Draft only, not for citation.

The Filipino *Sari-Sari* Store

Hazel Jean Malapit

Econ 778: Seminar in Economic History/
Empirical Political Economy

1 May 2007

Abstract

The pervasiveness of the neighborhood *sari-sari* (variety or general) store in low-income residential communities in the Philippines remains an unexplained neoclassical puzzle. How can such micro-enterprises continue to operate despite shrinking market shares from excess competition? What explains the continuous flow of new entrants? Using an agent-based rational choice approach, this paper analyzes the *sari-sari* store as an organizational innovation that allows the household to combine production and consumption objectives and overcome constraints. The predominance of women as *sari-sari* store proprietors is attributed to the relatively low opportunity cost of women's time, and gender norms that assign domestic responsibilities to women.

1. Introduction

The neighborhood *sari-sari* (variety or general) store is part and parcel of daily life for the average Filipino. Any essential household good that might be missing from one's pantry – from basic food items like coffee and margarine, to other necessities like mosquito coils, soap, and matches – is most conveniently purchased from the *sari-sari* store nearby at affordably-portioned quantities, sometimes even on credit. Apart from the most affluent communities, the *sari-sari* store is a constant feature of residential neighborhoods in the Philippines both in rural and urban areas, proliferating even in the poorest squatter communities. About 93 percent of all *sari-sari* stores nationwide are located in residential areas (Bonnin, 2004: 80; McIntyre, 1955), and are typically operated from a portion of the owner's house (Chen 1997; Bonnin, 2004; McIntyre, 1955; Silverio, 1982).

As early as the 1950s, residential areas in Metro Manila exhibited "a widespread scattering of tiny neighborhood stores," the most common of which is the *sari-sari* store (McIntyre, 1955: 66). He describes these stores in greater detail:

> "…the store is merely an open, stall-like recess on the lower floor of a dwelling. Nearly every block has one to four such stores, located on the corners of the crossroads, with an occasional store in the middle of the block. The range of customers must be limited to the immediate vicinity. Poor neighborhoods, even the most destitute group of squatters' shacks, have a surprisingly large number of these stores." (McIntyre, 1955: 66)

Nearly three decades later, Silverio wrote, "No single socioeconomic institution in the country today boasts greater numerical presence in a Philippine community than the *sari-sari* store. *Sari-sari* stores dot the neighborhood landscape so profusely that sometimes only a single house separates one from another" (Silverio, 1982: 59). His observation is just as true today as it was twenty-five years ago. In a more recent study, Bonnin (2004: 105) observed that it was not unusual to find four or five stores within the same short block, and in one instance, three stores were located side-by-side in adjacent homes.

Although both Silverio and Bonnin conducted their research in urban communities, the popularity of the *sari-sari* store is not exclusively an urban phenomenon.[1] As may be expected in less densely populated areas, rural *sari-sari* stores are fewer and farther in between but just as present as their urban counterparts. An early study by Stoodley (1957: 237) observed that each Tagalog *barrio* or village has at least one *sari-sari* store, usually run by a woman. One can expect the same today in the more remote villages.

The fact that many stores are often clustered in the same area, especially in the urban areas, leads one to suspect that this is not a particularly lucrative income-generating activity.

[1] There is no clear history of how the sari-sari store emerged, although Silverio (1982) suggests that the *sari-sari* store dates back to the Sung dynasty period (1127AD) when Philippine-Chinese trade began. Other accounts confirm the establishment of Chinese agent stores during the Spanish period (Wickberg, 1962: 280), although other retailers may have also existed outside the Chinese network.

These stores carry the same types of goods, charge similar prices for these goods (Bonnin, 2004), and therefore compete based on their location. However, the numerous competitors operating in the same neighborhood limits the market share of each store in a given community. Also, these stores are appear to be more common in poorer neighborhoods (Chen, 1997; Silverio, 1982; Bonnin, 2004), where purchasing power of potential customers are low, and therefore, the potential market for retail goods as a whole is likely to be small. Indeed, store owners recognize that excess competition is a problem (Bonnin, 2006: 105), and many claimed that their stores were "just breaking even" and not making any profits (Bonnin, 2004: 103).

More recently, a study by Coke (2002) on microfinance group lending finds that 35 percent of women borrowers in the Western Visayas region choose to invest in a *sari-sari* store, even though group members are typically neighbors. Market research studies by AC Nielsen report that the number of *sari-sari* stores nationwide grew by an estimated 88 percent between 1997 and 2000 (Bethge, 2003), 14 percent in 2002 (Bonnin, 2004: 80), 13 percent in 2003 (Capistrano, 2005), and 7 percent in 2004 (Amojelar, 2006). These studies confirm the observation that the *sari-sari* store has remained popular as a micro-enterprise, resulting in a growing flow of new entrants despite the oversaturation that already seems to exist.

Despite excess competition, price markups remain high (Chen 1997), and *sari-sari* stores continue to grow, accounting for 90 percent of the country's total retail outlets (Olarte and Chua, 2005). Given that the profitability of such an enterprise is limited, why is there no downward pressure on prices? What explains the continuous flow of new entrants? Perhaps more obvious is why women are more likely to pursue this type of activity. One might argue that women are likely to choose home-based livelihoods because they are constrained by domestic responsibilities. However, if this is the case, then any profitable home-based enterprise should suffice. Does the *sari-sari* store offer women particular benefits that are not available to men?

Using an agent-based rational choice approach, this paper attempts to explain why *sari-sari* stores persist, and why they seem to defy neoclassical profit maximization. This paper argues that the *sari-sari* store is an innovative enterprise that allows households to combine both production and consumption objectives and overcome binding constraints on their investment and employment opportunities. As such, *sari-sari* stores cannot be expected to respond to the same economic conditions as a typical capitalist firm would. These additional factors that influence the entry and exit decisions of store owners create a wedge between the traditional basis for profit maximization and the relevant basis for optimization from the agents' point of view. Therefore, economic conditions that already appear unprofitable in the traditional sense may still induce entry of new stores, consistent with the development path of *sari-sari* stores in the Philippines.

