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# **EGYPTIAN CONSUMER KNOWLEDGE AND ATTITUDES ON MORTGAGE FINANCE AND PROPERTY REGISTRATION**

**EGYPT FINANCIAL SERVICES PROJECT  
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# **EGYPTIAN CONSUMER KNOWLEDGE AND ATTITUDES ON MORTGAGE FINANCE AND PROPERTY REGISTRATION**

## **EXECUTIVE SUMMARY**

The use of home purchase mortgage for dwelling purchase and implementation of mass urban property registration are both in nascent stages in Egypt. Clearly, the first step in activating consumers to take out mortgages and register their properties is for them to understand these instruments. This paper reports on results from a February 2007 survey of 504 Cairo consumers from better socio-economic groups, and was designed to determine their understanding and knowledge of these instruments and their attitude towards them.

About 35 percent of respondents reported having heard or read something about buying an apartment or taking out a mortgage in the past year. This is a fairly high simple penetration rate and indicates that the marketing campaigns were reasonably successful, although much remains to be done. Of those who had heard something on the topic, close to half stated that they had paid close attention to the information or had carefully considered whether a mortgage would be a good thing. Such a high rate of paying close attention indicates that many in the sample population have a real interest in the subject.

The penetration rate for information on registration is only about one-half of that for mortgage—19 percent vs. 36 percent. This again indicates that the purposeful education campaigns about mortgages are having an effect. That said, the share of respondents who reported having heard something that said they paid close attention to the information was the same. Unlike the case for mortgage, there is no difference between recent owners and would-be owners in their respective penetration rates.

There are moderate differences among the sample population between their understanding of the basic idea of mortgage loans (modest) and of property registration (high). However, specific knowledge was greater for mortgages than for registration, perhaps because mortgages are so new in Egypt and are receiving a good deal of attention. Half of the respondents who have purchased a property in the past five years said they have registered it, and a large majority of respondents report being motivated to register a property purchased in the future, despite misgivings about the registration process.

These findings, taken as a whole, indicate that the education campaigns and media coverage have had significant impact on knowledge levels and attitudes, but a substantial educational job remains to motivate consumers to use mortgage loans in home purchases. Would-be borrowers have particularly negative reactions to the present high interest rates. On the other hand, the task for registration is to improve the actual registration process and then to inform consumers about the improvements.

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The views expressed are those of the author and not necessarily those of USAID or Chemonics International.

## INTRODUCTION

Mortgage finance and mass title registration is novel in Egypt. In 2005 there was scarcely any home purchase mortgage loans issued and only 10 percent of urban residential property was formally registered.<sup>1</sup> The two areas are closely related because difficulties in registering properties and mortgage liens cause a rise in the transaction costs of mortgage lending, and increase risks to the lender of engaging in such lending, that the pledged collateral may not in fact be available, should the borrower default on his loan. The reformist government, under Prime Minister Ahmed Nazif that took office in 2004, has taken a series of actions to jump-start mortgage lending and to improve the efficiency of the registration process and dramatically cut registration fees. These measures have been accompanied by various advertising campaigns by lenders and the government to expose would-be borrowers and current home owners to the “new products” of home mortgages and comparatively cheap registration.

The question addressed in this paper is, what were consumer knowledge levels and attitudes about home purchase mortgages and title registration by February 2007, after these campaigns? Importantly, those interviewed were either recent home purchasers, or those who expected to purchase a unit in the next three years, i.e., those with greatest interest in following the development under examination here.

The analytical results are important from a policy perspective because they inform policymakers and lenders of the effectiveness of such broad educational campaigns.

As detailed below, there are modest differences among the sample population between their understanding of the basic idea of mortgage loans (modest) and of property registration (high); however, specific knowledge was greater for mortgages than for registration, perhaps because mortgages are so new in Egypt and are receiving a good deal of attention. Half of the respondents who have purchased a property in the past five years have registered their properties, and a large majority of respondents report being motivated to register a property purchased in the future, despite misgivings about the registration process. These findings, taken as a whole, indicate that a substantial educational job remains to motivate consumers to use mortgage loans in home purchases, particularly given the present high interest rates. On the other hand, the task for registration is to improve the actual registration process and then to inform consumers about the improvements.<sup>2</sup>

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<sup>1</sup> Everhart et al. (2006), Egypt Financial Services Project (2005).

<sup>2</sup> We were unable to identify a literature on knowledge and attitudes about mortgages and property registration for home purchasers in developing countries. There is a rich literature on the attitude of rural residents on registering their plots, in terms of the security gains achieved. See, for example, Barrows and Roth (1990), Besley (1995), Migot-Adholla et al. (1991), Pinckney and Kimuyu (1994), Place and Hazel (1993), and Sjaastad and Bromley (1997). Also, a solid literature exists on the effects of urban dwelling title registration on owners' decisions to invest in their properties. See Baharoglu (2002), Razzaz (1993), DeSouza (1999), Jemenez (1982), and Struyk and Lynn (1983), and the effect of secure titles on housing values (Mendez (2006), Friedman et al. (1988)). For developed countries, literatures are present for consumer knowledge of financial products (often from a consumer protection perspective) and attitudes (often from a marketing perspective) Mandell (1973), Buch et al. (2002), Lee and Hogarth (2000), Hilgert et al. (2003), Albaum (1979), El Anshasy et al. (2005), Woodward (2004), and Weiss (1989), but not for registration, presumably because it is essentially universal. Thus, it appears that this study offers initial findings for developing countries on knowledge and attitudes.

