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## The Sustainability of the Botika-Binhi Program

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In 1994, under contract with the Department of Health (DOH), the *Samahang Manggagawa ng Binhing Kalusugan* (SMBK) began the replication of the *Botika-Binhi* (BB) Project throughout the country, utilizing the HAMIS network of community-based health organizations. Soon after, the SMBK formed the *Kabalikat ng Botika-Binhi* (KBB) within its own structure to undertake the bulk purchase of pharmaceutical products, mainly generic drugs. SMBK also signed a memorandum of agreement with the Family Health Management for and by Poor Settlers (FAMUS) to undertake the replication effort in Southern Luzon. As of February 1995, a total of 175 BBs had already been established throughout the country. By March 1996, this would grow to 370. Seventy-one percent were established in Luzon, with the remaining 29 percent divided largely evenly between Visayas and Mindanao. Among the regions, the Cordillera Autonomous Region (CAR) had the largest number, at 46, or 28 percent of the total. The National Capital Region (NCR) was second, at 29 BBs, or 17.4 percent of the total. Among the provinces, Abra has the highest at 32 BBs, or 19.2 percent of the total. The aim of the program managers was to establish 1000 BBs nationwide by 2000.

This article focuses on the question: will the BBs be sustainable or not? This is critical because an informal analysis suggested them to be economically not viable. Is the system of establishing BBs the appropriate long-term strategy for distributing necessary but affordable medicines? Is, for example, the use of the SMBK-KBB as centralized purchasing agent the appropriate organizational structure?

For that matter, does the "cooperating agency" matter for long-term sustainability—whether it is a nongovernment organization (NGO), a community-based organization (CBO), a local church or religious insti-

tution, or a local government unit (LGU)? This is an important question considering the wide variety of institutional linkages among the existing BBs. NGOs seem to be the predominant type of cooperating agency, with 54 percent of all BBs. CBO-linked BBs are a far second at 18.3 percent. While NGOs and CBOs seem to be dominant in Luzon and Visayas, LGUs seem to be more important in the Visayas. Luzon BBs seem to have closer links with the existing government health infrastructure than elsewhere. Church-based BBs make up only 4 percent of the total.

### **The Research on Botika-Binhi**

This operational research had the following objectives:

- To collect financial statements on pre-selected BBs using the files and project records of the cooperating agency, and prepare a financial profile of the BB case studies;
- To prepare institutional and economic profiles of the same case studies;
- To identify and select a theoretically sound methodology for conducting an operational assessment of the BBs;
- To identify the conditions for financial, economic and institutional viability of the BBs given the project's goals and objectives;
- To determine the economic impact of the project on the members in particular and on the community in general;
- To provide policy recommendations on specific program interventions to develop sustainable BB projects in case of future expansion.

The scope of the operational research was meant to be a pilot-study, rather than a full-blown survey-based statistical analysis. As such, much of its findings are meant to be indicative and to pave the way for a more expansive survey-based research. The findings are not necessarily tentative but definitive in identifying general policy directions to enhance the viability of the program.

The key term to be defined is "sustainability." For purposes of this research, three aspects are necessary:

- *Financial sustainability*: the ability of a BB to either generate or source a sufficient amount of financial resources or monetized material inputs to maintain a targeted stream of project benefits over the expected project life;
- *Economic sustainability*: the ability of a BB to generate economic value or net social benefits during its expected project life. Net social

benefits would be measured by the opportunity cost—or gains or opportunities foregone due to a choice of action or project—and willingness-to-pay—the amount a buyer would be willing to pay to obtain a product or service regardless of the price by which the product or service is being offered;

- *Institutional sustainability*: the existence of incentive structure and resource constraints among the key actors—namely BB members and managers and the community—conducive for the continued operation of the BB.

As will be explained below, while a project may be financially sustainable, but economically not viable, these need not imply that it will be institutionally unsustainable.

*BB holders* are those members of the community actually managing the day-to-day operations of the BB. The BB holders might in turn be members of a people's organization (PO) or of a CBO, which in turn are organizational expressions of collective action at the community level.

Support agencies (SAs) are government and nongovernment entities, which provide technical, administrative, financial and/or logistical support for the BB holders. While the SMBK-KBB would be considered as an SA, for purposes of this research it was excluded from this definition as it acts as an SA for all BBs. SAs would be those that dealt with particular BBs and not all. SAs are also different from the cooperating agencies which, by the FAMUS documents, are just administrative entities that FAMUS dealt with at the community level and these may or may not include the BB holders. This study focused on the SAs and excluded the cooperating agencies from the analysis, as the crucial element in the analysis is the relationship with the BB holders mainly, as shall be seen.

In the methodology of research, the research team utilized the case study method and the key informants approach in conducting this study. Three project sites were selected: Bagong Silang, Caloocan City; Siláng, Cavite; and Surigao City. The first was an urban community, the second was presumed to be rural. It was initially surmised that Surigao had no link with SMBK-KBB because of the distance and this was the main reason for selecting it. As it turned out, all the BBs visited had close linkages with SMBK. But Surigao turned out to be the model of BBs based in rural communities as the Cavite site proved to be already in the process of urbanization.

Prior to fieldwork, categories of key informants were identified, such as BB holders, BB members, BB non-members, etc. The interview

questions were designed to be open-ended and aimed at identifying the following:

- the nature of BB operations;
- the incentives of the holders to manage the BB and for members to patronize them;
- the effectiveness of the organizational framework under which the BB was operating.

After the fieldwork, at least fifty key informants had been interviewed from the Surigao area. This reflects the fact that in Surigao, the team decided to investigate the citywide structure and interconnections of the BBs in that city, rather than the relatively autonomous nature of the individual BBs in Bagong Silang and Siláng. The breakdown of key informants according to category was more or less evenly distributed.

Case studies were prepared to highlight the institutional and financial aspects of the BBs visited. All three communities differed in terms of the nature of the community and the primary economic activity. Bagong Silang was an urban community, mainly resettled slum dwellers largely engaged in informal and secondary employment with substantial rates of unemployment and underemployment. Siláng was a settled rural community but already in the process of urbanization because of its proximity to the industrial zones of Cavite and to Tagaytay City. Livelihood included farming, employment in the nearby industrial and service establishments and remittances from overseas labor. Rising real estate values because of the proximity of Tagaytay made a measure of real estate speculation more profitable than long-term farming. The Surigao sites were settled rural communities largely engaged in subsistence and commercial fishing.