This paper draws on the qualitative work of three researchers on *sari-sari* stores in Metro Manila, representing three snapshots of the development of *sari-sari* stores over the last 25 years. The earliest and most comprehensive study was conducted by Silverio (1982), who reported five detailed case histories of *sari-sari* stores located in two low-income communities, one middle-income community, and a mixed low- to middle-income community. The second study was conducted by Chen (1997), which surveyed communities that had bustling informal sector activities. Stores were randomly selected in proportion to the population of each selected area, but he does not mention which areas are included, nor the number of observations, and instead cites averages for the entire sample. The most recent study is by Bonnin (2004), who conducted a qualitative survey of 30 women *sari-sari* store owners in 3 Metro Manila communities experiencing insecure housing.

The analysis begins with a discussion of the determinants of demand for *sari-sari* store products in Section 2. Section 3 provides an analysis of the supply behavior of potential and existing store owners and offers an explanation for why the *sari-sari* store has been predominantly a woman's activity. Section 4 concludes and outlines areas for future research.

2. Determinants of Demand

In general, demand for any product or service is an increasing function of disposable income. Poorer households are able to afford a smaller bundle of goods and services, whereas wealthier households can afford a larger bundle. In addition, two other factors affect consumer demand for *sari-sari* store products: low and variable income sources, and transactions costs as a share of income. When incomes are low, households are less able to purchase in bulk and would prefer to purchase in quantities smaller than the manufacturer's retail minimum even if the prices are ultimately higher. Purchasing too much can go to waste, either because they have no storage facilities for perishables (i.e. no refrigerator) or because stocking food at home tempts children to deplete the supply at once, disrupting the household's consumption budget (Silverio, 1982: 99-100).

Almost all *sari-sari* stores use retail techniques called *takal* (by measured volume) and *tingi* (by piece), which refers to the division of goods into quantities smaller than is usually available in the marketplace (e.g. cigarettes are sold by the stick, cooking oil by the cup, etc.) (Silverio, 1982; Chen, 1997; Bonnin, 2004, 2006). A recent survey of consumer preferences conducted by Synovate reports that 63 percent of respondents bought items in *tingi*, with the majority represented by the lowest income groups (D & E market segments[2]) (Olarte and Chua, 2005). Bonnin (2004: 81) observes that household dependency on *sari-sari* stores are class-based. For middle-income households, *sari-sari* stores are convenient sources of emergency and impulse goods, whereas for low-income households, *sari-sari* stores serve as their extended pantry, getting products they need at just the right amounts at the time they need it (Bonnin, 2004: 81).

---

[2] The ABCDE market segments used by advertising and market research institutions refer to the following monthly household income (in 2002 Philippine pesos): E, 8000 and below; D, 8001-15000; C, 15001-50000; B, 50001-100000; A, 100000 and above (Alana et al, 2002). Using the 2000 Family Income and Expenditure Survey (FIES) data (NSO, 2000), this classification corresponds roughly to the following income deciles: E, 6th decile and below; D, 6th-7th deciles; C, 8th-10th deciles; A-B, 10th decile (Author's calculations). Note that the D and E market segments comprise the poorest two-thirds of Filipino households.

In addition, if incomes are both low and variable, as may be expected for individuals employed in the informal sector, not only are households unable to advance consumption by purchasing in bulk, they are also in need of credit to smooth their consumption. Chen (1997), whose study was confined to areas in Metro Manila that had a high degree of informal employment, reports that majority of the *sari-sari* store sales are made on credit, representing 23 percent of the store's assets. Similarly, among women *sari-sari* store proprietors in low-income communities, providing credit is an important strategy for increasing sales (Bonnin, 2004).

Transactions costs relative to income is also an important determinant of demand. Transactions costs include transportation costs as well as the opportunity cost of time spent traveling from one's home to the nearest commercial center or market. The accessibility of the *sari-sari* store offers convenience, which becomes more important the further away the community is from commercial areas. This explains why *sari-sari* stores cluster in the interior sections of residential neighborhoods (Chen 1997: 88). Clearly, when income levels are low, even a short *jeepney* ride to the market represents a large cost to the consumer so that poorer communities are more likely to patronize *sari-sari* stores even when supermarkets or other retail stores are within close proximity. On the other hand, higher income communities are more likely to patronize *sari-sari* stores when the nearest commercial areas are relatively inaccessible.

Both these factors also explain the absence of *sari-sari* stores in affluent residential neighborhoods. Wealthier households are able to purchase in bulk from supermarkets, have no trouble storing unconsumed perishable goods, and have no need for consumption credit. Transactions costs are a small part of their budget, especially since they can afford to purchase a month's worth of household goods in one trip. High transactions costs, relatively low incomes and seasonality of income sources also explain why neighborhood *sari-sari* stores are just as important for meeting consumer needs in the rural areas.

In summary, the larger the disposable incomes of households in the community, the larger the potential market size for the neighborhood retail stores. Although households' dependence on the *sari-sari* stores for daily necessities increase the lower their disposable incomes, the relative value of transactions remain small compared to the potential sales from middle-income households. With the added risk of default from poor neighbors in low-income communities, it is seems that more *sari-sari* stores can be accommodated in higher income neighborhoods than in lower income neighborhoods.

Still, why do we observe the opposite? Although there is no conclusive data on the number of stores according to community income levels, researchers have typically oversampled low-income communities (Silverio, 1982; Chen, 1997) or communities with insecure housing (Bonnin 2004), suggesting that lower income communities are more saturated than the middle-income communities. The answer must lie in the supply side of the equation. What explains the *sari-sari* stores' apparent tolerance for unprofitable conditions?

3. Determinants of Supply

Ultimately, the *sari-sari* store is an organizational innovation that traverses the family's production and consumption needs. The recognition that the operation of this enterprise is not separable from the consumption decisions of the household is the underlying reason for its observed defiance of neoclassical profit maximization. In particular, the payoffs that determine the entry and exit decisions of store proprietors incorporate constraints as well as objectives that are not typically accounted for by standard economic theory. The unique characteristics of the *sari-sari* store, its operation from within the home, and the specific form capital takes, that is in the form of consumable household goods, are the basis for its universal appeal.

(a) ***The Entry-Exit Decision***

Given that there is strong demand for neighborhood convenience stores particularly in the interiors of residential neighborhoods and in communities with low and variable incomes, enterprising community residents with access to some capital rush to fill this demand. They will enter so long as the returns to this activity is higher than their next best alternative.