As it is a single country study, financial depth and access to services are held constant in the analysis. As such, it contributes to the first of the two tracks in the emerging literature on financial services in developing countries: single country studies of measuring and analyzing access to financial services

The presentation is organized as follows. The first section provides information on the Egyptian context for the analysis, including recent developments in mortgage lending and property registration, and related information campaigns. The second section discusses how the survey was conducted, sample sizes, types of questions asked, and the sub-populations of interest. The third section briefly outlines the analysis that has already been done. The fourth presents the results of descriptive analysis of changes over the period, and the fifth summarizes the results of descriptive regression models employed to identify significant covariates of knowledge and attitudes. The final section concludes.

## **Context**

This section provides background on three topics: the first two cover the status of property registration and home purchase mortgage lending in 2005, and government initiatives since then in each area, respectively; and the third covers the related marketing and education campaigns conducted, beginning late 2005.

### ***Property Registration***

Despite laws viewed as essentially sufficient to support a functional title registration system, in 2005 an expert analysis described the system as:

...Egypt's real property registration system can best be described as onerous and expensive for applicants, vastly underutilized, excessively bureaucratic and complex, misunderstood and unpopular with the public, and incapable of promoting a real estate mortgage finance market. (Egypt Financial Services, p.xi)

The World Bank reports that the average time to register a property was 193 days, compared with 49 days in the Middle East region, and 32 days in OECD countries (World Bank, 2006).

In 2006, the Government of Egypt (GOE), after several years of planning, launched a high profile program to completely reform and modernize the property registration system. The responsibility for registration is divided between the Ministry of Justice, which oversees the actual recordation that is administered by the Real Estate Publicity Department, and the Egyptian Survey Authority, that handles cadastre function. Nevertheless, responsibility for modernization was assigned to the Ministry of State for Administrative Development (MSAD) which is viewed as energetic and more competent for systems development. MSAD started with nine districts in Cairo, and its efforts are being complemented by a USAID project that is working in an additional district that is also pioneering critical design and training components. By early 2007, design work was well-advanced and actual recordation is anticipated to begin in late 2007.

Since formal registration had been used so little, there was general agreement that consumer education would be a key strategic ingredient, but it was also believed that an education campaign should wait until registration process improvements were closer to realization.

### ***Home Purchase Mortgage Lending***

In recent years home purchase finance was limited to installment sales by developers for the purchase of new dwellings; aside from these loans, purchases were financed by savings and borrowings from members of extended family and friends. The installment sales are wholly

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at the household or firm level (e.g., Claessens, 2006), rather than cross country studies analyzing barriers to access (e.g., Beck et al, 2006).

unregulated and have been subject to significant abuses. Developers require large down-payments; they often pay in installments, and then further payments. Title remains with the developer until all installments are paid, placing the purchaser at a distinct disadvantage. Purchasers are not permitted to occupy their units until a large share of the total purchase price, sometimes 100 percent, is paid off. Actual interest charges are hard to determine since the unit sales price typically includes both the cost of the unit and financing.

The Mortgage Finance Authority was created in 2001 by Presidential Decree to stimulate and regulate mortgage lending by lenders other than commercial banks and started operations in 2004. Two mortgage finance companies (MFCs), non-depository specialized housing lenders, became operational in 2005 and have briskly expanded their lending. By early 2007 two more were registered. Two government-owned, commercial banks are quite active and make loans in conjunction with down-payment subsidies extended to moderate income first-time purchasers. By fall 2006, additional commercial banks were becoming interested and setting up home purchase lending operations, in part because they were searching for new loan products to absorb their high liquidity (Struyk and Brown, 2006).

### ***Education and Advertising Campaigns***

In the mortgage sphere, the MFA and early lenders have had a common view of the marketing strategy that is consistent with the classic 3-phase communication model: cognitive stage (exposure, reception, cognitive response) => affective stage (attitude, intention) => behavior stage (action) (Kotler, 2000). In such a new market, the focus was on the cognitive and affective stages, i.e., in exposing the target population to the concepts on the advantages of home purchase mortgages and the value of property registration, and then affecting their attitudes towards both.

Outreach to consumers has been extensive. Broadly, the campaigns of 2005-2006 had two elements—providing information through broad media distribution (complemented by materials available in lenders' offices and the MFA's portal), and the operation of call centers, where interested consumers could call and obtain additional information. The broad distribution ads included contact information for the call centers. The centers primary task was education. If a caller requested information on a lender, the MFA-operated center would provide it for multiple lenders. Those operated by the lenders naturally fed potential clients to their own loan officers.

In terms of campaigns, in 2006 the MFA aired 50 radio spots in late summer, ran an ad in the largest daily newspaper for seven days, listed its call center in the Yellow Pages web site in English and Arabic, and, with the MFCs, mounted a concentrated TV and radio public education campaign during Ramadan, the peak TV viewing season. Additionally, high exposure press events were arranged for the MFA chairman, which brought additional coverage.<sup>3</sup> The effectiveness of these events was strengthened by workshops for the media. These efforts were complemented by campaigns by the two active mortgage finance companies.

