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INFORMAL FINANCE AND WOMEN IN EGYPT: "BANKS" WITHIN BANKS

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Abstract

Specialized credit programs for women have emerged recently in many low-income countries. Based on experience in earlier credit programs for other disadvantaged groups, one might expect that these programs for women will encounter difficulties. Relying on research done in Egypt in mid-1993 we suggest an alternative strategy for providing formal financial services to women.

Our research focused on informal finance among employees of the Principal Bank for Development and Agricultural Credit (PBDAC). Two types of informal finance were studied: self-help financial groups that are called gam'iyas in Egypt, and merchant credits. The study involved a census of gam'iyas operating in 4 village banks, 2 branch banks, one governorate bank, and half the departments in the head office of the PBDAC system. The study covered about 2,500 of PBDAC's 40,000 employees and also included several case studies of bank employees who sold goods to other bank employees on credit. In addition, a case study was done of one community to clarify the extent to which informal finance permeated rural areas.

The study found that about 4 in 5 of PBDAC's employees were members of gam'iyas operating within the Bank and that about 9 out of 10 of the households with PBDAC employees participated in gam'iyas. The average person put about $30 each month in gam'iyas, which amounted to 10 to 20 percent of their total bank compensation. Although most of the employees had bank accounts, the majority of these accounts were moribund. In addition, many of the Bank employees also bought goods from other employees on credit.

The village study showed that nearly two-thirds of the households participated regularly in gam'iyas, that many of them bought goods from merchants on credit, and that numerous women stored their savings with informal moneykeepers. Many of the merchants in the community competed by selling merchandise and farm inputs on credit. The amount of informal finance found was surprising, given the number of banking facilities that operated in the area studied. We were also surprised by the amount of informal saving that was occurring among people of modest means.

The research showed that PBDAC was neither satisfying the financial requirements of its employees nor the demands for financial services by most villagers, especially women. Many Egyptians make deposits in gam'iyas and with moneykeepers and likewise extensively use small and short-term loans from gam'iyas as well as from merchants. Using informal finance as a proxy, banks in general, and PBDAC in particular, are not providing some of the types of financial services that are most popular in Egypt, particularly among women. At the same time, women play a prominent role in many popular forms of informal finance, demonstrating that many of them are financially literate.

PBDAC and other banks in Egypt are providing few financial services to their own employees, thus encouraging the operation of informal banks within banks. If formal banks cannot compete with informal finance in their own offices, they will be unable to effectively compete with informal finance in the rest of the economy. It appears that PBDAC has opportunities to expand their female client base, especially in rural areas. They might do this by assigning female employees to seek more women clients, especially as depositors. Some of these depositors might later qualify as borrowers if the bank adjusts its lending technology to provide more small and short-term loans. PBDAC might also indirectly expand the informal credit available for women by increasing its formal lending to rural merchants. A moderately successful PBDAC program that attracted women clients would result in millions of Egyptian women having sustained access to formal financial services. In contrast, targeted credit programs for women will likely have difficulties in providing sustained credit access for several thousand women in the country.

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Mayada M. Baydas, Zakaria Bahloul and Dale W Adams[1]

I. INTRODUCTION

Credit programs for women are in vogue in numerous countries. Behind these efforts lie the assumptions that formal lending is gender biased and that women must be taught how to use finance. These programs are reminiscent of early endeavors--based on analogous assumptions--that targeted loans to farmers in general, to operators of small farms in particular, and to entrepreneurs with small businesses.[2] Since many of these earlier credit efforts performed poorly it is perhaps not unrealistic to predict that credit programs for women will encounter similar difficulties.[3] This leads us to question the assumptions on which these credit programs are based. Is the primary explanation for an economic group's lack of use of formal finance due to idiosyncratic characteristics specific to the group and to prejudices against its members, or is the explanation more systemic in nature? Do all

[1] The Agency for International Development (A.I.D.) funded our research. This included support from two offices in the Research and Development Bureau: the Women in Development Office and the Office for Economic and Institutional Development. We also appreciate the encouragement we received from PBDAC, from the A.I.D. Mission in Egypt, and from the Chemonics group. Edgar Ariza-Nino, Tim Seims, Melissa Brinkerhoff, Ali Kamel, John Foti, Douglas Clark, Wilmot Averill, William Ellis, Kamel Nassar, and Mahmoud Nour were especially supportive of our work. The usual disclaimers apply.

[2] See Donald (1976) and also Webster (1989) for reviews of some of these programs.

[3] The problems in these programs included loan defaults, excessive transactions costs, dependency on subsidies and outside funding, small numbers of beneficiaries, and efforts that were often transitory.

marginal groups in a society under-use formal financial services for essentially the same reasons--reasons that may be exacerbated by targeted credit programs?

We use information from Egypt to shed light on these questions. Our study concentrated on employees of the Principal Bank for Development and Agricultural Credit (PBDAC) and surveyed their use of formal and informal financial services.[4] We found a bazaar of informal financial arrangements among these employees, especially the women, that amounted to informal banking inside a formal bank. Before discussing our findings we present background on PBDAC and on informal finance in the country.

II. BACKGROUND ON PBDAC

Since 1985 the Egyptian government, as part of a structural adjustment program, has increasingly exposed economic activities to market forces, particularly in agriculture. These reforms included removing most price controls, eliminating subsidies on farm inputs, and allowing private firms to handle most product and input marketing. The structural adjustment program also included reforms in financial markets. By the early 1990s interest rate policies were generally liberalized, lending targets and loan quotas were mostly removed, and banks were withdrawing from non-banking activities. These economic and financial reforms had an important impact on the Principal Bank for Development and Agricultural Credit (PBDAC).[5]

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[4] Informal finance encompasses financial transactions that occur outside the purview of central monetary authorities.

[5] The acronym PBDAC is shorthand for a financial system that includes a head office in Cairo, Governorate banks, branches of both the Cairo head office and Governorate

Aside from PBDAC, which is classified as a special bank, most of Egypt's banks are concentrated in urban areas. Relatively few of the clients of these institutions are women, only a small percentage of the bank employees in rural areas are female, and few women employees work in positions that involve policy making or dealing with clients.