At the core of the analysis, the BB was viewed as an institutional innovation, whose adoption by a community ultimately depended on its ability to reduce *transaction costs* to enhance economic welfare. This analysis was extended to cover basic financial analysis, the concept of social capital and basic notions of welfare economics and collective action theory. Institutional innovations are developed in order to reduce costs. Technological innovations involve the application of science to the production process to reduce production costs. In contrast, institutional innovations are applications of managerial and organizational processes to reduce transaction costs.

Transaction costs are the expenses incurred to facilitate exchange in a market economy. Because people are not omniscient, markets in the

real world seldom approximate the theoretical features of a perfect market. A perfect market is supposed to be the most efficient mechanism to distribute goods but it assumes perfect information, namely that buyers and sellers know exactly how much a product or service is priced at any location at any given time. This prevents any form of price manipulation, so that buyers are able to obtain the goods and services they desire at the lowest possible price, to therefore enhance their economic welfare. Producers have little choice but to produce the goods and services in the most efficient manner to realize a profit as they would have little control over the prices in the market.

But it is precisely the absence of perfect information that makes real markets unable to deliver on maximizing the welfare of consumers. The farmer would not know who the ultimate buyers are of his produce, nor do consumers know the source of their daily rice. Because people are not omniscient, information about buyers, suppliers and product quality, and ways of ensuring contract enforcement and monitoring become important. And these activities have a price, namely transaction costs. These include the cost of advertising to provide the necessary information, often inadequate, the time spent by consumers in searching for bargains or new products and services, transport cost to ferry goods from the producer to the consumer and the like. These are over and above the actual cost of producing the goods themselves. Institutional innovations are therefore aimed at reducing these transaction costs.

To illustrate, the adoption of the assembly line was an institutional innovation at the factory level, which revolutionized production. Prior to the assembly line, production processes were done by batches of orders. Assembly line production substantially reduced costs and increased the volume of production, even with the same production technology. Although this reduced the selling price of the product, the huge volume made up for any revenue loss due to the price decrease. This also provided funds for advertising to provide information on the product. And this certainly improved consumer welfare as a bigger supply of goods was made available at a lower price.

Another institutional innovation is the modern corporation, which is a major organizational and managerial leap from a single proprietorship or a partnership arrangement. In development management, examples of institutional innovations include the emergence of NGOs, self-help volunteer organizations, peer-monitoring mechanism of the Grameen Bank of Bangladesh, and cooperatives. These improved the

delivery of social services to low-income communities without the need for government expenditure or subsidy. Unlike technological innovation, institutional innovation focuses on the software, not the hardware—on the rules of the game and the way things are done as opposed to the machinery and equipment.

When transaction costs are too steep, for various reasons, large segments of the population are excluded from the market, and they are usually the poor and those who live in distant and inaccessible locations. This would be the situation in the pharmaceutical industry. Drug manufacturers would not know all who will purchase their output. They have a rough idea of market locations especially in the low-income districts and far-flung areas. To actually identify the markets in the provincial or community levels would be expensive for them. Instead, a network of detailmen, medical representatives, retailers, drug-store chains and other middlemen channel the drugs from the factory to the retail outlets. This system ensures that supply reaches the consumers but it has costs. The transaction costs alone (which include the markup of the retailers and other middlemen) causes the retail price to reach far higher than the price at the factory level. This is the cause of the absence of drugstores in far-flung areas and the prohibitive cost of drugs where they are available.

The BB is an institutional innovation that attempts to address this lack of information. The SMBK purchases mainly essential drugs (i.e., those for the most common ailments, such as paracetamol and amoxycillin) which are generic therefore cheap, directly from the manufacturers. This substantially reduces the cost of each unit of medicine. BB holders then obtain these drugs directly from the SMBK and sell these to members with a nominal 5 percent markup to cover its costs and generate a slim margin of profit to maintain and expand operations. Members also pay monthly dues to cover operating expenses and to build a reserve fund to be used for preventive and emergency medical procedures. Non-members are supposed to be charged a higher mark-up of 15 percent although as will be seen later, this is often difficult to enforce specially in settled communities. In any case, the resulting prices are much lower than in the established retail outlets.

Many BB holders happen to be volunteers, so that the BBs save on the cost of their wages. Before a BB is established, a community must first generate a counterpart fund of about ₱500; this ensures a certain level of community commitment, and also would indicate a certain

level of collective purpose that would be crucial in the success of a volunteer endeavor, as will be discussed later. A health survey would then be undertaken to identify the precise health needs and requirements of the community. This covers not just the actual health condition but the presence or lack of sanitation facilities and access to running water. This again identifies areas for community action, as in developing water and sanitation facilities. This information is summarized in a community health data board that would be displayed in a public area and updated regularly to track the health needs of the community.

This information greatly aids in the development of preventive medicine and health practices that reduce the need for drugs to be purchased. Communities are also encouraged to develop their own herbal gardens and herbal preparations. The buffer fund allows for regular check-ups to maintain health levels of community members. In this manner, the BB actively promotes welfare by encouraging practices that improve the health of individuals and by making only the essential drugs available at substantially low prices.

The welfare gains for the community and for individuals can be summarized as follows:

- The BB made a greater amount of essential drugs available at much lower prices. The gross margins that middlemen normally passed on to consumers were simply reduced.
- The manufacturers can still benefit from the increased access to the rural and low-income markets.
- For society as a whole, the health condition of a wider segment of the market is improved by making essential medicines more affordable and encouraging preventive medicine and health practices.
- However, the BB to be economically viable must be able to absorb full costs on smaller margins of profit. Normally, smaller margins are offset by larger sales volumes. But this is not possible for many BBs because their markets are small (mainly the community itself where the BB is located) and drugs are essential items but are purchased only when necessary, which in a healthy community is not very often.
- If the BB has any advantage, it would stem from two factors. First, the BB would know its own buyers, something middlemen would love to have. Second, since the BB operates based on volunteerism and altruism, a substantial amount of costs—especially labor costs—are reduced.



## Financial Analysis

To measure financial sustainability, a set of measures for liquidity, activity, profitability and solvency were utilized. As a measure of liquidity, the defensive ratio gives the number of days a BB can operate without making any sale. As measures of activity, the turnover ratios for inventory, fixed asset and total assets reflect the efficiency of BB operations in utilizing its available assets. Profitability measures the ability of the BB to generate cash from sales and returns given a set of assets.

