

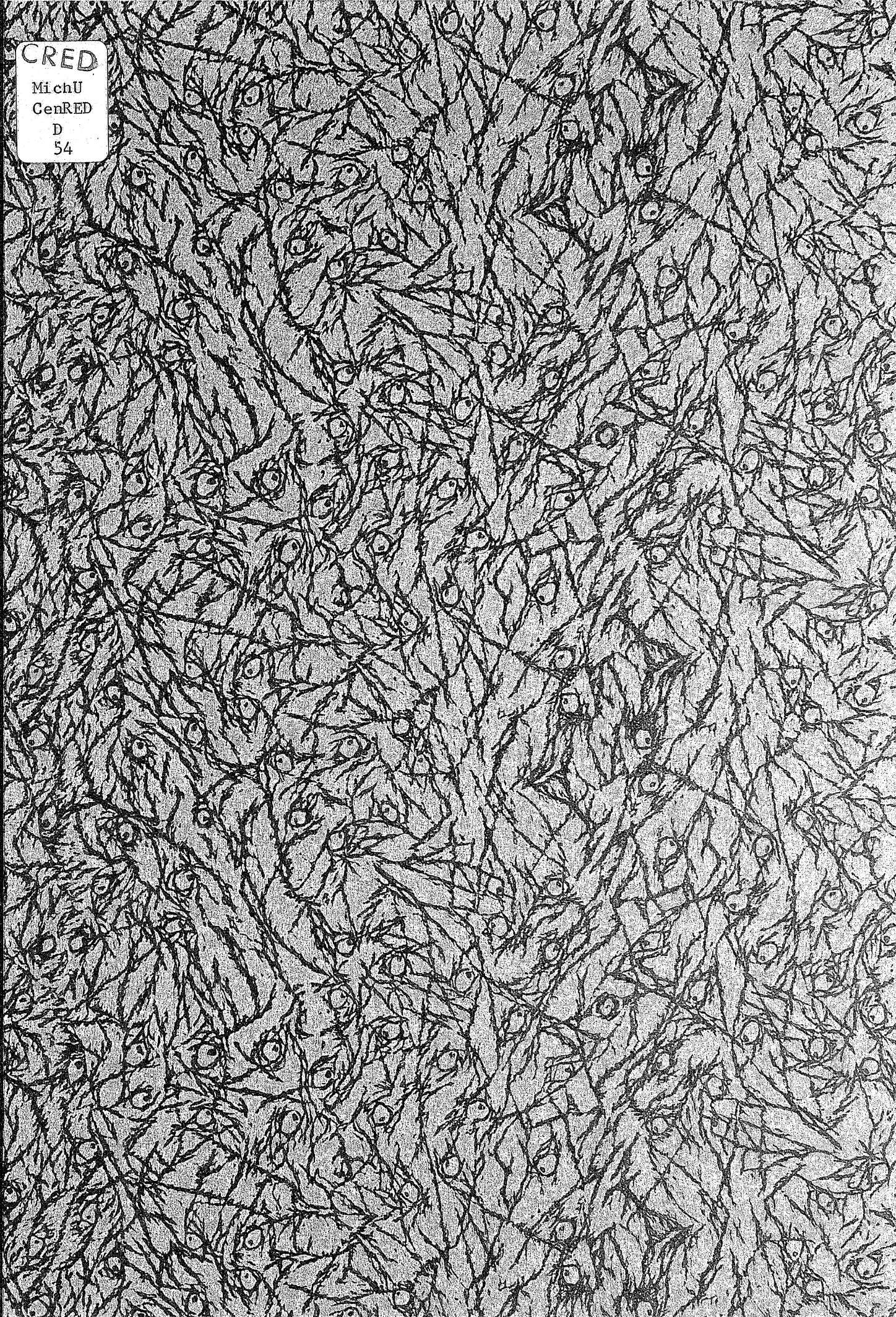
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The Economics of Prestation Systems:
A Consumer Analysis of Extended Family
Obligations with Application to Zaire

by

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ABSTRACT

The Economics of Prestation Systems:
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Alfred H. Saulniers

For the great majority of urban Africans, consumption and savings decisions take place within constraints imposed by prestation systems. Prestation payments, often referred to as extended family obligations, were estimated in 1969 at almost 1 million dollars per month for Kinshasa, Zaire, approximately 10 percent of the city's household expenditures. The redistributive impact of such payments is noteworthy.

This paper employs age-sex equivalence scales to estimate hospitality expenditures for guests. Econometric evidence indicates that the level of gift expenditures and receipts are linked to income, unemployment, family composition, savings and participation in the prestation system. Implications of this research for increased levels of schooling, population policy, and urban migration are discussed.

† † †

Pour la grande majorité des africains urbains, les décisions concernant la consommation et l'épargne sont soumises à des contraintes spéciales imposées par les systèmes de prestation. Les paiements de prestation, que l'on considère souvent comme des obligations familiales étendues, ont été estimés en 1969 à presque 1 million de dollars par mois pour Kinshasa, au Zaire, c'est-à-dire approximativement 10% des dépenses des ménages de la ville. L'effet redistributif de tels paiements mérite d'être souligné.

Cette étude emploie des échelles d'équivalence âge-sexe pour estimer les frais d'hospitalité pour les invités. L'évidence économétrique indique que le niveau de ces frais est lié aux revenus, au chômage, à la composition de la famille, à l'épargne et à la participation au système de prestation. Les implications de la présente recherche sur la politique accrue d'éducation scolaire, la politique démographique et la migration urbaine sont discutées.

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I. Introduction

One phenomenon which has not benefited from rigorous economic examination is the prestation system. Prestation is a term employed by anthropologists and sociologists to denote an exchange system in which giving may be used to create social obligations. Prestation systems are so called because they involve exchange within a network of social imperatives (Belshaw 46-49). They have two aspects, obligatory and voluntary. An individual may be forced to bestow gifts due to social obligations, pressures, or sanctions. Conversely, he may choose to employ gifts to create reciprocal obligations as an investment in future services. Because such systems have been examined by anthropologists only in rural areas, the phenomenon has been relegated unfortunately to the domain of primitive exchange and hence outside the realm of modern economic theory (Firth 8-17).