PBDAC has branches throughout the country and is the only supplier of formal financial services in many villages and small towns. Its heritage includes cooperatives, land reform, close ties to ministries dealing with agriculture, and involvement in non-banking activities (Moharrum 1983, Rochin and Grossman 1987; Sadowski 1991, Shaker 1982). The bank performs most banking functions, but is not permitted to offer current accounts and was also exempted from reserve requirements imposed on other banks.

In addition to providing loans to many farmers and cooperatives, from 1976 until 1993 the bank also monopolized the sale of fertilizer and farm chemicals. Many loans were typically made in kind based on credit formulas and were recovered through controls exercised over product markets by the bank or by other parastatels. To perform these functions the Bank evolved five institutional layers: a head office in Cairo with several branches, 18 regional banks, 155 branches of regional banks, 801 village banks that had a correspondent relationship with nearby regional banks or their branches, and approximately 4,300 sales outlets for farm inputs that were mostly affiliated with village banks. In the early 1990s

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banks, and village banks. Prior to 1993 the system also included a large number of retail outlets and warehouses that handled farm inputs.

PBDAC had more than 40 thousand employees, approximately 2,000 of which were located in the head office in Cairo.[6]

Unlike many rural development banks PBDAC was not burdened by loan defaults or by the need to solicit most of its funds from government or donors to sustain lending. It made substantial profits on its credit/input transactions, paid hefty taxes to government, and provided loans directly or indirectly to a substantial proportion of the farmers--mostly men--in the country. In late 1992 the bank had the equivalent of nearly $1.2 billion dollars in outstanding loans, but it only had about $500 million in deposits that were mostly owned by cooperatives and by other agricultural organizations.

Major changes in the Egyptian economy increasingly pushed PBDAC out of its comfort zone into terra incognita during the early 1990s. Financial reforms increased the cost of funds that the bank previously borrowed from other banks on concessionary terms and forced PBDAC to apply higher interest rates on both deposits and loans. Liberalization of product markets resulted in PBDAC having less control over loan repayment than previously and the privatization of farm input markets eliminated a third or more of its profits. In the early 1990's these changes left PBDAC with about one-third of its employees who were redundant--mostly those who had been selling farm chemicals and fertilizer--declining profits, a shrinking loan portfolio, and some loan recovery problems. Not only did the bank lose its input business, but it also lost part of its lending business that was tied to input sales.

[6] For many years the Egyptian government guaranteed employment for school graduates and PBDAC was often required to hire new people to help fulfill this pledge.

As a result, in 1993 the bank was faced with downsizing, seeking new clients, and also redefining its corporate mission.

III. INFORMAL FINANCE IN EGYPT

There is meager information on informal finance in Egypt. The concentration of economic activities in state-owned enterprises in the past likely stunted the informal finance that accompanies private commerce. Cultural norms about lending and borrowing may have further constrained informal finance and also dampened investigation of this subject. At the same time, the overall repression of formal financial markets, other distortions in the economy, and large inflows of remittances from workers overseas stimulated a hidden economy that fostered informal finance (Sadowski 1991). The rapid rise and fall of large but unofficial Islamic Money Management Companies during the early 1980s was a manifestation of these activities (Kazarian 1993).

Anecdotal information suggests that lending among friends and relatives, between landowners and tenant/workers, within marketing systems, and by moneylenders is also common. Although not documented, an expansion in informal finance likely accompanied the growth of the private sector in agricultural markets in the early 1990s. Fragmentary information also shows that self-help financial groups with the generic name of rotating savings and credit associations (ROSCAS), called gam'iyas in Egypt, are common.[7]

[7] For further background on ROSCAS see Bouman 1978. Hajaj 1993, Van der Akker 1987, Van Nieuwenhuijze and other 1985, and Singerman 1989 provide additional information on the gam'iyas in Egypt.

Gam'iyas

The term gam'iya translates literally as 'association' in English. ROSCAS are popular among all economic and social classes in many countries, including Egypt. These groups may be organized around a place of work, around where people live, or within family or friendship circles. ROSCAS have become a significant social and economic phenomenon in Egypt (Hajaj).

Typically a ROSCA is comprised of a small group of individuals who contribute a given amount or share to a pot periodically with the pot being given in rotation at the time of collection to a member of the group. In its simplest form the frequency of contribution is linked to income flows and the order of rotation is determined by lot. Contributions may be made daily among merchants in central markets or bi-weekly or monthly among salaried workers. After all members of the group have received a pot the group may disband, may add or delete members and then continue, or simply recycle with the original membership.

ROSCAS are flexible and generate financial contracts that are tailored by the group. The size may vary from a handful of individuals to several hundred people. Members may be all women, all men, or a mixture of both. The amount of each person's share can range from the equivalent of just a few pennies to hundreds of dollars. Several individuals may divide a share by each paying for a fraction of a share and then splitting their pot proportionally. Informally, members may also renegotiate their position in the rotation to receive the pot if emergencies arise (Singerman 1989).

The financial intermediation that occurs in a gam'iya is similar to that done by a bank. A hypothetical example illustrates this point: A monthly gam'iya may be organized by an individual who negotiates with nine other members to receive a pot of $900 (9x$100) the first month. Essentially, the organizer receives a $900 loan free of interest and agrees to repay in nine monthly installments of $100 each through her share payment in subsequent monthly rotations of the group. Nine members must each deposit (save) $100 the first month to provide the funds lent to the group organizer. The person who receives the second pot converts from being a depositor to being a borrower; she essentially obtains a loan for $800, even though she receives a pot of $900 from the other nine members. The $100 difference being a withdrawal of the share she deposited in the first rotation of the group--the $100 dollar loan installment paid by the first borrower/organizer. Additional members convert from being depositors to being borrowers until the cycle is completed and all members have received a pot and repaid their loans. The last person is a net saver throughout since the $900 that she collects from the group members the 10th month are her monthly contributions (deposits) made in earlier rotations of the ROSCA.