The MFA call center became operational in spring 2006 and has handled about 150 calls per day, with surges following promotional campaigns, particularly the Ramadan campaign. The Egypt Arab Land Bank initiated its own call center in 2006, and it averages around 200 calls per day according to senior management, with calls stimulated by advertising in print media and on radio.

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<sup>3</sup> In some ways this campaign was similar to that executed in the U.S. in 1918 by the Department of Labor for the nationwide "*Own Your Own Home*." As reported by Weiss (1989, p.109), a key objective was to stimulate the flow of mortgage lending.

In contrast with the mortgage sector's explicit campaigns, publicity on registration has come from news stories about pending simplifications in the registration process and especially about the sharp fee reductions implemented in summer 2006. A few years ago registration fees were as high as 12 percent of property value. Reduced in several steps over the years, in summer 2006 they were finally set at a minimum of LE 500 (about USD 87 at then current exchange rates) to a maximum of LE 2,000, with the actual fee depending on dwelling size (in square meters). This attracted a great deal of press attention and these stories often cited the plans of radical simplification and modernization of the registration process. Since the new procedures are not yet in place, campaigns would be premature.

## **Information Employed in the Analysis**

This section covers three topics: the structure of the sample, the subpopulations of interest, and the nature of the information gathered on knowledge and attitude about mortgages and property registration.

### ***Sample Structure***

Recall that the goal was to interview recent home purchasers (within the past five years), and those who stated that they were likely or very likely to purchase a unit in the next three years.<sup>4</sup> In other words, the idea was to speak to those who had the greatest incentive to be informed about these matters, it being believed that a broader approach would yield too many respondents with no knowledge.

The design for the sample used in this analysis followed that for a similar survey conducted in 2005. The initial design called for household interviews for a random sample drawn in specific neighborhoods. This turned out to be infeasible because so few respondents qualified as recent or probable near-term dwelling purchasers and met other screening criteria (Abbott, 2005). Instead, respondents were recruited at 11 shopping malls frequented by middle and upper-middle income Egyptian families.

In 2005 the sample size was 505—309 potential home purchasers aged 25-55 with monthly incomes of at least LE 1,000, and 196 recent dwelling purchasers. Potential respondents were screened on income, since it was thought that those with lower incomes are unlikely to afford to purchase a dwelling in the formal market. For reference, a January 2007 representative survey of 9,000 households in Greater Cairo concluded that 61 percent of households had income of under LE 1,000 per year (TAPR-II, 2007, Table 2.4).<sup>5</sup> Unfortunately, detailed analysis of the procedures used in 2005 and the resulting data raised grave reliability issues and this data is not used here.

The “shopping mall method” was repeated in 2007, and the final sample sizes were 204 and 300 respectively, for current owners and potential purchasers. About 2,500 mall visitors were approached to find the 504 respondents who both qualified to participate and were willing to be interviewed.

Clearly, this is not a representative sample, but it nevertheless provides some insight into the knowledge levels and attitudes of dwelling purchasers and those who may be able to purchase one. It is important in assessing the sample to understand that malls serve purposes beyond a shopping venue in Cairo; they are a place to pass time in air-conditioned comfort, socialize with one's friends at a coffee bar, and otherwise socialize (Abaza, 2006).

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<sup>4</sup> The respondent also had to say he was the main decision-maker in deciding on the past or potential future purchase. Furthermore, any person who said that anyone in his or her family was employed in market research, journalism/advertising, public relations, or financial services was excluded as a respondent.

<sup>5</sup> By comparison, households with an income below LE 1,500 per month are eligible for a down-payment grant to assist with dwelling purchase.

So the idea of many mall visitors being willing to participate in an extended interview is not far-fetched.

### ***Sub-Populations of Interest***

Beyond the basic dichotomy between current and potential owners, significant variation in knowledge levels and attitudes are expected to exist among different income and social groups, for the analysis respondents were divided into three social classes that were determined not only by monthly income, but also by the type of position the respondent held, frequency of international travel, car ownership, club memberships, and appliance ownership. Club membership is common among the well-to-do, and considerable prestige is associated with membership in elite clubs; but there is quite a wide range of clubs. The point system, routinely used in Egypt, employed higher values go to more elite categories for each variable, with the sum of points across all attributes used in the assigning of respondents to social classes.

In the interview, income information was solicited with a single question. Even with responses being requested to name an income category from a card showing eight income intervals, rather than announcing a specific amount, it is very likely that income is substantially understated. For this reason, using the additional information in determining social classes very probably yields a better indicator of economic status than the income measure alone.

Table 1 provides information on selected characteristics of the respondents. In the panel on social class, Class A is the most elite and broadly includes respondents in the top two income groups shown in the first table panel. Class B is in an in-between position, and broadly (75 percent in the group) includes those with monthly incomes in the LE 1,500 to 4,000 range. Class C is the relatively low social group. As shown in the last table panel, about 15 percent of the sample was from Class A group and 25 percent from Class B, with the majority being in Class C.

### ***Information on Knowledge and Attitudes***

Respondents were asked three types of questions. First, at the beginning of each of the registration and mortgage sections of the interview, they were asked to describe these concepts in their own words. For example, the question on registration was: "What does the term "registration" of real estate property mean to you?" The answers that were given were analyzed and coded into non- mutually exclusive categories with short statements characterizing the response.

