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International remittances refer to money and goods that are transmitted to households back home by people working away from their origin communities. From the standpoint of economic development, the central question regarding such resource transfers is quite straightforward, namely, How are such monies used? Do migrant workers channel international remittances into productive investments in their home communities, or do they use such monies merely to underwrite the consumption of newly desired consumer goods? Stated more baldly, do remittances from abroad help provide the investment needed to facilitate development, or do they merely foster new patterns of dependence on "status-oriented" consumer goods for migrant workers and their families?

In the past many observers have taken a dim view of the economic impact of international remittances, primarily because they believe that the bulk of such monies is spent on personal consumption. In his review article M. Lipton, for example, maintains that "everyday [consumption] needs often absorb 90% or more of a village's remittances" and that "investment is only the fourth [and last] priority for remittances."¹ Similarly, Shahid Perwaiz in his analysis of remittances in Pakistan writes that most such earnings are "frittered away in personal consumption, social ceremonies, real estate and price escalating trading."² Other country-level studies in Egypt, Turkey, and Yemen have lamented both the low levels of international remittance earnings that go into investment and the large amounts of such earnings that are spent on consumer durables, housing, and land.³

In more recent years several empirical studies have appeared to refine these rather pessimistic conclusions. I. Gilani et al. found that Pakistani workers did indeed use remittances from abroad to increase consumption (one-third of the migrant households reported increased

expenditures on basic staples) and that most "investment" went into real estate and housing. Overall, it was found that 62% of remittance expenditure went into current consumption, 22% into real estate, 13% into direct investment, and 3% into financial investments.⁴ However, when the expenditure behavior of migrants was compared to that of a nonmigrant control group, the consumption propensities of the two groups did not differ significantly. These findings suggest that the perceived negative effects of international remittances on development are no different from the results that would have obtained had the poorer members of society been made better off by some other means. Gilani et al.'s findings underscore that the critical point of analysis should not be the consumption and investment behavior of migrants but, rather, the behavior of migrants in comparison with nonmigrants.

The purpose of this article is to extend the debate concerning the uses of international remittances by rigorously comparing the expenditure behavior of a set of migrant households with those of a control set of nonmigrant households. Since all the households are separated into quintile groups on the basis of expenditure or income, it becomes possible to identify how remittance earnings affect the consumption and investment behavior of different types of migrants: rich, middle income, and poor. Such a more nuanced view of the impact of remittances will, it is hoped, enable us to transcend those positions that merely decry the "unproductive" and "wasteful" impact of international remittances.

This article proceeds in six sections. The first section provides an overview of the data set. Section II presents the predicted income and expenditure functions used in analyzing migrant and nonmigrant behavior, and Section III discusses the choice of the functional form for the model. Section IV specifies and estimates the model, Section V presents the empirical results, and Section VI summarizes the main findings of the article.

I. Data Set

Data for the study come from two household surveys that I conducted in 1986–87 in three villages in Minya Governorate, a rural province located about 250 kilometers south of Cairo. These three villages were not selected on the basis of any purported migration or remittance characteristics; rather, they were chosen because they were the same communities that I had studied in 1978–80.⁵

Most inhabitants of the study area are peasants or government workers: survey data show that 53% of all males over 18 years old are peasants or agricultural laborers and 17% are government workers.⁶ The peasants tend small plots of land planted in wheat, maize, clover, and cotton,⁷ and the government bureaucrats work for one of the government institutions that have been created in the area since the Eryp-

tian revolution of 1952.⁸ According to the data, mean annual per capita household income (including remittances) in the area is LE 425.6 (US\$310) (1 Egyptian LE = US\$0.73).

In the first survey 1,000 households were interviewed in the three villages to collect basic socioeconomic data on each household member: age, education, primary and secondary occupation, landholding, and gross monthly income. Households were also asked about the presence/absence of a household member working abroad during the last 10 years (1976–86).⁹

On the basis of this survey, all 1,000 households were divided into three groups: nonmigrant ($N = 661$), once-abroad migrant ($N = 235$), and still-abroad migrant households ($N = 104$). Each group was then stratified (from high to low) on the basis of actual gross household income. For nonmigrant and once-abroad migrant households, actual gross household income was calculated as the sum of all gross individual incomes; for still-abroad migrant households, income from workers still abroad was valued in terms net of travel costs and basic subsistence (food and housing) abroad.

In the second survey 150 of the original 1,000 households were selected for interviewing: 75 from the income-stratified group of nonmigrant households and 75 from the income-stratified group of once-abroad migrant households.¹⁰ None of the households in the still-abroad migrant group were chosen for interviewing in round 2, since it seemed desirable to question the migrant himself regarding remittance expenditures. The goal here was to select two comparable groups of income-stratified migrant and nonmigrant households in such a way so that the main difference between them is that the first group had received remittances and the latter had not.

It is important at the outset to pinpoint both the socioeconomic character and the representativeness of the households selected in round 2. Table 1 analyzes the socioeconomic character of round 2 households by showing how they are distributed through the income order. In this table all 1,000 households from round 1 are ranked by income quintiles on the basis of their predicted per capita income (excluding remittances).¹¹ Column 1 shows how the nonmigrant households in round 1 are distributed among these quintiles, and column 2 shows how the nonmigrant households in round 2 are distributed. Columns 3 and 4 then show the quintile distributions for the once-abroad migrant households in rounds 1 and 2.

Table 1 shows that nonmigrant households were drawn fairly equally from all income groups. For both rounds 1 and 2, only the poorest income group produced more than its quintile share of nonmigrants. With respect to once-abroad migrant households, table 1 shows that migrant households tended to come from the middle income quintile groups. In both rounds 1 and 2 the second and third quintile

TABLE I
DISTRIBUTION OF NONMIGRANT AND ONCE-ABROAD MIGRANT HOUSEHOLDS AMONG QUINTILE GROUPS RANKED BY PREDICTED PER CAPITA INCOME
(Excluding Remittances)

Percent of 1,000 Households Ranked by Predicted per Capita Income (Excluding Remittances)	Percent of Round 1 Nonmigrant Households (<i>N</i> = 661) (1)	Percent of Round 2 Nonmigrant Households (<i>N</i> = 75) (2)	Percent of Round 1 Once-Abroad Migrant Households (<i>N</i> = 235) (3)	Percent of Round 2 Once-Abroad Migrant Households (<i>N</i> = 75) (4)
Lowest 20%	25.87	25.33	8.94	10.67
Second 20%	18.61	20.00	24.26	21.33
Third 20%	14.07	18.67	34.89	38.66
Fourth 20%	18.76	18.67	19.58	17.33
Top 20%	22.69	17.33	12.34	12.00
Top 10%	12.71	12.00	4.26	2.67

NOTE. —Households are ranked by predicted per capita income (excluding remittances) by using eq. (1) to estimate parameters from the 661 nonmigrant households in round 1. These parameters were then applied to the 235 once-abroad and 104 still-abroad households to predict income for all households. See Sec. II of text.

groups produced disproportionately high shares of once-abroad migrant households. It is interesting to note here that once-abroad migrant households are not wealthy. In both rounds the top quintile (and decile) groups actually produced disproportionately small shares of once-abroad migrants.¹²

Table 2 analyzes the representativeness of round 2 households by comparing selected characteristics of nonmigrant and once-abroad migrant households. For example, earlier analysis of the data suggests that nonmigrant and once-abroad migrant households are statistically different in terms of household size and number of males over 13 years of age.¹³ Such analysis suggests that large households, and especially households with more males, have a higher propensity to send migrants abroad.