Given the level of capital one is willing or able to invest, K^i , and other community and household characteristics, the payoff to this activity is given by:

$$\pi^i = (1+\mu)\cdot D(\underset{+}{Y}, \underset{+}{\frac{\tau}{Y}}, \underset{+}{K^i}, \underset{-}{N}) - w^i L - rK^i \quad (1)$$

where μ is the markup, *D(.)* is demand, $w^i L$ is the wage bill, and *r* is the opportunity cost of capital representing its next best alternative use. As discussed in the previous section, demand for a particular store in a given community is an increasing function of disposable income, *Y*, transactions cost as a share of disposable income, τ / Y, and the scale of the store measured by the level of inventory, K^i. The scale of the store is included here because a store that carries a wider variety of goods is able to support more transactions, all other things equal. Among the store owners interviewed by Bonnin (2004), low profits have been attributed to the inadequacy of their stock. Profits were also positively related to the value of working capital in the case histories reported by Silverio (1982). On the other hand, the intensity of competition given by the number of existing *sari-sari* stores in the area, *N*, limits the potential market share of each store and thus reduces demand.

As long as $\pi > 0$, i.e. revenues exceed labor and capital costs, new stores will be set up. As more stores enter, the potential market share of each store declines. This results in downward pressure on markups as stores compete for customers. Larger stores with a wider variety of goods are able to attract more customers, and are also likely to enjoy scale economies via larger wholesale discounts. As the payoff to *sari-sari* stores fall, smaller stores who are unable to compete with the cost advantage of the larger stores shut down, allowing the remaining stores to thrive. In equilibrium, the *sari-sari* store earns zero economic profits.

This standard analysis of firm behavior seems to be an accurate description of the behavior of *sari-sari* stores in middle-income communities where the stores are not as ubiquitous: they do not cluster too close to each other, they are more likely to be located in the relatively inaccessible parts of the neighborhood, and there is less competition. On the other hand, low-income communities seem to defy these predictions. Many stores are closely clustered together with only a few houses in between them, some none at all. Despite their small market shares, markups remain high, and continuous flows of new entrants add more pressure to the dwindling demand. How can prices remain high under such unfavorable supply conditions? What induces the flow of new entrants?

If new stores enter an already saturated neighborhood retail market, then it must be the case that the payoffs to this activity continue to be positive. Conditions deemed unprofitable in the traditional sense, may still appear profitable from the agent's point of view once other benefits are considered. This paper argues that there are four main factors that increase the payoffs to operating a *sari-sari* store: (i) low opportunity cost of capital, (ii) capital takes the form of consumable household goods, (iii) low opportunity costs of family labor, and (iv) the strength of personal relations that guarantee reciprocity among neighbors.

Low Opportunity Cost of Capital

Any rational individual who has accumulated some capital seeks to employ it in its most productive use. However, if these savings are too small, it may not be worthwhile to participate in formal savings and investment markets perhaps due to transactions costs. Formal activities also include other costs such as licenses and registration, taxes, and other barriers that likewise contribute to transactions costs and erode whatever earnings potential there is. Therefore, an individual who is able to invest a larger amount of capital will find a wider range of profitable investment projects, as opposed to another individual with less. The existence of profitable investment alternatives is also correlated with the income level of the community. A community with higher disposable incomes can demand and accommodate a greater variety of goods and services, whereas a community with lower disposable incomes is likely to be limited to the basic necessities.

These two observations imply that the relevant opportunity cost of capital considered by the agent in evaluating the payoff to the *sari-sari* store is an increasing function of the level of capital and average disposable income in the community, $r^i(\underset{+}{K^i}, \underset{+}{\overline{Y}})$. Given the same level of investment, an agent in a poorer community will face lower opportunity costs of capital and therefore higher payoffs to the *sari-sari* store compared to an agent in a wealthier community. Therefore, conditions that no longer induce entry in a wealthier community may still induce entry in a poorer community. Within the same community, agents that have access to more capital, be it through savings or loans, will face higher opportunity costs of capital and therefore a lower payoff to the *sari-sari* store. This implies that conditions that no longer induce entry for wealthier agents may still induce entry for poorer agents.

To illustrate, if wealthier neighborhoods have access to more profitable investment alternatives, the opportunity cost of capital for these neighborhoods (r^H) will be higher than in poorer neighborhoods (r^L). This implies that, all other things equal, a potential entrant in a poorer community will evaluate the *sari-sari* store to have higher payoffs than a potential entrant in a wealthier community ($\pi^L > \pi^H$). Therefore, because of differences in the opportunity cost of capital, conditions that already seem unprofitable in a higher-income community could still induce entry in a lower-income community ($\pi^L > 0 > \pi^H$).

Also, it is clear that a *sari-sari* store proprietor that relies on interest-bearing loans (such as 5-6[3]) to finance their operations face higher costs of capital and therefore would require a higher rate of return compared to others who finance their operations primarily from their own savings or from zero-interest loans from relatives. These enterprises will be less tolerant of excess competition and are more likely to thrive only in areas of strong demand, such as interiors of residential neighborhoods with higher disposable incomes.

Combining Livelihood and Consumption/Savings Motives

A unique feature of the *sari-sari* store is that capital takes the form of consumable household goods. Because of this characteristic, there is little risk in losing one's capital because even if the store does not generate enough revenues, capital can be conveniently carried over into future period consumption without any appreciable losses. Therefore, unsold inventory simultaneously fulfill two functions: as investment in an income-generating activity, and as savings in kind. Only goods actually sold become part of the production side, while the unsold inventory is by default allocated to future (or even present) consumption. The ability to combine livelihood objectives, i.e. generating income, and savings motives, is likely to be more important for households whose income sources are subject to variability.

The payoff function can thus be modified to distinguish between capital in the form of sold and unsold inventory:

(2) $$\pi^i = (1+\mu)\cdot D(.) - w^i L - r^i(\underset{+}{K^i}, \underset{+}{\bar{Y}})\cdot K^i_{SOLD} - r^i(\underset{+}{K^i}, \underset{+}{\bar{Y}})\cdot K^i_{UNSOLD},$$

where $D(.) \equiv K^i_{SOLD}$ by definition. Because inventory is considered savings in kind (i.e. future consumption) until sold, the last term of Equation (2) is irrelevant to the payoff function. Therefore, to induce entry, the relevant payoff requires only that revenues exceed labor costs and the opportunity cost of capital for goods sold. This feature increases the payoff to the *sari-sari*

[3] "5-6" is a term used to describe informal loans that charge an interest rate of 20%, i.e. borrow 5, pay back 6. Note that the period of these loans are variable, sometimes as short as a few days.

store relative to other home-based informal activities, which may explain the unparalleled popularity of this enterprise in recent history.