These standard measures are augmented by two other indicators peculiar to this type of operation. First is the growth in capital funds to the growth in membership,

$$\begin{array}{lcl} \text{Ratio of capital funds} & = & \frac{\% \text{ growth in capital funds}}{\% \text{ growth in membership}} \quad (1) \\ \text{to membership} & & \end{array}$$

This ratio indicates the growth of the BB from operations and membership dues, rather than from increases in membership. A ratio of less than 1 implies that much of the growth came from additional members, which has limits specially when one considers the sizes of communities where BBs are located. This ratio would suggest either inefficient operations or delinquency in the payment of dues or both. If greater than 1, the ratio suggests either that the operations were efficient and members were not delinquent in payment of dues, or operations and membership fees were subsidizing each other. The second is the ratio of growth of capital exclusive of net income to the growth in membership,

$$\begin{array}{lcl} \text{Ratio of capital funds net of} & = & \frac{\% \text{ growth in capital funds net of income}}{\% \text{ growth in membership}} \quad (2) \\ \text{income to membership} & & \end{array}$$

The second ratio indicates how much capital growth came from membership contributions. A ratio greater than 1 indicates that members are paying in advance. A ratio less than 1 indicates delinquency in the payment of membership dues. Together these two ratios give an idea of the sources of capital growth of the BB, whether from membership increases or from operations. If (1) is greater than (2), it would imply that much of the BB capital growth came from operations, and that membership contributions play a secondary role. If (1) is smaller than

(2), it would imply that the BB was more dependent on contributions rather than on operations, and thus imply the need for continuing cash support in the long run. These two ratios are particularly important for long-term financial sustainability.

Financial statements were not readily available for all the three project sites, so that a crude set was reconstructed for Bagong Silang from the monthly status reports submitted to SMBK-KBB (for which Bagong Silang was the most updated). This sketchy application of the financial analysis suggested that a BB could be financially viable under certain conditions. The BB can last up to twenty-five days without having any sale and still be able to operate. It registered an inventory turnover of ten times over an eleven-month period, implying a need and ability to replenish inventory in a little more than a month. It generated revenues nine times that of total assets, with a gross profit margin of 14 percent. The operating margin was 4 percent. As an investment, the BB performed well with an ROA of 39 percent and ROE of 65 percent.

The ratio of capital to membership was 18.59, implying a growth in capital 18 times faster than the growth in membership. With the second ratio at 7.81, this would imply that much of the growth had indeed come from operations. The BB was clearly financially sustainable in its first year of operation, at least. However, financial sustainability need not imply long-term economic sustainability. First there are limits to the growth of their market. From a low base of ₱2,100, the high growth in capital was understandable in the first year. This may not be the case for succeeding years. Second, financial sustainability does not consider opportunity costs and willingness-to-pay calculations, only accounting costs. Given that the BB operates under the principles of altruism and volunteerism and the calculus of reputation effects and social norms, economic analysis must be seen as an indication of whether the BB was sustainable if operated under conditions of profit-maximizing and utility-maximizing principles. BB holders are not paid any wage and sometimes even contribute to operating expenses, such as transport to and from SMBK in obtaining inventory. A full-blown economic analysis would require a survey to obtain information on what these costs might actually have been and to incorporate these in the calculation of the ratios to see if the BB can indeed be operated as a profitable enterprise or business. In the absence of this information and thus of economic analysis, one can then emphasize the institutional sustainability of the BB.

### **Institutional Analysis**

Economics assumes that the continued financial and economic viability of the BB is a product of rational choice. A community will maintain a social development project for as long as 1) the expected social benefits exceed social costs (or the expected net social benefits are positive), 2) resources for the maintenance of the project are available, and 3) the problem of free-riding is solved through the proper institutional incentives or the existence of social capital (to be discussed in detail below). With this basic framework, the maintenance of the BB can be reduced to three questions:

- Are the net social benefits derived from the BB positive?
- How do the communities mobilize the necessary resources for the maintenance of the BB?
- How are they able to sustain collective action? What forms of individual incentives and social capital were used?

As rational beings, individuals will prefer more to less, generally speaking. They will continue to patronize or maintain a project for as long as the benefits are greater than the costs, and they have the resources to support project costs. In other words, the beneficiaries must perceive a real economic need for the project output and should have the resources to sustain the project. This must be the case for the BB when regarded as an institutional innovation. The BB scheme is an essentially non-market institutional innovation, a set of welfare-enhancing rules and arrangements. Its adoption by a community is based on its ability to reduce transaction costs, which at the minimum consist of travelling and search costs. Search costs over the choice of medicines is reduced by restricting the drugs to essential generic drugs purchased by the SMBK-KBB directly from the manufacturers and by encouraging the use of herbal medicines and preparations and preventive health practices such as regular check-up, community health surveillance through the databoard and sanitation. Travelling costs are reduced by the volunteer BB holders directly obtaining the supplies from SMBK-KBB. Not surprisingly, the CAR had adopted the BB system as it is one of the most inaccessible areas in the country. A similar thing can be said of the island barangays of Surigao City. Thus, to be sustained by the communities, the BB must first and foremost be a more viable means of acquiring pharmaceuticals and pharmaceutical preparations, than the market-based system of drugstores, detailmen and wholesalers.

From the case studies, more than the mere access to affordable drugs, patronage of the BB was also influenced by two other factors: the dependency ratio; and the transactions and transportation costs faced by the household in accessing medicines from traditional market sources. The greater the number of children in the family, the more likely will a household participate in the BB system. This hypothesis was supported by the observation that 1) most of the prevalent illnesses seemed to be child-related; and 2) the differences in the age configuration of member families and non-member-families. Member families usually had children below twelve years old. When non-members were asked why they did not enlist in the program, a common response was "*Wala namang nagkakasakit*" ("No one gets ill in the family"). Upon examination of the age configuration of their households, one would note that their children were already adolescents or young adults.

The location of the households and the impact on transaction costs also seem to play a critical role in determining participation. The lack of transportation or the distance between the community and the nearest source of medicines seem to affect the decision to participate in the BB or at least to patronize it. In Bagong Silang, there was a geographically determined catchment area which allowed two BBs to coexist without necessarily undermining each other. It was a rather densely settled community and these two BBs were located far enough from each other to serve their immediate neighborhoods. In Silang, despite the relative affluence of the community (owing to overseas workers' remittances), the BB was patronized mainly because of the distance to the nearest drugstores which were all located in the poblacion. This was all the more the case with the island barangays of Surigao, where the drugstores are largely in the city center and required a ride on a pumpboat which was not too frequent on any given day.