According to table 2 (rows 1 and 2), the nonmigrant and once-abroad migrant households in round 1 are statistically different in terms of household size and number of males over age 13. Similarly, the table reveals that nonmigrant and once-abroad migrant households in round 2 are also statistically different in terms of these variables. According to rows 5 and 6, nonmigrant households in round 1 have more mean land farmed (rented and owned)¹⁴ and higher mean per capita incomes (excluding remittances) than do once-abroad migrant households in round 1. However, these differences are not statistically significant. The table shows that these same relationships prevail in round 2: nonmigrant households have more mean land farmed and higher mean per capita incomes than once-abroad migrant households, but these differences are again not significant. Despite the lack of statistical significance, these findings tend to underscore the point that once-abroad migrant households are not wealthy. With respect to the issue of representativeness, the data in table 2 show that the households in round 2 are broadly representative of those in the larger round 1 sample.

In round 2 interviewing focused on household expenditure and investment behavior. As indicated in table 3, data were collected for 14 major categories of outlay and on several subdivisions within each category. For nonmigrant households, the time base over which the outlays were measured differed between categories of expenditure. Once-abroad migrant households were surveyed over the same 14 major categories, and migrants were queried about outlays in each category since their return. Since all of the migrant workers in round 2 had returned home, their remittance earnings were treated as being either spent or invested.

Table 4 presents summary data showing how once-abroad migrant households in round 2 spent their actual remittance earnings. Because of the difficulties involved in identifying the proportion of remittances

TABLE 2
SELECTED CHARACTERISTICS OF NONMIGRANT AND ONCE-ABROAD MIGRANT HOUSEHOLDS

	Round 1 Nonmigrant Households (<i>N</i> = 661)	Round 2 Nonmigrant Households (<i>N</i> = 75)	Round 1 Once-Abroad Migrant Households (<i>N</i> = 235)	Round 2 Once-Abroad Migrant Households (<i>N</i> = 75)	Round 1 <i>t</i> -statistic (Two-tailed)	Round 2 <i>t</i> -statistic (Two-tailed)
Mean household size	6.55	6.53	7.33	8.39	- 3.43**	- 3.29**
Mean number of males in household over 13 years old	2.10	1.95	2.47	2.96	- 3.75**	- 4.87**
Mean age of all males in household (years)	25.62	24.92	22.43	22.19	3.83**	1.62
Mean education of males in household over 18 years old (1 if preparatory school or higher, 0 otherwise)	.18	.22	.24	.17	- 2.28	.76
Mean land farmed (feddans) ^a	1.07	1.19	.67	.71	1.88	1.06
Mean annual per capita income (excluding re- mittances) in Eyp- tian LE ^b	399.72	461.39	372.60	375.75	1.29	1.12

^a Land farmed includes land rented and owned; 1 feddan = 1.038 acres.

^b 1 Egyptian LE = US\$0.73.

** Difference between households is significant at the .05 level.

TABLE 3
EXPENDITURE ITEMS INCLUDED IN ROUND 2 OF 1986-87 HOUSEHOLD SURVEY

Item	Time Period for Nonmigrant Households	Time Period for Migrant Households
Food, drink	last month	same
Shoes, clothes	last year	same
Education, school supplies	last year	same
Medical, health expenses	last year	same
Agricultural expenses	last year	same
Pilgrimage to Mecca	last 5 years	same, plus since migration
Marriage expenses	last 5 years	same, plus since migration
Household goods (radio, TV)	last 5 years	same, plus since migration
Housing costs (building, repair)	last 5 years	same, plus since migration
Land purchases (building, agricultural)	last 5 years	same, plus since migration
Agricultural investment	last 5 years	same, plus since migration
Vehicle purchases (car, taxi)	last 5 years	same, plus since migration
Store, restaurant purchases	last 5 years	same, plus since migration
Other investment	last 5 years	same, plus since migration

spent on normal recurring expenses, in this table data are not presented on migrant expenditures on such items as food, drink, and clothing.

According to table 4, the bulk of remittance money spent on non-recurring expenses went into housing. Fully 53.9% of actual remittance expenses on nonrecurring items went into the construction or repair of houses. Another large percentage (20.5) went into the purchase of land for agricultural or building purposes. The once-abroad migrant households in round 2 spent only a small percentage of their remittances on vehicles or mercantile activities. According to the table, only 4.7% of actual remittance earnings went to vehicle purchases and only 3.0% went to the purchase or expansion of a store. These patterns of remittance expenditures will be analyzed in more detail below.

II. Predicted Income and Expenditure Functions

In order to compare the expenditure behavior of migrant and nonmigrant households in round 2, it is necessary to address one theoretical issue and two methodological problems.

The theoretical problem concerns the issue of fungibility. Since money can be spent in many different ways, simply observing that

TABLE 4
 ACTUAL EXPENDITURES ON NONRECURRING ITEMS AS PERCENTAGE OF
 TOTAL ACTUAL REMITTANCE EARNINGS OF ONCE-ABROAD
 MIGRANT HOUSEHOLDS (*N* = 75)

Item	Percentage of Total Remittance Earnings
Build new home	42.5
Repair house	11.4
Purchase agricultural land	11.2
Marriage	10.8
Purchase land for building	9.3
Purchase car or taxi	4.7
Open or expand store	3.0
Purchase television	2.3
Purchase radio	1.0
Purchase refrigerator	.9
Other	2.9
Total	100.0

remittances are not used to encourage investment, for example, does not mean that remittances cannot be credited with this result. Remittances from abroad may well have freed other resources for expenditure on investment. To overcome this problem, in this study remittance and nonremittance income are combined for each once-abroad migrant household, and expenditures out of this total income (remittance plus nonremittance) are reported.

The two methodological problems are as follows. First, we do not know what the annual incomes of the 75 once-abroad migrant households would have been had they not had someone abroad. Second, we do not know what the annual expenditures of these once-abroad households would have been had they not had a migrant abroad. To solve these two problems, it is necessary to predict what the incomes and expenditures of these households would have been without remittances.

In pursuit of these ends, the following procedure was used. The parameters predicting annual gross household income (excluding remittances) (INC) were estimated from the 75 households that had not sent a migrant abroad. The equation used was:

$$\text{INC} = \text{LND} + \text{EDUC} + \text{MALE13} + \text{FEM13}, \quad (1)$$

where LND = land farmed (rented and owned) by household; EDUC = mean education of male household members over 18 years old (1 if preparatory schooling or higher, 0 otherwise); MALE13 = number of males over 13 years old in household; and FEM13 = number of females over 13 years old in household.

On the expenditure side, the parameters predicting annual gross household expenditures (excluding remittances) (EXP) were also estimated from the 75 households that had not sent a migrant abroad. The equation used was:

$$\text{EXP} = \text{HS} + \text{CHILD5} + \text{MAR} + \text{INC} + \text{SQINC}, \quad (2)$$

where

- HS = size of household;
- CHILD5 = number of children less than 5 years old as proportion of household size;
- MAR = marriage dummy (1 if there are marriage costs in last 5 years, 0 otherwise);
- INC = log of per capita annual income; and
- SQINC = square of log of per capita annual income.

The parameters from equations (1) and (2) were then applied to the 75 once-abroad households in order to predict their gross annual income and expenditures without remittances.

