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RESEARCH ARTICLE

Impact of Financing Techniques in Maintaining Profitability of Problem-Ridden Small Scale Bakery Industry; A Study on Selected Bakeries of Sylhet District

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Abstract

The survival of small scale bakery industries depends on the profitability of their operation. As the industry is mainly labor intensive and need comparatively smaller capital, so the survival of such industry has a good impact on the national economy. The researchers analyzed the scale of operation; start up expenditures of different options, financing techniques, utilization of trade credit and capital turnover of 15 samples industrial units of different scales selected by stratified sampling techniques to get the insights of the problem of profitability and survival. The data were collected through a structured questionnaire and distributed among respondents. The collected data were processed through simple statistical and financial tools and techniques. From the analysis it is clear that the attitude of entrepreneurs must be changed from conservative to aggressive in financing to facilitates production and marketing, in utilization of trade credits to facilitates operation and in adopting managerial tools and techniques to ensure the profitability and survival.

Introduction

The food processing sector is critical to Bangladesh development because it developed vital linkage and synergy between - industry and agriculture. The growth of this industry is very high as the consumption of value added food items is expected to grow very high. This growth will bring immerse benefits to the economy, raising agricultural yields, enhancing productivity, creating employment and raising life standards of the large number of people across the country, especially those in rural area [1].

Bakeries manufacture bread, and yeast raised products (buns, rolls etc.) biscuits, crackers and cakes [2]. In a developing country like Bangladesh the manufacturers of bakery etc is not an organized industry and is scattered all over the country in small units, catering mostly to local demands. Large bakeries manufacture various items for catering mainly the urban population but small bakeries are available in localities produce items in local haunts.

Bakery products like bread biscuits and cakes have now become the integral part of our social life due to rapid urbanization and increase economic activities [3]. Although basic bakery products are bread, biscuit and cake but the varieties are numerous [4]. A large number of bakery producer are now producing kitchen products vegetable roll, singara, somosa etc. and sweet products for catering the demand of snacks and first food shops which are growing like mushroom in all big cities of the country. The number of bakeries in the country is over 7000 [5]. Now the figure is not less than 20000. There are around 100 medium and large scale automatic and semi-automatic bread and biscuit factories around the countries. Among them, 5 or 6 units are exporting a small portion of their products [6]. Almost all of the bakeries in our country are individually owned. The entrepreneurs and workers in these sub-sectors are not formally trained. They acquire the required skill by the job experience. It involves a large number of semi skilled and widely unskilled workers, which is available in our country. The employed workforce in the bakery industry over the country is around 500,000.

Sylhet is one of the six divisional cities of Bangladesh surrounding 78,97,008 Sq. k.m. having a population of about 8 million [7]. The bakery industry of this region enjoys the demand of a population of nearly 6 million including population of Moulabibazar, some part of Sunamgonj and Hobigonj.

Our study is oriented to fifteen selected units of bakery industry in Sylhet. Those units are semi automatic bakery producing bread, toast, biscuit, cake, buns, and other items. These units are doing business for several years in the Sylhet area but still have poor profitability. One of the most important reasons of this poor profitability is their inefficiency in financing the operation as most of the capitals are bear by the owners themselves. The researchers tried to find out the impact of the financing on the profitability of those problem ridden units.

Objectives

The general objective of the study is to find out the impact financing techniques on the profitability of the bakery units. To meet the main objectives this study is designed:

- To find out the sensitivity of credit purchase ratio with the age of unit and daily production level.
- To find out the relation of credit sales ratio with the age of unit and daily sales level.
- To reveal the reasons behind the change in capital turnover ratio with the experience of units and their production level.
- To provide some suggestions to improve financial performance of those production units.

Methodology of the Study

This is a research of descriptive-analytical in nature. For sampling design the researchers used stratified sampling method to ensure representation of bakeries of different scales. The study used both primary and secondary data. Primary data has been collected from selected fifteen units of bakery industry of Sylhet district of Bangladesh using a structured questionnaire from the selected respondent. Secondary data has been collected from some published document and report of Ministry and Commerce. Some books and articles are also studied for this purpose. Collected data has been analyzed by using some statistical and financial tools and techniques.