Other possible household characteristics that might affect participation in the BB are the acceptance of generic drugs and the access to herbal remedies. BB member-households tended to accept generic drugs while non-members were usually not disposed to generic drugs. Households with experience in herbal remedies tended to purchase drugs only when the remedies are not working.

Willingness is not enough and a community must have the adequate resources to maintain the BB. Two of the communities were able to source financial support from LGUs for the initial start-up and subsidies for operations. All the BB projects visited appeared to be gener-

ating sufficient cash from operations. In Surigao, the federation of Primary Health Care (PHC) workers even offers a counterpart fund of ₱2,000 worth of free drugs for initial inventory whenever the community is able to raise ₱500 for the BB start-up.

With regard to the presence of SAs, none of the BBs operated without direct or indirect support from either SMBK-KBB or FAMUS. With the exception of Bagong Silang, close linkage with the LGUs and the PHC network seem to be a common feature.

A word about the PHC might be necessary at this point. This is one of the oldest and most enduring yet not well noticed programs of the DOH. Started in the 1950s, it involves both paid and volunteer midwives to provide basic medical and health assistance to expecting mothers and mothers with infants. Traditional midwifery practices such as the *hilot* are integrated into the program. Although a nationwide program, it has not been successful in many areas according to informants, but where it has been successful, the volunteers have undertaken other important volunteer activities. Indeed, in Silang and Surigao, they are the backbone of the BB program, the holders being without exception PHC midwives.

A more crucial aspect also would be the managerial and technical capabilities and the resource constraints faced by the individual BB holders themselves. Managerial capabilities in bookkeeping and cash management were generally adequate. But some concern needs to be focused on the handling of accounts receivables or credit sales and the effectiveness of the reporting system for project monitoring and evaluation purposes. While credit sales are not allowed, they do occur in the communities. The BBs do not know how to reflect sales by credit in their financial reports. The handling of receivables is particularly important given the common experience of cooperatives in the country collapsing under a liquidity problem created by credit sales. On the reporting system, while the SMBK-KBB has developed the most basic reporting mechanisms, the BBs (specially the farthest) do not remit these documents on a regular basis and this poses a problem for project monitoring and evaluation purposes.

The BB holders were often those with relatively lower household demands and/or with a very high sense of voluntarism. Unfortunately, voluntarism has its limits. A more crucial question would be the resource constraints faced by the individual holders themselves. In Bagong Silang, for example, like most residents, the spouses of the BB holders are employed in informal and secondary labor markets and

suffer the same problems of low wages and lack of job security. One of the holders reported that her husband had been unemployed for several months. They were trying to live on the meager allowance she received from the BB. Another holder reported that her husband was considering relocating to Quezon in hopes of earning more from tending a hectare of coconut land.

In Surigao, the island barangays are very rural indeed and the cash economy has yet to spread. Many of the communities live off subsistence fishing and the cash earned from commercial fishing, though limited allows them to obtain the necessary supplies of rice and other basic items. A lot of the community time is therefore devoted to volunteer activities. The PHC is largely composed of women, so that the menfolk formed the Barangay Environmental Sanitation and Implementation Group (BESIG). The BESIG members themselves construct cemented barangay roads and concrete public toilets, toilets for the individual homes, drains and sewers for entire communities, with the materials all donated by the city government. The menfolk thus provided labor for free. Because of the low need for cash in these rural communities, volunteer activities directed to community infrastructure and social service (as in the PHC volunteers and BB holders in charge of community health service) would seem to remain vibrant in the foreseeable future.

Silang is the intermediate case. In a rapidly urbanizing setting, many of the BB officers have been leaving in search of better-paying jobs in the nearby industrial estates proliferating in that part of Cavite or in overseas employment. The BB holder is still a PHC volunteer, but their numbers have diminished in the last few years as the expansion of the cash economy to their rural community has opened more job opportunities outside.

Since the BB would face difficulty as a business-for-profit operation, crucial then for long-term sustainability as a community-supported volunteer activity is the availability of social capital in the community itself. Robert Putnam defines social capital as "networks of civic engagement," arising from prior collective action experience, values, norms, traditions, family ties, or institutions which facilitate collective action (Putnam 1993, 173). Thus social capital would include the reputation effects and norms of altruism and voluntarism, which might affect the calculus of net gains, and turn otherwise uneconomic projects into sustainable ones. Social capital is also critical in solving

the threat of free-riding, by altering the individual structure of incentives away from a noncooperative to a more cooperative outcome.

Because of social capital, the benefits from a project need not be in terms of project output but from the social status attached to participation. For that matter, the opportunity costs might be affected by the possible loss of face and other social sanctions that might make nonparticipation untenable. As explained by Akerlof (1976, 1980), reputation effects can explain the maintenance of customs and traditions, even oppressive ones like the caste system of India.

The problem with cost-benefit analysis is that it may not capture this complex set of incentives and resource constraints faced by key actors of the BB. This problem arises because in practice, cost-benefit analysis utilizes imputed market values (thus monetized) rather than opportunity cost and willingness-to-pay valuations. Thus cost-benefit analysis might have difficulty capturing psychic benefits (from status or social acceptance) and social sanctions which are difficult to monetize.

Moreover, by using the principles of a perfect market (i.e., the utility-maximizing individual and the profit-maximizing firm) as its welfare standard, cost-benefit analysis might not be too applicable in conditions where a degree of altruism and voluntarism play a critical role, particularly for the BB holders. How does one deal with the actual fact of altruistic behavior? As noted by Akerlof (1982), when gift-giving norms and social capital enter the analysis, workers might produce more than under conditions of individual utility-maximizing behavior. In other words, one might see people producing more than would be suggested by a purely economic analysis. Similarly, one might observe BB holders producing more than would be suggested by their opportunity costs. This will be a worthwhile area for further investigation as it is a truly serious methodological issue in economic analysis.

Despite the importance of social capital, unfortunately cost-benefit analysis tends to ignore social capital altogether. When free-riding is rampant in a community, a welfare-improving social development project (as measured by a positive economic rate of return) might end up being institutionally unsustainable due to an absence of individual incentives or social capital. Indeed a positive economic rate of return need not be associated with an institutionally sustainable development project and vice versa. This might explain the failure of many large-

scale projects such as feeding programs for elementary students and school-building programs in which supplies often did not reach the intended beneficiaries.

The form of social capital might differ from place to place. In settled rural communities, social capital would usually come in the form of intricate family and kinship ties. In urban areas, it might be in the form of public institutions, respect for the law, participation in sectoral organizations and other expressions of civil society such as civic groups. It is the absence of forms of social capital that might explain the extreme forms of individualistic, even familistic, attitudes pervasive in many sections of society.