The urban dweller in a developing country functions largely within a prestation network. Even though physically removed from a rural customary environment, an important part of his consumption expenses and much of his nonconsumption outlays are socially dictated by traditional norms. These social payments are generally linked with extended family obligations.

The problem of measuring effectively the cost of such obligations in urban Africa has attracted relatively little attention. Their incidence, however, has proved rather controversial. Colonial administrators railed against the "family parasites" whose dependence created an overwhelming economic burden for urban workers. Others took a more positive view claiming that family obligations created a reservoir of savings which, if invested in school fees, served to boost the level of education of the population at large. By thus channeling surplus funds toward a more productive use, the prestation obligations held down luxury consumption and hence contributed to a more effective allocation of scarce foreign exchange. However, an accurate measurement of expenditures on these obligations has never been made.

If such methods of measurement existed, knowledge of the economics of prestation systems would be essential to the formation of government policies involving family size such as personal taxes, tax relief for children or family allocations. In addition, the transformation of some traditional mechanisms within the family structure to substitute for such modern institutions as

savings and loan associations, unemployment insurance and retirement funds must be taken into account in any planning endeavor. Further and most important, the current emphasis on income redistribution within the growth process prompts a hard look at a traditional method of achieving redistribution in order to determine its potential as an adjunct to other policy instruments aimed at producing a more equitable income situation.

The aim of this paper is to examine the economics of prestation systems in Kinshasa, Zaire. The next section of the paper is an attempt to construct an economic framework with reference to the ethnographical literature on the hinterland from which Kinshasa draws the majority of its population and on the population of the capital itself. This overview includes both rural and urban studies to bring out more clearly the rationale for and the extent of solidarity payments. The third section proposes a more accurate method of quantifying gift payments and measures their extent using a 1969 household budget survey. The method employed overcomes the hurdle of effectively estimating intra-household gifts from the nuclear family to visitors and guests. The last section attempts to develop a theory of prestation and test certain theoretical relationships econometrically.

II. Solidarity Payments in Western Zaire

This section will examine the rationale and nature of solidarity payments in rural western Zaire, then proceed to a review of the same phenomena in an urban setting.

A. Traditional Societies. This section will survey some economic aspects of the ethnographical literature with reference to prestation systems of those traditional rural societies in Western Zaire which have contributed the greatest portion of Kinshasa residents through migration. Understanding the motives and importance of these transfers in the rural milieu will make possible an awareness of the pressures for gift-giving in the urban environment and bring into focus the forms of adaptation of traditional customs to a new situation.

The importance of prestation stems from the lack of a clear distinction between an individual's property and collective property. Among most ethnic groups in Western Zaire, the right of ownership is at the same time both individual and collective, as the individual is, first and foremost, a member of a descent group (Biletsi 19). This membership is not of a submissive nature, but rather, the individuality is totally absorbed by the group (De Cleene 44), or the individual cannot exist apart from the group (Doutreloux 134).

In strictly economic terms, this means that members of the descent group are responsible for the production and consumption of basic necessities such as food and shelter. In addition most special skills to transform raw materials to finished products as baskets, nets, wooden objects are found within the extended family. The extended family also assures its continuation by maintaining responsibility for the inculcation of traditional values in new members. Thus, the prestation system fosters harmony within the production group.

In a predominately rural environment, solidarity transfers between persons are an outward manifestation of a more or less permanent relationship, cementing bonds between individuals or between/within social groups. As such, they may also be considered more sharing or generosity to be continued throughout the individual's life. Such virtues are impressed on children from the earliest years (Wolfe 13) and the continued manifestation of generosity throughout life is a prerequisite to obtaining prestige in the tribal environment (Van Wing 144) (Wolfe 19).

The most extensive sharing relationships occur between members of the same descent group, where sharing acts to reinforce the kinship ties. Mpase quotes

a proverb from the Mai-Ndombe area on the role of reciprocity as the binder of traditional society. "A hut wears away at the corners; without reciprocity kinship crumbles."¹ The intensity of generosity within a descent group makes it possible to consider economic well-being as a primary function of this unit. The distribution of game, bride wealth, death payments, the provision of services, granting of loans or gifts, or sharing of capital equipment to group members ensure that generosity is the cohesive basis for traditional society.

Even marriage does not significantly alter the nature of this tie, as in many groups there is no word to designate the nuclear family (De Cleene 5). Each spouse remains the representative of his respective group (Domont 8).

The exchange of tokens is the basis for all social transactions including marriage, funerals and adjudications (palavers) and the more weighty the matter, the greater the value of the exchange (MacGaffey 104-5). Gifts must be reciprocated and the reciprocal is often more of a symbolic nature than an attempt to balance the original (Mpase 22). Palm wine is usually exchanged and consumed on the spot. Hospitality is important. Food is commonly shared (Van Overbergh 80) (Wolfe 13, 61). Meals or small amounts of food are given to kinsmen of all ranks. MacGaffey claims that among the Banza Manteke anyone refusing to share food would be renouncing his kinship and the basis for his status in rural societies (179). Some food is marketed and the proceeds shared (Wolfe 60), other food brings in cash by being sold by relatives in town (MacGaffey 109, 177).

The timing of gifts is linked to certain major events in the life cycle of an individual. The most important occasion for distribution of goods is the institution of bride wealth. Marriages being the symbol of a union between two clans, and not two individuals, bride wealth is transferred from the relatives of the young man to those of the young woman to mark the agreement of the respective clans to the union. Other occasions for gift-giving are births, the first communion, confirmation, the receiving of a diploma, etc. which provide opportunities for the parents to organize a reception in honor of their children (Mpase 142).

A further opportunity for the redistribution of wealth is a funeral. Contributions to the family of the deceased are made in cash or kind, with the latter often taking the form of cloth or blankets to envelop the body.