The basic function of a bank is comparable to the operation of a ROSCA. Instead of being members of a gam'iya, ten people may separately visit a bank on the last day of a month where nine of them first deposit $100 each and the tenth person immediately receives a $900 loan. The loan contract entitles the borrower to a sum of $900 which is repaid in 10 monthly installments of $100, the tenth payment being interest. The interest allows the bank to cover its cost of intermediating between depositors and borrowers and also provides a reward for depositors. If the same 10 individuals repeat their monthly bank visits to make additional deposits, to repay their loans, or to obtain loans their actions duplicate the operations of a ROSCA; the main difference being the interest payment needed to sustain the formal intermediary and to reward savers.[8]

Other forms

Other types of informal finance such as trade credit are also reported to be common in Egypt. As is the case in most countries, merchants often sell goods on credit to customers (Early 1993). Pawnbrokers provide loans in exchange for some consumer durables, especially gold (Early 1993). Moneylenders exist in both rural and urban communities, although they do not advertize that they charge interest (Van den Akker 1987). Some of these informal financial arrangements were encountered in our study.

IV. STUDY DESIGN

Few people would be surprised to find informal finance in remote regions without banks or among unsophisticated people. In both cases observers might conclude that participants used informal finance because they lacked access to a supply of formal financial services--informal finance being popular only by default. This line of reasoning lies behind most recent credit programs for women, the assumption being that women do not have access to formal finance or do not understand it (Weidemann and Merabet 1992). An alternative interpretation might focus on the demand for financial services and conclude that people use informal finance because it provides more attractive financial services than does formal finance--informal finance being the first choice.

[8] In some countries, especially in Asia, the ROSCA rotation is determined by bids that effectively result in interest being paid by borrowers to savers. We found no evidence that bidding was practiced in Egypt, possibly because of religious feelings about interest.

One way of separating the demand factors from other factors that impinge on finance decisions is to study informal finance among individuals who are obviously knowledgeable about banking and who have ready access to formal financial institutions. It is for this reason we concentrated our study on PBDAC employees. Most of these employees are well educated and all of them have daily contact with formal finance through working in bank offices. If they choose to use informal finance it is not because they lack either physical access to banks or knowledge about banking.

We did our analysis in two phases. One phase involved studying the participation in gam'iyas by PBDAC employees working at four levels in PBDAC. This included doing interviews in the following units that were located in Cairo, the governorates north of Cairo, and also in and around Suez:[9]

- a census of gam'iyas in 4 village banks where there were about 20 employees per bank;
- a census of gam'iyas in 2 branch banks where there were approximately 100 employees per branch;
- a census of gam'iyas in one governorate bank where there were over 200 employees;
- and a census of gam'iyas in five out of ten divisions in the main PBDAC office in Cairo. This involved about half of the 2,000 employees in the head office.

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[9] In late 1992 two of the authors interviewed PBDAC employees in a handful of village and branch banks located in middle Egypt and also in and around Alexandria about their participation in informal finance. This, and our discussions with PBDAC managers who had worked in other regions led us to conclude that gam'iya participation among PBDAC employees was common throughout the country. This fragmentary information was the primary reason for our subsequent research.

Data were collected in mid-1993. Our procedure involved using informants to identify the gam'iyas that existed among the employees in each division selected at the head office and in the other banking units surveyed. A total of 51 gam'iyas were thus identified. Next, the leaders of these gam'iyas, two randomly selected members of each gam'iya, and a non-member in the office, if any, were interviewed.

Shortly after beginning our research we heard about additional informal financial activities in PBDAC that we had not anticipated. A number of employees were moonlighting as part-time merchants who sold a variety of goods to a substantial number of other bank employees on credit. Unfortunately for our research, shortly before we began our interviewing the new Chairman of the bank issued a directive that employees should stop selling merchandize on bank time. This drove these activities underground and made employees leery about answering questions regarding these transactions. We were, nevertheless, able to complete case studies on several PBDAC employees/merchants that illustrate how these arrangements operated.

The other phase of our research was a case study of informal finance in Tersa village, a mid-sized rural community located north of Cairo. Our main objective in this phase was to evaluate the extent to which informal finance entered village activities. Through the use of local informants we identified and then interviewed about 20 gam'iya leaders, interviewed a few of the members of these gam'iyas, and then interviewed a sample of merchants operating in the central business district. Although we did not base our interviews on a random sample of merchants or households, we feel our information provides a representative picture of several major forms of informal finance in Tersa and is also illustrative of how rural people in Egypt deal with financial problems through informal arrangements.

V. INFORMAL FINANCE IN PBDAC

Our major objective was to study gam'iyas and assess their importance in PBDAC. This included collecting information on the characteristics of the groups, on leaders, on members, and on employees who were not members of a gam'iya within the Bank. Additional information was also collected on the installment credit provided by moonlighting employees to other employees.

Characteristics of gam'iyas

As can be noted in Table 1, the 51 gam'iyas surveyed had an average membership of 35 with group size ranging from 10 to 150. Surprisingly, none of these groups engaged in any activities outside of the collecting and dispensing of funds and most groups operated without holding meetings to collect share payments. Members simply met individually with the group leader to pay their share or to receive the pot on designated days. On average, women made up 55 percent of the membership. The majority of these groups were of mixed gender; only one gam'iya was an all-male group and a handful of others were all-female groups.