Analysis and Findings

Level of Activities

To find out the profitability of investing in bakery business, it is important to analyze the bakery units on the basis of their activities because profitability depends on the level of activity as it is a very low value adding business for stiff competition in the market. The researchers identified the activity level of 15 bakeries in table 1.

Table 1: Size distribution of bakeries by production

Daily Production & sell (6 days a week), (Tk. '000)	No. of Bakeries	% of Bakeries
TK. 20000-50000	04	26%
TK. 50000-80000	03	20%
Tk. 80000-110000	03	20%
Tk. 110000-140000	01	7%
TK. 140000-170000	01	7%
Tk. 170000-210000	01	7%
Tk. 210000+	02	13%
Total	15	100

Source: Field Survey Conducted on March 2013- May 2013

Normally bakery items are perishable that is why most of the bakeries produce in a small scale every day. Some of the units produce in a small scale because of slow or falling demand for their product, small production capacity or inability to reach customer on time. Two of the bakeries have daily production more than BDT 2lakh that may be due to their huge investment or easy access to customers by strong network. Ten out of fifteen units are producing products of less than BDT110 thousands a day. Two of them are producing the products of above BDT 210 thousands a day. This implies that two-third of the sample units are doing in very small scale and only 13% are doing in moderately large scale.

Distribution of Startup Costs

Start up cost is a factor for determining profitability of any business. Large start up cost reduces the profitability if the activities are not proportionately increased. The sampled bakery business is established in rental building or in own building in BSCIC industrial Estate. There is a gulf of difference in startup cost in two types of establishment. The researchers tabulated the cost of two types of establishment in table 2.

More initial investment (BDT 6.8 million) is required for establishing a bakery on the industrial estate than on rental building (1.48 million). Entrepreneurs deploy most of their initial investment for constructing building on the industrial estate. Bakeries on rental building spend most of their start up costs (68%) for machineries and tools where as it is second highest cost (29%) for bakeries on industrial estate. Many businesses have their own pick up van but it is not depend on the type of establishment, so it is not considered. Establishing the bakery units in lease hold land

Table 2: Distribution of Startup Costs

	On Rental Building (10)		On industrial estates (05)	
Startup Costs	Amount	% of Bakeries	Amount	% of Bakeries
Remodeling the Building /Constructing	200,000	0.14	3,000,000	0.44
Gas, Electricity connection			200000	0.03
Machineries & tools	1,000,000	0.68	2,000,000	0.29
Furniture, racks	30,000	0.02	100,0000	0.15
Rickshaw Vans (average 5 each)	30,000	0.02	30000	0.00
Pick up/ truck/Mini				
Inventories	20,0000	0.14	500000	0.07
Advance rent/Installments	20,000	0.01	120000	0.02
Total	1,480,000	1.00	6,850,000	1.00

Source: Field Survey Conducted on March 2013- May 2013

and own building is nearly 5 fold more than the units established on the rented building. So it easily hampers the profitability as the activity level is not raised proportionately. But it provides more security on doing business from same place for long term without any interruption of owner of building. It increases the strength of entrepreneurs to think strategically to increase business with vision.

Financing of Startup Cost

Financing the startup costs has significant impact on the profitability of bakery industry due to inherent cost of every specific source. Two of the units have taken huge amount of bank loan, so both of them are excluded for their extreme value. The other thirteen units have the debt- equity ratio as in Table 3.

Table 3: Distribution of Startup Cost

Sources	%
Own savings, funds	70
Borrowed from friends, relatives	30
Bank Loan	00
Total	100

Source: Field Survey Conducted on March 2013- May 2013

The entrepreneurs finance maximum of their start up cost from their savings. Entrepreneurs cannot rely on bank loan for the start up cost but a certain percentage (30%) they borrow from their friend or relatives. This implies that supply of the startup cost from their own savings and borrowing from friends, relatives' relief the entrepreneurs from the tension of accrued interest on the loan and slowed the activities of entrepreneurs.

Operational Expenditure

Profitability also depends on the operation of enterprise. In production and operational activities of enterprise profitability can be increased by minimizing the production and operation cost and maximizing the revenue by charging more for the product and or increasing market share.

In production and operation level, the entrepreneurs attempt to minimize the operational expenditure. The researchers collected the information from the sampled units and tabulate the information in Table 4.