If, in addition, the opportunity cost of capital is low because of limited investment alternatives in poorer communities, or because of the small scale of the investment, then the payoff to the *sari-sari* store is even higher. Clearly, the lower the opportunity cost, the more negligible is the cost of capital for the agent. In the extreme case where the opportunity cost of capital is zero, there is little difference between keeping one's savings under the bed and using it to purchase household goods in bulk. The interaction between the scale of the investment and the extent of investment alternatives is summarized in Figure 1. The opportunity cost of capital is lowest for agents with small levels of capital in poorer communities, so the payoff to the *sari-sari* store will be high relative to other informal sector activities. Agents with small levels of capital in middle-income communities face better alternative investment opportunities and may find other informal activities that yield positive payoffs even without the benefit of being able to combine livelihood and savings motives.

In fact, the diversion of inventory towards household consumption appeared to be a universal practice among *sari-sari* stores. Bonnin (2004: 110) reports that what belongs to the business and what belongs to the home is often a gray area, and that it was common for stock to be diverted for household use. Similarly, Silverio (1982: 117) notes that there is often no distinction between the store's inventory and the family's household resources since family members simply take what they need from the store without paying for it or noting it down. These findings suggest that this fluidity of capital that allows the household to combine production and consumption objectives is an important aspect of the *sari-sari* store.

The savings motive may also explain why there does not seem to be any downward pressure on prices despite intense competition. Prices in *sari-sari* stores are observed to be higher than in supermarkets or other commercial retail stores (Chen, 1997; Silverio, 1982; Bonnin, 2004). High prices may reflect the value of convenience offered by the store, reflecting the transportation costs to the nearest market or commercial area. High prices may also reflect the value of *tingi* and *takal*, the smaller quantities that are not available in other retail stores. In some cases, high prices may also reflect an imputed rate of interest for the credit extended to regular customers since prices are the same for both credit and cash sales (Silverio, 1982). However, when competition is fierce, it is not clear why stores would not use prices to capture a larger market share. In choosing not to lower prices, store owners are actually choosing to allocate a larger part of their investment as savings for future consumption. If goods cannot be sold at a breakeven price,[4] perhaps store owners would rather use the goods for household consumption rather than sell them at cost. It is highly unusual for a *sari-sari* store to sell products at deep discounts to dispose of inventory under ordinary circumstances. Even in the unfortunate case where the household ends up consuming all or majority of its inventory, the household would have still gained from the wholesale prices at which goods were bought.

In addition, saving in the form of household goods also serve as an effective hedge against inflation. For example, households who were able to hoard goods certainly fared better than poorer households during periods of hyperinflation that occurred at the time of the Japanese occupation of the Philippines in the early 1940s. Sicat (2003: 26) reports that in 1945, the prices of most necessities (rice, charcoal, beef, chicken, bananas, cooking oil, salt and soap) were in multiples of 8 to 10 times their prewar prices. As prices fell in the post-Japanese occupation period (Sicat, 2003: 26), these hoarded goods may have served as initial capital for new *sari-sari* stores who saw the opportunity to avoid the devaluation of their savings by disposing of their stock. The strength of the savings motive coupled with the deterioration of economic opportunities also predict a rapid increase in the number of *sari-sari* stores during periods of stagflation, as in the mid-80s debt crisis (Lim, 1992: 4).

---

[4] Note that the breakeven price must exceed the acquisition cost of goods to cover operating expenses and cost of capital where relevant.

Low Operating Costs

The ease of managing the home-based *sari-sari* store, which some suggest is the primary reason for its popularity (Silverio, 1982: 59), really refers to the low operating costs of this type of enterprise afforded by its location at the home and the consequent ease by which other family members including children, the elderly and the disabled, who are otherwise economically unproductive, are mobilized as unpaid family workers. For women especially, home-based income-generating activities allow them to overcome the time constraints imposed by their domestic responsibilities. Multi-tasking extends the productivity of their workday beyond what is possible outside the home, and avoids the costs associated with hiring domestic help. In general, home-based livelihoods entail lower operating costs compared to livelihoods outside the home if the household has an adequate endowment of family labor, or if other constraints attach additional costs to conducting activities outside the home. This cost advantage clearly serves to further increase the agent's evaluation of the payoffs to the *sari-sari* store relative to other income-generating activities outside the home, all other things equal.

In addition, if family members have low opportunity costs, then the imputed wage bill, $w^i L$, will be low or negligible. This benefit will be less important for households who do not have other family members available to tend to the store at home, or households whose family members are employed elsewhere. Also, this appears to be related to the income level of the community. Unemployment and underemployment are likely to be more common in poorer communities, so that family members with low opportunity costs of time are not in short supply. Therefore, in a poor community, agents who have access to a pool of family members are more likely to set up *sari-sari* stores, whereas agents who do not have this advantage are more likely to choose informal activities outside the home (see Figure 2).

If both the opportunity cost of capital is negligible and operating expenses are negligible, then the relevant payoff collapses to only the first term:

(3) $$\pi^{i} = (1+\mu)\cdot D(\underset{+}{Y}, \underset{+}{\frac{\tau}{Y}}, \underset{+}{K^{i}}, \underset{-}{N}).$$

That is, the entry decision boils down to whether or not the store can sell any quantity of goods at a positive markup. In a situation where the market is so saturated that the potential market share is very small, the viability of the *sari-sari* store hinges on the stability of high prices and on the ability of the store owner to attract and maintain loyal customers. For as long as the cost of goods sold is recovered (i.e. sold at a positive profit margin or markup), there is no reason for the *sari-sari* store to close shop under these conditions.

