Financial Literacy in Micro-Enterprises: The Case of Cebu Fish Vendors

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A myriad of reasons explain the performance of business ventures; one of these is the possession or lack of skill in managing the financial affairs of those ventures. While the lack or deficiency of it may be detrimental to larger enterprises, the effect could be much more disadvantageous to small or micro enterprises. This study assesses the financial skills of fish vendors in Pasil, the main fish distribution and trading center in Cebu City, Philippines. This study used simple random sampling to obtain 123 respondents and adopted a 95% level of confidence on statistical tests. Findings show that vendors possess low level financial skills as indicated by a significant number of vendors who do not record nor keep record of transactions, do not monitor profit and loss, and have deficient cash management practices. Furthermore, most vendors are confined to high interest loans.

Keywords: financial literacy, micro-entrepreneurs, Pasil, Cebu, informal sector

1 Introduction

Financial literacy along with other business skills is necessary in the conduct of business. Harper (1991) stresses that a good financial plan is a necessity today. He maintains that if poor management is the number one cause of new business failures, then insufficient capital ranks second. Good financial planning facilitates business growth and enables financial control. The lack of financial planning together with poor financial practices can destroy a business, even if a good market opportunity exists (Harper, 1991).

Education and formal training in the technical fields of business, particularly accounting, finance, marketing, and law are essential in today's competitive times (Harper, 1991). Thus, any form of business enterprise including micro-entrepreneurs, a special sector of the informal economy, should acquire these skills to succeed. These entrepreneurs need a minimum level of professionalism in handling or managing their finances to be able to succeed as pointed out by Harper (1991).

Many Cebu City residents are involved in various micro-enterprises; one group engaged in such activities is the Pasil Fish Vendors. As a marginalized sector of society, they badly need help to enable them to improve their living conditions. Based on the information gathered from the National Economic Development Authority (NEDA) and the Department of Trade and Industry (DTI), not much is known about them. But it is common knowledge that the lack of financial management skills is one of the major problems that the vendors need to address to run their ventures well.

Pasil is a place known to be a center of fish distribution in Cebu City and the Province of Cebu. Interviews with the resident barangay tanod, officers of the Pasil Suba Sawang-Calero Vendors Association, Inc. (PASACAVA), vendors, and residents reveal that the market has been in place for years and yet there is practically no published literature about it.

Financial management is broad and subsumes financial accounting. Brigham and Houston (2004) illustrated the role of finance and divided the finance function into two major categories: treasury and controllership. Treasury covers capital budgeting, inventory management and credit management functions while controllership includes cost accounting, financial accounting, and tax management. Brealey, Myers and Marcus (1999) show similar sub-divisions in their book. This shows that the management of an enterprise's finances is crippled without the financial accounting function.

Accounting is frequently known as the language of business (Valix, Peralta & Valix, 2009; Meigs & Meigs, 1993) and people in business have repeatedly shown its importance through their behavior. Drucker (2000) emphasizes that one can be effective in business today if one knows how to read a

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1 Barangay tanod is the Filipino colloquial term for a guard or watchman in the barangay, which pertains to a village or a small administrative division.
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A minimum facility with numbers, such as control on cash, is needed in conducting the affairs of the business. Such financial literacy results in better financial decisions (Gray et al., 2009). It affects society in the same way that illiteracy does in reading and writing (Habschick, Seidl & Evers, 2006). Fabozzi and Peterson (2003, p. ix) assert that “financial management is not restricted to large corporations: it is necessary in all forms and sizes of businesses.”

There are varying financial literacy measures (Gray et al., 2009) but they identify record keeping as a fundamental skill or practice (Financial Services Authority [FSA], 2005; Financial Education Fund [FEF], 2009; Kun Dar, 2007). Record keeping is considered by this study as the most basic of all financial skills. It is the source of important information vital to critical decision-making, and it is responsible for decreasing unnecessary expense (Gray et al., 2009).

