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## INTRODUCTION

Migration patterns in Central America are characterized by large movements of the rural poor to urban areas. These population movements have aggravated the already deteriorated economic conditions of low-income urban settlements in Guatemala. Food prices and household incomes are two of the main determinants of urban households' purchasing power and their food security. Previous evidence demonstrates positive associations between household income, food consumption and dietary energy intake among urban low-income groups, while the price elasticity of food demand was found to be highly negative: a general increment in food prices has a strong negative impact on food intake levels. Little is known about the survival strategies employed by the urban poor in response to acute economic crisis. Moreover, the "urban poor" are hardly a homogeneous group, hence different survival strategies may be employed by different sub-groups. The present study was carried out to evaluate the impact of changes in purchasing power of different groups of urban low-income households on their food intake patterns.

## METHODS

The study site was a low-income sector of Guatemala City, called "El Milagro" with an estimated population of 27,600 (1986) and considerable in migration. A household survey was conducted twice, at a one-year interval (June/July 1986 and 1987) in the same 200 households selected by a two-stage random sampling procedure. Demographic and socio-economic characteristics and household expenditures were obtained. Household food intake was obtained using the one-day recall method. During the survey period, the food intake of each household was obtained for two separate days, and the result averaged. The households were *ex post* classified as: "low income" (LI): per capita income < total cost of adequate minimum-cost diet; "middle income" (MI): cost of minimum-cost diet < per capita income < cost of expanded basic goods basket; "high income" (HI): per capita income > cost of expanded basic goods basket.

## RESULTS

Between 1986 and 1987 the consumer price index for Guatemala City increased 9%, and the general food price index; 11%. LI households increased on average their nominal per capita income (12%), while MI and HI households decreased theirs (11% and 24%, respectively). Adjusted for the general price increase, the real income of LI households remained about constant, decreased for MI and HI households: 17.4 and 29.1%, respectively. Considerably more households in the MI and HI groups experienced a greater increase in unemployment. The budget share to food remained approximately constant in the MI and HI households, declined

slightly in the LI group. Budget shares to housing increased in all three groups, most significantly among the LI households. The budget categories which declined in all three groups were: clothing, health and recreation. Food consumption patterns changed differently in each group. LI households decreased their intake of dairy products, maize and potatoes, but increased consumption of many other foods (meats, bread, maize products, rice, beans, sugar). MI households substantially increased their intake of bread, potatoes, beans and eggs, and to a lesser extent of meats, rice and dairy products. HI households decreased their intake of rice, meats and maize, but increased that of beans and sugar. Price changes for meat, beans and rice were small (0-6%), but larger for dairy products, eggs, potatoes and sugar (20-46%). The price of maize fell, and that of maize products increased, each by 8%. Assuming that all three groups faced the same absolute and relative price changes, it is clear that price-elasticities are not uniform across income groups. Mean dietary energy and protein intake levels increased among the LI and MI households, and remained constant among HI households. The number of households with adequate energy intake levels increased in all three groups but mostly in LI and MI households. The number of households with an adequate protein intake increased in LI and MI households, but decreased slightly in the HI group. The protein-energy relationship in the diet of the LI households improved slightly.

#### CONCLUSIONS

LI households were better able to cope with macro-economic conditions in protecting their relative economic position compared to MI and HI households. These results coincide with those of studies conducted elsewhere. All three groups demonstrated considerable ability to protect in general their food security position, by changing the composition of their food intakes without adverse effects on dietary and protein intake levels. Perhaps the interval between the two measurement periods was not sufficiently long to capture medium- and long-run effects. The inflation rate between 1986 and 1987 can be characterized as moderate. The impact of more severe inflation on food security may be very different. Many research questions remain. What survival strategies are employed by the urban poor in response to chronically adverse macro-economic conditions? What are the characteristics of those urban low-income households that are most successful in coping? Does the informal economic sector provide the very poor with a safety net? Are there limits over time to the effectiveness of coping mechanisms? How can public sector policies and programmes reinforce the positive effects of the coping mechanisms? What lessons can be learned in the context of self-reliant development processes in low income urban areas?