Table 1. Selected Characteristics of PBDAC Gam'iyas

Characteristics	Sample	Range
No. of Gam'iyas identified in survey	51	NA
Avg. no. of members per group	35	10-150
Avg. % of females in group	55 %	0-100%
Avg. no. of rotations per cycle	31	10-150
Avg. size of contribution per share	$21	$1.50-$30
Avg. frequency of collection/month	1.5	1-3
Rotation determination:		
* Lottery;	57%	NA
* Lottery except leader 1st;	20%	NA
* Negotiation	23%	NA
Avg. age of group in years	4	1-15
Leader's major reason for initiating group:		
* Savings		
* Loan	10%	NA
* Help someone	17%	NA
* Group Solidarity	55%	NA
	18%	NA
Avg. change in membership over life of gam'iya	11%	0-50%
Percent of groups that had default or delinquency problems	17%	NA

NA = Not Applicable

The average gam'iyas in PBDAC had operated for approximately four years and required 31 rotations to complete one cycle.[10] The average share paid at each rotation was about the equivalent of $21 and rotation occurred on average 1.5 times per month with the most common timing being every two or four weeks. A handful of ROSCAS handling small shares rotated three times a month. The total amount of the funds pooled each rotation averaged $651 and ranged from about $45 to $2,700. The sequence of receiving payment was determined by lottery in 57 percent of the gam'iyas, 20 percent of the groups granted the leader the first pot and the remaining rotations by lottery, and another 23 percent of the groups used ad hoc procedures to determine rotations, often involving some subjective evaluation of need.

When asked about the main reason for initiating the group, 55 percent of the leaders responded it was to help someone in need (sometimes the leader), 17 percent cited group solidarity, 17 percent responded that one of the members wanted an immediate loan (sometimes the leader), and 10 percent said the primary reason was to promote savings. These percentages describe reasons for initiating these groups. Once formed many of the groups persisted through additional cycles. The reasons for the continuance may be more accurately represented by the responses given by other members of the group for joining and maintaining membership. These responses are presented later in our discussion.

[10] The difference between average number of members (35) and the average number of rotations (31) is due to some members splitting shares. On average, about 5 members of the group paid for fractions of one or more shares. For example, two members may divide one share two ways in a group while three other members may divide one share three ways. All the other members of the group may pay a full share.

The composition of groups was quite stable. Over the life of an average group only 11 percent of the members changed, but since the average group had persisted for four years the turnover per year in membership was only about 3 percent.[11] Further stability was noted in loan recovery. Only 17 percent of the groups experienced delinquency, but rarely did any of the groups have default problems. The fact that gam'iyas were extremely popular among PBDAC employees indicates that compliance with group norms was excellent. All groups interviewed in the survey exhibited flexibility in allowing new members to join, old members to drop out, and in permitting members to adjust the sequence of payments.

Characteristics and motivation of leaders

Among the most prominent features of the gam'iyas surveyed was the gender composition of leaders. As can be noted in Table 2, 83 percent of these groups were organized and managed by women. The average leader was middle-aged, married, had a college diploma, had been a member of the gam'iya they were managing for 5 years, and had worked in the bank for about 18 years. Most leaders (90 percent) were members of gam'iyas before assuming leadership and, on average, leaders had managed gam'iyas for about 8 years. An average leader was managing 1.2 gam'iyas, but about half of the leaders were also participating concurrently in other gam'iyas as members. More than a third of the leaders were members of other gam'iyas outside the bank.

[11] Since we did not attempt to enumerate groups that had terminated their activities, our survey somewhat underestimates the instability in gam'iyas.

Table 2. Characteristics of Gam'iya Leaders, Members, and Non-members

Characteristics	Leaders	Members	Non-members
Gender composition:			
Women	83%	55%	50%
Avg. age	41	40	40
Married	93%	83%	87%
Avg. years of education	14	14	14
Avg. number of years in PBDAC	18	17	17
Previously member of gam'iya	90%	68%	NA
Avg. % of salary deposited in gam'iyas	42%	37%	12%
Percent of spouses also participating in gam'iyas	19%	17%	19%

NA = information not available

The reasons given by the leaders for their participation in gam'iyas involved both economic and social factors. Economic reasons dominated leader decisions, however. The fact that the average leader was placing 42 percent of their salary in gam'iyas reinforces this conclusion. The primary economic reason reported by 57 percent of the leaders was that membership gave them savings opportunities. Another 26 percent responded that membership was primarily to get an immediate loans and only 2 percent of the leaders said their membership allowed them access to future loans. Only 11 percent of the leaders gave the social reasons of helping someone or supporting group solidarity as the primary justification for their participation.

During the interviews we queried leaders about their use of, and attitude toward, formal financial services. Most of the leaders (81 percent) had a savings account in a bank, but only 14 percent of them had current accounts. Most leaders, nevertheless, said they only left nominal amounts in these accounts. During the past few years some 40 percent of the leaders had requested loans from a formal financial institution and most of these requests were approved. In addition, most leaders reported purchasing goods through installment credit from merchants--both inside and outside the bank--as well as from PBDAC's consumer cooperatives that sold durable goods on installments.

Leaders expressed several complaints about formal financial services. One-third of them felt that it was too easy to withdraw funds from bank accounts (Table 3).[12] Some 14 percent of them complained about the relatively high transaction costs and inconvenience of making small deposits, 9 percent of them complained about low interest rates on deposits, another 9 percent objected on religious grounds to receiving interest on deposits, and 2 percent felt that making deposits in their own institution would expose them to envy among fellow workers. The rest of the leaders (31 percent) had no opinion about formal finance, possibly because they seldom thought about using these services.

Characteristics of Members and Non-members

As can be noted in Table 2 there are only slight differences--aside from gender composition--in the characteristics of leaders, other members of gam'iyas, and non-members. It should be noted that the percentage of male participants would have been higher if we

[12] Shipton terms this an illiquidity preference.

had included in our study more village banks where women were a smaller proportion of the total number of employees.[13]

Most members (68 percent) previously participated in other gam'iyas. The average member had been in ROSCAS for five years, was a member of one and a half groups, and allocated 37 percent of their monthly salary to gam'iyas. Some of the employees who did not join gam'iyas were members in groups outside the bank. On average these non-members were allocating 12 percent of their salaries to "outside" gam'iyas.