¹"Wuka awake ntondo batuku, mbila ewake ntondo bosobiano", Mpase, p. 92-93.

Within such societies, the primary importance placed on sharing acts to restrict the development of an unequal income or wealth distribution by means of a strong traditional pressure based on belief in sorcery (Mpase 30) (Bentley I, 273). Among the Ngombe if a man begins to amass goods, he is immediately beset with demands from kinsmen, which, if refused, are sanctioned by accusations of witchcraft (Wolfe 60). Among the Banza Mateke the desire to accumulate goodwill of friends and clients means a man with greater prestige will be more called upon for small gifts, meals and other assistance (MacGaffey 179).

With the intrusion of the monied sector into the traditional life, sharing has acquired new dimensions. A monetary salary or income from some economic activity may be given to the parents or elders to hold as savings or to pay clan expenses (de Sousberghe 43) (Doutreloux 134). Refusal to share income may provoke accusations of witchcraft (Lamal 202). Solidarity payments hence fulfill the role of savings accounts (Mpase 125) and act as a brake on the development of modern savings institutions (N'Dongala 7).

The individual thus contributes to the general welfare of his descent group in a variety of means. From them he expects to receive help in obtaining a wife, protection before authorities, aid in paying fines, succor in illness, expenses at funerals and vengeance after death. His children in return are educated in traditional values by the descent group. His contributions are not unilateral transfers but rather investments in social relationships, based on reciprocity, with economic overtones. The system provides for social and economic security within the rural environment. Compliance is assured by the threat of social insecurity.

B. Urban Environments. Although removed geographically from the extended-family solidarity patterns of the rural traditional societies, the urban dweller still functions to a great extent within that same social and economic network. Urban living has introduced some modifications into the prestation systems and these will be noted in this section.

The individual-collective ownership issue has not been settled by urban dwellers. Although Caprasse and Bernard found that a small proportion of Kinshasa teachers claimed no solidarity payments in cash to extended family dwellers, the manner in which the question was posed leads to some doubt about the validity of the answers (Caprasse and Bernard 445). Baeck, moreover, found the belief

to be widespread that family members still did not make the distinction between those consumption goods of the nuclear and those of the extended family (p. 176).

In the urban area, the extended family is no longer the main production and consumption unit. The market mechanism has substituted mass-produced items for many of the goods previously produced by extended family members. The ensuing monetization of production and consumption has led to a monetization of solidarity obligations; Lux found in a small Yombe town that almost 50% of the transfers to extended family members were in the form of cash (1972, p. 180). This monetization tended to place a greater burden of solidarity payments on the wage earners, increasing their share of the traditional solidarity payments (Lux 1972, p. 177) (Capelle 63) (Baeck 161).

Besides monetization, a psychological rationale has been offered for assumption of increased solidarity burdens by urban dwellers, that of proving to their rural relations their success in the city. This success is demonstrated in tangible terms by the proffering of goods and services (Baeck 169).

The absolute permanence of solidarity expenditures resulting in the village environment from daily contact has also changed. In an urban environment, gift giving to the extended family is intermittent, occurring at visits or moments of contact between family members (Mpase 159). These visits are most frequently the visit of a relative to the city, or occasionally a vacation visit outside the city at the place of family origin. Among Yombe workers over 80% of visits were associated with gifts and over 75% of gifts were exchanged during a visit (Lux 1972, 175).

A visit imposes the obligation of hospitality. This occurs whether a family member arrives in the city to take up permanent residence or for a short visit (Bernard 270). A return ticket is expected to be provided to the relative returning to the rural area (Mpase 202). The obligation is often extended to non-family members from the same village (Caprasse and Bernard 477) or to persons with whom the relationship would have been considerably weaker in the rural areas (Mpase 170). Often children are sent to the city to be educated at the expense of the urbanite. This constitutes a process of investment in human capital by savings forced from the urbanite (Lux 1959, 51). Only in a few cases does this represent the continuation of the traditional pattern of education by the uncles. These visitors occasionally bring sacks of produce or perform domestic tasks in exchange for hospitality (Mpase 201-2), but the value is usually inferior to that given by the urbanite (Lux 1972, 177).

Food is often shared with friends from the city who may be in difficulty, another extension of traditional patterns of hospitality. Baeck created a special category for food sharing because of its importance. He found that it accounted for 13% of food expenditures (Baeck 166).

Urban dwellers are expected to contribute on the occasions of marriage and death in rural areas even if they are unable to attend (MacGaffey 168). However, these contributions do not have the same importance in the set of exchanges as they do for the rural relatives. The motivation may be different as well. With the upward mobility of educated urban residents after independence, the rural dwellers forced transfers of money or hospitality under penalty of loss of traditional rights back home. These forced transfers seem to attenuate the growth of urban-rural income disparities (Lux 1959, 52).

As in rural areas, a higher level of income is associated with increased gift expenditures in urban areas. Houyoux and Houyoux found that not only did the absolute amount increase with income, but the importance within the budget increased as well (p. 128).

The lack of unemployment compensation in Zaire (Wembi 151-157) (Lux 1959, 52) has brought about an evolution in the prestation system to cover a non-traditional need. A major source of income for the unemployed is family solidarity (Houyoux 251). Kazadi found in a survey of 200 unemployed that 20% had received financial aid from kin. In addition, gifts of food and clothing were important but not recorded (La Fontaine 57) It should be noted that independent women were excluded from Kazadi's survey. In addition, aid is often obtained from friends and neighbors. In the same study Kazadi found that 25% of the unemployed received help in either food or cash from other tenants on the same plot (p. 66 in La Fontaine, p. 130).

In summary the urban dweller still functions within the same prestation system as his rural counterpart. The increased monetization of prestation obligations and their relation to easily measured variables, as number of visitors or unemployment, indicate that the urbanite's family obligations are more susceptible to quantification and economic analysis than those of rural dwellers for whom the social aspect predominates.