Manipulating Demand

Although demand has been assumed to be exogenous from the point of view of the agent, there are two ways by which the agent can manipulate demand. First, by increasing the scale of the investment, stores can carry a wider variety of goods, creating a virtual monopoly for goods that none of the other stores stock. However, especially for credit-constrained households, the level of investment is not easily varied. This is a strategy that will only be viable for wealthier agents. Second, owners can capitalize on personal relationships and social networks within the community to maintain loyal customers and expand their potential sales despite the existence of other competitors. In exchange for their loyalty to the store, regular customers or *suki* often receive preferential treatment by being able to purchase on credit and enjoy discounts or extra portions (Silverio, 1982; Bonnin, 2004). Therefore, the agent's ability to capture a larger share of the market also increases the payoffs to the *sari-sari* store. In a community with excess competition, an agent with stronger social networks is more likely to set-up a *sari-sari* store compared to an agent who is less connected, all other things equal.

When asked how they feel about the heavy competition, one store owner said, "I think if I'm working then others have the right to work also. Everyone has the right to have their own business… it's OK (the competition), it's always there." (Bonnin, 2004: 105). Perhaps one reason for this optimism is that one can successfully enlarge and sustain one's customer base by forging bonds of familiarity, by being *malambing* (charming) and *mabait* (pleasant), and engaging in *chica-chica* (chit-chat or gossip) with customers (Bonnin 2004: 113). One store owner in a low-income neighborhood remarked that good relationships with customers is the antidote against competition (Silverion, 1982: 119).

Offering goods on credit is clearly one way by which stores compete for customers – a strategy to ensure patronage. In this case, the *sari-sari* store and its loyal customers function like a savings club for consumption. The household with savings, the *sari-sari* store, advances consumption for other households, who then pay back their advances according to the frequency of their income flows. Silverio (1982: 129) notes that there is no standard time for payment of credit, although weekly or bi-monthly payments corresponding to the debtors' paydays are the expected norm. In these arrangements, high prices would then include some imputed rate of interest for the credit. However, this strategy is likely to be more important in more closely-knit communities with strong personal relationships that guarantee reciprocity. Otherwise, store owners cannot expect their neighbors, to whom they extended credit, to keep their end of the bargain by paying back loans regularly and continuing to purchase exclusively from their store. Core Filipino values that ensure reciprocity such as *pakikisama* (maintaining harmonious personal relations) and taking care to avoid causing *hiya* (shame, embarrassment or inferiority) (Bonnin 2004: 112) are likely to be strongest in long-standing neighborhoods with less mobility among residents. Therefore, in addition to other community characteristics such as levels of disposable income and transportation costs, demand for retail goods in a given community is also a positive function of the degree of reciprocity. When reciprocity is enforceable, the possibility of extending credit relaxes the budget constraint of customers and increases their demand for goods.

Because the intensity of competition is what drives stores to attract a regular customer base, the incentive to offer credit will be stronger in poorer communities where customers are also more likely to welcome credit. However, as already mentioned, this is only a viable strategy if borrowers can afford to pay back loans regularly, and only in communities where there exist more personal relations among neighbors. An interesting contrast can be made between two stores in Silverio's (1982) study. Stores in the low-income communities in Sampaloc do not extend credit at all to their customers because of the lack of confidence in the paying capacity of borrowers, whereas stores in a similar community in Caloocan City extend some credit to foster good neighborhood relationships and thereby increase sales (Silverio, 1982: 100-101). This is further evidence that the extension of credit depends on the enforceability of reciprocity, which appear to be stronger in the Caloocan City community.

Although a significant portion of *sari-sari* store sales are indeed made on credit (Chen, 1997; Bonnin, 2004), the very poor, who need credit the most, are often unable to borrow even from the *sari-sari* store (Silverio, 1982). For middle-income communities, sales on credit also appear to be a substantial, although in this case, households use credit out of convenience and not as a privilege for patronage (Silverio, 1982: 106). Higher-income households prefer to pay the *sari-sari* store a lump-sum monthly payment rather than paying in cash for every transaction. It is also interesting to note that the sense of good personal relations is likewise less developed in the higher income communities because it is often the domestic help who transacts with the store owners, compared to lower income communities where residents themselves interact with the store owners (Silverio, 1982: 125).

To summarize, agents who are most likely to choose to operate a *sari-sari* store have the following characteristics: their income sources are subject to variability, they have relatively small levels of capital or savings, they have access to a pool of family labor with low opportunity costs of time, and they live in low-income communities with strong social networks but with limited investment and employment opportunities. The four factors outlined in this section represent benefits to the *sari-sari* store that are unaccounted for by traditional profit maximization. They all contribute to a higher valuation of the payoffs to the *sari-sari* store representing a wedge between traditional definition of profits and the relevant payoffs on which entry and exit decisions are based. Because agents evaluate higher payoffs to the *sari-sari* store, unprofitable conditions in the traditional sense may still induce entry, especially for households who have higher valuations of these benefits. In equilibrium, this results in a greater number of stores in communities where limited investment and employment opportunities exist, consistent with the oversaturated scenarios found in low-income communities.

Taken together, all these factors predict important differences in the conditions of supply in poorer versus wealthier neighborhoods. Poorer communities tend to be highly saturated, with smaller stores that make extensive use of repackaging goods into smaller quantities (*takal* and *tingi*). If the community is characterized by strong personal relationships so that reciprocity is enforceable, then a substantial share of their sales will be on credit to regular customers. On the other hand, wealthier communities will have larger stores in smaller numbers that are located in relatively inaccessible areas. Product variety is more important than selling goods in smaller quantities, and stores typically offer credit to their neighbors for convenience. These conditions are summarized in Figure 3.

Regardless of the income level of the community, markups remain high, even under highly competitive situations. In poorer communities, the reluctance of store owners to lower prices may be reflecting savings motives, i.e. they would rather save goods for future consumption than sell them at cost. They are also more willing to use their social networks to attract and maintain regular customers, rather than reduce prices. Although there does not appear to be any overt collusion, high markups may also be stable because store owners do not wish to incite ill relations among their neighbors by engaging in price competition (Bonnin, 2004). While social norms do play a part in the persistence of high markups, it is doubtful that some agents would not deviate from this norm in a highly competitive environment, especially in more transient communities where social networks are not very strong. Therefore, high markups are more likely to be supported by the savings motive rather than socially-enforced cooperation.