This study intends to find out the following: (a) Pasil fish vendors’ demographic profile, problems and coping mechanism; (b) the financial skill of the fish vendors; (c) the vendors’ sources of capitalization; and (d) the extent to which vendor’s income is related to financial skills. Considering that financial literacy is fluid and a subjective concept (FSA, 2005), this study limits its scope to the vendors’ facility or skill in the following areas: (a) record keeping; (b) analysis of profit and loss; and (c) the control/custodial skill for cash. These criteria are well within the scope of Orton’s (2007) definition of financial literacy and of the models of financial literacy measures used by the Financial Services Agency (FSA) and the Financial Education Fund (FEF) (FSA, 2005; FEF, 2009; Gray et al., 2009).

2 Methodology

A total of 123 fish vendors, all members of PASACAVA, are randomly selected out of 242 in the list by using the table of random numbers (Gay & Diehl, 1992). The questionnaire method and interviews with tanods (see Footnote 1), non-vendors and vendors are used to gather data. The questionnaire was pilot-tested and consequently revised to address the general and specific objectives. Probing questions are used and documentation is done through cell phone camera and digital camera to validate their claims that they list transactions. Respondents are asked to show the list immediately and explain it. Some of the interviews are conducted right in the Pasil market while they are selling fish; other respondents are interviewed in their respective houses when they could not be interviewed in the Pasil market.

The data are tabulated using Microsoft Excel spreadsheet with appropriate coding. Consequent analysis of data through Statistical Package for Social Sciences (SPSS) is also conducted. With the exception of computing the average expense and annualized interest that is done in Excel, the rest of the analysis are done through SPSS. Financial skill is measured by three factors: record keeping, analysis of profit and loss, and cash management. Record keeping is measured by the practice of recording transactions, safekeeping of records, and quality of methods and materials used. Analysis of profit and loss is measured by the summary of recorded transactions and format used. Cash planning, distinguishing between personal and business funds, and safekeeping of cash measure cash management skill. To assess the vendors’ cash management skills, an assumption had to be made that if the vendors would not run out of money more than three times a year, then this would strongly indicate that they know how to plan their finances. It is founded on the “rule of three”, a common phrase indicating that when an event occurs three times, it is no longer a product of chance or coincidence but a pattern (Carlson & Shu, 2007; Beggs, 2008; Bregman, 2009).

To find out whether non-recording is related to the income of the business, the average daily income is used as an indicator. The means of both groups are compared. If the mean of those who listed transactions is greater than the mean of those who did not, there is a reason to believe that recording of transaction is a factor in the outcome of the vendors’ enterprise. The threshold for low-cost fund is placed at 10% based on Pag-IBIG’s multi-purpose rate of 10.75%, a lower rate was used for the sake of conservatism; similarly Grameen Bank, a popular banking system for the poor founded in Bangladesh, also charges 10% on income generating loans (Grameen Bank, 2009). The average estimated loan rates
that vendors avail themselves of are compared against the threshold. Since these rates have different maturities, the figures are annualized for comparison with the adopted threshold rate.

3 Discussion of Results

3.1 Socio-economic profile

<table>
<thead>
<tr>
<th>Table 1. Summary Statistics</th>
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<tr>
<td>Age Distribution</td>
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<td>20-30</td>
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<td>31-40</td>
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<td>41-50</td>
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<td>51-65</td>
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<td>66-above</td>
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<tr>
<td>Self-perceived social status</td>
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<tr>
<td>Undefined</td>
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<tr>
<td>Income dependence on fish</td>
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<tr>
<td>Selling fish is the only source</td>
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<td>With</td>
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<tr>
<td>other sources</td>
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<tr>
<td>Gender distribution</td>
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<tr>
<td>Male</td>
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<tr>
<td>Female</td>
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<tr>
<td>Civil status</td>
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<tr>
<td>Single</td>
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<tr>
<td>Married</td>
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<td>Widowed</td>
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</table>