Table 4: Operational expenditure (percentage of sales) at different production level

	Production Level				
Sector	Less than BDT 50000	50000-100000	100000-150000	150000-200000	200000-above
Raw materials	65%	64%	63%	62.5%	62%
Labor	10%	9%	9%	8.5%	8%
Gas, Electricity	2%	2%	2%	1.5%	1.25%
Packaging	7%	7%	7%	7%	6.75%
Management	1%	1%	1%	.80%	.70%
Distributing & marketing expenses	13%	13%	13%	12%	11%
Margin	2%	4%	5%	7.70%	10.30%

Source: Field Survey Conducted on March 2013- May 2013

This table indicates that the activity level influence the efficiency in operational expenditure. The margin from the operation increased from 2% to 10.30% in the units of production level from less than Tk.50000 to more than Tk.200000. So the bakery which has a good activity level can reduce the expenditure in raw materials, labor, gas, electricity and also in distribution. Cost of raw materials reduced from 65% of selling revenue to 62% in the production range Tk.50000-more than Tk.200000. Labor by 1%, electricity by 0.75%, packaging by 0.25%, Management 0.30% and distribution by 2% in the above mentioned production range. So the comparatively larger units are in good profitability level and the smaller units are in verge of sickness as these units are working on marginal profit.

Profitability

From the analysis of the table 4, the profitability of sampled bakery units can be depicted as in Table 5.

Table 5: Profitability of units

Status	No of Units
Good profit (5% or above on sale)	05
Moderate (2% on sale)	06
Poor (less than 2%)	04

Source: Field Survey Conducted on March 2013- May 2013

Profit means the excess of revenue over expense. So the profitability of a business unit can be increased through increased sales or reduced expenses. Profitability of the bakery business also depends on the least cost operation and proper management of demand of the bakery item as these items are perishable. The study found that only five among fifteen units are making 5% or above profit from their sales. Other 6 and 4 units are making 2% and less than 2% profit respectively. The reasons behind the lower profitability of bakery firm are high price of raw materials, low margin on selling, low leverage on finance structure, dependency on credit sales.

Distribution of Units by Credit Purchase Ratio and Owners' Experience

One important option of reducing the cost of financing is using trade credit. By the use of trade credit an entrepreneur can increase the level of activity by removing then limitation of financing. But availing the trade credit facilities depends on the relationship with the supplier. If the relationship converted to the relationship of faith and trust between them, then the entrepreneurs get good opportunity of using trade credit. Using the trade credit also depends on the attitude of the entrepreneurs. Some of them do not opt for using trade credit because of the option of purchasing in lower price by cash payments. The researchers gathered information of utilizing trade credit by the units on the basis of their business experience. The collected data are tabulated in Table 6.

Purchase on credit provides owners a least cost

Table 6: Credit purchase ratio and owner's experience

Owners' experience (in years)	Credit Purchase Ratio				
	0-40	40-80	80-120	120+	
0-5	1				1
5-10	1	1			2
10-15	1	1	1	1	4
15-20	0	1	1	2	4
20+	0	1	1	2	4
Total	3	4	3	5	15

Source: Field Survey Conducted on March 2013- May 2013

'source of financing. Proper utilization of that source of financing helps firm make profit. Entrepreneurs with experience of 15 to 20 and above years have credit purchase ratio 40 to 120 and above. This implies that because of their experience they can better manage their trade credit as short term source of finance. Their good reputations also help them to get large amount of trade credit from the suppliers. On the other hand entrepreneurs those are new in the industry having credit purchase ratio of 40 to 80. This is may be due to their lack of experience, poor capacity to satisfy credit, small scale of business and attitudes against credit purchase. We can generalize that the units of long business experience can build up good relationship with suppliers and facilitates by the low cost trade credit financing and thus can increase their profitability.

Distribution of Units by Credit Purchase Ratio and Daily Production Level

The impact and use of trade credit can also be analyzed on the basis of production level. The researchers presented the collected data of credit purchase ratio in table 7.