Members' reasons for participating in gam'iyas were similar to those given by leaders. The largest group of members (54 percent) said they joined gam'iyas because it enabled them to save more, 24 percent joined to access an immediate loan, and 9 percent joined to access a future loan. Social reasons for joining--reinforcing group solidarity and helping someone--were the primary motives for joining for only about 10 percent of the members. Although difficult to quantify, it appeared that social reasons induced some members to join the gam'iya but that economic reasons dominated their motivation for participation after the initial cycle was completed.

As can be noted in Table 3, there were likewise few differences in the reasons given by leaders and members for not using more formal financial services. The responses of non-members, however, were somewhat different. Non-members had fewer religious concerns about receiving interest, were less concerned about transaction costs, cared less about the liquidity of deposits, and a much higher proportion of them had no opinions about formal

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[13] A typical village bank may have 20 employees with only two or three of them being female. It is not unusual, however, for the female employees to be group leaders in the gam'iyas that often operate in these banks.

financial services. Overall, this suggests that employees who chose not to join ROSCAS were less interested in financial transactions in general than were members of gam'iyas.

Table 3. Primary Reasons for Not Using More Formal Financial Services

Reasons	% of Leaders	% of Members	% of Non-Members
Low interest rate	9	10	10
Did not want interest	9	10	3
High transaction costs	14	13	5
Can withdraw money any time	33	30	16
Lack confidentiality	2	7	5
No opinion	31	30	60

As was the case with group leaders, the majority of the members (78 percent) reported that they had largely inactive savings accounts in banks and only a few members (13 percent) had current accounts (Table 4). Almost half (43 percent) reported that they had requested loans from a formal financial institution in the past two years and the majority of them (39 percent) received formal loans. About a third of the members purchased goods on installment from merchants outside the bank, and about two-thirds used installment payments to purchase goods from PBDAC employees/merchants or a PBDAC cooperative. Overall, there were few differences between leaders, members, and non-members in terms of drawing upon alternative financial services.

Table 4. Alternative Financial Services Used

Services	% of Leaders	% of Members	% of Non-Members
Savings accounts	81	78	68
Current accounts	14	13	10
Requested a formal loan in past 2 years	40	43	32
Received a formal loan in past 2 years	38	39	32
Purchased goods on installment from outside merchant	26	35	39
Purchased goods on installment from PBDAC merchants or cooperative	64	70	53

Gam'iya membership

Our survey revealed that a large percentage of PBDAC employees were members of Gam'iyas largely comprised of PBDAC employees. The number of members in the 51 gam'iyas surveyed was 1,785.[14] On average each employee who participated in a PBDAC gam'iya was a member of 1.5 gam'iyas either inside or outside the bank; some members only participated in fractional shares in the gam'iyas. Thus, the figure 1,785 includes some double counting of individuals who where members of several groups. Eliminating the double counting, the number of PBDAC employees who were current members of these 51 gam'iyas was 1,190, 79 percent of the 1,512 people employed in the units or offices surveyed.

[14] These gam'iyas include only those ROSCAS that were comprised largely of PBDAC employees. We did not count the ROSCAS in which PBDAC employees participated that were outside the bank.

In addition, about one-third of the PBDAC employees who were "non-members" were current members of gam'iyas that operated outside PBDAC. Thus, at the time of our interview about 85 percent of PBDAC's employees were members of ROSCAS in or out of the bank and approximately half of them belonged to more than one group. In our interviews with group leaders, group members, and non-members of PBDAC gam'iyas we also asked if their spouses were ROSCA members. Some 19 percent of the leaders, 17 percent of the members, and 19 percent of the non-members reported their spouses were likewise participating in gam'iyas (Table 2). If one spouse put a large proportion of their salary in a gam'iya, the other spouse often did not participate. Since our survey was structured to measure employee rather than household participation in ROSCAs, we cannot give a precise estimate of the percentage of PBDAC employee households that were participating in gam'iyas at the time of our survey. We feel confident, nevertheless, in estimating that it was 90 percent plus. It may have been closer to 100 percent if the households that occasionally participated in ROSCAS were included.

Amounts involved

The value of the share paid each rotation by individual members ranged from the equivalent of about $1.50 to $33. The average amount of each individual's share was about $21. A few groups collected shares three times each month, but it was more common to do it once or twice during the month in concert with salary or incentive payments. Since the average group did 1.5 rotations each month, the average member contributed the equivalent of more than $30 monthly to gam'iyas, a sizable amount compared to base salaries that mostly ranged from $50 to $100 per month.

In 1992, base salaries in PBDAC were only about one-third of total cash compensation.[15] Thus, the average payment ($30) made to gam'iyas was about 20 percent of the total monthly cash compensation received by the lowest paid employees (3x$50 =$150) and 10 percent for those in the higher compensation range (3x$100=$300). During our interviews with leaders, group members, and non-members we asked them what proportion of their monthly income they placed in gam'iyas. The average group leader stated they placed 42 percent, the average member said 37 percent, and the average non-member said they placed 12 percent of their income in gam'iyas outside of PBDAC. These percentages may be higher than our above estimates due to employees only comparing their base salary and bimonthly incentives payments with gam'iya payments and ignoring their year-end bonuses.

Using conservative assumptions, if only 75 percent of PBDAC's 40 thousand employees regularly participate in gam'iyas and they pay shares averaging only $15 each month, then the total cash float in PBDAC gam'iyas would amount to the equivalent of about a half million dollars. Using less conservative assumptions and including all involvement of PBDAC employee households in gam'iyas might increase this amount to something in the neighborhood of a million dollars a month. Sizable volumes of funds also circulate in gam'iyas and in other forms of informal finance in villages that are serviced by PBDAC facilities.

[15] Unpublished PBDAC information for 1992 showed that salaries comprised 31 percent of total salaries, incentives, and bonuses during the year for PBDAC employees. Salaries were paid monthly while most incentive payments were made bi-monthly in the middle of the month. Cash bonuses were generally paid in a lump sum at the end of the year.