In Bagong Silang, the BB is running in spite of the absence of social capital throughout the community. An indication of this is the continued absence of the community databoard. The viability of the BB is dependent on the sheer voluntarism of the BB holders themselves who as members of a religious group regard the BB as a personal ministry (though they take pains to emphasize that they do not proselytize in the performance of their duties in the BB). Despite several attempts at organizing membership meetings, the BB membership had yet to meet as of the end of this research project. The BB operates with effectively little accountability to the community.

In turn, community participation is limited to patronage and does not extend to the decision-making processes. Social capital is limited if not absent due to the highly urbanized nature of the community and its relative youth as a basically new resettlement area. Familial ties prevalent in rural communities have yet to be replaced by viable forms of social capital. What social capital there is might be within the religious group of the BB holders, and it would be interesting to study if the group has similar activities in other communities and if the group itself is able to sustain the commitment of the BB holders in the absence of support from the communities in which they stay.

In Surigao City and Silang, social capital comes in the form of decades of collective action, familial ties, LGU support and the voluntarism of the BB holders themselves steeped in the PHC tradition. In these areas, the community databoard is regularly updated and displayed as a source of community pride. "PHC" is more often synonymous with community action. In both places, indigenous political leadership seemed to participate actively in the affairs of the BBs.

However, there is greater financial accountability on the part of the Silang BB than was seen in Surigao City. In Silang, the support agen-



cies and SMBK-KBB play a crucial role in ensuring regular financial record-keeping. But while community participation is channeled through the barangay council in Silang, there seem to be more decision-making mechanisms outside of the municipal and barangay government structure in Surigao City. Moreover, while the traditional forms of social capital might last for a longer time in Surigao City, this might not be the case for Silang because of creeping urbanization, emigration and the expansion of the money economy.

### Summary and Conclusions

The BB was analyzed as an institutional innovation. Is the BB project then sustainable? The problem arises because the BB will have to support itself with gross margins much smaller than those of the traditional market system of the middlemen. The question was answered through financial, economic and institutional analysis.

At the core of the financial analysis was the ability of the BB to generate financial resources from its operations rather than from membership contributions, its ability to generate cash internally. Based on the reconstructed financial statements of Bagong Silang, this was most probably the case, where net income rather than membership dues were a greater source of capital growth. There were also indications that this was also probably the case in Silang, Cavite. This report went on to examine the institutional aspects of the different BBs visited. Three questions were asked: are the net gains from the BB positive? Do the communities have access to resources? Are the levels of social capital adequate? The following conclusions were reached:

1. *Financially, for as long as the BB is kept as a voluntary organization, the BB can be sustainable.* Those BB operating in urban areas where economies of agglomeration are available might be more financially viable. Such is the case of the BB in Bagong Silang, which generated ₱200,000 worth of revenues over the last eight months. Those found in the rural areas, where demand is limited, might not be so. Unfortunately this cannot as yet be verified in the absence of financial statements.
2. *But financial sustainability need not mean economic sustainability.* Economically, the BB might be sustainable for as long as the BB is able to absorb the opportunity costs involved within a smaller gross margin. Whether this is possible is uncertain. A great deal of subsidy occurs at the community level. Many costs are left unreflected.

3. *The existence of social capital is critical.* The gains from the BB are dependent on the ability of traditional middlemen to reduce their transaction costs, and the ability of the BB holders and the community to supply their inputs on a voluntary basis. As development proceeds, the initial cost advantage offered by social capital might be eroded by reductions in the cost of transportation.
4. *The absence of social capital need not imply financial instability in the short run.* In fact the urban-based BB, where social capital might be low, are places where financial viability might be strongest. Again, in the case of Bagong Silang, while the community might not have the social capital, the economies provided by a high population density with purchasing power make it quite profitable as a voluntary organization. In places where social capital might be high, the lack of these economies might actually act as a damper on financial viability.
5. *Institutional linkages are also important for long-term stability.* Institutional linkages are critical not only for financial support but also for the effectiveness of the BB within the PHC strategy. Such is the case in Silang and Surigao City, where the BB benefited from the mobilization of community support generated by the PHC activities.

## Recommendations

The following set of recommendations might be considered:

1. *Continue the current system of community identification.* The current system of offering training rather than cash grants is effective in weeding out communities and groups not prepared to manage a BB. The offer of a cash grant from the very start can be detrimental to the long-term viability of a BB. Communities, which are not prepared to run a BB will end up expecting an annual dole-out from government, rather than maintaining a BB themselves. In the long run, this might actually be more expensive. But should cash grants be used, certain criteria need to be met.

First, the communities must be located in a predominantly rural area. In the absence of economies of scale, cash grants can go a long way in maintaining the financial viability of a rural BB.

Second, there must be indicators that the level of social capital is high. Community databoards are useful indicators. The presence of family ties is another (though its effects can be ambiguous). The active participation of community leadership in health affairs is critical. A history of collective action is also imperative.

Third, the community must have undergone some basic training in BB management and primary health care. In other words, the community must have the basic orientation and the skills necessary to run the BB. Fourth, the existence of institutional linkages with an LGU or the health center's PHC program is important. This will ensure technical, financial and political support for the project. Should these conditions be met, the likelihood that the cash grants will be maintained will be higher.

2. *Upgrade the abilities of the BB holders to handle credit sales.* The reality of credit sales must be dealt with. While it might be better to ban credit sales altogether, this would be impossible given the economic reality the BB holders face. Currently, BB holders do not know how to deal with credit sales in their accounts. This is a potentially dangerous situation, given the experience of consumer cooperatives.
3. *Generate in-house data about the BB.* For project monitoring purposes, it might be useful to generate as much information possible about the BB from within the SMBK-KBB system itself, such as the information about inventory levels and initial capital. Since the purchase of drugs is centralized, it might be helpful to utilize the sales receipts of the BB, rather than what is reported in the monitoring sheets. For that matter, assuming that the initial capital is used largely to purchase drugs, the first sale of drugs to a BB might be a good indication of the start-up capital.
4. *Treat rural BBs not as individual BBs but as a network of BBs.* As already discussed, individual BBs in the rural areas might not seem too viable due to limited demand and the absence of economies due to agglomeration that is available in an urban setting. Thus it might be more useful to organize them as a BB network, to achieve a measure of economies and greater market reach. This might be difficult in areas where social capital among barangays is low. But in Surigao City, this network is in fact possible.
5. *Consider utilizing and organizing urban-based BBs either by occupational or sectoral group (such as labor unions), or as community-based but not community-led organizations.* Given the lack of social capital in many urban communities, the pursuit of a community-led BB may be ineffective unless community-organizing effort is included. It might be more efficient to pursue sectoral-based BBs (such as among transport workers, market vendors, etc.) or even as NGO-type structures rather community-wide institutions.