Finally, it was necessary to determine the income and expenditures of the 75 once-abroad households with remittances. This was done as follows. Total remittances for each once-abroad household were valued in terms net of travel costs and basic subsistence (food and housing) abroad. Since all of the once-abroad households had a migrant abroad within the past 5 years, the resulting total remittance figures were then annualized by dividing them by the number of years the household had a migrant abroad. Annual gross household income (including remittances) for the 75 once-abroad households was then determined by adding predicted annual gross household income (INC) and net remittance income per year. Annual gross household expenditures (including remittances) for these once-abroad households were calculated in a similar fashion: by adding predicted annual gross expenditures (EXP) and net remittance expenditures per year.

In equation (1) it is hypothesized that size of land farmed (LND) and the mean education of male household members (EDUC) are positively correlated with gross annual household income. In this equation it is also hypothesized that number of males over 13 years old (MALE13) and number of females over 13 (FEM13) are also positively correlated with household income.

In equation (2) it is hypothesized that household size (HS) and number of children less than 5 years old as proportion of household size (CHILD5) are positively correlated with gross annual household expenditure. The same is hypothesized to be true of the log of income variable (INC). Since marriage costs are so high in this area, the mar-

TABLE 5
REGRESSION TO ESTIMATE PREDICTED GROSS ANNUAL HOUSEHOLD INCOME
(Excluding Remittances)

Variable	Regression Coefficient	t-Ratio
Land farmed (rented and owned) by household (LND)	329.525	9.294**
Mean education of male household members over 18 years old (1 if preparatory school or higher, 0 otherwise) (EDUC)	-797.968	-2.371**
Males in household over 13 years old (MALE 13)	377.906	2.950**
Females in household over 13 years old (FEM13)	360.193	2.675**
Constant	892.271	2.460**

NOTE.— $R^2 = .585$; $N = 75$.

** Difference is significant at the .05 level.

riage dummy variable (MAR) is entered to capture the effects of marriage on household expenditure.

Tables 5 and 6 summarize the parameter results obtained from using equations (1) and (2) to estimate predicted gross annual household income and expenditures without remittances. In table 5 all of the coefficients are significantly different from zero at the 5% level. As expected, four of the five coefficients are positively correlated with predicted gross household income (excluding remittances). It is surprising, however, to note that the coefficient for mean education of male household members over 18 years old (EDUC) is significantly and negatively correlated with predicted gross household income (excluding remittances). This relationship can be explained as follows. In

TABLE 6
REGRESSION TO ESTIMATE PREDICTED GROSS ANNUAL HOUSEHOLD EXPENDITURES
(Excluding Remittances)

Variable	Regression Coefficient	t-Ratio
Household size (HS)	189.029	6.145**
Number of children less than 5 years old as proportion of household size (CHILDS)	1117.431	1.881*
Marriage dummy (1 if marriage in household within last 5 years, 0 otherwise) (MAR)	511.550	2.354**
Log of per capita annual income (INC)	2.119	4.956**
Square of log of per capita annual income (SQINC)	-.001	-4.414**
Constant	-805.163	-2.566**

NOTE.— $R^2 = .437$; $N = 75$.

* Difference is significant at the .10 level.

** Difference is significant at the .05 level.

rural Egypt the private sector is so weak that most educated people seek work with the government. Yet not only must such educated people often wait 4–5 years after graduation to receive a government job, but when they do begin working they start at very low wage rates—LE 30–LE 60 (US\$20–US\$45) per month. All of this makes the returns to preparatory and secondary school education either low or negative in rural Egypt. In table 6 all of the coefficients are also significantly correlated with predicted gross annual household expenditure (excluding remittances), and only the coefficient for the squared income term (SQINC) is negative (as expected).

Table 7 summarizes the results of efforts to calculate annual per capita income and expenditures for nonmigrant and once-abroad migrant households. According to row 1, the predicted mean annual per capita income (excluding remittances) of once-abroad households (LE 391.07) is less than that of nonmigrant households (LE 461.39). Yet when remittances are included, the predicted mean annual per capita income of once-abroad households (LE 772.16) is 67% higher than that of nonmigrant households (LE 461.39). Similarly, when remittances are included, the predicted mean annual per capita expenditures of once-abroad households (LE 623.87) is 142% higher than that of nonmigrant households (LE 257.58).

Table 7 shows that remittances change the expenditure patterns of once-abroad migrant households. According to rows 4–6, mean annual per capita expenditures (including remittances) for migrant as opposed to nonmigrant households are higher by 31% for consumption, 231% for durables, and 1,458% for investment.

Since it is important to the analysis pursued here, the classification of expenditures in table 7 (rows 4–6) into three categories—consumption, durables, and investment—merits some discussion. The distinction between these three categories of expenditures lies in the difference between current and future wants. Consumption refers to expenses used to meet immediate wants: food, drink, clothing, pilgrimage, and marriage.¹⁵ Durables refer to expenditures used to meet more long-term needs, such as consumer goods and housing. Finally, investment refers to those outlays for which the individual expects (or hopes) to enjoy some economic return in the future: land, equipment, and commercial enterprises.

While it may be easy in theoretical terms to distinguish between consumption, durables, and investment, on a practical level the difference between these three types of expenditures becomes blurred. For example, consider an expenditure item of key importance to this study: housing. From the standpoint of society, expenditures on housing should be classified as a “durable,” because they benefit the individual without any major social externalities. Yet from the standpoint of the individual, housing expenses should be classified as an “investment,”

TABLE 7
ANNUAL PER CAPITA INCOME AND EXPENDITURES FOR NONMIGRANT AND ONCE-ABROAD
MIGRANT HOUSEHOLDS

	Nonmigrant Households (<i>N</i> = 75)	Once-Abroad Migrant Households (<i>N</i> = 75)	<i>t</i> -Statistic (Two-tailed)
Mean annual per capita income (excluding remittances) in Egyptian LE	461.39	391.07 ^a	.90
Mean annual per capita income (including remittances) in Egyptian LE	461.39	772.16 ^b	-3.50**
Mean annual per capita expenditures (including remittances) in Egyptian LE	257.74	623.87 ^c	-7.24**
Mean annual per capita expenditures (including remittances) on consumption in Egyptian LE ^d	187.19	246.54	-6.16**
Mean annual per capita expenditure (including remittances) on durables in Egyptian LE ^e	63.95	211.98	-5.30**
Mean annual per capita expenditure (including remittances) on investment in Egyptian LE ^f	6.60	102.87	-4.80**

NOTE.—Predicted income and expenditure values recorded here may differ from actual figures presented in previous tables. 1 Egyptian LE = US\$0.73.

^a This is a predicted value, estimated from equation (1). See text.

^b This is a predicted value, calculated by adding the predicted income results from equation (1) and net remittance income per year. See text.

^c This is a predicted value, calculated by adding the predicted expenditure results from equation (2) and net remittance expenditures per year. See text.

^d Consumption = expenses on food, drink, clothing, education, medical, pilgrimage, and marriage.

^e Durables = expenses on household goods and housing.

^f Investment = expenses on land, agricultural investment, vehicles, store, and other items.

** Difference between households is significant at the .05 level.

since new and improved housing offers possible future economic returns to the individual. Since expenditures on housing are of vital importance to once-abroad migrant households, this article will attempt to analyze housing expenses both as a durable and as an investment good.