Installment credit

There are a number of PBDAC employees, especially in the Cairo office, who were essentially part-time merchants selling goods on credit to other bank employees. The types of goods sold range from food products, such as meat in 2 to 5 pound bags, to furniture. One women employee sold gold items to several hundred PBDAC employees on credit. Other employees sold watches, household appliances, and especially clothing on installments, a practice that is common among merchants and trusted clients throughout Egypt. The employee/traders either purchased merchandise to sell on their own or were selling goods from family-owned stores. We interviewed two of these employees/merchants who talked with us after assurances of anonymity. We also talked informally with a number of their clients while researching gam'iyas.

The first employee/merchant was a widow who began to sell consumer goods in the bank after her husband passed away and left her a store. She decided to continue to work at the bank, where she was employed until 3 p.m. five days a week, and to manage the store in the afternoons and on off-days. As a means of attracting customers, like other PBDAC merchants, this woman offered to sell goods on credit. Customers, both co-workers and other trusted clients, could purchase goods from her by paying installments. Clients typically gave her a down payment at the time of purchasing the merchandise with the promise to fulfill the rest of the payment on a future date or through installments, usually due on pay day.

This employee/merchant purchased most of her goods with cash since few wholesalers offered her credit. In part, gam'iyas also provided some of the finance for her merchandizing efforts. She was the leader of two PBDAC gam'iyas and a member in a third. She had organized gam'iyas for 15 years and she usually took the first pot in groups she organized. The two gam'iyas that she was managing at the time of interview handled about $600/month each and involved 15 members each, mostly men. Thus, she receives an interest-free loan approximately twice each year from the groups she led. Almost half of her salary was deposited in gam'iyas. She had moribund savings and checking accounts, but she had never sought a formal loan.

Another PBDAC employee/merchant sold household goods through a family-owned store and occasionally brought samples to the bank to show potential clients. This resulted in about 10 bank employees per month buying goods from him. He provided some credit facilities to selected colleagues for installment purchases. Payments ranged from about $15 to $60 every two weeks or month over periods that extended up to six months. Although this individual was not participating in PBDAC gam'iyas, he was a member of two gam'iyas outside the bank. His total payments to these groups were about $23 per week and the value of the pots in each group was about $600 per week. The purchase of merchandise for his store was mostly in cash from retained earnings.

For many individuals these credit arrangements were attractive. One male employee told us he lost his job in Iraq several years ago, returned to Egypt, and began working in PBDAC. During the move he lost his watch and was strapped for cash to buy a new one. Shortly after starting to work in PBDAC he contacted one of the employee/merchants who sold goods on credit and immediately obtained a new watch. The terms of the transaction involved putting the equivalent of $9 down and then making six monthly payments of $6 each for a total payment of about $45. He estimated that the watch would have cost him about $33 if he had paid cash for it, implying an effective simple interest rate of more than 50 percent over the six month life of the loan. He was willing to pay this much for it because he was short of cash, needed the watch immediately, and because no transaction costs were involved. Also, since the transaction involved a markup in the price of the good, rather than an explicit interest payment, it did not violate his religious norms regarding paying or receiving interest.

VI. INFORMAL FINANCE IN TERSA

Tersa is a moderate-sized village located about 25 miles north of Cairo. Nearly 5,500 people live there in approximately 1,200 households. The village has three schools, several mosques, and a commercial center that is concentrated along a single dusty street about three blocks long with some 80 registered businesses. Some residents in Tersa commute daily to work in Cairo, or to work in processing plants a few miles away, and about 100 men from the village work overseas, particularly in Saudi Arabia. About half the households do some farming, but less than a third rely on farming for a living. Farmers grow a variety of crops including wheat, cotton, various fruits and vegetables and many of them also have live-stock. Only five small and rudimentary manufacturing facilities are in the village: one makes charcoal, another produces floor and roof tiles, and three more make wooden furni-ture. Approximately 10 percent of the adults in the village are government employees.

One of PBDAC's village banks is located on the edge of the community in a new building, the only formal banking facility in the village. The bank provides services to a larger area than just the community of Tersa. In May 1993 the bank had the equivalent of about $400 thousand in deposits, some two-thirds of which belonged to farmers.[16] This village bank was atypical since it had loans outstanding equivalent to only about $270 thousand, an amount far smaller than deposits. A larger town about three miles away had three branches of commercial banks. By Egyptian standards, the Tersa area was well served by formal banking facilities. Despite this, there was a surprisingly large amount of informal finance in the village. In addition to the ubiquitous ad hoc borrowing and lending among friends and relatives, three other important forms of informal finance were prominent in the village: gam'iyas, selling goods on credit, and moneykeeping.

Gam'iyas

In mid-1993 the village bank in Tersa had 11 employees--all male--6 of whom were participating in gam'iyas outside the bank. Because it was a new facility, and some employees had been transferred there from other parts of the PBDAC system during the past several years, employees had not developed a level of mutual trust that fostered the emergence of gam'iyas within the bank.[17]

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[16] Some of these deposits were compensatory balances required of borrowers that varied between 10 and 25 percent of the total value of loans. The compensatory balance effectively raised the rate of interest paid on loans since the interest rate paid on deposits averaged about 17 percent while the rate paid on the loan averaged about 23 percent. Bank employees had incentives to insist on compensatory balances in the form of deposits since part of their annual bonuses were tied to deposit mobilization performance.

[17] Most other village banks have been in operation for a number of years and employees have established social relationships that facilitate gam'iya formation more readily than was the case in Tersa.

A substantial portion of the households in the village regularly participated in Gam'iyas. These groups came in a variety of forms tailored to meet the financial demands of members. Gam'iyas among salaried workers, for example, had cycles that coincided with pay days--typically each month--and usually had 10 to 20 members. These usually involved individuals contributing $3 to $15 per month to the gam'iya. Other gam'iyas had shorter cycles, smaller individual shares, and larger memberships. Shares as small as $.33 per day were collected from 30 people with distributions made to receiving members every week or two weeks. Members often divided shares and then split pots proportionally. The rotations of many gam'iyas were based on need, some involved drawing lots, and most groups allowed members with emergencies to move up in the rotation.