## Appendix

### The Case Studies

**A.1 The Botika-Binhi at Bagong Silang.** Bagong Silang, Caloocan City, is a resettlement site of the National Housing Authority. The original residents of Bagong Silang were urban poor communities relocated from different parts of Metro Manila during the mid- and late-1980s. Many of the residents migrated from other parts of Luzon and the Visayas as early as the 1970s. Many residents of working age reportedly find employment in the informal and secondary labor markets of Metro Manila, including the vicinity of Bagong Silang itself, where wages are low and job security non-existent.

The Bagong Silang Botika-Binhi (BSBB) started in 1994 as a spin-off of a medical clinic established by the Christian missionaries working for the Servants Community. Initially, the clinic was funded by the Servants Community and it would appear that many of the community volunteers were given generous allowances for their services. When the Christian missionaries left, the medical clinic was discontinued and whatever medicines left were lent to the BSBB. Additional capital was raised from membership fees from the initial membership. As a whole, the BSBB began with ₱2,100 as capitalization, both in cash and kind.

When the BSBB was visited in June 1995, it had a total of 170 members, who were required to pay a ₱10 membership fee and ₱10 monthly dues. Not all members were updated. When asked whether overdue accounts were a cause for concern, the staff reported that it was not. It was quite common for BSBB members to skip their monthly payments only to renew when a purchase was to be made. Other members might advance their monthly payments instead.

The day-to-day operations of the BSBB were handled by four women. During the medical clinic, the women made up the kitchen staff, tasked with preparing meals. All are members of the Living Springs Community (LSC). The BSBB holders, however, take pains to make it clear that the BSBB is not a veiled attempt to proselytize.

The BSBB relies primarily on sales proceeds and monthly dues for cash requirements. The total sales of the BSBB, from September 1994 to July 1995, amounted to some ₱190,000. As an indicator of the market demand for the BSBB, at one time the BSBB staff inadvertently bought some ₱20,000 worth of inventory from the SMBK-KBB on a credit basis. The BSBB was able to pay off the loan in three months. Already, another BSBB is being established in an adjoining phase of the resettlement site.

The BSBB has since organized weekly feeding centers and mothers' classes. These activities are conducted simultaneously. While the children are being fed, the mothers are given instruction on aspects of preventive health care.

Donations and garage sales of second-hand items are the primary sources of funds for these activities.

While no statistical test was conducted, it would appear that household characteristics do matter. The likelihood of membership and patronage seems to be determined by the presence of infants or children in a household. Non-members interviewed would attribute nonmembership to the absence of children in their household: *"Wala namang nagkakasakit sa amin"* (None among us gets ill). Transaction cost also matters. It costs around ₱6 one-way on a tricycle to get to the nearest drugstore, and the presence of low-cost medicines nearby appears to be a strong incentive to either patronize the BSBB and/or to become a member.

Community participation in the BSBB is limited primarily to patronage and the payment of a registration fee and monthly dues. As such, there is effectively no financial accountability to the community. Not that they did not try: attempts to hold a general membership meeting have been tried but in vain. The BSBB holders have discontinued their efforts here due to chronically poor attendance. As another indicator of poor community mobilization, the BSBB holders have also had difficulty preparing their community databoard. In the other project sites, the databoards were often a source of pride for the community and were conspicuously displayed in the barangay health center. Updated quarterly, the databoards are not only tracking mechanisms but also symbols of community participation. The BSBB has yet to work on its databoard despite repeated instructions from SMBK-KBB.

Moreover, the Christian communities established by the Servants Community also do not exert any control over the BSBB. While the staff come from the Living Springs Community (LSC), it would appear that the LSC has virtually no strategic nor operational control over the BSBB. In other words, the BSBB is not an LSC project but a personal ministry of the women themselves. Strategic directions of the BSBB are the product of discussions among the holders and resource people from the SMBK-KBB.

Also outside of the SMBK-KBB, the BSBB has had very little institutional linkages with the LGU or the health center. Any concern from the barangay seems to be characterized by benign neglect. Links with the barangay health center are limited to referrals and technical assistance, as in the case of immunization campaigns. Any links with the political leadership is on a personal basis. The BSBB staff has made attempts to persuade the congressman to adopt the BB concept in his entire congressional district.

While the BSBB is clearly a community-based but not a community-led organization, BSBB members have little control over the strategic and operational actions of the four BSBB holders. The latter have no accountability to the former whatsoever. This however need not imply that the long-term sustainability of the BSBB depends on turning the community-based organization into a community-led one.

Such an attempt might require the fielding of community organizers into a community characterized by little social capital, where the networks of civic engagement are virtually absent. But that might be too expensive. For now, the sustainability of the BSBB depends on the need for affordable drugs and on the voluntarism of the BSBB holders.

The voluntarism of the BSBB holders is a crucial factor for now. Motivated primarily by a sense of mission, despite a monthly allowance of ₱250, the holders made a very clear distinction between themselves and the other volunteers of the previous medical clinic. According to the BSBB holders, while the previous volunteers were in fact paid workers ("*mga bayaran*"), the four women were not. When the funding ended, the "paid volunteers" ended their involvement while the holders continued theirs, despite all being members of the LSC. The BSBB holders were unable in fact to identify anyone among the LSC willing to take over the BSBB should the four decide to quit.

This is of course a cause for concern. Like most residents, the spouses of the BSBB holders are employed in informal and secondary labor markets and suffer the same problem of low wages and lack of job security. One of the BSBB holders reported that her husband had in fact been unemployed for several months. In the meantime the family had been living off the meager allowance from the BB. Another holder reported that her husband was considering relocation to Quezon province, where he might earn more from tending a hectare of coconut land. In other words, voluntarism has its limits, and economic vulnerability and necessity could easily end the continued involvement of the BSBB holders. And without any linkages with the community and the barangay, the LSC, and the health center, the BSBB's long-term sustainability is uncertain.