Table 7: Credit purchase and daily production level

Daily Production level	Credit Purchase Ratio				
	0-40	40-80	80-120	120+	
TK. 20000-50000	1	2	1		4
TK. 50000-80000	1	1	1		3
Tk. 80000-110000	0	1	1	1	3
Tk. 110000-140000	0	0	1		1
TK. 140000-170000	0	0	0	1	1
Tk. 170000-210000	0	0	0	1	1
Tk. 210000+	1	0	0	2	2
Total	3	3	5	4	15

Source: Field Survey Conducted on March 2013- May 2013

High level of production required high amount of investment in production materials. From the above table it is clear that bakeries with high daily production level have high level of credit purchase ratio. On the other hand, bakeries with low production level have low credit purchase ratio. Heavy weight firms that have huge production capacity invest most of their fund on the fixed assets, so to utilize that huge production capacity they depend on the trade credit and make large amount of credit purchase. Though the units of production level of less than BDT 50000 are more in number (4) of using trade credit, but the ratio is comparatively small. The larger credit purchase ratio is maintained by the larger production units. They are opting for better return by maintaining high level of production by comparatively low cost trade credit facilities.

Distribution of Units by Credit Sales Ratio and Units' Age

Credit purchase are used for increasing the production level by utilizing low cost financing option, credit sales are used to increase the production level through increasing sales level. New companies are opting for credit sale to penetrate in the market that is networked by the existing companies. Some larger companies are maintaining the credit facilities for maintaining the existing market share. Some are opt for cash sale only in order to create a fund flow for their activities. The researchers collected the information and tabulated them in order to get insights of that strategy of profitability as in Table 8.

Table 8: Credit sales ratio and unit's age

Units' age (in years)	Credit Sales Ratio					Total
	0-20	20-40	40-60	60-80	80-100	
0-5			0	0	1	1
5-10		0	0	1	1	2
10-15	2	1	0	1	0	4
15-20	1	1	2	0		4
20+	1	2	1	0	0	4
Total	4	2	3	4	2	15

Source: Field Survey Conducted on March 2013- May 2013

Business units sell on credit to increase the volume of sales. These large volumes of sales help firms achieve economies of scale as early as possible and get more profit. But credit sales required efficient receivable management by the firm. If the firms' collection efforts are not sufficient then these credit sales may increase opportunity cost as well as bad debt and reduction in profit. The study showed that units with 0-5 years and 5-10 years of operation had very high credit sale ratio of 60-100 for getting more sales and early capturing the market share. In contrast more experienced units had less reliance on credit sales. Those units had occupied a fixed market share that is why they mostly rely on cash sales.

Distribution of Units by Credit Sales Ratio and Daily Sales Level

To get more insights the researchers tabulated the information of credit sales of the units on the basis of daily sales level as in Table 9.

Table 9: Credit sales ratio and production level

Daily Sales level	Credit Sales Ratio					
	0-20	20-40	40-60	60-80	80-100	
TK. 20000-50000	1	1	2			4
TK. 50000-80000	0	1	0	1	1	3
Tk. 80000-110000	0	1	1	1	0	3
Tk. 110000-140000	0	0	1	0	0	1
TK. 140000-170000	1	0	0	0	0	1
Tk. 170000-210000	0	1	0	0	0	1
Tk. 210000+	1	1	0	0	0	2
Total	3	5	4	2	1	15

Source: Field Survey Conducted on March 2013- May 2013

Relationship between daily sales level and credit sales ratio also has an impact on the profitability of the business units. High level of credit sales of daily sales means that huge amount of investment in the current assets which reduce return on assets as well as profitability. The study found that 4 units that had Tk.20000-50000 daily sales level had 0-60% credit sales ratio. Other 6 units with moderate level of sales also had a good reliance on the credit sales. In contrast 2 units with the highest daily sales level had 0-40% credit sales ratio. These results indicate that higher reliance on credit sales by units with lower daily sales level is one of most important reasons of those units' financial weakness.

Problems and Risk in Operation as Experienced by Owners

The scope of profitability can be hindered by the limiting factors. These factors are as in Table 10.