(b) **Gender Dimensions**

Many claim that the *sari-sari* store has endured as the most popular form of home-based informal livelihood for women (Bonnin, 2006). Chen (1997) reports that indeed female workers form majority of the labor force in this segment of the retail market. In line with the discussion on the entry decisions of agents, the dominance of women in this type of home-based activity is rooted in three interrelated factors: (i) gender roles that assign domestic responsibilities on women impose constraints on their time and attaches additional costs to activities outside the home; (ii) women face lower opportunity costs of time relative to men in the labor market, and (iii) the savings motive is stronger for women relative to men because of their role as household managers.

Bonnin (2004: 96) reports that one of the motivating factors for setting up a *sari-sari* store for women is the need to attend to domestic responsibilities after marriage or upon having children. Domestic duties are viewed as the natural domain of women, and although men may help with some household responsibilities, such participation is low and often inconsistent (Bonnin, 2004: 101). For women in low-income households who cannot afford household help and who have no other extended family to depend on, withdrawing from the labor force is often the only solution. In general, home-based income-generating activities are desired for its flexibility because it is the most compatible with women's domestic responsibilities (Eviota, 1992; Ofreneo, 2005). The additional constraint of domestic responsibilities imposes costs on activities outside the home because of the need to hire domestic help or because of the additional time burden on women who need to fulfill their domestic responsibilities in addition to the time already spent working outside the home. This serves to reduce women's valuation of the operating costs of home-based livelihoods, including *sari-sari* stores, as opposed to other income-generating activities outside the home. In addition, because men earn more than women on average (Lim, 2000: 1295-98), the opportunity cost of time is higher for men relative to women, eroding the cost advantage of a home-based informal activity for men. All these factors serve to lower the operating costs of the *sari-sari* store for women relative to men, so that conditions that no longer induce entry for male agents may still induce entry for female agents.

While male gender identity is based on their role as the breadwinner, women are expected to stretch the household budget and manage the purchase of food and other household necessities (Bonnin, 2004: 98; 2006). If there is not enough income to meet the household's needs, women are responsible for financing the shortfall, be it through creative budgeting, borrowing for immediate daily needs, or finding other sources of income (Bonnin, 2004: 98). Because of their role as household managers, the possibility of combining livelihood and savings objectives through the *sari-sari* store is more valuable for women relative to men. The payoff function in Equation (2) can be revised to incorporate a measure for the relative importance of the savings motive, θ :

(4) $$\pi^{i} = (1+\mu)\cdot D(.) - w^{i}L - r^{i}(\underset{+}{K^{i}},\underset{+}{\overline{Y}})\cdot K^{i}_{SOLD} - \theta\, r^{i}(\underset{+}{K^{i}},\underset{+}{\overline{Y}})\cdot K^{i}_{UNSOLD}\,,$$

where θ approaches 0 for women, while θ approaches 1 for men. Combining this with the differences in the opportunity costs of time where women's imputed wage is lower than men's imputed wage, $w^{F} > w^{M}$, female agents will evaluate the payoffs to the *sari-sari* store to be higher compared with male agents, all other things equal. Therefore, one would expect women to dominate in the oversaturated scenarios found in low-income communities, whereas *sari-sari* stores run by men are likely to behave more closely in line with the predictions of traditional profit maximization.

This prediction is consistent with the case studies presented by Bonnin (2004; 2006), who reports that many of the stores were surviving on very low profits or were just breaking even, in light of the fact that 69 percent of the sample considered the *sari-sari* store as their main source of household income. Despite the very low earnings, most of the women she interviewed view their stores as being extremely vital to their survival (Bonnin, 2006: 142). This suggests that there are indeed benefits to the *sari-sari* store that may not be captured by the traditional definition of profits.

4. Conclusion

This paper offers an agent-based, rational choice explanation to the puzzling path of development of *sari-sari* stores in residential neighborhoods over the last 25 years. The *sari-sari* store is viewed here as an organizational innovation that allows the household to combine production and consumption objectives and overcome constraints. These additional considerations create a wedge between the traditional basis for profit maximization and the relevant basis for profit maximization for the agent. All of these factors predict that lower income communities are likely to exhibit excess competition where the non-traditional benefits to the operation of a *sari-sari* store are stronger. This implies that there will be greater tolerance for low profits and therefore greater saturation in these communities. On the other hand, in higher income communities with alternative investment opportunities, low profits will induce exit and any remaining stores are expected to be reasonably profitable in the traditional sense.

The same analysis applies when looking at the gendered pattern of development of *sari-sari* stores. Women are found to be more likely to operate *sari-sari* stores in low-income communities because of their low opportunity costs of time relative to men, and gender norms that ascribe domestic chores and household budget management as their primary sphere of responsibility.

Some view the *sari-sari* store as a coping strategy primarily used by women to diversify sources of income (Bonnin, 2004; 2006; Chen, 1997), while others view the *sari-sari* store as exploitative, victimizing their poor customers with high prices that prevent them from accumulating savings of their own (Silverio 1982). As an industry, the informal home-based *sari-sari* store has been described as inefficient because of their high and uneven prices, and because of the lack of record-keeping and the frequent diversion of inventory for household use, *sari-sari* stores are "not managed scientifically as a trained businessman would manage his business" and instead operate "intuitively in search of profit" (Silverio, 1982: 117). One sociologist has also questioned the economic rationality for the demand for the *takal* and *tingi* products in *sari-sari* stores, suggesting that nearsightedness and the "smallness mentality" has been ingrained in the Filipino culture (Olarte and Chua, 2005).

The analysis in this paper provides economic insights into these observations. Demand for *sari-sari* store products arise not out of a preference for 'smallness' or nearsightedness *per se*, but as a rational response to the constraint imposed by customers' low variable incomes and their inability to obtain consumption credit elsewhere. *Sari-sari* stores are not comparable to 7-11. They serve very different objectives and therefore cannot be expected to respond to the same economic conditions in the same way. Store owners do maximize profits, but this objective is subject to the constraints on the alternative uses of their capital, the alternative uses of their idle household resources, and the savings motive. In this sense, the *sari-sari* store is an innovative way to pursue multiple objectives and overcome binding constraints.