**A.2 The Botika-Binhi at Siláng, Cavite.** There were two Botika-Binhis in operation in Siláng during the project study. For purposes of this research, only the BB in Pooc I was visited and studied. "Pooc" was derived from "Pinag-puukan." It had a total population of 1006, comprising 217 households. Most of the people are followers of El Shaddai, the Catholic religious group. According to the Barrio Captain, Mr. Juan Videla, 90 percent of the Pooc residents are related to each other in one way or another. The most common source of livelihood in the area is farming, and almost all farmers own their land. The average size of agricultural land is one hectare, on which a variety of crops is raised, such as coffee, pineapple, papaya, banana and ornamental plants. Quite a few have become overseas workers (OFWs) in recent years and many women have sought employment as factory workers in the Cavite export processing zones or industrial estates. There are a few migrants from Bicol, the Visayas, and lahar-stricken Pampanga who have made Siláng their new home. Most of them started as transients in search of work during the coffee harvest season, from December to March. Land prices in Pooc I range from ₱150 to ₱300 per square meter.

An active Mothers' Club was already in existence in Poooc I prior to the setting up of the BB. All mothers in the community were required to join the organization. The main project of the club was and still is the Clean and Green Project, a beautification drive that entailed the planting of golden duranta along the roads and maintaining cleanliness in the neighborhood. Other activities included handicrafts and livelihood projects sponsored by the Department of Agriculture. A future project of the club would be the setting up of classes on pre-natal care for the members. The current president of the Mother's Club is Josephine Reyes. In addition to her administrative duties in the organization, she also helps the BB by collecting membership fees and payments on drugs bought on credit.

Susan Noche of FAMUS conducted a seminar on August 1994 at the Primary Health Office (PHO) of Trece Martires, and the BB concept was first introduced in quite a cursory manner since it was not the main objective of the seminar to launch a full-scale information campaign on the BB. Despite this, one of the participants, a midwife named Luisa Jardiniano, became very much interested in putting up BBs in Siláng. The reasons cited for setting up the BB were the lack of medicines, the distance to the nearest drugstore, and the need to provide immediate care and relief to the ill.

FAMUS provided the technical knowledge through a convention attended by members of the Mothers' Club in Poooc I and II. Having recruited twelve other midwives from the rural health unit (RHU), Ms. Jardiniano conducted surveys in order to gather base-line health data on all the barangays of Siláng, as an initial requirement of all BB operators. Seed money of ₱10,140 was raised, ₱2,740 of which half came from caroling and the rest from kind donations made by the mayor and councilors. It was used for initial inventory and office supplies.

The BB in Poooc I was formally established on 14 December 1994. Strong ties with the LGU is very evident. It is the responsibility of the barangay council to choose at least two Barangay Health Workers (BHWs) per barangay. In Poooc I, the BB receives moral and financial support, specially from the barangay captain, Mr. Videla. He strongly feels the need to sustain the operations of the BB. Unfortunately, the experience of the BB in Poooc II has not been as good. Although it was established a month before the BB in Poooc I became operational, it was beset with many problems, mainly political. The BHW and barangay chairman do not see eye-to-eye and there is no support from the councilors.

FAMUS shares the cost with the barangays in the training programs for the operation of the BB. During the study period, there were eight BBs in the FAMUS areas in Cavite: two each in Siláng and Cavite City, and one each in Imus, Bacoor, Maragondon and Bulihan. FAMUS also monitored the books and financial records to ensure accuracy and integrity.

The RHU, under the dynamic leadership of Dr. Engracia dela Cruz, is largely tasked with the implementation of the DOH-PHC programs such as

immunization and family planning. It also provides free generic drugs to the midwives, who in turn distribute them to needy patients. The RHU budget is approved by the Sangguniang Bayan and each year, ₱200,000 comes from the municipal government. One real problem of the RHU is the lack of medicines and vitamins to combat the most common health problems, particularly malnutrition and acute respiratory infection specially among children. Its limited resources are stretched by contributions (mainly in kind) from provincial NGOs with projects in Siláng. The RHU personnel consists of one medical doctor, three registered nurses, three rural sanitary inspectors, one driver, one janitress, one clerk, fourteen regular midwives, five volunteer BHWs, and peripheral health workers.

The immediate past president and vice-president of the BB were then working in Taiwan and South Korea, respectively. The former secretary has also found gainful employment in Siláng. A BHW midwife, Casia Paglinawan, then held the post of treasurer. She was a direct recruit of Ms. Jardiniano, who also happened to be the principal sponsor at her wedding. Casia has been a BHW since 1979. Among her responsibilities were record-keeping, monthly audits, weekly collections of payments made on credit and the purchase of medicines from SMBK. The new president of the BB, Solita Alimuon, was elected on 1 August, and so there have been no serious changes in management.

The BB was run by eleven volunteers, all rural health workers, on a rotating schedule. Despite the fact that they do not receive a salary nor an allowance, they continued to render service because they recognized the need for better health care in the community. They all seemed to have a genuine desire to be of service to their fellows. Should a volunteer decide to leave, it is the barangay captain who looks for a replacement. An office was provided rent-free; the BB was then housed at the barangay hall but there were concrete plans to build a structure on donated land using funds contributed by then newly elected councilors. A glass cabinet stored all the medicines and record books. However, it was noted that no locks had been installed. The BB was open from 9:00 am to 5:00 PM, Monday to Saturday, but a volunteer was always on call to provide medicines outside these hours. Customers could also call on the volunteers at their houses.

The average number of members is 110, with some leaving and others coming back quite regularly. All members were women. In general, if a member were unable to pay the monthly dues for three consecutive months, she would forfeit her membership and corresponding privileges. The usual reasons for non-membership or separation from the BB were: 1) preference for brand-name medicines, or the lack of information on the use and effectiveness of generic drugs; 2) never ill often enough to require a steady purchase of medicines; 3) loss of income or the inability to pay monthly dues; 4) no children who may require medicines on a regular basis; 5) the perception (albeit false) that there was no great difference between the BB prices and those of the regular drugstores.



Monthly dues were pegged at ₱10.00 and were collected by the volunteer-holders. Two bank accounts were kept with BPI-Silang, one for savings largely accumulated from the collection of membership fees and another for sales. Funds from membership fees are never used to purchase medicines. The revolving fund for inventory would be coming from sales revenues. For every ₱2,500 accumulated revenues, ₱2,000 is used to purchase medicines and ₱500 is deposited as savings. The total amount in the bank then amounted to ₱6,700. A general assembly was called once a month to inform members of the BB's activities and current financial status and to decide on what medicines to buy and in what quantities.