Second, there were questions that probed their specific knowledge. In the case of mortgages, the questions focused on terms and conditions of such loans, e.g.: "With a mortgage loan, what happens when the borrower is unable to make payments for several months?" Three answers were possible. For registration, these questions focused on the lower fee schedule for property registration introduced in summer 2006, e.g., whether the new fees are computed as a flat fee or as a percentage of unit value.

The third type of question was designed to capture information on the respondent's attitude or views about registration and taking out a mortgage. These queries used a 1-to-10 scale (1=strongly disagree and 10=strongly agree) with a respondent giving his score after each statement read by the interviewer. One example from the registration block was: "Registration of property is too expensive."

Lastly, the survey inquired explicitly about whether the respondent had heard or read about taking out a mortgage or property registration in the past year. If they responded positively,

they were asked how close attention was paid, with a choice of four levels of increasing intensity. Separate sets of questions were asked for registration and mortgage.

### **Analysis Outline**

The analysis proceeded in two steps. In the first, descriptive statistics were computed for the various measures, and tests were computed to identify significant differences between current owners and would-be owners.

In the second part of the analysis, descriptive regression models were estimated to determine if there are significant differences in knowledge and attitudes among respondent sub-populations. Three types of explanatory variables are included in these models. One is the respondents characteristics, in particular, his social class and age, the hypothesis being that the higher the social class and younger the respondent, the more knowledgeable they will be and the more positive their attitude toward borrowing with a mortgage for home purchase and the need for registration. In short, we test for information asymmetries associated with these factors. The second is whether the respondent reported having heard information about mortgages or registration in the past 12 months and the degree of attention he paid to it. Separate questions were asked about exposure to information on the two topics. We hypothesize that the greater the attention paid, the greater the knowledge level and the more positive the attitudes toward borrowing with a mortgage and registering the property.

The third consists of separate dummy variables for models with registration-related and mortgage-related dependent variables to account for those recent purchasers who, respectively, registered their unit (50 percent) or took out a mortgage to finance their purchase (3 percent). The hypothesis is that because of their actual experience, they will be particularly knowledgeable respondents. In models estimated using the combined samples of recent purchasers and would-be purchasers, a dummy variable is included for recent purchasers.

### **Findings: Knowledge and Attitudes, Descriptive Results**

The basic information is presented in Table 2, which is divided into three main parts: indicators of the respondent's exposure and acceptance of information in the past year on mortgage lending; responses about mortgages; and, those about property registration. Data is presented separately for recent dwelling purchasers and potential purchasers.

A "+" next to the entry for potential purchasers indicates that the value differs at the 0.05 level of significance or higher from the value for recent purchasers. As shown, there are only two instances of significant differences in the responses of the two populations. Hence, the results are generally discussed for the sample as a whole.

### ***Exposure to and Receipt of Information***

The first panel of the table shows that about 35 percent of respondents reported having heard or read something about buying an apartment or taking out a mortgage in the past year. This is a fairly high simple penetration rate and indicates that the marketing campaigns were reasonably successful, although much remains to be done. Of those who had heard something on the topic, close to half stated that they had paid close attention to the information or had carefully considered whether a mortgage would be a good thing for them. Such a high rate of paying close attention indicates that many in the sample population have a real interest in the subject. Among those who had carefully considered whether a mortgage would be a good thing for them, the share of potential owners is about double that for current owners, i.e., 16 vs. 30 percent of respondents. This is consistent with the potential owners being close to making an actual decision on this point.

The penetration rate for information on registration is only about one-half of that for mortgage—19 percent vs. 36 percent. This, again, indicates that the purposeful education campaigns about mortgages are having an effect. That said, the share of respondents who reported having heard something that said they paid close attention to the information was the same. Unlike the case for mortgage, there is no difference between recent owners and would-be owners in their respective penetration rates.

### ***Mortgages***

We start with information on the share of respondents who had a grasp of the key elements involved. Around 24 percent of respondents were unable to articulate a response to the open-ended question. In fact, however, knowledge was greater than this indicates: when asked the specific questions about mortgage loan characteristics in the block of questions on knowledge, only about 7 percent of respondents said “don’t know” to each question; i.e., over 90 percent had sufficient confidence of their knowledge to answer. The three most common elements in the answers to the open-ended question are shown in the table; about two-thirds of those who offered an answer made at least one of these statements.

Among the responses, the single most common is to “borrow from a bank.” In Egypt, where most new dwellings are purchased from developers under an installment contract, the fact that a mortgage loan is obtained from a bank (or mortgage finance company) is an important point. “Borrowing with interest,” another of the responses, is also likely associated with bank loans since installment sales do not explicitly define financial terms, rather just an all-in price. Offsetting these indicators of knowledge about mortgage loans is the fact that 21 percent of those who provided responses said a mortgage involved installments, which is true for both mortgages and installment sales. With only about 6 percent of respondents giving both responses (“from a bank” and “installments”), one is led to think that “installments” may refer to developer finance. Based on the observations in the last two paragraphs, including making an allowance for some misunderstanding on installments, one could indicate a penetration level in the 55-60 percent range.