III. Choice of Functional Form

To pursue the analysis, it is necessary to choose a proper functional form for the model. The selected functional form must do several things. First, it must provide a good statistical fit to a wide range of

commodities. Second, because of the focus here on expenditure-consumption relationships, the chosen form must have a slope that is free to change with expenditure. In this study expenditure elasticities as well as marginal propensities to consume need to be calculated. A model specification that imposes the same slope (or marginal budget share) for all levels of expenditure would not be useful. What is needed is a functional form that mathematically allows for rising, falling, or constant marginal propensities to consume over a broad range of expenditure levels. Third, the chosen function should conform with the criterion of additivity. To be internally consistent the sum of the marginal propensities for all commodities should equal unity.¹⁶

For these reasons, the semi-log ratio function was selected as the basic functional form:

$$C_i/EXP = a + b(\log EXP), \quad (3)$$

where C = expenditure on good i , EXP = total expenditure, a = constant, and b = parameter to be estimated for good i .

In using this function to compare the expenditure behavior of households with different incomes, various socioeconomic factors other than income must be taken into account. Part of the observed differences in expenditure behavior may be due, for example, to differences in family size or (in this sample) to the presence of a worker abroad and the length of time spent abroad. These household characteristic variables thus need to be built into the function in a way that allows them to shift both the intercept and the slope of the Engel curve. Therefore, let HS (household size) be the variable for family size and MNS (months abroad) the variable for length of migrant time abroad. Also let MIG be the (0,1) migration dummy variable that allows expenditure behavior to differ according to migrant/nonmigrant classification. The complete model is:

$$C_i/EXP = a + b(MIG) + c(\log EXP) + d(MIG)(\log EXP) + e(HS) + f(MIG)(HS) + g(MNS). \quad (4)$$

From this equation the expenditure elasticity for the i th good (ξ_i) and the average and marginal budget shares (ABS and MBS , respectively) can be derived as follows:

$$(\text{when } MIG = 0) \xi_i = [(EXP/CON)(c)] + 1, \quad (5)$$

$$(\text{when } MIG = 1) \xi_i = [(EXP/CON)(c + d)] + 1, \quad (6)$$

and

$$ABS_i = C_i/EXP, \quad (7)$$

$$MBS_i = (ABS)(\xi_i). \quad (8)$$

For the individual household, these terms are evaluated at the household mean values for consumption (C) and expenditure (EXP). But when comparing across expenditure quintiles, then C and EXP are assigned their mean values for the relevant quintiles.

Although both income and expenditure data were collected for all households in round 2, the analysis here will emphasize expenditure data. There are two reasons for this. First, the income data proved to be noisy, and there was often a large (and unexplained) discrepancy between income and expenditure, even after savings were accounted for.¹⁷ Second, in situations like this, expenditure is likely to be a better indicator of permanent income, which itself is viewed as the more important determinant of consumption behavior.¹⁸ This consideration is particularly relevant for migrant households, where annual incomes fluctuate considerably depending on the presence of a worker abroad. Under these conditions, total consumption expenditure is likely to provide a better measure of the households' perceptions of their future income than the actual incomes recorded in the surveys.

IV. Specification and Estimation of Model

Using equation (4) to estimate the model yields the following formulation:

$$C^{\text{con. dur. inv}}/EXP = \text{MIG} + \log EXP + (\text{MIG})(\log EXP) + \text{HS} \\ + (\text{MIG})(\text{HS}) + \text{MNS}, \quad (9)$$

where:

- $C^{\text{con. dur. inv}}$ = annual per capita household expenditure on consumption, durables, or investment;
- EXP = total annual per capita household expenditure;
- MIG = migration dummy variable (1 if migrant household, 0 otherwise);
- $(\text{MIG})(\log EXP)$ = migration dummy variable \times log of annual per capita household expenditure;
- HS = size of household;
- $(\text{MIG})(\text{HS})$ = migration dummy variable \times size of household;
- MNS = months spent abroad by migrant (0 if no migrant).

In this specification, the dependent variable is expressed in per capita terms so as to facilitate comparisons between households. The independent expenditure variable (EXP) is also expressed in per capita

terms, so that the model permits family size to influence both the intercept and the slope of the various commodity functions. The migration dummy variable (MIG) allows household expenditure behavior to vary according to migrant/nonmigrant status. The migration variable (MNS) captures the effect of migrant time spent abroad on expenditures.

After two households were eliminated because data were incomplete,¹⁹ the parameters of equation (9) were estimated for 148 households in round 2. The parameters were estimated separately for expenditure and income and separately for each category of outlay—consumption, durables, and investment. The basic estimation technique was ordinary least squares (OLS).

The results are summarized in table 8. Using expenditure data, column 1 shows that 11 of the 18 coefficients are significantly different from zero at the 10% level. With income data, column 2 shows that 10 of the 18 coefficients are significant at this level of confidence.

With consumption as the numerator of the dependent variable, table 8 shows that as household size (HS) rises the share of consumption in total expenditures decreases. This relationship is highly significant using both expenditures and income data and suggests that economies of scale do exist for consumption items like food, drink, and clothing. The table also reveals that both the months abroad (MNS) and the migration dummy terms (MIG) are negative and significant when using expenditures and income data. This suggests two important findings: first, that migrants who stay abroad longer spend a smaller proportion of their expenditures or income on consumption; and second, that migrants spend a smaller share on consumption than do nonmigrants at a given level of expenditure. These are key findings, because they show that migrants do not spend a disproportionate share of their remittance earnings on consumption goods.

With consumption as the numerator of the dependent variable, the negative and significant terms for annual per capita expenditures (EXP) indicate that as total expenditures rise the share of spending on consumption falls. This relationship is expected. Summing the relevant coefficients ($[EXP]$ and $[MIG][EXP]$) to arrive at the relationship for migrant expenditures yields a similar result (not shown), which is also statistically significant. According to the data, as migrant annual per capita expenditures rise, the share of migrant spending on consumption falls.

With durables as the numerator of the dependent variable, the household size term (HS) is positive and significant using expenditures data. This suggests that at a given level of expenditure larger households spend a higher proportion on such durable items as household goods and housing. Using expenditures data, the months abroad term (MNS) and the migration dummy (MIG) are also positive and highly

TABLE 8

REGRESSION ANALYSIS OF HOUSEHOLD EXPENDITURE AND HOUSEHOLD INCOME ON SELECTED VARIABLES ($N = 148$)