III. The Extent of Solidarity Payments in Kinshasa, Zaire

The first sub-section will attempt to calculate the value of solidarity payments among Kinshasa dwellers. A new method is proposed to more accurately measure the cost of hospitality expenditures for visitors to the nuclear family. The measure is applied, and estimates of gross gift expenditure, gift receipts and net gift expenditures are constructed. In the second sub-section, the independent variables for testing gift relations are determined.

The data used in estimating gifts consist of 1,238 budgets, each provided by one household, which covered one month's expenditures. These come from the Socio-Economic Survey of Kinshasa carried out from January 1969 to January 1970, which was based on a random sample of one percent of the African households in the city stratified by administrative units called zones.

An interesting aspect of the sample is the notion of the basic sampling unit. The household was defined as "the set of people who live from the same revenues and eat from the same casserole." Such a definition, common in African statistical enquiries, was chosen since extended family members may be dispersed to several dwelling units, yet form part of the same household. This choice of sampling unit is fortunate as it permits a more systematic examination of the impact of extended family obligations on the urban dweller's budget than a strict interpretation based on lodging.

Initially socio-demographic information was collected from household members. Later each household was interviewed twice daily for thirty days to collect information on receipts and expenditures. Daily visits and interviews were employed since most African housewives are illiterate and do not maintain records of expenses. Current market values were imputed after careful measuring of produce harvested from family gardens or received as gifts.

For purposes of this analysis foreign African households were eliminated from the original sample due to their non-static condition. These represented 15.6% of the total and were composed mainly of Angolan refugees living in Kinshasa. In addition, four households whose head was less than twenty years old were eliminated.

Formation of the Dependent Variables

1. Gift Expenditures. Gift expenditures may be considered as having three components: gifts in cash, gifts in kind, and hospitality expenditures. Determination of the first two components was rather straightforward at the time of the survey. Gifts in cash were recorded as a separate category. Also a cash value equivalent to current market price was ascribed to gifts in kind and also recorded separately. These values may be somewhat biased downward from actual gift expenditures, as both spouses ordinarily keep part of their gifts a secret from each other (Houyoux and Houyoux 101), and may also have concealed them from the interviewer to keep their partner in ignorance.

An accurate determination of hospitality expenditures for family and friends residing either temporarily or permanently with the nuclear family has always proved to be the stumbling block in any study of gift-giving. There is no recording of the amounts allocated within the household. It is proposed to disaggregate expenditures on food and non-food items by using age-sex equivalence scales. Such scales express each individual's weight in the household budget as a proportion of a standard adult male. By dividing the family into its nuclear and non-nuclear components and applying the relevant scales to different expenditure categories, the budget may be decomposed into outlays for the nuclear family and hospitality for visitors.

An earlier paper by the same author constructed age-sex equivalence scales for foodstuffs for Kinshasa families based on the same data (Saulniers). In the paper it was shown that there were no significant differences in scale values for nuclear and non-nuclear household members, except for adult males, and that those differences would be accounted for by the age structure, not by membership in or exclusion from the nuclear household. These scales were used to disaggregate food expenditures to those for the nuclear family and those for guests. A similar method was employed to determine scales for non-food items than for foods. Table I shows the relevant scales by age-sex category. It can be seen that the scale values are generally higher for non-food items than for food. The exceptions are children (7-12) and older adults. The scale values for non-food items for males over fifty and females 40-49 are not significantly different from zero at the 5 percent level, but are included for the sake of consistency. The scale values were employed to separate non-food outlays into those for the nuclear family and those for the guests. The sum

TABLE I: AGE-SEX EQUIVALENCE SCALES FOR FOOD AND NON-FOOD EXPENDITURES

Category	Expenditures on:	
	Food	Non-Food
Child (under 2)	.68143 (.04867)	1.2427 (.17815)
Child (2-3)	.69806 (.04939)	.75667 (.18122)
Child (4-6)	.66499 (.04039)	.87985 (.14803)
Child (7-9)	.85250 (.03950)	.75408 (.14453)
Child (10-12)	.81304 (.04249)	.76202 (.15570)
Male (13-15)	.68582 (.05887)	.94067 (.21515)
Male (16-19)	.57380 (.05463)	.97447 (.19990)
Male (20-29)	.79336 (.03796)	.96214 (.14086)
Male (30-39)	1.0000 (.05386)	1.0000 (.20502)
Male (40-49)	.99435 (.06635)	.66130 (.25250)
Male (50+)	.90985 (.07945)	.23859 (.30428)
Female (13-15)	.69235 (.06051)	1.0006 (.22120)
Female (16-19)	.87353 (.05638)	1.2186 (.20614)
Female (20-29)	1.0269 (.05462)	1.2732 (.17259)
Female (30-39)	1.1310 (.05854)	.69070 (.22306)
Female (40-49)	1.0346 (.07864)	.37682 (.30180)
Female (50+)	1.2264 (.08405)	1.1088 (.33075)

Source: Saulniers Table E, Column 7.

of guest expenditures for foods and non-food items constituted hospitality expenditures. It should be noted that this method does not impute a value for rent where the host family owns its own home. It simply allocates expenditures made to nuclear family and visitors. Likewise, this method does not compute the earnings lost by a landlord who allows guests to stay rent-free in tenant housing. Thus the estimate of hospitality outlays derived in this manner is slightly below the market value for the services rendered.

The hospitality gifts derived using the scales, and the other components of giftgiving are set forth in Table II. All three types of gift expenditures, cash, kind and hospitality, increase with income. Hospitality expenditures are the largest category of the three. They account for 2/3 of gifts for lower income families and decrease to approximately half of gift expenditures for families at the upper end of the income scale. Gift incidence on the family budget also rises as income increases from a low of five percent of the budget to approximately 13 percent at the upper levels, in line with the Houyoux's findings. Based on the sample estimates of gift expenditures, almost one million dollars in gifts was the monthly expenditure by nationals in Kinshasa at the time of the survey. Not only is this slightly less than 10 percent of the total expenditures made by nationals during the same period, but it is a sizeable portion of the family budget.