With respect to knowledge of specific mortgage characteristics, two of the three questions listed in the table required the respondent to know provisions of the Egyptian mortgage law. The third, on the result of failing to make payments, is more general. The correct response to each question is in brackets after the question. The pattern shows respondents possessing surprisingly high levels of knowledge about the inability to have multiple mortgages on the same property (85 percent) and the requirement for a mortgage to be registered (90 percent). It is somewhat puzzling that only about half this amount knew that the likely consequence of failing to make the required payments would be to lose the property.

Combined, the results for the open-ended question and the specific knowledge questions indicate that a substantial amount—perhaps half—possess basic information about the home purchase mortgage.

Regarding respondents’ attitudes about taking out a mortgage, it is useful to consider these in two groups—one for three positive statements about taking out a mortgage (listed first in this panel of Table 2), and one for the two statements calling into question the desirability of taking out a mortgage.<sup>6</sup>

The two positive statements assert that a mortgage loan would permit one to acquire a larger unit and to move into the unit as soon as it is finished. A mortgagor being able to

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<sup>6</sup> The attitude questions, and those about registration, were ordered randomly in the questionnaire to avoid establishing positive or negative response patterns that the respondent might subconsciously follow.

immediately occupy the dwelling being purchased once the loan is secured is especially important in Egypt because under installment sales the purchaser is generally not permitted to occupy his unit until payments equivalent to at least 70 percent of the total charges have been made. This often is several years after the unit has been completed. Hence, immediate occupancy is a considerable advantage for mortgage lenders in competing for clients. The third point is more attitudinal with the positive statement about adapting to new practices. Importantly, support for all three statements is quite strong—mean values of about 8 on the 1-to-10 scale.

The results for one of the negative statements (disapproving of a daughter marrying someone who had to borrow to secure the family's dwelling), is quite weak (value of about 4). In Egypt, a suitable groom should have his own (fully paid) dwelling to contribute to the marriage. So this question is, in part, asking about the social acceptability of incomplete ownership. On the other hand, the aversion to long-term debt is strong (value over 8). In practice, however, this may manifest itself in high mortgage loan prepayment rates rather than a refusal to take out a mortgage loan.

### ***Registration***

At the outset, it is important to note that 50 percent of those in the recent dwelling purchasers sample stated they had registered their units. One anticipates that this would make them particularly informed about the process, and also make them particularly strong advocates of the benefits of registration. In reality, there is only one significant difference between the mean responses of recent purchasers and would-be purchasers in the tabulations presented in Table 2. Hence, it appears there is something of a broad “conventional wisdom” about property registration.

Respondents showed a stronger grasp of the basic concept of registration than with financing a home purchase with a mortgage. In response to the open-ended question, two-thirds of respondents expressed that registration protects or guarantees property rights. On the other hand, knowledge of registration is much lower than that of mortgage loans. The specific question asked was if the respondent knew about the change in registration fees made effective in 2006. Only 15 percent said they did. The low knowledge rate was unexpected given the wide coverage given to the story in the media, and government agencies' heavy promotion of the change's importance. Those who responded positively in general (65 percent) knew that the new system is a flat-fee system rather than an ad valorem.

The questionnaire included seven questions designed to understand respondents' attitudes toward registration—three positive statements and four negative statements (Table 2, third block of information in the registration section). A general pattern is that respondents were in stronger agreement with the positive questions (average scores over 9), than to the negative statements (average scores from about 3 to 6). Strong positive convictions were expressed regarding improving the ability to sell the unit in the future and increasing the owner's protection of legal rights.

Among the negative attitude questions, the weakest support was for the statement that registration was something not very important to do when buying a unit, with a mean score of only 3.3. This, combined with the findings on respondents' basic understanding of the registration concept, argues that the broad importance of registration has been successfully communicated.

Two other negative attitude questions, however, highlight the traditional problems with the registration system. There is considerable support for ideas that registration is too expensive and is a complicated process that takes a long time (mean values of 6.2 in both

cases). Recent purchasers felt significantly more strongly about the high fees than would-be purchasers, likely because they registered before the lower fee schedule was introduced. Finally, there is also moderate support for the idea that ownership can be proven without formal registration—something that has been true in urban Egypt for many years. Interestingly, responses are distributed bi-modally for recent owners, with few responses in the 4-7 categories. For would-be owners, the answers are quite evenly distributed over all 10 response categories.

The last entry in the registration block is on the respondents intention to register a newly purchased unit, should he purchase one. The conviction has a very high mean score, greater than 9. This suggests that the target group for future campaigns should be current owner-occupants.

### **Findings: Knowledge and Attitudes - Regression Results**

We estimated a series of descriptive regressions to explore how respondents' responses vary with certain characteristics. Table 3 provides definitions for both the dependent and independent variables employed. Most of the independent variables are in continuous form. We also experimented with dummy variables for categories, e.g., socio-economic class defined into three categories, but the results were not materially different.<sup>7</sup> Models were estimated for recent owners, possible owners, and all respondents combined.<sup>8</sup>

#### **Registration**

The results for the logit models of respondents' knowledge in this area can be summarized succinctly: generally, the relationships are very weak. (Here and elsewhere results are treated as statistically significant if they meet a 5 percent-level significance test.)