Variable	Using Household Expenditure Data	Using Household Income Data
Consumption:		
Household size (HS)	-.019 (-2.780)**	-.025 (-3.856)**
Migrant household size (MIG)(HS)	.010 (1.088)	.026 (2.705)**
Months abroad (MNS)	-.004 (-3.501)**	-.003 (-3.135)**
Migration dummy (MIG)	-.614 (-1.748)*	-1.460 (-3.125)**
Annual per capita expenditures (EXP)	-.289 (-7.180)**	...
Annual per capita income (Y)	...	-.278 (-9.056)**
Migrant annual per capita expenditures (MIG)(EXP)	.090 (1.661)*	...
Migrant annual per capita income (MIG)(Y)	...	.210 (3.216)**
Constant	2.489 (10.445)**	2.339 (11.815)**
R ²	.644	.503
Durables:		
Household size (HS)	.014 (1.953)*	.001 (.165)
Migrant household size (MIG)(HS)	-.012 (-1.188)	.008 (.744)
Months abroad (MNS)	.002 (1.990)**	.002 (2.031)**
Migration dummy (MIG)	1.510 (4.095)**	-.540 (-1.019)
Annual per capita expenditures (EXP)	.253 (5.966)**	...
Annual per capita income (Y)	...	.009 (.255)
Migrant annual per capita expenditures (MIG)(EXP)	-.253 (-4.436)**	...
Migrant annual per capita income (MIG)(Y)	...	.078 (1.020)
Constant	-1.275 (-5.096)**	.088 (.382)
R ²	.270	.090
Investment:		
Household size (HS)	.005 (1.055)	.003 (.827)
Migrant household size (MIG)(HS)	-.004 (-.602)	.001 (.088)
Months abroad (MNS)	.002 (2.460)**	.001 (2.227)**
Migration dummy (MIG)	-.112 (-.448)	-.654 (-2.247)**
Annual per capita expenditures (EXP)	.037 (1.285)	...
Annual per capita income (Y)	...	.008 (.418)
Migrant annual per capita expenditures (MIG)(EXP)	.022 (.567)	...
Migrant annual per capita income (MIG)(Y)	...	.104 (2.487)**
Constant	-.214 (-1.260)	-.054 (-.428)
R ²	.170	.201

NOTE.—*t*-statistics are in parentheses.

* Significant at the .10 level.

** Significant at the .05 level.

significant. This suggests not only that migrant households spend a higher proportion of their expenditures on durables at a given level of expenditure but also that migrants who stay abroad longer spend a larger share on durables. Since housing constitutes 87.8% of mean annual per capita durable expenditures for once-abroad migrant households, it is reasonable to conclude that migrants also spend a higher proportion on housing at a given level of expenditure.

With investments as the numerator of the dependent variable, the months abroad term (MNS) is positive and highly significant using both expenditures and income data. This suggests that migrants who stay abroad longer also spend a higher proportion on investment at a given level of expenditure or income. Given this relationship, it is rather disturbing to note that the migration dummy term (MIG) is negative and significant when using income data. This suggests that migrant households actually devote a smaller share of their income to investment at a given level of income. However, summing the relevant coefficients ($[Y]$ and $[MIG][Y]$) to arrive at the relationship (not shown) for migrant income suggests that as migrant income rises, so does the proportion of income spent on investment.

V. Empirical Results: Remittances and Household Behavior

The purpose of this article is to compare the expenditure behavior of migrant and nonmigrant households with similar expenditure (or income) levels. To do this, all 148 households must be ranked into quintile groups on the basis of expenditures (or income), including remittances. The 148 households can then be divided into migrant and nonmigrant groups, and the regression results reported above can be used to calculate expenditure elasticities and marginal budget shares for the various quintile groups. This makes it possible to compare the marginal budget shares for migrant and nonmigrant households at similar levels of expenditure (or income).²⁰

Tables 9, 10, and 11 show the expenditure behavior on consumption, durables, and investment for the 74 nonmigrant and 74 once-abroad migrant households. In each table, the nonmigrant and once-abroad migrant households are first ranked into quintile groups on the basis of per capita expenditures (including remittances) and then analyzed using expenditure data. Households are also ranked into quintile groups in tables 9–11 on the basis of per capita income (including remittances) and then analyzed using income data. In each case, quintile means are determined by aggregating mean individual household values, and once-abroad migrant households are evaluated on the basis of their expenditures or income including remittances. The main difference then for any quintile group between the once-abroad migrant and the nonmigrant households in either case should be that the former have received remittances and the latter have not.

Table 9 presents the expenditure behavior for consumption (food, clothing, school, medical, pilgrimage, and marriage). Expenditure data show that for nonmigrant households marginal budget shares to consumption decline with expenditure. Although consumption here includes more than just food, this finding is broadly consistent with Engel's Law. Expenditure data also show that for once-abroad migrant households marginal budget shares to consumption decline with expenditure. However, it is interesting to note the nature of this decline. For once-abroad migrant households, marginal budget shares to consumption drop very dramatically between the first and second quintile groups. Migrant households in the poorest quintile group spend 71% of their increments to expenditure on consumption; but those in the next group spend only 32% and those in subsequent groups spend even smaller proportions. These data suggest that as soon as migrant households have satisfied their more immediate consumption needs, they begin devoting higher proportions of their incremental expenditures to nonconsumption items.

Two important conclusions can be drawn from the data in table 9. First, except for the lowest expenditure quintile group, budget shares to consumption for migrant households are surprisingly low: 32% or less. This suggests that these migrant households do not spend large increments to expenditure on such items as food, clothing, pilgrimages, and marriages. Second, except for the lowest expenditure group, marginal budget shares to consumption for all quintile groups of expenditure are lower for migrant than for nonmigrant households. This means that migrant households are less likely to spend additional increments of expenditure on consumption than their nonmigrant counterparts. Once-abroad migrant households evidently prefer to spend their new money on items other than consumption.

Table 10 presents the expenditure behavior for durables (household goods and housing). Expenditure data show that for all quintile groups of nonmigrant households expenditure elasticities for durables are greater than 1.0. Durables are then luxury goods for nonmigrant households, and, as expected, marginal budget shares to durables rise as expenditures increase. These relationships also hold true for once-abroad migrant households. Expenditure elasticities for durables are greater than 1.0 for all migrant quintile groups, and their marginal budget shares to durables increase from 38% to 63%. Yet it is instructive to analyze the nature of this increase. With only one exception, marginal budget shares to durables are higher for all quintile groups of migrant than for nonmigrant households.

The data in table 10 reflect the importance of one particular durable good—housing—for migrant households. As noted above, once-abroad migrant households spend over 87% of their mean annual per capita durable expenditures on housing (building and repair). These

TABLE 9

EXPENDITURE BEHAVIOR ON CONSUMPTION FOR NONMIGRANT AND ONCE-ABROAD MIGRANT HOUSEHOLDS RANKED BY QUINTILE GROUPS

PERCENT OF 148 HOUSEHOLDS RANKED BY PER CAPITA EXPENDITURES/INCOME (Including Remittances)	USING EXPENDITURE DATA					USING INCOME DATA				
	Percent of 74 Households in Each Group	Mean of per Capita Expenditure	Mean of per Capita Consumption	Expenditure Elasticity	Marginal Budget Share to Consumption	Percent of 74 Households in Each Group	Mean of per Capita Income	Mean of per Capita Consumption	Income Elasticity	Marginal Budget Share to Consumption
Nonmigrant households (N = 74):										
Lowest 20%	39.19	130.58	121.89	.69	.64	39.19	191.84	129.49	.59	.40
Second 20%	32.43	217.41	169.23	.63	.49	27.03	319.27	180.31	.51	.29
Third 20%	13.51	354.35	248.66	.59	.41	16.21	462.83	190.23	.32	.13
Fourth 20%	13.51	551.86	303.88	.47	.26	8.11	676.57	283.98	.34	.14
Top 20%	1.35	875.00	575.00	.56	.37	9.46	1,839.59	335.54	-.53	-.10
All	100.00	255.97	185.09	.60	.43	100.00	465.40	185.09	.30	.12
Once-abroad migrant households (N = 74):										
Lowest 20%	1.35	145.77	145.00	.71	.71	...	...	...	...	...
Second 20%	8.11	247.21	150.86	.53	.32	13.51	377.32	151.15	.31	.12
Third 20%	25.67	364.16	169.77	.38	.18	24.32	510.31	188.02	.25	.09
Fourth 20%	27.03	543.02	250.82	.37	.17	32.43	709.75	233.18	.15	.05
Top 20%	37.84	941.43	322.05	.15	.05	29.73	1,220.97	355.33	.04	.01
All	100.00	618.49	247.43	.28	.12	100.00	768.30	247.43	.14	.04