The performance of any business unit is always influenced by some risk like shortage of raw materials; labor strike, power crisis, frequency of bad debt, theft by employee, inefficient management, etc. arise from inside and outside of the organization. An organization cannot sustain in any competitive environment if it is unable to outperform those risk. So it is required to find out what problem is more severe in case of weak performance of studied units. It is found from the

Table 10: Percentage of Problem and risk experienced by owners

	Percentage of Problem and risk experienced by owners						
Owners' experience (in years)	Raw materials	Labor	Power	Non Payment of debtors	Theft by employee	Wastage	Poor Quality
0-5	10	10	20	30	10	5	15
5-10	08	09	40	25	05	05	10
10-15	08	09	40	25	05	05	10
15-20	07	07	50	20	05	03	08
20+	07	07	50	20	05	03	08
Average							

Source: Field Survey Conducted on March 2013- May 2013

study that power crisis is the most severe problem experienced by the owner regardless of their age of experience. Owners, those are new in the business and have experience less than five years marked nonpayment of debtors as the most important problem. This is may be due to their lack of experience in receivable collection or more relaxed credit terms. Other entrepreneurs marked it as the second severe problem they are facing. Poor quality and shortage of raw materials and labor are the third and forth large problem faced by the entrepreneurs. It is clear from the above table that the more experienced a unit is the less percentage of internal problems they are facing. This implies that with the time the entrepreneurs get expertise and better able to manage those problems.

Seasonality of Business

The seasonality of the business has impact on the profitability. The longer business period increases the prospects of profitability.

Seasonality means fluctuation of production and sales related to different seasons. During off-peak season sales and production are slow and in peak season sales and production are high. Off peak season for bakery items are month of Ramadan, holidays of Eid-ul-Adha and April-May. Since Sylhet is a Muslim majority area, during Ramadan people of the area reduce their demand on bakery item like bread, cake, biscuits, etc. because of fasting. During those off peak seasons people take their home made products. On the other hand, the demand for bakery items is high during the rest of the year.

Distribution of Units by Monthly Capital Turnover Ratio and Units' Age

Overall profitability depends on the capital turnover ratio. Capital turnover ratio measures how efficiently the companies utilize its capital to generate profit. The higher profit indicates a good capital turnover of a company. The table 11 reflects the capital turnover ratio of the smaller units on the basis of units' age or experience of the business.

Table 11: Monthly capital turnover ratio and unit's age

Units' age (in years)	Capital turnover ratio (%)					
	0-4	4-8	8-12	12-16	16-20	
0-5		1				1
5-10			1	1		2
10-15			1	2	1	4
15-20			1	2	1	4
20+				2	2	4
Total		1	4	6	4	15

Source: Field Survey Conducted on March 2013- May 2013

The profitability of these problem ridden bakeries is not satisfactory that is why their capital turnover ratio also not satisfactory. A trend is found from the study is that, units with 15 years and above experience have 12 to 20 percent capital turnover ratio. This indicates that experienced entrepreneurs are better able to utilize their capital. On the other hand entrepreneurs who are new in the industry are not much efficient in capital management.

Distribution of Units by Capital Turnover Ratio and Daily Production Level

The profitability reflecting factor capital turnover ratio on the basis of level of activities can be reflected by table12.

Table 12: Capital turnover ratio and daily production level

Daily production level	Capital turnover ratio (%)				
	0-4	**4-8**	**8-12**	**12-16**	**16-20**
TK. 20000-50000	2	1	1		
TK. 50000-80000		1	1	1	
Tk. 80000-110000		1	1	1	
Tk. 110000-140000			0	1	0
TK. 140000-170000				1	
Tk. 170000-210000					1
Tk. 210000+					2
Total	2	3	3	4	3

Source: Field Survey Conducted on March 2013- May 2013

As the capital turnover ratio measures how much sales are generated by utilizing capital, it isrequired to analyze the relationship between daily sales level and capital turnover ratio for the studied units. It is apparent from the study that units with lower production level (Tk. 20000-Tk.50000) had lower and medium capital turnover ratio, medium production level (Tk. 50000-170000) had medium turnover ratio (4-16), and units with higher production had higher turnover ratio (16-20). So it can be said that higher sales means higher capital turnover capacity of a unit.