- No correlation was established between having a basic understanding of the registration concept (Protect) and the socio-economic class, age, extent of exposure to information, or having registered a recently purchased dwelling. The latter may result from owners commonly hiring a lawyer to handle this complex transaction.
- A positive association was identified between knowing about the new registration fee schedule (New\_sys), and the respondent paying greater attention to information about registration (Expose). For all three populations, the mean odds<sup>9</sup> of knowing something about the new schedule was 0.18, and these are increased by a factor of 2.7 with a unit increase on the five-point scale in the degree of attention paid to the information.
- Among would-be unit purchasers, those with higher SEC scores were significantly more likely to know about the new fee schedule, with the odds increasing by a factor of 5.25 for a 5 point SEC score (or 25 percent) increase.

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<sup>7</sup> So-called dummy variables can be thought of as indicator variables; a person, object, or transaction either has or does not have a specific attribute. If it has, the variable takes the value of 1; if it does not, the variable is zero. In the case referred to in the text, we converted continuous variables, for example, age, into a series of discrete or dummy variables, hence, the respondent was either in the age group 25-35 (value=1) or not (value=0). The co-efficients of these variables have the virtue of easy interpretation, e.g., a person in this age group has xx points; stronger support for some mortgage characteristic.

<sup>8</sup> Because so few variables were significant and the number of models is large, the estimated models are not presented. These are available from the author upon request.

<sup>9</sup> Odds are defined as  $p/(1-p)$ , where  $p$  is the probability of an event occurring. In this case, the event is knowing the new registration fee schedule. If the mean probability is 0.2, then the mean odds are 0.25 (.2/.8). This particular form is necessitated by the statistical tool used in the analysis, i.e., logit regression.

The results for the estimated regression models on respondents attitude toward registration, as indicated by reactions to six statements, mirror those for knowledge in that few significant patterns between attitudes, on the one hand, and socio-economic status, age, extent of exposure to information, or having registered a recently purchased dwelling, on the other. One clear finding is that those who stated that they paid more attention to information received on registration in the past year gave lower agreement scores to two negative statements about registration: there are other ways to prove ownership (Other-reg), and the process is too expensive (Reg-expnsv). The mean values for these two variables are 5.4 and 6.2 respectively (on the 1-to-10 scale, Table 2). Going up two levels in the “attention rating,” for example, from “I glanced at it” to “I paid close attention to it and carefully considered whether it would be a good thing,” reduces the ratings by 0.75 and 0.84 points, respectively, or about 14 percent of the mean scores. As expected, potential owners were significantly more likely to give a lower agreement score to the statement that registration is too expensive, a reduction of 0.55 on average from a mean of 6.2.

Finally, regarding intentions to register a newly purchased unit in the future, no significant relations were identified that met the 5 percent significance-level criterion.

### ***Mortgages***

Broadly, the results for knowledge of and attitudes about home purchase mortgages parallel those for registration. The results reported below are based on multiple regression models of continuous, but limited, dependent variables. Beginning with understanding mortgage concept and knowledge of specific attributes, we found:

- The extent of exposure to information and the attention paid to it was the only factor significantly associated positively with greater understanding of the concept (Concept\_mortg). Age and socio-economic status do not play such a role. The finding holds both for recent purchasers and potential purchasers, and the magnitude of the effects are similar, but the impact is quite modest: the elasticity, evaluated at the means of understanding, with respect to exposure, is only 0.14, so that a 10 percent increase in the exposure score is only associated with a 1.4 percent increase in conceptual grasp.
- Higher socio-economic class is associated with higher knowledge levels (Know\_mortg), for owners alone and for the combined sample (neither is significant in the potential owner’s model). The impact again is modest, with elasticity at the means of knowledge, with respect to SEC of 0.3. The other variable significance in the same two knowledge models is exposure to information. However, in this case, the sign is negative and we have no ready explanation for why this is the case.
- Almost no significant relationships were identified in the five attitude models. Only the exposure to information was significant in explaining the variance in the responses for statements on parents not approving of a husband having to borrow to buy a home for their daughter (Daughter\_marr), and it being important not to have long-term debt (Long-debt).

The results for the multivariate analysis of registration and home purchase mortgage make two strong points:

(a) the information that consumers have obtained through organized educational campaigns or through press coverage has been important in educating them, and

(b) little informal education has occurred on these topics that are associated with socio-economic position, age, or even experience in the housing market. These, apparently, are not topics discussed among friends and family.

## **Conclusions**

The use of home purchase mortgage for dwelling purchase and implementation of mass urban property registration are both in nascent stages in Egypt. Clearly, the first step in activating consumers to take out mortgages and register their properties is for them to understand these instruments. The results reported here are from a February 2007 survey of 504 Cairo consumers from better socio-economic groups, designed to determine their understanding and knowledge of these instruments and their attitude towards them. This is not a representative sample; the findings likely give the upper limit on knowledge levels.

About 35 percent of respondents reported having heard or read something about buying an apartment or taking out a mortgage in the past year. This is a fairly high simple penetration rate and indicates that the marketing campaigns were reasonably successful. Of those who had heard something on the topic, close to half stated that they had paid close attention to the information, or had carefully considered whether a mortgage would be a good thing for them. Such a high rate of paying close attention indicates that many in the sample population have a real interest in the subject.