In general, the persistence and proliferation of the neighborhood *sari-sari* store is highly correlated to the income share of the poorer population and the overall level of development of the Philippine economy. The more recent explosion in the numbers of *sari-sari* stores, growing by an estimated 88 percent between 1997 and 2000 (Bethge, 2003), is likely to be a consequence of the contraction following the East Asian Crisis. Indeed, Bonnin (2004) reports that 63 percent of the women reported having waged work positions prior to opening their business, and that the transition to informal employment was often a consequence of job displacement. When individuals are released from the binding constraints of poor economic opportunities, the need for the *sari-sari* store, both from the demand side as well as from the supply side, is likely to decline.

References

Alana, Bienvenido P., Emelina S. Almario, Aurora E. Perez, and Odilyn M. de Guzman. (2002). "Contraceptive Self-Reliance Through Financial Sustainability: A Market Segmentation Approach," Paper for the POLICY II Project-Philippines, The Futures Group, [http://www.constellafutures.com/abstract.cfm/2937, accessed 04/22/07].

Amojelar, Darwin G. (2006). "Ad spending to spread beyond trimedia – AC Nielsen," *The Manila Times*, 01 July 2006, [http://www.manilatimes.net/national/2006/july/01/yehey/business/20060701bus2.html, accessed 04/15/07].

Bethge, Wolfgang (2003). "Sari-Sari Stores," (translated from German), [http://home.arcor.de/be/bethge/sarieng.htm, accessed on 03/27/07].

Bonnin, Christine (2006). "Women's experiences as home-based traders in Metro Manila: A case study of the neighborhood store," *Research and Practice in Social Sciences* 1(2): 132-155.

Bonnin, Christine (2004). "Windows to the Market: Exploring Women's Strategies and Supports as Home-Based Traders in Metro Manila," MA Thesis, Dalhousie University, Halifax, Nova Scotia, Canada.

Capistrano, Francis Y. (2005). "Modern sari-sari stores for modern consumers," Business World, 17 January 2005, [http://www.itmatters.com.ph/features.php?id=010705b, accessed 04/22/07].

Chen, Kuang-Jung (1997). "The Sari-Sari Store: Informal retailing in the Philippines," *Journal of Small Business Management* 35(4): 88-91.

Lim, Joseph Y. (1992). "A Study on Philippine Exchange Rate Policies," Philippine Institute for Developing Studies (PIDS) Working Paper Series No. 92-09, August.

Lim, Joseph Y. (2000). "The Effects of the East Asian Crisis on the Employment of Women and Men: The Philippine Case," *World Development* 28(7): 1285-1306.

McIntyre, Wallace E. (1955). "The Retail Pattern of Manila," *Geographical Review* 45(1): 66-80.

National Statistics Office (NSO). (2000). Final Results 2000 Family Income and Expenditure Survey, [http://www.census.gov.ph/data/sectordata/2000/ie00fr18.htm, accessed 04/22/07].

Olarte, Avigail and Yvonne T. Chua (2005). "Mini-Size Me," *i-Report: The Investigative Reporting Quarterly*, Philippine Center for Investigative Journalism (PCIJ), Jan-Mar, Issue No. 1, [http://www.pcij.org/i-report/1/mini-size2.html, accessed 3/23/2007].

Ofreneo, Rosalinda Pineda (2005). Women and Work, Quezon City, Philippines: University of the Philippines Open University.

Sicat, Gerardo P. (2003). "The Philippine Economy During the Japanese Occupation: 1941-1945," University of the Philippines School of Economics (UPSE) Discussion Paper No. 0307.

Silverio, Simeon G. Jr. (1982). "The Neighborhood Sari-Sari Store," in Marie S. Fernandez, ed., The Philippine Poor I: Two Monographs, Manila: Institute of Philippine Culture, Ateneo de Manila University.

Stoodley, Bartlett H. (1957). "Some Aspects of Tagalog Family Structure," *American Antrhopologist* 59 (1957): 236-249.

Wickberg, Edgar (1962). "Early Chinese Economic Influence in the Philippines, 1850-1898," *Pacific Affairs* 35(3): 275-285.