Results and Discussions

One of the important techniques to achieve optimum profitability level of bakery industry is to increase the production level to increase the utilization ratio of physical, financial and human resources. Small producing units are suffering more for their poor profitability ratios. Using all prospects by increasing distribution network is essential for survival of such units (Table1). Investing more in startup capital may reduce profitability if the activities do not increase proportionately. So decision about investing in startup capital should be taken strategically by considering the profitability of the units (Table 2). Selecting the sources to finance in startup capital should be taken strategically as each of the source has specific cost of capital. Internal rate of return should be calculated before using debt capital. Otherwise, cost of debt capital may reduce the profitability; even make the unit a losing concern (Table 3). Operation levels of units have direct impact on cost of elements of production and ultimately on total cost of operation. Large scale production units are availing that benefits that leads to better profitability. So the activity level of each unit should be maximized (table 4). Lower profitability of the surveys units is due to failure in economy of operation (Table 5). Trade credit is a powerful tool to finance the business without hampering the profitability, rather increasing it. But enjoying trade credit favorably require good relationship with the suppliers that may build up in long times. Old units are availing more than the new units (Table 6). But this facility is available for the larger production not small production unit. For the supplier, these types of customers are very crucial for their business interest. So they can use the trade credit more and increase the potentiality of their profit (Table 7). Credit sales increase the sales volume and eventually make the firm able to produce in large volume and thus increase the profitability. Firm with few years of operation have to depend more on credit sale but the established firms (old) are now selling comparatively more on cash sale and get their fund released after short time engagement with produced goods. (Table 8). But some new firms become excess aggressive and follow liberal credit policies, so their fund involved in accounts receivables and impede the profitability of operation (Table 9). The shortcoming of the units in attaining the level of optimum production level for profitability may be featured is power crisis, non-payment of debtors for poor debtor management practices of the firm. These problems are followed by shortage of raw materials, skilled labor etc. But the experienced (aged) firms suffer less due to these types of shortages as the entrepreneurs get more experience to manage the limitations after a reasonable time (Table 10). To maintain the reasonable profit margin, management should consider the seasonality of business for bakery items. Utilization of high demand at the peak hour and reducing the recurring expenditure in off-peak hour by maintaining the preparation for peak hour is the key consideration to reach and restore the optimum profitability level. Experience increase managerial skill. It is proved in the study that managers with better experience can keep the capital turnover ratio of the unit at higher level that leads to satisfactory profitability ratio (Table 11). It is also depicted that units with higher production level enjoy higher capital turnover ratio, so the bakeries should adopt strategies to increase their sales and production level to maintain the optimum profitability ratio (Table 12).

Recommendations of the Study

- Units are recommended to take the aggressive attitude in production by producing in comparatively larger volume.

- For long term undisrupted operation units would set up their units in specific areas such as industrial estates. For short term profitability units may be established in rented building for small involvement of money in start up.

- Entrepreneurs are suggested to involve banks or other financial institutions to expedite their activities for its fixed cost of capital.

- Increasing the production level of bakery units the profitability can be increased in many folds from the marginal 2% to satisfactory 10.30% in raw materials, labor, gas, packaging, and material expenditure.

- The comparative larger units have better profitability in their operations. So the units must be aggressive in production and specially marketing the products to increase the scale of production with minimum investments.

- Trade credit is a good source of investing and way of increasing the scale of production. As facilitating with good trade credit opportunity depends on the business experience and size of operation, so the entrepreneurs must try to build up good relationship with their suppliers by maintaining commitment in dealings and behaving like trustworthy.

- Analyzing the limiting factors of profitability indicates that the problem of power scarcity and receivables management is the major concern. So the authority must concentrate on the problem to accelerate the industrial development, especially small scale industrial development and the management must improve the receivables management of the enterprises to minimize the problem of nonpayment of buyers. The other problems like non- availability of raw materials, theft by employee, wastage and labor scarcity must be addressed.

- The capital turnover ratio indicates the profitability of the enterprise depends on the experience and scale of production. The better capital turnover ratio of the units of longer business experience and larger scale of production infers again that the units must try to be aggressive in their operation and marketing to enjoy more profits [8,9].

Conclusion

Profitability is the yardstick of survival of any enterprise. Bakery units of Sylhet region are suffering more because of poor profitability ratio. The reasons of such poor performance identified as the poor production and sales level due to conservative attitudes and managerial limitations. Experience to handle these problems can contribute more in achieving expected profitability by using trade credit, improving debt-management and credit-management and expanding the operation level of the units. The small scale bakery units must change their attitudes and style of management to ensure their survival in such competitive situation.

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