*unclear interest rates were excluded from T test

The youngest vendor is 21 years old; the oldest, 83 (Refer to Table 1). Their mean age is 43.11 years old. The majority are female (77%), some have spouses who also earn a living by selling fish. The vendors, 28 of whom are males and 95 are females, have spent a considerable number of years earning a living from selling fish. They have been selling fish from 14 to 40 years; 75% are married, the rest are single. Out of the sample size of 123, 89.4% indicated that selling fish is their only source of livelihood while the rest are able to augment earnings from other sources such as selling Avon products, renting out tools, and some others supported their income by doing complementary jobs at the Pasil market. None of the respondents perceived his or her economic status as rich. Forty seven percent (47%) see their status as middle class; the remaining 53% see their status as poor. There are several reasons why vendors ended up selling fish; among these, the influence of their parents ranked first, followed by their poverty that led them to sell fish as source of livelihood.

3.2 Problems

Fish vendors encounter problems in their day-to-day experience. The first category of problems concerns the low demand for fish. Aside from the seasonal element of sales operation, other events like typhoons (e.g., typhoon Frank) affect the demand for fish. Sea calamities (e.g., capsizing of Princess of the Stars) inhibit buyers from buying, resulting in low demand, supply glut, and saddling vendors with the problem of leftovers. The general rise and slump in the supply of fish affect them. When supply is high, they are forced to lower the price and when the supply is low, vendors compete
for the scarce supply and buyers are naturally turned off given the few choices. The second problem is the inherent moral hazard of selling on credit, because buyers may default on payment. The third one is lack of capital that constrains their operational flexibility. The fourth is the incurring of losses brought about by several interconnected reasons. Fifth is the health hazard of their job: their schedule is extremely demanding and, as a consequence, they do not get enough sleep or rest. Theft ranks sixth, followed by the lack of physical assistance and the poor condition of the building. Other problems are the rent, tough selling season, house rental, relocation, association dues and fire. The vendors, however, have learned to live with these problems, and through years of experience, devised some techniques to deal with them.

3.3 Coping mechanisms

Low demand. In times of low demand, they have learned to sell fish at breakeven or below cost to minimize loss or to salvage capital. Given enough allowable time, unsold inventories are packed in boxes stuffed with ice for reselling on the succeeding trading day or days. Others sell the excess to dried fish traders, while others even go into dried fish trading themselves, or employ aggressive marketing by calling on mobile or ambulant fish vendors to dispose of the excess inventory. Some vendors would stop selling altogether while others would continue selling despite the odd times just to cut down on inventory. Extraordinary events, like the capsizing of a ship that psychologically drives distaste for fish and dampens demand, are addressed with the help of the government by sponsoring media fora and advertisements through celebrity endorsements.

Defaulting on payment. Solutions on buyers defaulting on credit range from the sedate to aggressive types. The sedate type involves doing nothing and waiting for payment. The moderate type involves negotiations, agreeing to collect and receive on installment, and dropping of credit line. The aggressive type involves scolding and collection, summoning at the barangay level, coercion, and dropping of credit line.

Lack of capital. They address the problem of capitalization by acquiring a loan, borrowing from the bank, pawning jewelry and appliances, and paying an old loan with a new loan.

Losses and small profit. They address losses and diminutive profit by doubling the selling effort and mark up to recover the losses.

Sickness. They take some rest by staying home and medication to relieve themselves of stress, sickness and lack of sleep.

Theft. There is no other way to prevent theft than by being watchful and vigilant. There is however, a violent solution such as “to kill” (pamatyon), but this is said more out of exasperation and not actually done.