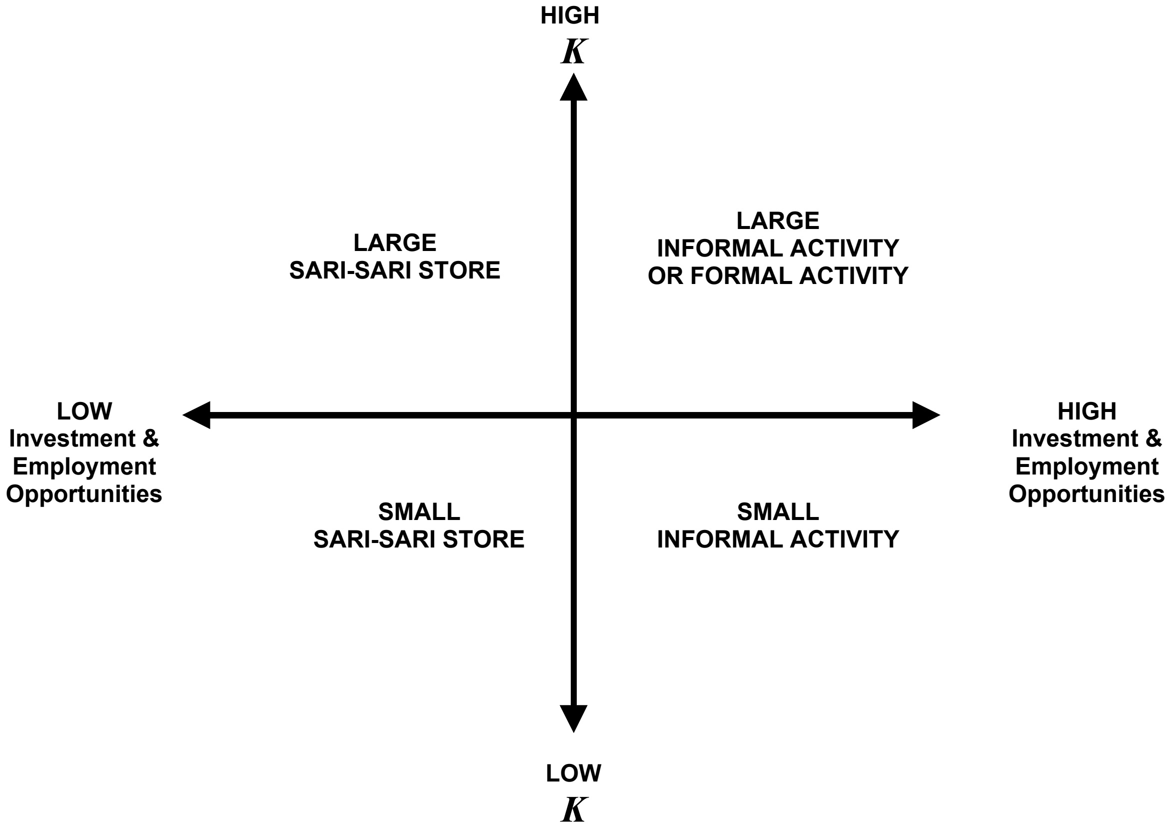

Figure 1:
Viable Enterprises by of Community Type & Scale

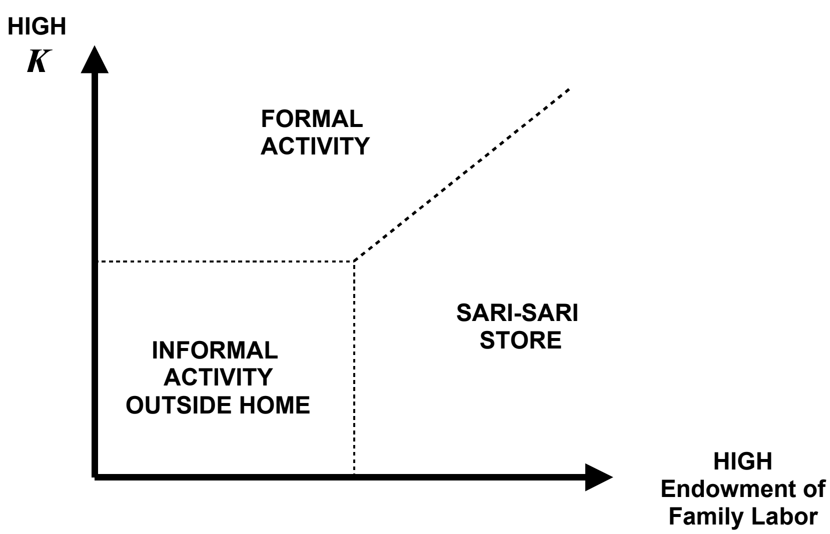

Figure 2:
Viable Activities by Household Type & Scale

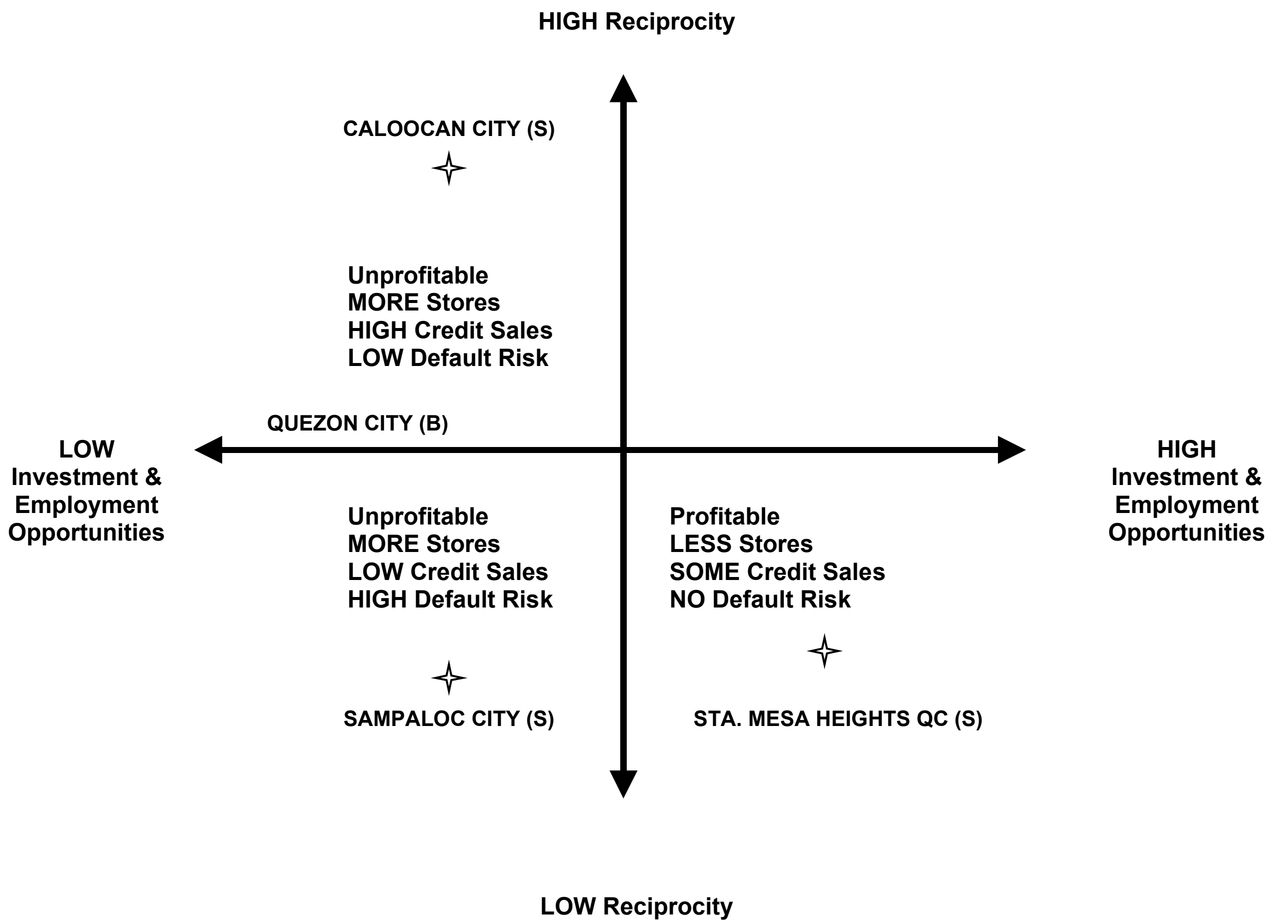

Figure 3:
Characteristics of Sari-Sari Stores by Community Type & Case Studies from Silverio (1982) and Bonnin (2004)