2. Gift Receipts. Gift receipts both in cash and in kind were measured at the time of the survey. A market value was determined for all non-monetary gifts and recorded. Receipts in cash and in kind were found to be an increasing function of income indicating that higher income earners receive more in gifts than do individuals at the lower end of the income scale.

Total gift receipts as a proportion of total expenditures are in an inverse relationship to income. Relative to total expenditures, gift receipts are most important for the lowest level groups, representing almost 20 percent of expenditures. For a wide range of incomes, gifts account for approximately 14 percent of expenses, while for the high income groups, the relative importance of gift receipts falls to 10 percent.

3. Net Gift Expenditures. Net giftgiving was obtained by subtracting gift receipts from gross gift expenditures. From Table II it is evident that there is a redistribution of income from the high income groups to the low income groups, as a result of a traditional pattern still adhered to in urban areas.

Table II: Total Gift Expenditures and Receipts, Net Gift Expenditures, and Gift Incidence by Income Level

Category	Income Level*						
	1 0-14.99	2 15.00-19.99	3 20.00-24.99	4 25.00-34.99	5 35.00-59.99	6 60.00-99.99	7 100.00+
a. Gifts of Cash	0.12	0.25	0.37	0.82	1.11	3.40	4.99
b. Gifts in Kind	0.06	0.16	0.18	0.31	0.75	1.78	2.78
c. Gifts of Hospitality	0.42	0.83	1.17	1.57	2.53	4.95	9.90
d. <u>Total Gift Expenditures</u> (a + b + c)	0.60	1.24	1.72	2.70	4.39	10.13	17.67
e. Gift Receipts in Cash	1.40	1.41	1.93	3.48	4.51	5.59	10.26
f. Gift Receipts in Kind	1.07	1.11	1.33	1.53	1.71	2.26	6.42
g. <u>Total Gift Receipts</u> (e + f)	2.47	2.51	3.26	5.01	6.22	7.85	16.68
h. <u>Net Gift Expenditures</u> (d - g)	-1.87	-1.27	-1.54	-2.31	-1.83	2.28	0.99
i. Average Family Expenditures	11.00	17.52	22.59	29.62	44.75	75.29	162.66
j. Gift Expenditure Incidence (per cent)(d/i)	.055	.071	.076	.091	.098	.134	.108
k. Gift Receipt Incidence (per cent)(g/i)	.225	.143	.144	.169	.139	.104	.103
N:	211	193	197	257	227	104	49

*Income and expenditures measured in Zaires (Z). 1 Z = \$2.00 U.S. 1 Z = 100 K (Matuka) 1 K = \$.02 U.S.

All groups earning less than 60 Z per month are net gift receivers, while those earning more than that sum are net gift givers.

On the whole, however, Kinshasa Nationals are net gift receivers. A weighted average of net gift expenditures by income class shows a receipt of 1.35 Z per household. The sources for this net inflow are gifts from the foreign Kinshasa community, transfers from the rest of the country, and remittances from abroad.

Formation of the Independent Variables

1. Income. Two income-related variables are included in the analysis. As is evident in Table II, income levels are strongly associated with the value of gifts both given and received. A higher level of income enables more money to be spent as gifts. Conversely, a higher level of gift receipts increases income. That gifts are an increasing function of income has been brought out for the traditional society by Mpase among others, and for Kinshasa by Houyoux and Houyoux. Total expenditures were used as an approximation for income.¹

The lack of a regular source of income may be expected to play a prominent role in gift receipts. If the prestation network functions as an alternative to unemployment insurance, a non-working head of household should receive more gifts than a working head of household. A dummy variable was used to denote lack of regular employment. Those considered without a regular job include students, housewives, retired, independent women² and unemployed.

2. Family Composition. Two variables are employed to examine the effect of family composition on prestation expenditures and receipts. The presence within the household of non-nuclear family members entails an increased level of solidarity expenditures for food, clothing and shelter. While many of

¹For an explanation of the institutional difficulties in determining certain leisure expenditures, and hence total family income, see Houyoux and Houyoux, p. 101, and Caprasse and Bernard, p. 415.

²An independent woman, "femme libre," or "femme independante" is an unmarried, non-working female head of household, living on her own, and dependent on her own resources for the upkeep of herself and her children, often relying on sexual earnings for a livelihood.

the guests may be temporary, they are constantly being replaced by others. Thus the composition of a household's guests may change, but the structure of extending hospitality remains constant.

The value of gifts received may also be a function of their presence, as kinsmen arriving from the interior are occasionally accompanied by gifts in kind. Also, the extended family may sense an obligation to ease the burden of hospitality of the urbanite by sharing the costs of food and lodging. The number of non-nuclear visitors was included as an independent variable.

The presence of children within the household constitutes an alternative to the use of funds for prestation. Investment may be made in the household's children, instead of extra-household solidarity expenses. Further, the extended family may contribute to the education and rearing costs of the children. Gift receipts are also tied to ceremonial occasions connected with children, such as a birth, baptism, first communion, confirmation or school graduation. It is hypothesized that the greater the number of children in the household, the lower will be the prestations, and the higher will be the gift receipts. The number of children under 20 years of age was considered among the independent variables.

3. Reciprocity. Most writers stress the reciprocal nature of prestation. The act itself is viewed as an exchange, or one transaction in a continuing reciprocal process. While the process is an ongoing one, it is expected that gift receipts may be associated positively with giftgiving and vice-versa. Table II indicates that both giftgiving and gift receipts rise together. The mechanism may operate through the income effect, more gifts provide more income, which enable more gifts to be made. To examine the presence of reciprocity, the value of gifts received was employed as an independent variable for the equations where gift expenditures was the dependent variable, and vice-versa.¹

4. Savings. Saving in a modern credit institution may be a substitute for saving through the traditional prestation mechanism where money is placed to create future service. Higher outlays for savings are hypothesized as associated with lower expenses for prestations. Value of current savings deposited in the savings and loan institution is employed as a variable.