TABLE 10

EXPENDITURE BEHAVIOR ON DURABLES FOR NONMIGRANT AND ONCE-ABROAD MIGRANT HOUSEHOLDS RANKED BY QUINTILE GROUPS

PERCENT OF 148 HOUSEHOLDS RANKED BY PER CAPITA EXPENDITURES/INCOME (Including Remittances)	USING EXPENDITURE DATA					USING INCOME DATA				
	Percent of 74 Households in Each Group	Mean of per Capita Expenditure	Mean of per Capita Durables	Expenditure Elasticity	Marginal Budget Share to Durables	Percent of 74 Households in Each Group	Mean of per Capita Income	Mean of per Capita Durables	Income Elasticity	Marginal Budget Share to Durables
Nonmigrant households (N = 74):										
Lowest 20%	39.19	130.58	8.69	4.80	.32	39.19	191.84	24.40	1.07	.14
Second 20%	32.43	217.41	41.17	2.34	.44	27.03	319.27	29.83	1.10	.10
Third 20%	13.51	354.35	94.26	1.95	.52	16.21	462.83	127.72	1.03	.29
Fourth 20%	13.51	551.86	226.75	1.62	.66	8.11	676.57	137.49	1.05	.21
Top 20%	1.35	875.00	300.00	1.74	.60	9.46	1,839.59	155.46	1.11	.09
All	100.00	255.97	64.19	2.01	.50	100.00	465.40	64.19	1.07	.15
Once-Abroad migrant households (N = 74):										
Lowest 20%	1.35	145.77	18.00	3.05	.38	...	...	...	...	...
Second 20%	8.11	247.21	52.74	2.19	.47	13.51	377.32	90.59	1.04	.25
Third 20%	25.67	364.16	117.64	1.78	.58	24.32	510.31	100.68	1.04	.21
Fourth 20%	27.03	543.02	172.01	1.80	.57	32.43	709.75	222.23	1.03	.32
Top 20%	37.84	941.43	351.28	1.68	.63	29.73	1,220.97	354.28	1.03	.30
All	100.00	618.49	214.13	1.73	.60	100.00	768.30	214.13	1.03	.29

housing expenditures are important for migrants from all quintile groups, as they attempt to replace their traditional mud brick houses with red brick houses. At the mean, once-abroad migrant households devote 60% of their increments to expenditure on durables (housing).

Table 11 presents the expenditure behavior for investment (land, agricultural equipment, vehicles, and stores). The results are suggestive. Expenditure data show that for nonmigrant households marginal budget shares to investment show no trend over expenditure levels and are very low at all levels of outlay. However, for once-abroad migrant households, expenditure data reveal that marginal budget shares to investment rise sharply with level of expenditure. With only one exception, marginal shares to investment are higher at all quintile levels of expenditure for migrant than for nonmigrant households.

Since migrant households spend such a high proportion of their expenditures on housing, table 12 presents an alternative way of comparing the investment behavior of migrant and nonmigrant households. In this table all expenditures on housing (building and repair) are classified under the category of "investment," rather than under "durables." As noted above, from the perspective of the individual, outlays on housing represent an investment to the extent that they offer some expected return in the future.

With housing classified as an investment good, table 12 shows that marginal budget shares to investment for nonmigrant households rise sharply with expenditure level. Yet the same expenditure data show that marginal budget shares to investment for migrant households rise even faster. In fact, migrant households in the top quintile group devote over 80% of their marginal budget shares to investment. A final glance at the expenditure data shows that with only one exception marginal budget shares to investment are higher at all quintile levels of expenditure for migrant than for nonmigrant households.

Taken together, the findings of tables 11 and 12 are important because they show that migrant households do invest their remittance earnings. Regardless of whether expenditures on housing are classified as a "durable" or an "investment" good, migrants tend to devote higher proportions of their increments-to-expenditure to investment than do nonmigrants. This is a key finding: when controlling for expenditure, migrants are actually more likely than nonmigrants to invest additional increments of expenditure.

It is, of course, essential to identify the character of migrant investment, especially when such investment does not include housing expenses (building and repair). According to table 13, when housing items are excluded, most migrant investment goes into the purchase of land (agricultural and building). Once-abroad migrant households devote approximately 73% of their total per capita investment expenditures to land. According to the table, once-abroad migrant households

TABLE 11

EXPENDITURE BEHAVIOR ON INVESTMENT FOR NONMIGRANT AND ONCE-ABROAD MIGRANT HOUSEHOLDS RANKED BY QUINTILE GROUPS

PERCENT OF 148 HOUSEHOLDS RANKED BY PER CAPITA EXPENDITURES/INCOME (Including Remittances)	USING EXPENDITURE DATA					USING INCOME DATA				
	Percent of 74 Households in Each Group	Mean of per Capita Expenditure	Mean of per Capita Investment	Expenditure Elasticity	Marginal Budget Share to Investment	Percent of 74 Households in Each Group	Mean of per Capita Income	Mean of per Capita Investment	Income Elasticity	Marginal Budget Share to Investment
Nonmigrant households (N = 74):										
Lowest 20%	39.19	130.58	.0	...	...	39.19	191.84	1.53	2.03	.02
Second 20%	32.43	217.41	7.02	2.14	.07	27.03	319.27	10.00	1.26	.04
Third 20%	13.51	354.35	11.43	2.14	.07	16.21	462.83	6.75	1.57	.02
Fourth 20%	13.51	551.86	21.24	1.96	.08	8.11	676.57	18.29	1.31	.04
Top 20%	1.35	875.00	.0	...	...	9.46	1,839.59	8.58	2.77	.01
All	100.00	255.97	6.69	2.41	.06	100.00	465.40	6.69	1.56	.02
Once-abroad migrant households (N = 74):										
Lowest 20%	1.35	145.77	.0	...	...	...	...	...	...	...
Second 20%	8.11	247.21	.0	...	...	13.51	377.32	4.61	1.67	.02
Third 20%	25.67	364.16	27.48	1.49	.11	24.32	510.31	45.09	1.09	.10
Fourth 20%	27.03	543.02	70.67	1.28	.17	32.43	709.75	54.85	1.11	.09
Top 20%	37.84	941.43	180.19	1.19	.23	29.73	1,220.97	218.49	1.05	.19
All	100.00	618.49	94.34	1.24	.19	100.00	768.30	94.34	1.07	.13

TABLE 12

EXPENDITURE BEHAVIOR ON INVESTMENT—WHERE INVESTMENT INCLUDES ALL EXPENDITURES ON HOUSING (Building and Repair)—FOR NONMIGRANT AND ONCE-ABROAD MIGRANT HOUSEHOLDS