A uniform procurement scheme had not yet been established then across all BBs. Ms. Paglinawan would then take the initiative in purchasing supplies from SMBK. Twice or thrice a month (or as the need arose), she would buy medicines worth ₱2,000 to ₱5,000 and often single-handedly carried home an armload of boxes. The purchase of supplies had become more frequent in the months right before the study period because even the BB at Poo II would get their supplies from them. A 5 percent discount was given by SMBK to defray the cost of transport and meals, but Casia received no remuneration for her efforts. She had expressed concern over her failing health and the possibility that she might not be able to continue this sort of work. She was afraid that no other person might be willing to take on the difficult but crucial job of procuring medicines from SMBK.

Drugs with the highest turnover were paracetamol, amoxicillin, ascorbic acid and herbal preparations. A strict policy of "no prescription, no antibiotic" was adhered to. There were many requests for branded drugs; many would refuse to use generics, but the sale of non-generics runs contrary to the BB philosophy of providing affordable medicine to the target clientele. Credit sales of drugs were rare and allowed only for small amounts (₱20) and short periods (one week). No receipts for drugs sold were issued, but every transaction was recorded in a logbook. The mark-up on drugs sold to members was only 5 percent and 30 percent for non-members, either way substantial saving for the buyer. Proceeds from total sales from members equaled those from non-members. There were no other sources of income for the BB other than the interest earned on the savings account.

**A.3 The Botika-Binhi Network of Surigao City.** Surigao City has an active PHC program implemented by the City Health Office through the Federation of Women's Clubs (FWC). Strictly speaking, the PHC itself is a DOH program that is implemented through NGOs. Many of the federation's most active members were the original midwives, later joined by the BHWs. Since the menfolk (mostly husbands of the FWC members) have formed the Barangay Environment and Sanitation Implementing Group (BESIG), these consolidated organizations have decided to adopt the PHC as their organization name.

The current PHC organization in Surigao City traces itself back to 1985 with the revival of the FWC by Midwife Zeny Arana assisted by many, including the then FWC President, Mina Lasaca. It has an active presence in nearly all fifty-four barangays. PHC programs include nutrition and feeding programs (courtesy of the Barangay Nutrition Scholars, BNS); prenatal, postnatal and infant care (courtesy of midwives, trained *hilots*, and BHWs); and beautification, road concreting, and installation of toilet bowls (courtesy of the BESIG). The organization is able to reach the level of *puroks* such that each purok chapter of the PHC can proudly present a regularly updated and publicly displayed health databoard which is regularly consolidated for the City Health Office. Each purok also tends an herbal garden.

Indeed volunteers largely comprise the active core and the community participants of the PHC. They form the most pervasive institution specially among the far-flung barangays of the city. The city government has been most supportive. It provides the PHC with rent-free office space and supplies the construction materials used by the BESIG in its construction projects (with an all-volunteer labor force). Indeed the PHC members themselves acknowledge that in the absence of this support they would not have attained the success they were enjoying then.

Being the only organization with a strong and widespread presence throughout the city up to the purok level, the PHC members in most barangays have close familial and social ties with members of the barangay councils. The degree of social capital is thus quite substantial. Within this context therefore, the Botika-Binhi functions as just one more project among the many that the PHC has already been undertaking, one that was also congenial with the usual operations of the organization.

There are about twenty BBs in operation throughout the City, mainly in the far-flung barangays which are the priority of the PHC. The FWC requires a barangay resolution and permit and a health survey for a BB to be established. In addition, a new BB, if it can raise ₱500 cash as counterpart, is provided by the FWC with ₱2000 worth of medicines as seed capital. The BBs obtain their inventory from the FWC through Ms. Zeny Arana; Ms. Arana frequently travels to Metro Manila since her family of origin are there and she can thus regularly obtain medical supplies from SMBK. She bills the FWC only for transport expense. The City BB Central Office applies a 10–20 percent mark-up on the medicines purchased from the SMBK and recommends a further 10–15 percent markup for BB members. Higher mark-ups are recommended for the island barangays to reflect the higher transport cost. A further mark-up is also recommended for sales to non-members. The Central Office also recommends that the BB members in each barangay hold monthly meetings and plan on developing a standard citywide ID for all BB members to allow purchases at a discount in any BB in the City.

Three BBs were studied in depth, all of them island barangays, namely Libuac, Zaragoza and Danawan. The first two are among the original ten BBs established in the City in July 1994; the third was established in June 1995. In all three, the BB holders and a number of BB members and non-members were interviewed. Eight other BBs were visited after these three BBs. Three of the eight are in the small islands.

Two BBs obtained counterpart funds from the respective Barangay Councils, with Zaragoza raising it from member's registration fees. All charge a ₱10 registration fee and ₱2 monthly dues. Libuac has 50 members, Zaragoza 49 and Danawan 20. In Libuac, the BB occupies rent-free space at the local PHC office; in the other two, the BB occupies rent-free space in the front yard of the respective BB holder, in both cases nipa structures constructed by the local BESIG membership. Holders are all BHWs, married women with no infant at home to care for, and volunteers, charging only for transport cost for inventory build-up.

The holders handle the reports on daily sales, inventory and narrative. A BB treasurer is in charge of collection of monthly dues and registration fees. Holders claim that credit is strictly discouraged and extended for at most one week. But cursory inspection at one BB showed a substantial number of credits extending beyond one week. Moreover, accounting for credit is not undertaken systematically, perhaps because credit is officially discouraged. But the substantial volume of credit transactions noted in two BBs is explained by the holders' difficulty in not extending a degree of compassion towards buyers who are all barangay residents, therefore presumably familiar to the holders. Unfortunately the incidence of credit was not investigated in the three BBs.

Among BB members, all are married women, average age 43, with an average number of 3.1 children. Livelihoods are generally commercial fishing and subsistence farming and fishing. These barangays are all settled communities. All members own their houses. Reasons for joining are mainly to avail of cheap medicines and to help in health projects. It was noticed that in the later BBs observed, members tended to be by and large PHC members. Thus BB matters tended to be among those discussed at the monthly meetings of the PHC. Among the medicines purchased were paracetamol and amoxycillin. Even with the cheap medicines, most have purchased on credit and most have defaulted at least once because of the absence of penalties.

The non-members in the three barangays tended not to have any infant at home and to have a more substantial income. Also in a few cases the non-members tended to equate membership in the BB with membership in the PHC. Finally it was noted in one barangay that members tended to reside at the population center. The Captain noted that recruitment of the farther households still needs to be undertaken.

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