¹Richard Porter has suggested the possible introduction of bias by using OLS methods. A later version of this paper will attempt to estimate giftgiving and gift receipts using 2SLS and LIML.

IV. Results

The first section examines the functional form of the equations describing the prestation system and analyses the general results. The second section examines the effects of subsidiary variables as schooling and Kinshasa exposure on gift expenditure and receipts.

1. General Results. The method chosen to develop an economic theory of prestation is to determine a consumer demand-type function for prestation. Additional independent variables are later considered to encompass the quasi-economic phenomena. Ordinary least squares methods were applied. Variables were dropped from consideration and the equations reestimated when the coefficients were not found significant at the five percent level.

Four functional forms were examined for both gift expenditures and gift receipts. The results are presented in Table III. The best fit for both dependent variables is provided by the simple linear form. The log-linear formulation's multiple correlation coefficient was close to that of the linear form as the result of including two additional independent variables. The double log and the log-inverse function did not perform as well. Per capita functions were not employed, as the basis of comparison is the household as a separate unit and later two independent variables related to family composition are introduced. On the basis of this evidence, the linear form was retained throughout. This form indicates a marginal propensity to redistribute income through the prestation system of approximately 10 percent which is considerably better than many explicit policy mechanisms.

Gift Giving. Using the independent variables detailed above, ordinary least squares regression was employed to estimate a linear equation for gift expenditures. The results are presented in Table IV. Prestation expenditures are a function of income and two household composition variables, the number of visitors and the number of children under 20 years of age. These variables are found to account for almost 2/3 of the variation in gifts.

The marginal propensity to give gifts out of current income is .084, accounting for one of the major budget categories. The household spends an average of 3.69 Zaires in hospitality payments per visitor per month. The presence of young children acts to trigger withholding from gifts, indicating an alternative use of funds. Neither unemployment of the household head nor savings nor reciprocity is significant in affecting gift giving.

Table III: Regression coefficients for functional forms of the expenditure and receipt functions

<u>Gift Expenditures</u>					N	R ²		
Ln (Gift Expenditures)	=	-5.3784 (.61005)	+	.11119 Ln (Gift Receipts) (.03187)	+	1.2195 Ln Expenditures (.07766)	862	.25718
Ln (Gift Expenditures)	=	5.3367 (.21644)	+	.13808 Ln (Gift Receipts) (.03299)	-	2726.4 $\frac{1}{\text{Expenditures}}$ (213.87)	862	.19606
Gift Expenditures	=	-3504.6 (182.07)	+	.04643 Gift Receipts (.01552)	+	484.68 Ln Expenditures (23.188)	1238	.29463
Gift Expenditures	=	*		*		.10030 Expenditures (.00301)	1238	.31778
 <u>Gift Receipts</u>								
Ln (Gift Receipts)	=	1.6927 [†] (.67483)	+	.12568 Ln (Gift Expenditures) (.03602)	+	.37708 Ln (Expenditures) (.09278)	862	.06200
Ln (Gift Receipts)	=	4.9651 (.23485)	+	.14472 Ln (Gift Expenditures) (.03458)	-	867.43 $\frac{1}{\text{Expenditures}}$ (236.93)	862	.05866
Gift Receipts	=	-2102.7 (374.61)	+	.15504 Gift Expenditures (.05181)	+	320.34 Ln (Expenditures) (48.453)	1238	.07773
Gift Receipts	=	182.81 (39.213)	+	.10604 Gift Expenditures (.05250)	+	.07469 Expenditures (.00947)	1238	.09084

[†] Coefficient not significantly different from zero at the one percent level, significant at the five percent level

*Blank spaces occur where the variable was dropped from the equation after having been found non-significant at the five percent level.

Table IV: Summary Statistics for Regression for Gift Expenditures, Gift Receipts and Net Gift Expenditures

	Constant	Income	Number of Visitors	Number of children under 20 years of age	Non-Working Household Head	N	R ²	\bar{Y}
Gift Expenditures	-50.729 [†] (20.523)	.08444 (.00317)	369.27 (10.814)	-22.437 (4.4537)		1238	.64962	348.74
Gift Receipts		.09859 (.00547)			788.23 (71.054)	1238	.15675	483.34
Net Gifts			337.25 (28.203)	-43.673 (7.2036)	-818.30 (75.609)	1238	.15333	-134.60

[†]Coefficient not significantly different from zero at the 1 percent level; significant at the 5 percent level.

Gift Receipts. Gift receipts are significantly linked to only two of the independent variables considered, income and unemployment. Gifts account for almost 10 percent of income, and as shown earlier, their absolute value rises with income level. An unemployed head of household can expect to receive almost 8 Zaires more per month in solidarity payments than a similarly employed individual. This indicates that the prestation system has evolved to fill the gap created by the absence of unemployment insurance. This aspect of the urban prestation has assumed major importance in recent years, as in the pre-independence period, employment was a pre-requisite for urban residence, and unemployed household heads were technically obliged to leave the city.

Net Gift Expenditures. Net gift expenditures are independent of income level. The rise in both gift expenditures and gift receipts associated with income act to annul each other. Three variables are significant in explaining net gift receipts: the number of visitors, the number of children and unemployment of the head of household. The sign and magnitudes of the coefficients confirm the way in which the dependent variable was constructed by subtracting gross receipts from gross expenditures. The effect of children is stronger for net gifts than for gross gift expenditures.

Due to the redundancy shown by the results for net giftgiving when similar coefficients are already available for gift expenditures and gift receipts, the next section will omit consideration of net giftgiving.

2. The Effects of Schooling and Kinshasa Experience on Prestation Systems

A. Schooling. The effects of a western-style education on traditional prestation systems may not be distinguished a priori. Mpase claimed that one of the desired effects of exposure to the educational system during the colonial period was to disengage the nuclear family from the web of extended family obligations. He found, however, that this effect was not often achieved (p. 69). The measure of success of the colonial goal would be a decrease in prestation associated with an increase in educational level. LaFontaine and others have noted an opposite effect, i.e., an increase in responsibility of the educated toward their less educated fellows, stemming from an awareness of their expected role within the society (p. 100). To complicate matters, a higher level of education is associated with a higher income level, with the consequent increased ability to participate in the prestation system if desired.