PERCENT OF 148 HOUSEHOLDS RANKED BY PER CAPITA EXPENDITURES/INCOME (Including Remittances)	USING EXPENDITURE DATA					USING INCOME DATA				
	Percent of 74 Households in Each Group	Mean of per Capita Expenditure	Mean of per Capita Investment	Expenditure Elasticity	Marginal Budget Share to Investment	Percent of 74 Households in Each Group	Mean of per Capita Income	Mean of per Capita Investment	Income Elasticity	Marginal Budget Share to Investment
Nonmigrant households (N = 74):										
Lowest 20%	39.19	130.58	3.36	11.77	.30	39.19	191.84	20.40	1.23	.13
Second 20%	32.43	217.41	40.05	2.50	.46	27.03	319.27	33.75	1.23	.13
Third 20%	13.51	354.35	92.50	2.06	.54	16.21	462.83	116.97	1.10	.28
Fourth 20%	13.51	551.86	216.92	1.70	.67	8.11	676.57	136.94	1.12	.23
Top 20%	1.35	875.00	248.78	1.97	.56	9.46	1,839.59	129.93	1.34	.10
All	100.00	255.97	59.48	2.19	.51	100.00	465.40	59.48	1.19	.15
Once-abroad migrant households (N = 74):										
Lowest 20%	1.35	145.77	7.50	6.39	.33	...	...	...	...	...
Second 20%	8.11	247.21	17.86	4.83	.35	13.51	377.32	76.51	1.12	.23
Third 20%	25.67	364.16	128.63	1.78	.63	24.32	510.31	126.23	1.10	.27
Fourth 20%	27.03	543.02	215.25	1.70	.67	32.43	709.75	252.82	1.07	.38
Top 20%	37.84	941.43	501.90	1.52	.81	29.73	1,220.97	536.91	1.05	.46
All	100.00	618.49	282.56	1.61	.73	100.00	768.30	282.66	1.07	.39

TABLE 13

PER CAPITA EXPENDITURE ON INVESTMENT BY ITEM FOR ONCE-ABROAD MIGRANT HOUSEHOLDS
RANKED BY QUINTILE GROUPS ($N = 74$)

PERCENT OF 148 HOUSEHOLDS RANKED BY PER CAPITA EXPENDITURES (Including Remittances)	PERCENT OF TOTAL PER CAPITA-MIGRANT INVESTMENT							
	Agriculture	Building	Irrigation	Vehicle,				
	Land	Land	Tractor	Pump	Taxi	Store	Other	ALL
Lowest 20%	.0	.0	.0	.0	.0	.0	.0	.0
Second 20%	.0	.0	.0	.0	.0	.0	.0	.0
Third 20%	2.1	1.5	.0	.0	.0	3.2	1.1	7.8
Fourth 20%	.0	18.8	.0	.9	.0	.0	1.6	21.4
Top 20%	25.5	25.2	.0	2.4	8.6	6.0	3.0	70.8
All	27.6	45.5	.0	3.3	8.6	9.2	5.7	100.0

NOTE.—Other includes investment in high-yield seeds, fertilizer, and pesticide.

devote much smaller shares of their total per capita expenditures on investment to other items, such as the purchase of stores (9.2%), vehicles and taxis (8.6%), and irrigation pumps (3.3%).²¹ Survey data show that only one migrant household bought a taxi and no migrant household purchased a tractor.

Table 13 also reveals that per capita expenditure on investment is dominated by once-abroad migrant households in the highest expenditure groups. According to the table, the fourth and the top expenditure quintile groups account for over 92% of total per capita migrant expenditures on investment. This is not surprising. It is also not surprising to note that while these wealthy migrant households concentrated their investments on land they also accounted for all of the investment expenditures on vehicles and irrigation pumps. Wealthier migrant households evidently possess the means to pursue a wider portfolio of investments.

It is instructive to inquire into the reasons for the pattern of migrant investment depicted in table 13. Why do once-abroad migrants choose to invest such a large proportion of their remittance earnings in land (agricultural and building)? This question can best be answered by referring to two factors.

First it is important to consider the socioeconomic character of the once-abroad migrants. As shown in table 1 (col. 5), the once-abroad migrants in this study are not wealthy. Rather, once-abroad migrants are disproportionately drawn from the middle quintile groups of the income distribution. Since they were not rich before migration, the evidence suggests that when they returned these migrants tended to spend their remittance earnings in a conservative fashion. Such conservativeness can be seen by considering how these investments tend to follow the migrants' occupational backgrounds. According to the data,

53% of the once-abroad migrants are peasants or agricultural laborers, 18% are government bureaucrats, and only 10% are merchants. Thus, the great majority of these migrants know only agriculture or the government bureaucracy and lack the necessary mercantile skills to either open a store or start a taxi business. In their investments they therefore tend to avoid areas they do not know (e.g., business) in favor of committing their earnings to what they know best (e.g., land).

Second, the attraction of land investment is intrinsically related to the general investment environment of the study area. Within the last decade the migration of workers abroad has sparked a major increase in land prices throughout Egypt. For example, between 1980 and 1986 the average price of a feddan of agricultural land in the study area increased by 600%: from LE 2,000 to LE 12,000 (US\$1,460 to US\$8,760). As a result, rates of return on land investment have clearly exceeded those found in other categories of investment. For instance, real rates of return on agricultural land in the area have averaged about 9.5% per year over the period 1980–86.²² By means of comparison, average annual real rates of return on most small farmer crops in Egypt have been negative over this same period of time.²³ While detailing the reasons for such negative rates of return on Egyptian crops would take us far beyond the purview of this article, the factors involved are closely related to the pattern of pricing, investment, and institutional policies pursued by the Egyptian state. As a result of these policies, few once-abroad migrants in the study area saw fit to invest in agricultural items other than land, such as new high-yield seeds and fertilizer. Several migrants in the upper expenditure quintiles did buy new agricultural machinery (gasoline-powered pumps) to irrigate their fields. But no once-abroad migrants bought tractors or other mechanized agricultural equipment, probably because they decided that the returns to such investment were too small.

VI. Conclusion

This article analyzed the economic uses and impact of international worker remittances in Egypt by comparing the expenditure behavior of 74 migrant households with those of 74 nonmigrant households. Controlling for level of expenditure (and income), in this article I compared these migrant and nonmigrant households with regard to their expenditures on consumption, durables, and investment. From these analyses, three conclusions emerge.

First, contrary to other studies, this analysis shows that migrant households do not "fritter away" their remittance earnings on personal consumption. For example, Lipton's finding that "everyday [consumption] needs often absorb 90% or more of a village's remittances" is at odds with the data presented here.²⁴ In this study budget shares to consumption (food, clothing, school, medical, pilgrimage, and marriage) for migrant households are much lower than 90%. In fact, at the

mean level of expenditure, migrant households devote only 12% of their increments-to-expenditure to consumption. Instead of spending a disproportionate share of their remittance earnings on consumption, migrant households in this study prefer to spend their earnings on other items. Migrant households in this study were not wealthy before migration, and thus they tend to view their remittance earnings as a temporary stream of income, one not to be squandered on newly desired consumer goods.

Second, this analysis confirms other studies' findings concerning the large amount of remittance money that goes into housing.²⁵ In this study fully 53.9% of remittance earnings on nonrecurring expenses went into the construction or repair of houses. In the classification system used in this article, expenditures on housing dominated the category of durables.²⁶ And in this study migrant households exhibited a higher propensity than nonmigrant households to spend money on durables (housing). With only one exception, marginal budget shares to durables (housing) are higher for all expenditure quintile groups of migrant as compared to nonmigrant households. Once again, this pattern of behavior tends to underscore the view of remittances as temporary earnings. When they enjoy temporary income flows from abroad, migrant households tend to tackle one of their most immediate concerns, namely, that of replacing their crowded and traditional mud-brick houses with more modern red brick dwellings.