Gam'iya leaders in Tersa, like those in PBDAC, were mostly women. Eight respected women were recognized throughout the village as gam'iya organizers. When asked about the reasons that motivated them to be organizers, the typical answer was that people trusted them and often asked them to take leadership. They felt they were assisting others through organizing groups and helping people to access financial services. This brought leaders social status and recognition. Another interesting case was that of a prominent women who was managing seven gam'iyas while she was a paying member in only one. This women, who was known as the "gam'iya lady", acted as a broker by helping individuals in the local area locate a gam'iya they could join that met their financial requirements. As an aside, one women we interviewed formed a gam'iya to help repay a loan her husband had taken from the village bank, showing the intertwining of formal and informal finance.

Interviews with a sample of village merchants showed that about three-quarters of their households participated in gam'iyas. Interviews with a number of public employees who worked in the village showed similar levels of participation. In a few cases both the husband and wife contributed to separate groups, even when only the husband received a salary. More commonly, either the husband or wife contributed to a group, but not both. Gam'iya participation was particularly common among individuals who had steady sources of income. Gam'iya membership was less common among people who primarily depended on farm income. While we did not do a census of the village, an informed village leader estimated that at least 60 percent of the households in the village regularly participated in gam'iyas.

Trade credit

Many of the merchants in Tersa allowed some customers to buy goods on credit. Some of them also obtained goods on credit from dealers or even farmers. Several of the butchers, for example, occasionally acquired animals for slaughter from local farmers but did not pay for them until several weeks later. Another merchant who specialized in clothing for women and children had about 100 credit customers who bought items by paying several installments over a-month-to-six-week period. Another merchant sold clothing and food items on credit to an equally large number of regular clients. These loans were almost always labelled as interest free but merchants suggested that people who paid cash were given discounts. Most merchants preferred cash sales and only offered credit sales as a way of competing for business. A few of the merchants occasionally received goods on consignment from wholesalers but few of them used bank loans or had bank accounts.

As PBDAC withdrew from selling farm inputs, three local farmer/merchants began to sell fertilizer and other farm inputs in Tersa. The largest dealer sold 100 tons of fertilizer during 1993 to about 150 clients, another sold 15 tons to several hundred farmers, and a third sold 20 or 30 tons to 40 clients. The largest dealer received some of his fertilizer on credit from wholesalers; however, the other two were not able to secure trade credit from their suppliers. No explicit interest was charged on credit sales but farmers who paid cash were usually able to negotiate a lower price than did those who bought on credit. A handful of other farmer/merchants in the village had also experimented with selling small amounts of fertilizer, suggesting the barriers to entry were minimal, even though the government officially required fertilizer dealers to obtain a license.

Moneykeepers

Numerous people in Tersa, especially women, deposited funds with moneykeepers rather than in banks. Moneykeepers were respected persons in the village and about a dozen women played a dominant role in this. Many of these women were educated, had salaried positions, and were known for their compassion, integrity, and honesty. Virtually all of them were also leaders of gam'iyas or members of these groups.

Moneykeepers are common in other countries in Africa where formal financial markets have been severely repressed or poorly developed. We were surprised to find moneykeepers in Egypt where formal deposit facilities were relatively accessible and incentives to deposit were attractive. Many of the people using moneykeepers were women who received remittances from relatives working elsewhere. In some cases the women were uncomfortable using banks or were unwilling to reveal their surpluses to strangers. In a few cases women avoided banks because of Islamic teachings against the receiving or paying of interest. In other cases women left funds with moneykeepers instead of banks because of complex liquidity considerations. On the one hand, they wanted easy access to funds to deal with emergencies or to capitalize on opportunities, while on the other hand they also wished to keep funds out of reach so that impulse buying was more difficult.

Moneykeepers did a variety of things with the funds they received. Some of them simply stored the money in what they felt was a safe place. Others deposited some of the funds in a bank account, and still others used part of the funds as working capital in a business or invested in gam'iyas. Given the wide spectrum of the financial arrangements in the village and their interlinkages, it seems that informal and formal financial markets were not segmented. Rather, these markets provided specialized financial services and products to various clients with special demands, some of whom used services from both formal and informal sources simultaneously.

VII. INFORMAL FINANCE, PBDAC AND COMPETITION

We interpret the puzzling popularity and profusion of informal finance in Tersa and among PBDAC employees as an indication of a lack of competition between formal and informal finance. In large part, banks in Egypt, and particularly PBDAC, have abdicated several major segments of financial activities to informal finance, namely deposit mobilization and small-and-short-term-lending. PBDAC is not producing the types of financial services and products that many people in the country, particularly women, are demanding and creating for themselves. Comparing the characteristics of the financial services and products provided by gam'iyas with the financial services and products provided by PBDAC illustrates this point.

Attractive features of gam'iyas

Flexibility is the dominant characteristic of gam'iyas and members were particularly adroit at molding these groups so they conformed to social norms. Members, especially women, were able to tailor the types of financial services they received from the group to their complex and varied individual requirements. This included a large measure of short-term loans with installment repayments and saving. A person who desired a loan to meet an emergency, for example, could organize a group and receive the first pot; members of the group later may be able to trade positions in the rotation to meet similar needs. Members with modest means could split a share with another person or join a gam'iya that involves small payments. Gam'iyas were also synchronized with the income flows of its participants which may range from a daily rotation to much longer time periods. If inflation becomes a problem the size of the group can be reduced so it takes less time to complete a cycle, or each member can split two pots: the two people who receive the first pot also split the last pot, the two people who receive the second pot split the next-to-last pot, and so on.

