO and NI
DRO	$0.000 < 0.05$	H1b Accepted	There is a relationship between DRO and NI
DPO	$0.287 > 0.05$	H1c Rejected	There is no relationship between DPO and NI
CR	$0.001 < 0.05$	H2a Accepted	There is a relationship between CR and NI
NWCT	$0.002 < 0.05$	H2b Accepted	There is a relationship between NWCT and NI
CTL	$0.776 > 0.05$	H2c Rejected	There is no relationship between CTL and NI

Conclusion

This study has endeavored to identify the working capital management constituents having gravity in determining profitability. The analysis result showed days' inventory outstanding (DIO), days receivable outstanding (DRO), current ratio (CR), and net working capital turnover (NWCT) are the determining factors here. A number of dissimilarities are found in this research, such as the majority of the firms are found maintaining a high volume of inventories for more than one year, and maybe this is the reason why days' inventory outstanding (DIO) is not a very important determining factor for the financial performance of those firms. Most of the firms are found to have high cash volume, though, during the interview, the managers and owners showed their concern for cash scarcity. In terms of the use of ICT in business the small manufacturing sector is relatively backward. There was also insolvency in routine documentation of their

financial data. All of these issues should be investigated that may bring some good result in the sector's development. According to Bangladesh Bank, there are 132 kinds of small firms. This study has taken data from only nine sectors. But the analysis was done based on comprehensive data. Hence, this study is very focused on the overall scenario of the nine sectors of production. Therefore, there are ample opportunities to conduct a study on different issues of small manufacturing industries.

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Appendix

Table –A1: Demographic information of sampled firms

Ownership

Serial no	Operating Area	Ownership					Total
		Single	2-10	11-20	21-30	Greater than 30	
1	Poultry	8	2	-	-	-	10
2	Nursery	9	1	-	-	-	10
3	Dairy	10	-	-	-	-	10
4	Bakery	7	3	-	-	-	10
5	Rice Mills	5	5	-	-	-	10
6	Construction	8	2	-	-	-	10
7	Brick Field	8	2	-	-	-	10
9	Furniture	7	3	-	-	-	10
10	Workshop	9	1	-	-	-	10

Number of employees

Serial no	Operating Area	Number of employees					Total
		1-50	51-100	101-150	151-200	201-250	
1	Poultry	10	-	-	-	-	10
2	Nursery	10	-	-	-	-	10
3	Dairy	10	-	-	-	-	10
4	Bakery	10	-	-	-	-	10
5	Rice Mills	-	-	3	6	1	10
6	Construction	3	5	2	-	-	10
7	Brick Field	-	-	-	7	3	10
9	Furniture	10	-	-	-	-	10
10	Workshop	10	-	-	-	-	10

Based on Total Assets

Serial no	Operating Area	Number of employees					Total
		Less than 20 Lakh	20 – 4 0 Lakh	41 Lakh – 1 Crore	1.1 – 5 Crore	5-10 Crore	
1	Poultry	0	0	10	-	-	10
2	Nursery	4	6	-	-	-	10
3	Dairy	6	4	-	-	-	10
4	Bakery	-	-	4	6	-	10
5	Rice Mills	-	-	-	7	3	10
6	Construction	2	3	5	-	-	10
7	Brick Field	-	-	-	7	3	10
9	Furniture	3	7	-	-	-	10
10	Workshop	4	6	-	-	-	10

Based on Employee Salary per Month (BDT)

Serial no	Operating Area	Number of employees					Total
		5000-7000	7001-9000	9000-11000	11000-13000	13000-15000	
1	Poultry	7	3	-	-	-	10
2	Nursery	2	8	-	-	-	10
3	Dairy	0	10	-	-	-	10
4	Bakery	-	-	8	2	-	10
5	Rice Mills	-	-	5	5	-	10
6	Construction	-	10	-	-	-	10
7	Brick Field	4	6	-	7	3	10
9	Furniture	4	6	-	-	-	10
10	Workshop	3	7	-	-	-	10

Table-A2: Simple Bivariate Correlation

		DIO	DRO	DPO	CR	NWCT	CTL	NI_in_M	DR
DIO	Pearson Correlation	1	-.285**	.519**	.057	-.397**	.089	-.357**	-.449**
	Sig. (2-tailed)		.006	.000	.595	.000	.404	.001	.000
	N	90	90	90	90	90	90	90	90
DRO	Pearson Correlation	-.285**	1	-.188	.086	.062	.082	.582**	.326**
	Sig. (2-tailed)	.006		.075	.420	.564	.444	.000	.002
	N	90	90	90	90	90	90	90	90
DPO	Pearson Correlation	.519**	-.188	1	-.381**	.018	-.033	-.324**	-.232*
	Sig. (2-tailed)	.000	.075		.000	.870	.758	.002	.028
	N	90	90	90	90	90	90	90	90
CR	Pearson Correlation	.057	.086	-.381**	1	-.403**	.342**	.246*	-.302**
	Sig. (2-tailed)	.595	.420	.000		.000	.001	.020	.004
	N	90	90	90	90	90	90	90	90
NWCT	Pearson Correlation	-.397**	.062	.018	-.403**	1	-.382**	.033	.669**
	Sig. (2-tailed)	.000	.564	.870	.000		.000	.757	.000
	N	90	90	90	90	90	90	90	90
CTL	Pearson Correlation	.089	.082	-.033	.342**	-.382**	1	-.038	-.443**
	Sig. (2-tailed)	.404	.444	.758	.001	.000		.723	.000
	N	90	90	90	90	90	90	90	90
NI	Pearson Correlation	-.357**	.582**	-.324**	.246*	.033	-.038	1	.451**
	Sig. (2-tailed)	.001	.000	.002	.020	.757	.723		.000
	N	90	90	90	90	90	90	90	90
DR	Pearson Correlation	-.449**	.326**	-.232*	-.302**	.669**	-.443**	.451**	1
	Sig. (2-tailed)	.000	.002	.028	.004	.000	.000	.000	
	N	90	90	90	90	90	90	90	90
. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								