Third, on the basis of the data presented here, it seems wrong to claim either that "migrants don't invest" or that "investment is only the fourth (and last) priority for remittances."²⁷ This study shows quite clearly that migrants do invest and that migrants actually exhibit a higher propensity to invest than do their nonmigrant counterparts. Using expenditure data and controlling for level of expenditure, marginal budget shares to investment of migrant quintile groups are consistently higher than those of nonmigrant groups. As has been observed elsewhere, most of this investment goes into land.²⁸ In this study approximately 73% of total per capita expenditures on investment by migrant households went into the purchase of agricultural or building land. From the standpoint of the individual migrant, land represents a good investment. The value of land not only tends to keep pace with the rate of inflation, but for most peasant migrants, it also represents the best type of investment available.

Notes

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1. Michael Lipton, "Migration from Rural Areas of Poor Countries: The

Impact on Rural Productivity and Income Distribution," *World Development* 8 (January 1980): 12.

2. Reported in A. B. Chandavarkar, "Use of Migrants' Remittances in Labor-Exporting Countries," *Finance and Development* 17 (June 1980): 39.

3. For Egypt, see Galal Amin and Elizabeth Awny, *International Migration of Egyptian Labour: A Review of the State of the Art* (Ottawa: International Development Research Centre, May 1985). For Turkey, see Barnard Kaysar, *Cyclically-Determined Homeward Flows of Migrant Workers* (Paris: Organization for Economic Cooperation and Development, 1972). For Yemen, see Jon Swanson, *Emigration and Economic Development: The Case of the Yemen Arab Republic* (Boulder, Colo.: Westview, 1979).

4. Ijaz Gilani, M. Khan, and Munawar Iqbal, "Labor Migration from Pakistan to the Middle East and Its Impact on the Domestic Economy," Research Report no. 127 (Islamabad: Pakistan Institute of Development Economics, June 1981), pt. 1.

5. See Richard H. Adams, Jr., *Development and Social Change in Rural Egypt* (Syracuse, N.Y.: Syracuse University Press, 1986).

6. For more summary data on the survey, see Richard H. Adams, Jr., "Worker Remittances and Inequality in Rural Egypt," *Economic Development and Cultural Change* 38 (October 1989): 46-49.

7. Mean land farmed (rented and owned) for peasants with land access in the area is 0.90 feddans (1 feddan = 1.038 acres). See table 2, row 5.

8. More information on the socioeconomic character of the study area is found in Adams, *Development and Social Change in Rural Egypt*, pp. 33-48.

9. More detailed information on this survey is contained in Adams, "Worker Remittances and Inequality in Rural Egypt," pp. 46-49.

10. The 150 households in round 2 were selected as follows. After the 661 nonmigrant households of round 1 were ranked from high to low on the basis of actual gross income, one nonmigrant household was chosen for interviewing in round 2 from each group of nine households in round 1. Likewise, after the 235 once-abroad migrant households of round 1 were ranked from high to low on the basis of actual gross income (including remittances), one migrant household was chosen for interviewing in round 2 from each group of three households in round 1.

11. In order to be consistent with the body of this article, the household rankings in table 1 are based on predicted per capita income figures. The rationale for using such predicted figures is explained in Section II below. The methodology used for ranking the 1,000 households by predicted per capita income (excluding remittances) is contained in table 1, note.

12. It should be noted that this finding is quite consistent with earlier analysis. Previous work found that while once-abroad migrants were distributed fairly equally through the income quintile groups, this was not true for still-abroad migrants. See tables 12 and 13 of Adams, "Worker Remittances and Inequality in Rural Egypt."

13. *Ibid.*, p. 49.

14. In rural Egypt, government regulations regarding land tenancy are so structured that a tenant possessing a valid, written rental contract virtually "owns" the land that he rents (see Adams, *Development and Social Change in Rural Egypt* [n. 5 above], p. 90).

15. After much thought, it was decided to include expenses on pilgrimage and marriage under the category of consumption. Unlike investment items, pilgrimage and marriage expenses are used to meet current—and not future—needs. And unlike durable items, pilgrimage and marriage do not provide any perceptible future economic returns to the individual.

16. For more on this point, see S. J. Prais and H. S. Houthakker, *The*

Analysis of Family Budgets (Cambridge: Cambridge University Press, 1971), pp. 84–86.

17. See, e.g., table 7. According to row 2, mean annual per capita income (including remittances) for once-abroad migrant households is LE 772.16. Yet row 3 shows that mean annual per capita expenditures (including remittances) for once-abroad households only sum up to LE 623.87 (or about 80.8% of mean annual per capita income).

18. The concept of permanent income (as opposed to "transient" income) originated in the work of Milton Friedman, *A Theory of the Consumption Function* (Princeton, N.J.: Princeton University Press, 1952). For more recent work on this topic, see Angus Deaton, "Wealth Effects on Consumption in a Modified Life-Cycle Model," *Review of Economic Studies* 39 (July 1972): 443–53; and Marjorie Flavin, "The Adjustment of Consumption to Changing Expectations about Future Income," *Journal of Political Economy* 89 (October 1981): 974–1010.

19. Of the two households in round 2 eliminated for incomplete data, one was a nonmigrant and the other was a once-abroad migrant household.

20. Total annual per capita expenditures (income) (including remittances) for migrant households are calculated using predicted functions, and the results of these predicted functions exceed actual expenditures (income) by about 10%. Consequently, in tables 9, 10, and 11 marginal budget shares for consumption, durables, and investment for once-abroad migrant households do not sum to unity.

21. It is instructive to note that this pattern of investment is quite similar to that recorded for nonmigrant households. Nonmigrant households devote 72.9% of their total per capita investment expenditures on land (agricultural and building), 16.9% on irrigation pumps, and 10.1% on the purchase of stores. No nonmigrant households bought a vehicle, taxi, or tractor.

22. In all likelihood, real rates of return on building land in the area have been even higher. However, such rates of return are notoriously difficult to calculate, because they are based on the transfer of relatively small pieces of land. All rate of return calculations here assume a 25% annual rate of inflation in rural Egypt over the period 1980–86.

23. While certain fruits and vegetables do yield positive real rates of return, these are not ordinarily grown by small farmers. At present, the only small farmer crop that yields positive real rates of return in Egypt is clover. For more on this point, see Adams, *Development and Social Change* (n. 5 above), pp. 118–20; and William Cuddihy, "Agricultural Price Management in Egypt," World Bank Staff Working Paper, no. 388 (World Bank, Washington, D.C., 1980), pp. 85–100.

24. It should be noted that Lipton's findings (n. 1 above) are based largely on internal remittances earned by migrants (rural to urban) working within India. In all likelihood, these internal remittance earnings represent a much smaller proportion of household income than the international remittance earnings discussed in this article. Nevertheless, the budget shares to consumption for migrant households in this study are still much lower than the 90% shares reported by Lipton.

25. See, e.g., Gilani, Khan, and Iqbal (n. 4 above); and Lipton, p. 12.

26. As stated in the text, housing accounted for 87.8% of mean annual per capita expenditures on durables for migrant households.

27. Lipton, p. 12.

28. See, e.g., Gilani, Khan, and Iqbal; and Sharon Russell, "Remittances from International Migration: A Review in Perspective," *World Development* 14 (June 1986): 687–89.