The penetration rate for information on registration is only about one-half of that for mortgage—19 percent vs. 36 percent. This, again, indicates that the purposeful education campaigns about mortgages are having an effect. That said, the share of respondents who reported having heard something that said they paid close attention to the information was the same. Unlike the case for mortgage, there is no difference between recent owners and would-be owners in their respective penetration rates.

There are moderate differences among the sample population between their understanding of the basic idea of mortgage loans (modest) and of property registration (high). However, specific knowledge was greater for mortgages than for registration, perhaps because mortgages are so new in Egypt and are receiving a good deal of attention. Half of the respondents who have purchased a property in the past five years reported having registered it, and a large majority of respondents report being motivated to register a property purchased in the future, despite misgivings about the registration process.

The results of the multivariate analysis indicate that exposure to information on registration and home purchase mortgages, and the amount of attention consumers pay to it, have been key in shaping knowledge and attitudes. The respondent's socio-economic class and age, or even participation in a registration, on the other hand, has had a bearing. These findings highlight the important role that education campaigns and media coverage have played, to date, in informing the population. They also indicate that experience with home purchase mortgages and property registration is so limited that, even among higher SEC households, understanding and knowledge of these instruments are not common. Both points argue for the continuation of campaigns to inform the public.

The results indicating no impact of registering a property on knowledge about the registration system is puzzling. Two explanations suggest themselves. First, because the process is complex, many households engage an attorney to handle the task. Second, it may be that they did not actually go through the official registration process, but rather used a court procedure under which a sales transaction is authenticated. Many purchasers rely on this procedure. The specific question in the survey was not tightly enough drawn to distinguish between these two cases.

The findings taken as a whole indicate that the education campaigns and media coverage have had significant impact on knowledge levels and attitudes, but a substantial educational job remains to motivate consumers to use mortgage loans in home purchases. The lack of significance of the socio-economic variables in the analysis, point to a very low general knowledge level that campaigns—and greater use of the mortgage loans and property registration—will be key in overcoming.

With respect to specific features, would-be borrowers have particularly negative reactions to the present high interest rates and carrying long-term debt. On the other hand, the task for registration is to improve the actual registration process and then to inform consumers about the improvements.

The findings may have implications for other countries that are just introducing mortgage lending or mass title registration. The dominance in the multivariate analysis of the “exposure” variable indicates the importance of informing the public about such innovations. Promotion of mortgage lending may well require lender, as well as government, campaigns to educate the public, with the campaigns targeted, at least initially, to the middle class. The results further suggest that such campaigns need to be multi-dimensional and sustained.

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**Table 1: Respondent Characteristics**

Characteristic	Recent Owners	Potential Owners
<b>Monthly household income-LE (% distribution)</b>		
1000-1500	28	28
1501-2000	20	26
2001-4000	33	30
4001-6000	8	8
>6000	11	8
<b>Education (% distribution)</b>		
Less than secondary	0.5	2
Secondary	7	8
Bachelors degree	80	77
Advanced degree	13	13
<b>Social class<sup>a</sup> (% distribution)</b>		
A – elite	16	15
B – middle	25	25
C – relatively low	59	60
n=	204	300

- a. Social class defined on the basis of household income, occupation/position of the respondent, frequency of international travel, club memberships, car ownership, and appliance ownership.

Source: 2007 survey data.

**Table 2: Knowledge and Attitudes about Taking a Mortgage for Dwelling Purchase and Dwelling Registration in 2005 and 2007** (Figures are percentages.)

	<b>Recent Purchaser</b>	<b>Potential Purchaser</b>	<b>Total</b>
<b>Exposure to Information</b>			
<b>Mortgages</b>			
In the last 12 months heard or read something about buying an apartment or house with a mortgage	33.8	38.0	36.3
Of those who did hear something:			
--percent who paid close attention to at least some of it	29.0	21.9	24.6
--percent who paid close attention to it and carefully considered whether it would be a good thing	15.9	29.8+	24.6
<b>Registration</b>			
In the last 12 months heard or read something about buying an apartment or house with a mortgage	17.2	19.7	18.7
Of those who did hear something:			
--percent who paid close attention to at least some of it	25.7	23.7	24.5
--percent who paid close attention to it and carefully considered whether it would be a good thing	22.9	23.7	23.4
<b>Mortgages</b>			
Understanding of concept			
Could not answer	20.1	26.3	23.8
To borrow with interest <sup>a</sup>	16.2	18.3	17.5
To take loan from a bank to buy a flat	26.0	24.0	24.8
To pay in installments	24.5	18.3	20.8
<b>Knowledge<sup>d</sup></b>			
Is it possible to take out multiple mortgages on the same property? [no]	84.3	85.7	85.1
What is the likely outcome of not making the required mortgage payments? [lose the property]	41.7	41.7	41.7
Is it possible to get a mortgage without officially registering it? [no]	91.7	90.0	90.7
<b>Attitudes<sup>b</sup></b>			
<b>Positive Statements</b>			
A mortgage would enable me to buy a much bigger apartment or house than I could otherwise.	8.2	8.6	8.4
Buying with a mortgage will allow me to move in once the loan is made.	8.0	7.9	7.9
Traditional ways of doing things are changing, and new ideas, such a buying a house by taking out a loan, are becoming more accepted in Egypt.	7.8	8.0	7.9
<b>Negative Statements</b>			
It is very important for me not to have long-term debt.	8.4	8.5	8.5
Most parents would not approve a marriage of their daughter to a man who has a mortgage on the apartment where they will live.	4.1	3.9	4