Inconsequential transaction costs are another attractive feature of gam'iyas and informal finance in general. Because most gam'iyas function where people worked, shopped, or lived the transaction costs of member participation were nil. Likewise, since most gam'iya pots were distributed immediately at time of collection, there were no storage costs--no need for a safe, a secure building, and guards. Likewise, the administrative costs of gam'iyas were low. In some cases individuals were willing to incur the costs of administering the gam'iya because they received the first pot. In other cases individuals valued the social capital they engendered from being leaders. Most importantly, gam'iyas solve at modest cost fundamental problems in finance: agent incentives, mobilizing deposits, avoiding theft, screening and selecting borrowers, collecting loan repayments, and applying sanctions.[18] In large part, gam'iyas manage these complex problems because of the prior knowledge that members have about each other and through their ability to exercise informal social sanctions against those who fail to meet their obligations (Besley and Coate 1991).

Mutual trust, insurance, credit reserves, good will, social capital, and reciprocity are all terms that describe another important feature of gam'iya participation. Many people join gam'iyas and involve themselves in other forms of informal finance because it forms a social reserve that can be called upon in times of emergency--the opportunity to borrow from others on short notice (Arnott and Stiglitz 1991). Closely associated with this, complex liquidity motives are additional reasons for the popularity of gam'iyas and moneykeeping. A surprisingly large number of people in Egypt--particularly women--put themselves in positions where they are forced to save.

Gam'iyas also provide financial services that are consistent with Islamic Laws on interest payments. The absence of interest is particularly attractive in rural areas where people are more sensitive to this issue than are many urban people. Although various banks

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[18] Some of these problems have been extensively discussed in the literature about information and in publications about the agency problem (e.g., Stiglitz and Weiss; Jensen and Mecking).

in Egypt some financial services that conform to the Islamic Law on interest payments, these services are not readily available in most rural area.

PBDAC services

In contrast to informal finance, the services provided by PBDAC are inflexible, often impose relatively large transaction costs on clients, and have few of the attractive features that cause informal saving to be popular. PBDAC's deposit services are not geared to the periodic flows of employees' incomes, are not diversified and tailored to meet the various demands of people who wish to save, and being a depositor with PBDAC does not enhance the probability of obtaining emergency loans. Another important difference is that major segments of informal finance are nurtured and managed by women while formal financial transactions in PBDAC are largely the domain of men. Assuming revealed preferences in informal finance is a reliable proxy for demand, PBDAC is producing few of the financial products and services that women in Egypt are demanding.

Enhancing competition

Formal finance can not substitute for all of the services provided by informal source. Even in countries with the most efficient formal financial system, informal finance fills important niches. Because of liquidity, efficiency, and security considerations, however, formal finance should be a more appropriate repository for deposits than are informal arrangements. A banks such as PBDAC should be able to provide more continuous intermediation, more access to liquidity, and also realize economies of scale and scope than can informal finance. PBDAC might compete more effectively in this area, especially for the deposits of women, with adjustments in its practices. This includes assigning women to promote deposits by women, more female clerks to accept deposits, providing a wider variety of financial instruments that emulate some of the advantages found in informal finance, and provision of contractual savings programs. Extending more loans to regular depositors and providing various forms of insurance would be additional ways of enhancing the perceived worth of being a depositor in the bank.

It will be more difficult for the bank to compete with informal finance by extending small and shorter-term loans. Credit cards, however, are a major innovation for lowering the transaction costs of making small loans. Banks also may be able to expand indirectly the amount of lending to small business, to women, and to poor people in general by augmenting their lending to merchants, traders and dealers. These firms, in turn, could then expand their volume of informal lending to clients.

VIII. CONCLUSIONS

We were amazed to find such dense participation in informal finance in Tersa and in PBDAC and to find people putting such large portions of their incomes in gam'iyas. We were also surprised to find women playing a dominant role in the forms of informal finance that deal with savings--gam'iyas and moneykeeping--and in forms that provide so-called consumer credit. Clearly, many women in the country are finance literate. They have devised ways of processing efficiently small amounts of savings and also granting small, short-term loans. These are services that the formal financial system is unwilling or unable to provide and they are services that both men and women wish to use.

It is particularly puzzling why employees in PBDAC, when acting as private individuals, can design flexible financial instruments that satisfy the demands of such a large proportion of the Bank's employees, while at the same time they are unable to produce similar services in their official capacities as Bank employees. It is unconvincing to label PBDAC as being biased against women when individuals at all levels in the bank--both male and female--so readily turn to women for leadership in administering the bazaar of informal financial arrangements in the Bank. An alternative explanation may be that, for systemic reasons, Banks in Egypt have been unable to provide the types of financial services that women and other groups beyond the fringe of formal finance most demand, namely attractive deposit services and small, short-term loans.

What are some of these systemic problems? The most important is the way banks were used in Egypt in the past to support development by reinforcing the implementation of economic plans through loan targeting. Banks, including PBDAC, were part of a command economy that was largely unresponsive to clients' demands for financial services. PBDAC was not established to mobilize voluntary deposits nor to issue small loans. The availability of subsidized funds from other commercial banks, interest rate restrictions, and limitations on providing checking accounts dissuaded PBDAC from producing the financial services that many people, including most of its employees--particularly women--wanted. Overall, there were few incentives for employees to create new financial services for PBDAC's account. Instead, employees vented their creativity in forming popular informal financial services and the net result of these efforts were "banks" operating within banks.

Our research provides insights that may be useful to both those who are attempting to expand formal financial services for women and to those who wish to reform development banks such as PBDAC. Instead of developing specialized womens' credit programs that service temporarily a few hundred female borrowers at high costs, it may be more appropriate to address the systemic problems that constrain the formal financial system from offering some of the financial services that women (and men) demand and so often spontaneously create informally. Encouraging banks such as PBDAC, for example, to provide more attractive deposit accounts may result in millions of additional women in Egypt using formal finance in relatively short periods of time. This, in turn, would allow a much larger number of women to become bank clients. Through depositing, some of these women would then enhance their perceived creditworthiness and may later qualify for formal loans. If a bank cannot provide at least some of the financial services demanded by its own employees, it is not likely to develop more attractive services for potential clients in general, particularly those residing in rural areas.

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