3.4 Recordkeeping

Results of the Chi-square test show that a significant number of the Pasil Fish Vendors do not list down their transactions. (Refer to Table 2 Panel A.) Out of those who did, 27 used an ordinary notebook, 5 used the yellow pad and 2 used loose leaves. Nobody uses the columnar sheet or the double entry method. Only 21 respondents kept records in a designated area. They use the single entry method when keeping records of their business transactions. Some list their business transactions on their arms and the palm of their hand, which could easily be erased. These clearly show that their recording skill is very poor and correspondingly their accounting skill is very crude. Accounting records should be well organized for these to be meaningful and useful (Swanson, Ross, & Hanson, 1992). Kun Dar (2007) shows clearly that the lack of internal bookkeeping is a major constraint to the formation and expansion of micro-enterprise in Nile, South Sudan.
### Table 2. Statistical Results

<table>
<thead>
<tr>
<th>Panel A</th>
<th>Chi square</th>
<th>Vendors who listed transactions</th>
<th>Yes</th>
<th>Expected</th>
<th>Residual</th>
<th>Df</th>
<th>P-Value</th>
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<tr>
<td></td>
<td></td>
<td></td>
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<td>-26.5</td>
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<tr>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td>61.5</td>
<td>26.5</td>
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<thead>
<tr>
<th>Panel B</th>
<th>Comparison of means</th>
<th>Average daily income of vendors who list transactions</th>
<th>Yes</th>
<th>N</th>
<th>Mean</th>
<th>T</th>
<th>Df</th>
<th>P-Value</th>
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<td></td>
<td>31</td>
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<td>-2.276</td>
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<td>75</td>
<td>534.08</td>
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<thead>
<tr>
<th>Panel C</th>
<th>One sample T-test (Test value =3)</th>
<th>Vendors run out of funds 3 times a year</th>
<th>N</th>
<th>Mean</th>
<th>T</th>
<th>Df</th>
<th>P-Value</th>
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<td></td>
<td>101</td>
<td>4.14</td>
<td>3.383</td>
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<thead>
<tr>
<th>Panel D</th>
<th>One sample T-test Test Value =.1</th>
<th>Annualized mean Interest Rate (AMIR)</th>
<th>Loan from friends</th>
<th>N</th>
<th>Mean</th>
<th>T</th>
<th>Df</th>
<th>P-Value</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>more than 10%</td>
<td></td>
<td>22</td>
<td>0.9631</td>
<td>2.720</td>
<td>21</td>
<td>0.0065</td>
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<td></td>
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<td>Loan from banks</td>
<td>13</td>
<td>0.2303</td>
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<td>0.0065</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Loan from others</td>
<td>47</td>
<td>1.0383</td>
<td>4.256</td>
<td>46</td>
<td>0.0000</td>
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### 3.5 Monitoring of profit and loss

No fish vendor prepares an income statement; consequently, they do not have a clear basis in determining the performance of their venture except by referring to the personal asset they have acquired through the years. This strongly indicates to them that they have earned money by selling fish. Those who list down their transactions calculate their income on cash basis (i.e., from the total cash, purchases, payment of loans, as well as other expenses are deducted to be able to arrive at their net income). Some list down their expenses that will be deducted later on from the total sales of the day; others simply rely on their memory. Fish vendors generally computed their income, as confirmed through random interviews, as follows:

Sales
Less: Cost of fish
Other expense:
  ice, water, rent, tax, food, light, loan installment
Income or loss

This computation ignores the matching principle because the items enumerated could be an accumulation of expenses from previous days that have remained outstanding because payments have not been remitted to the collector whose schedule of collection is sporadic and irregular. They consider installment payments on loans as an expense instead of repayment of debt. Swanson, Ross and Hanson (1992) mentioned that accepted accounting procedures require that revenue and expense be recorded in the accounting period in which revenue is earned and expenses are incurred. Meigs and Meigs (1993) further explained that expenses are offset against revenue on the basis of “cause and effect”. Therefore, similar other practices like non-recognition of depreciation expense and the charging of loan repayment against revenue contort vendors’ objectivity. Adopting cash basis accounting, which does not conform to Generally Accepted Accounting Principles or GAAP (Meigs & Meigs, 1993), degrades the value of information and thus makes decision-making risky.