The sample was divided into five relatively homogenous educational groups. These groups are the following: (1) no formal schooling (N=296); (2) primary education incomplete (N=326); (3) primary education completed but no further (N=157); (4) secondary education incomplete (N=377); and (5) secondary education completed and/or higher (N=82).

The results are presented in Table V for both gift expenditures and gift receipts. The marginal propensity to give gifts out of income varies little, from slightly above 6 percent to slightly below 10 percent. It is approximately equal for those without schooling, primary and secondary school leavers, higher for primary school completers, and highest for those who have been most exposed to western schooling, a result opposite in effect to that foreseen by the early educational theorists. Conversely, gift receipts have the greatest importance in the family budget for those families whose heads of household have received no formal schooling, approximately 15 percent of income. This percentage falls with increasing income, to slightly below 9 percent for those with more than a primary school education, confirming La Fontaine's findings.

Both family composition variables are significant in determining the value of gift expenditures. The amount spent for visitors is relatively constant for those with a primary school education or less, approximately 3 Zaires per month. This amount rises somewhat for secondary school leavers, and is highest for those with most education, 5 Zaires per month.

The presence of children means that less is spent on gifts as was expected. Those who provide best for children are those whose level of education is highest.

Savings is significant in determining both gift expenditures and gift receipts for two groups, primary and secondary school leavers. However, the sign of the coefficient is different from that hypothesized by earlier writers on the subject (Mpase, N'Dongala). Gift expenditures had been expected to fulfill a role of substitute for savings. This would have arisen if the individual were faced with the choice of spending his money on gifts to the extended family, or putting the money into savings. The results show this not to be the case, and an alternative explanation may be suggested. Personal saving at a low level of income may be seen as an indication of financial responsibility for the family. Such individuals are more likely to manifest their responsibility in other areas as well, including the traditional prestation systems. In this light, the saver is seen as a more probable contributor to and receiver of family solidarity than the nonsaver.

Table V: Regression Coefficients for Gift Expenditures and Gift Receipts by Level of Schooling of Head of Household

Level of Schooling Coefficients for Gift Expenditures	Constant	Income	Number of Visitors	Number of Children Under 20 Years of Age	Savings	Reciprocity	Non-Working Household Head	N	R ²	\bar{Y}	Income Average
0 Years	-76.357 (23.875)	.06562 (.00805)	304.18 (17.569)					296	.58069	175.07	2406.6
Primary Incomplete		.06440 (.00665)	292.57 (15.435)	-23.399 (4.1342)	.24067 (.08734)	.03961 [†] (.01819)		326	.62304	198.84	2628.8
Primary Complete		.08247 (.01290)	305.22 (20.440)	-32.281 (9.4316)				157	.68863	278.36	3079.0
Secondary Incomplete		.06275 (.00561)	379.70 (21.327)	-16.345 [†] (7.6848)	.56686 (.10915)			377	.58309	469.67	4333.1
Secondary Complete and/or Higher		.09880 (.01039)	505.86 (52.353)	-63.139 [†] (28.552)				82	.69649	1150.4	8315.8
<u>Coefficients for Gift Receipts</u>											
0 Years		.15076 (.02280)					720.74 (121.76)	296	.17351	550.25	
Primary Incomplete		.11283 (.01042)			.47514 [†] (.23576)		786.04 (84.245)	326	.25456	427.50	
Primary Complete		.12235 (.01500)					340.25 [†] (157.68)	157	.14087	400.58	
Secondary Incomplete		.08718 (.00953)			.77847 (.25870)		862.59 (237.14)	377	.15856	444.85	
Secondary Complete and/or Higher		.08808 (.01449)						82	.12933	799.18	

[†]Coefficient not significantly different from zero at the 1 percent level, but significant at the 5 percent level.

Reciprocity is generally non-significant in explaining gift expenditures for all groups except primary school leavers, who pay out in gifts 4 percent of their gifts receipts. It is not significant in explaining gift receipts for all except those with the highest educational attainment. Hence, the family based unemployment security system provides between 7.20 and 8.60 Zaires per month for all except those who only completed primary school, who receive substantially less.

B. Kinshasa Experience. Length of residence in Kinshasa is expected to have a major influence on both gift expenditures and gift receipts. U-shaped curves are postulated for both variables as a function of length of city residence. The rationale for such a distribution is a combination of modern and traditional forces which may cause the receipts and expenditures of both those who have been in Kinshasa a short time, and those who have spent a long time there to be higher than those of residents who are neither recent arrivals nor city veterans.

Recent arrivals in the capital would tend to spend more, hoping by their generosity to enter more fully into the urban prestation network. They would also tend to receive more aid in covering their costs of establishment in the city, and as a support while unemployed and locating a job.

Residents who have been in Kinshasa a long time - although exposed to an urban system longer - may be viewed as fulfilling the role of the elders in the traditional society. As elders, they are at the summit of the redistribution system, receiving from some and passing on to others.

To examine the effect of Kinshasa residence on the prestation system, the portion of the sample for which date of arrival in the city was known (1121 of 1238 cases) was divided into 6 homogeneous groups based on length of stay in Kinshasa. These groups are the following: 0-5 years (N=177); 6-10 years (N=248); 11-15 years (N=224); 16-20 years (N=239); 21-25 years (N=118); and 25 or more years residence (N=175).

The results are presented in Table VI for both gift expenditures and gift receipts. The marginal propensity to give gifts out of income decreases with length of residence in Kinshasa from a high of 12 percent for new arrivals to a low of 3 percent to those who have been in the city for 26 years or more. The value of the coefficient is relatively stable for those whose length of stay is from 11-25 years, approximately 9 percent of income. The sharp decline for the last group may be compensated by a higher number of visitors and the importance of reciprocity.

