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RELATIVE DEPRIVATION IN CONSUMPTION OF URBAN POOR HOUSEHOLDS IN KOREA: WITH SPECIAL REFERENCE TO OBJECTIVE DEPRIVATION*

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Despite the rapid economic growth since the 1960s, the economic inequality has been exacerbated in Korea. This study analyzed the variables influencing the level of objective deprivation. For empirical analysis, this study used data on 602 households in the city of Inchon collected by the author through interviews. The major method used in this study was multiple regression. The findings were as follows: residential class was the most critical variable in determining the level of deprivation. For the entire sample, assets had stronger effects on the deprivation than nonasset income, but the two variables had different effects depending on residential class. For the poor residential class, the two variables had the significant effects. For the middle residential class, however, only the asset variable had significant effect. These results imply that the household consumption in Korea shows remarkable difference according to residential class, and that inequality of wealth, compared to that of nonasset income, has much more serious effects.

INTRODUCTION

Despite rapid economic growth since the 1960s, economic inequality has been exacerbated in Korea. The problem of relative poverty has become more serious than that of absolute poverty. This issue is one of equity, not economic efficiency.

Household well-being is the ultimate goal of all household behavior, and level of consumption determines household well-being. The level of consumption in the urban poor household is, thus, the important indicator of the household well-being.

Many studies on level of consumption in urban poor households have focused on the following subjects; consumption expenditure pattern by income classes in household economics research and housing deficit in housing studies; labor reproduction in industrial sociology and the measure of minimum living expenses in labor economics; and lifestyles of the classes

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in social stratification theory. However, there are some limitations in respect to the relative comparison of the level of consumption among classes. That is, studies of industrial sociology and labor economics targeted only urban laborers, and did not concern the relative comparison among classes. Furthermore, those studies were conducted to understand the level of consumption through consumption expenditure size, not through the contents of consumption. While, in the field of household economics and social stratification theory, there have been researches on the relative comparisons among the classes primarily involving consumption expenditure budget; but not qualitative comparisons in the contents of consumption.

The concept of relative deprivation is important as the theoretical perspective for the understanding of the level of consumption in urban poor households. Merton and Rossi (1957) and Runciman (1966) introduced the concept of relative deprivation as subjective deprivation, which means 'feelings of deprivation relative to others'. Subsequently, Townsend (1979) emphasized that objective deprivation is a more useful concept than subjective deprivation to explain the standard of living of poor households. Objective deprivation is the condition in which the level of living of each household cannot come up to that of an average reference group of all the nation. Therefore, relative deprivation in urban poor households focusing on objective deprivation, a "condition of deprivation relative to others", should be considered.

In particular, the level of consumption in the urban poor households would be an accurate measure when analyzed as a concept of relative deprivation. In the past, the concept of poverty was understood merely through the level of economic resources available to each household, but not through the level of household well-being from actual consumption.

Then, what are the determinants of relative deprivation? In previous researches on deprivation studied by Western Europe, income, an economic resource, was considered as an important variable for explaining deprivation. On the contrary, a recent study by Desai and Shah (1988) proved that income is not the only factor for describing deprivation.

Compared to other newly industrializing countries, income[1] distribution in Korea is comparatively equal, but the distribution of wealth is so seriously unequal as the Gini coefficient is almost over 0.9 (Korean Research Committee for Public Concept of Land 1989). Therefore, it could be an impetuous conclusion that income is considered as the determinant for

[1]Income herein means mainly labor income or earnings.

deprivation of Korea.

Recently, there are many studies on distinguishing social classes with regard to the share of lifestyles and enjoyment in chances of life conducted by sociologists (*e.g.*, Hong and Kim 1988; Paek 1991). Especially, residential segregation by social classes has been expedited due to the construction of new large-scale residential areas in urban Korea since the mid-1970s (Lee 1980, 1982). Therefore, it would be useful to include residential class as one of the determinants of relative deprivation.

Based on the above views, this study was attempted to explain the relative deprivation of the Korean urban poor households in the 1990s. Two issues as follows were addressed.

First, in order to understand the consumption level, is the concept of deprivation more useful than that of poverty?

Second, considering the economic inequality in Korea, what is the most important determinant of relative deprivation among nonasset income, assets, or the other variables (residential class, education, age, or number of household members)?

Through investigating those problems, the consumption of urban poor households as resulting from the economic inequality could be explained comprehensively.

THEORETICAL OVERVIEW

Relative Deprivation

Deprivation is a very important concept to analyze the consumption level and well-being of households. This concept was introduced from Smith's *Wealth of Nations* in the early part of the eighteenth century. He recognized the ways in which necessities were defined by customs (Smith [1776] 1937, p. 821).