The daily mean income of those who list transactions is bigger than those who do not list their transactions (Refer to Table 2 Panel B), suggesting that the deficiency in financial literacy is related to income of the vendors’ ventures. If appropriate records are kept, and profit and loss are monitored, some due accounts could be discovered; this would save vendors from incurring significant losses because the longer the accounts are carried without earning interest, the smaller is the percentage of return on the invested capital (Skousen, Stice & Stice, 2000). In Nile, South Sudan,
the absence of financial statements pose constraints to the formation and expansion of micro-enterprises (Kun Dar, 2007).

Vendors extend credit without evaluating the client that frequently defaults on payment. Thus, the violation of trust and confidence in business (Meigs & Meigs, 1993; Skousen, Stice, & Stice, 2000) may lead to substantial losses. Furthermore, their income and expense evaluation is not systematic because of non-recording. For this reason, their pricing policy is based solely on the conventional mark-up per kilo, which is around 5 to 10 pesos regardless of the kind of fish, demand, costs, and other data considered necessary to make a final decision on pricing (Hansen & Mowen, 1997).

3.6 Cash planning and control (Cash management)

Results of the t-test show that the vendors do run out of money more than three times per year (Refer to Table 2 Panel C). In addition, they do not segregate the cash used for business and that used for personal needs. They either keep their money in the bank or other safekeeping facilities like the cooperative. Cash is stored in unlikely places such as pocket, apron, shelf, etc. It imposes undue risk on cash as the most liquid of all assets (Skousen, Stice, & Stice, 2000) because of its vulnerability to theft and misuse. When vendors run out of cash, it indicates that they do not know how to plan their finances because anticipating cash needs, physical protection, accurate accounting and minimizing idle cash are basic objectives of cash management (Meigs & Meigs, 1993). The minimal cash planning compounds this behavior, as shown by the indiscriminate borrowing even at predatory interest rates. These practices run counter to Hansen and Mowen’s (1997) view, which emphasized the importance of timing of cash inflows and outflows and even pointed it out as a reason for business failure.

3.7 Access to source of low interest funding/loans

Only a few fish vendors have access to different sources of funding other than their relatives. They tapped banks, friends, and other sources served as conventional moneylenders. To be able to make an assessment of the interest rate that is being paid by fish vendors when they make loans, the threshold of 10% p.a. was adopted. This was based on Pag-IBIG’s multi-purpose interest rate of 10.75% p.a. as stated earlier.

Vendors’ bargaining power is low because these loans were mostly acquired as a desperate measure to fund their ventures. Interest is an additional cost for vendors who will try to price above cost to recover interest (Hansen & Mowen, 1997). However, they cannot increase the price too much because the market is very similar to over-the-counter stock transactions described by Brealey, Myers, and Marcus (1999), wherein prices of stocks are quoted based on volume, supply and demand. Therefore, vendors are limited by the price offered by other vendors, otherwise, they run the risk of not being able to sell at all. The high interest causes a reduction in their income. Thus, a combination of static price ceiling, high interest rate, and sustained plateau in fish demand will most certainly be disadvantageous for vendors.

Vendors depend on informal loans for inherent advantages described by Lim (1993). He observes that lenders and borrowers are usually personally known to each other, live in the same vicinity and therefore have access to information that formal banks usually do not have. However, greater disadvantage to vendors results because of this dependence. The results also support Baker (2009) in her observation that one of the most difficult obstacles to revenue growth for micro-businesses is their difficulty in gaining access to capital.