<b>Top 3 of 19 statements ranked 1<sup>st</sup> as the most important points in deciding to take out a mortgage<sup>c</sup></b>			
Interest rate would be low enough to be acceptable.	48.5	44.3	46.0
The length of the loan period.	5.4	5.0	5.2
The monthly payments would be affordable.	8.3	9.3	8.9
<b>Registration</b>			
Understanding of concept.			
Expressed that registration protects property rights or guarantees them.	66.7	65.7	66.1
<b>Knowledge</b>			
Aware of registration fee system introduced in 2006.	14.7	16.0	15.5
Knew that the new system is flat fees (rather than percentage of value) as basis.	73.3	58.3	64.1
Correctly named the maximum or minimum fee in system.	6.9	4.7	5.6
<b>Attitudes<sup>b</sup></b>			
<b>Positive</b>			
Registration of my dwelling would make it easier to sell in the future.	9.2	9.3	9.3
Registration is a process that would give me the clearest possible legal right to my real estate property.	9.2	9.2	9.2
Registration of real property would help me protect my rights in the event of a dispute.	9.4	9.6	9.5
<b>Negative</b>			
Registration of real estate generally is not something very important to do when buying an apartment or house.	3.4	3.2	3.2
Registration is too expensive.	6.5+	6.0	6.2
Registration is a complicated process that takes a long time.	6.4	6.1	6.2
There are other ways to prove ownership other than registration that are just as good, for example, utility bills.	5.6	5.2	5.4
<b>Intention</b>			
How likely are you to register your property if you bought a new dwelling in the next year? (1=definitely not, 10=definitely will.)	9.1	9.4	9.3

+ 2007 value for owners is significantly different from the value for potential owners at the 0.05 level or higher.

a. Percentage of those responding; multiple responses possible.

b. Mean value on a scale from 1 (strongly disagree) to 10 (strongly agree) for those responding to the question.

c. Percentage of those who did not answer that they (a) could not answer, or, (b) they would never take out a mortgage under any circumstances.

d. Percentage of respondents answering correctly. The correct answer, according to the law, is in brackets after each question.

**Table 3: Variables Used in Multivariate Analysis**

Variable Name	Definition
<b>Dependent Variables – Registration</b>	
Protect	Var=1, if respondent expressed that registration protects or guarantees the property rights.
New_sys	Var=1, if aware of the new registration fee system.
Flat_fee	Var=1, if those aware of new system knew it is a flat fee system.
Fee_amnt	Var=1, if those knowing it is a flat fee system knew the maximum and minimum fee charged.
Imp_reg	Score 1 to 10, agree with: Registration of real estate property generally is not something very important to do when buying an apartment or house.
Legal	Score 1 to 10, agree with: Registration is a process that would give me the clearest possible legal title to my real estate property.
Other_reg	Score 1 to 10, agree with: There are other ways to prove ownership other than registration that are just as good for example utility bills.
Reg_expnsv	Score 1 to 10, agree with: Registration of property is too expensive.
Complicated	Score 1 to 10, agree with: Registration of real estate is a complicated process that takes a long time.
Sell_future	Score 1 to 10, agree with: Registration of real estate property would make it easy to sell it in the future.
Rights_dispute	Score 1 to 10, agree with: Registration of real estate property would help me protect my rights in the event of a dispute.
Will_register	Var=1, if respondent reported he would register a newly purchased property.
<b>Dependent Variables – Mortgage</b>	
Concept_mortg	No. of key mortgage attributes cited in open-ended response; maximum number is 3.
Know_mortg	No. of correct responses to three mortgage knowledge questions (0,1,2,3).
Daughter_marr	Score 1 to 10, agree with: Most parents would not approve a marriage of their daughter to a man who has a mortgage on the apartment or house they will live in.
Move_in	Score 1 to 10, agree with: Buying a home with a mortgage will allow me to move in once the loan is approved.
Larg_aptmnt	Score 1 to 10, agree with: A mortgage would enable me to buy a much larger apartment or house than I otherwise could with my current income.
Long_debt	Score 1 to 10, agree with: It is very important to me not to have a lot of debt over a long time.
Accpt_mortg	Score 1 to 10, agree with: Traditional ways of doing things are changing, and new ideas, such as buying a house by taking out a mortgage, are becoming more accepted here in Egypt.
<b>Independent Variables</b>	
SEC	Socio Economic Class Points, range between 24 and 45.
Age	Respondent's age, using mid-points of age intervals.
Expose	The level of exposure to information (0,1,2,3,4), where '0' indicates that the respondent heard nothing about mortgage—or, in a separate question, registration. '1' indicates that the respondent heard about mortgage, but he did not pay any attention to it, and so on till '4' which means that the respondent heard about mortgage, paid close attention to it, and carefully considered whether it would be a good thing.

Reg	Var=1, if recent home buyer registered his property.
Mortg	Var=1, if a recent home buyer obtained a mortgage.