Table VI: Regression Coefficients for Gift Expenditures and Gift Receipts by Length of Stay in Kinshasa

Length of Stay in Kinshasa <u>Coefficients for Gift Expenditures</u>	Constant	Income	Number of Visitors	Number of Children Under 20 Years of Age	Savings	Reciprocity	Non-Working Household Head	N	R ²	\bar{Y}	Income Average
0 - 5 Years		.12212 (.01162)	448.41 (41.405)	-59.389 (17.546)		-.08256 (.02258)		117	.69821	510.18	4345.1
6 - 10 Years		.11777 (.00729)	427.81 (27.325)	-48.755 (8.8221)		-.13947 (.03389)		248	.75154	402.90	3514.3
11 - 15 Years		.09856 (.00638)	286.59 (21.525)	-40.749 (6.4144)	.57075 (.14148)			224	.69646	301.70	3202.3
16 - 20 Years	-63.225 [†] (30.885)	.08215 (.00703)	325.06 (17.218)	-23.907 (5.8049)	.52393 (.09004)	.06294 [†] (.02601)		239	.76575	266.62	3241.1
21 - 25 Years	-224.69 (39.208)	.09496 (.00784)	422.81 (24.785)		.41883 (.13325)			118	.84122	341.73	3649.5
26+ Years		.02742 (.00601)	305.95 (22.869)			.16866 (.03031)		175	.61390	405.64	4069.1
<u>Coefficients for Gift Receipts</u>											
0 - 5 Years		.24860 (.04080)				-.59815 [†] (.25128)	1061.1 (327.64)	117	.28648	901.11	
6 - 10 Years		.12644 (.01253)				-.31067 (.07371)	921.92 (126.88)	248	.28708	472.80	
11 - 15 Years		.07050 (.00915)			2.5883 (.28358)		644.47 (112.30)	224	.40346	370.52	
16 - 20 Years		.09492 (.00906)			1.2941 (.20477)		295.03 [†] (117.79)	239	.28042	365.26	
21 - 25 Years				80.311 (16.294)			519.87 [†] (254.72)	118	.04750	445.38	
26+ Years			-218.49 (72.137)	50.749 (19.258)		.93762 (.14487)	630.60 (178.51)	175	.25200	571.82	

[†] Coefficient not significantly different from zero at the 1 percent level, but significant at the 5 percent level.

Gift receipts are closely related to income for those who have been in the city 20 years or less. The importance of gifts in the budget declines from a high of 25 percent of expenditure for those who have been in the city less than 5 years to between 7 and 9 percent for those living in Kinshasa between 10 and 20 years. The high weight of gifts for the first group lends support to the hypothesis that new arrivals depend strongly on prestation support until they become established in an urban environment. It should be noted that this strong measure of support refers to independent households and not to migrants who reside for a period in another household. The support given to this latter group is even higher, and enters into general hospitality expenditures.

The number of visitors residing in a household is highly significant in determining gift outlays. Households spend an average of 3.00 to 4.00 Zaires per month per visitor. It is also significant that households of long-term Kinshasa residents receive a lower value of gifts due to the presence of visitors.

The prestation system functions disjunctively with relation to the numbers of children. For residents of 20 years or less, the presence of children acts as a withholding incentive. The magnitude of the amount withheld decreases with the length of time spent in the city. Residents of more than 20 years do not withhold from gifts, but instead receive more gifts based on the number of children present. This latter pattern follows the more traditional rural based prestation system described by Mpase, lending support to the hypothesis that the behavior of the longterm residents of Kinshasa form a parallel to the village prestation network.

Reciprocity is negatively associated with both gift expenditures and receipts for short-term Kinshasa residents, and positively associated for medium or long-term ones. The group for which reciprocity is most important is that of residents of 26 years or longer. They disburse at least 17 percent of their gift receipts and receive at least 94 percent of the amount they spend. The difference in signs of the coefficients adds evidence of a disjunctive behavior pattern based on length of residence.

The solidarity based unemployment compensation also functions in a manner related to length of residence. Short-term residents receive about 11 Zaires per month if unemployed. This falls to 3 Zaires per month for the 16 to 20 year group, then rises again for the groups whose stay is longer.

Savings is positively associated with both dependent variables, but only at a significant level for the middle residence length groups. This supports the hypothesis that savings is dominated by the responsibility motive. The three groups for which significant coefficients were found have entered fully into the family prestation systems, manifesting both responsibility to the extended family (receipts of 130 to 250 percent of savings) and to the nuclear family by the act of saving.

V. Implications

There are several implications of this research regarding the development of an economic exploration for prestation systems and their relationship to education and length of city exposure. First, as schooling becomes more widely available, and the average length of time in school increases, the magnitude of income redistributed through the prestation system may be expected to increase.¹ This finding complements the human capital notions of an immediate redistributive impact for those receiving the education. Second, if the hypothesized link between savings and prestation is correct, a growth in modern savings and loan associations should increase the amount of money redistributed by making savers more aware of their responsibilities toward others. Third, a decrease in urban growth through migration may decrease the amount of prestation funds required for migrant establishment. It is not possible to determine whether the funds released would remain within the prestation system, or be put to alternate uses. Fourth, a decrease in the population growth rate should decrease withholding from prestation payments based on the number of young children. An alternative destination of the previously withheld funds could be to remain within the prestation network. Fifth, and most important, these results suggest that prestation systems may be fruitfully analyzed within an economic framework, and that much can be learned about a long

¹This finding may only hold as long as the distribution of education is skewed. It is unclear whether prestation would continue to remain important if all heads of households had attained the same educational level.

neglected aspect of consumer behavior from a similar examination of other micro samples. The rate of return to such studies, in terms of an understanding of a pre-existing redistribution system and its relation to economic growth, would seem quite high. Finally, the possibility of a more in-depth analysis of micro-data, to form a more complete economic theory of prestation is a worthwhile area of study. No attempt to do so was made here, but study of the impact of other variables such as occupational class, family size, income levels which change as a result of the growth process would appear beneficial as an aid in policy determination for developing countries.

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