3.8 Loan from banks

Banks provided loans only for 19 out of the 123 vendors interviewed. Out of the 19, only 4 availed themselves of the low-interest funding/loan. Based on their computation, the annualized interest rate went up to 60% p.a. for banks. However, the annualized mean interest rate (AMIR) turned out to be 23% per annum (p.a.). Nevertheless, this was still significantly higher ($p < .0065$) compared to the threshold of 10% p.a., which can be obtained from other banks (Refer to Table 2 Panel D).
3.9 Loan from friends and relatives

A total of 21 vendors signified that they have obtained loans from friends and relatives. The AMIR of these loans, however, was 96% p.a. This is higher ($p < .0065$) than the threshold of 10% p.a. considered in this study to be a low interest rate for loans (Refer to Table 2 Panel D.). There can be advantages and disadvantages in borrowing from relatives. Relatives with the same noble desire to help may continue to lend and suffer opportunity loss, while relatives seize the desperate circumstances as an opportunity to help and earn at the same time unknowingly charge rates perceived as smaller compared to the rates available. If these rates however are annualized, as the result of this study shows, vendors were not helped but were all the more disadvantaged.

3.10 Loan from others

The AMIR for those who availed themselves of funds from other sources such as the turko, turko-turko, mananto, etc. is 103% p.a., which is even worse than the interest rates on funds made available by friends and acquaintances. This too is higher ($p < .001$) than the threshold of 10% p.a. (Refer to Table 2 Panel D.). The fish vendors do not agree with this "predatory" loans and they find it very unacceptable; however, some have no other choice but to take it; otherwise they will not have enough capital to go on fish vending. Some of the common sources of these are the people referred to as the turko or Filipino Indian nationals who lend money, and the mananto or turko-turko who are Filipinos with a similar lending scheme.

4 Conclusions and Recommendations

This study shows that the Pasil Fish Vendors possess low financial skills. These were shown by the non-recording of transactions, improper recording techniques, highly deficient recording materials and poor records safekeeping practices; absence of a systematic income and expense evaluation or absence of income statement; minimal or lack of cash planning; and the consequent recourse to high interest rate loans. The combination of these constraints makes them ill equipped in conducting the affairs of their micro-enterprise, and affects their income and growth to some extent. It should be pointed out, however, that these conclusions are based mainly on an accountant’s perspective. It is premature to conclude whether or not their level of financial skills is just appropriate for their needs, whether practices such as pricing method or mental and cash accounting work well for them, and whether their current practices are totally detached from the formal organizations’ practices and the conventions of GAAP. Studies designed specifically along these directions are highly recommended.

The following recommendations are made: The Government, through its local arm, should provide interventions in the form of:

**Education.** I recommend a two-pronged intervention. First, review and polish vendor’s basic education. This will empower both their intellect and morale and is especially beneficial to the older part of the demography. Second, introduce vendors to basic financial education such as the basic measurement of income. It will help make more timely and wiser decisions for their enterprise.

**Low-cost funding.** There is a compelling reason for the government to funnel low-cost funding to these vendors. It should be customized to the needs and circumstances of the vendors, that is, loan packages should ensure smaller annual interest rates compared to the existing ones while maintaining the inherent advantages of informal transaction like flexibility of loans, payment period and loanable amount. As pointed out, Bangladesh did the same since 1976 through Grameen Bank.

**Better facility and regulations.** Throwing of fish carcasses should be regulated. This could be both harmful to the fish vendors and the residents close to the market. In addition, micro-banking system has to facilitate custodianship of money. Legislation must provide for health and hospitalization aid or subsidy.

**Provide linkage.** Government should help vendors establish linkage to organizations with aligned advocacy. The website www.kiva.org mentioned by Valdez (2009) illustrates that there exists institutions ready to help vendors, only if linkage is established. It is recommended that other businesses or individuals respond to the needs cited above. They can help and make money at the same time.
Finally, I recommend that city health officers: (a) study the health impacts of using seawater for fish. Interviews revealed that they use seawater to preserve physical integrity of fish but the seawater is taken from Pasil seawaters that are dirty, and (b) study the effect of constant exposure of the vendors to their environment. They should look into the stress of the trade and conduct information dissemination to prevent unnecessary sickness.

Acknowledgment

The UP Visayas Office of the Vice Chancellor for Research and Extension for funding this research, the UP College Cebu Central Visayas Studies Center for facilitating, and the office of the UPCC Dean for the endorsement.

References