Recently, it has developed as a comprehensive concept of deprivation by Townsend (1979). Townsend suggested that "people can be said to be deprived if they lack the material standards of diet, clothing, housing, household facilities, working, environmental and locational conditions and facilities which are ordinarily available in their society, and do not participate in or have access to the forms of employment, occupation, education, recreation and family and social activities and relationships which are commonly experienced or accepted" (Townsend 1979, p. 413). He and his colleagues argued that the deprivation concept has to be distinguished from poverty. "The first turns on the level of conditions or activities experienced, the second on the incomes and other resources

directly available" (Townsend *et al.* 1987, p. 85). Thus, to understand the effects of the poverty in actual living, the concept of the deprivation is adequate.

Operational Definition of Relative Deprivation in Consumption

Davis (1945: 2-3) defined "actual consumption or consumption level" as "a sort of aggregate of the food, fuel, and other nondurable goods used up, the services of houses, automobiles, clothing, and other durable and semidurable goods utilized, and the services of human beings used, by an individual or group, in a given period of time" (Davis 1945, pp. 3-4). Mitchell (1983) mentioned that consumption pattern was classified as the pattern of use of certain goods and services, and the pattern of some consumption activities, i.e., ownership of goods or frequencies of involvement in certain activities.

Townsend's deprivation concept was divided into material deprivation and social deprivation. To reflect those two kinds of deprivation in consumption behavior sufficiently, the concept including the ownership of goods and frequencies of involvement in certain activities in Mitchell's concept, as well as the use of goods and services in a given period of time in Davis' concept, should be required. Therefore, this paper defined "relative deprivation in consumption is the deprivation of material standards and the lack of involvement in social activities among eight consumption categories as daily available foods, clothing, housing, home equipment, location and environment, health, family activity, and education."

Determinants of Relative Deprivation in Consumption

Townsend marked a definite step forward in the British discussion on poverty. During 1968~1969, he asked sixty questions of his sample of 2,050 households throughout England and elaborated on the concept of relative deprivation objectively rather than subjectively. He hypothesized "with a diminishing level of resources, people will engage less fully in the national 'style of living'" (Townsend 1979, p. 59), and verified the relationship between deprivation and income using Pearson's correlation coefficient (Townsend 1979, p. 1168). This approach was criticized by Piachaud (1987). He objected to the approach by Townsend and argued that the score of any household on the Townsend's deprivation index was as much a matter of taste as an indicator of poverty. However, Townsend concluded that "on average, given the large sample, it was reasonable to ignore the 'could afford but did not want' category" (Desai 1986, p. 12).

In 1983, London Weekend Television (LWT) conducted the second biggest investigation of poverty in the United Kingdom. The LWT team interviewed 1,174 people aged 18 and over, and asked questions about thirty-five indicators of styles of living, taking into account some of the earlier objections in the Townsend/Piachaud debate (Desai 1986, p. 15). The LWT found that the best pattern was the curvilinear one between deprivation and the reciprocal of income in the regression analysis (Mack and Lansley 1985; Desai 1986, p. 17). Desai and Shah (1988) showed a sophisticated way of defining deprivation. Their measure was related to that proposed by Townsend and econometric estimation was carried out using his 1968/1969 data. They got information from the Townsend data on the socio-economic characteristics of households—income, wealth, family type, health, education, region and origin, and used the dichotomous logit analysis for the existence of deprivation. They concluded that income was found to be neither the sole nor the most important indicator of deprivation. In other words, by defining relative deprivation as relative to the community norm and making the norm the modal behavior, they made the sociological views of poverty empirically measurable.

Up to now, there is no study on the consumption behavior of the urban poor household in terms of relative deprivation in Korea. Meanwhile, since the mid-1980s, some research on relative comparisons among lifestyles of the classes were introduced, conducted by sociologists and housing researchers. Paek (1991) pointed out that the ownership of durable goods, especially a house, is the most apparent indicator for inequality among classes in Korean society. He also found that most of the durable goods except the house already had become indispensable to all including the laborer households. Lee and Cho (1991) who studied the actual conditions of the laborer's living during the period of 1987-1990, found trade-off relationship between the annual increasing rate of education expenses and that of housing expenses in the total living expenses. This indicated that the housing is the most serious problem, and the reduction in the education expenses could pass poverty to the next generation, in the poor households including the laborer's.

Based on Townsend's hypothesis saying that resources determine relative deprivation, this study investigated the determinants of relative deprivation in consumption and measured the resources of each household in terms of six indices such as residential class, nonasset income of the household, assets of household, education of household head, age of household head, and number of household members. The first four indices tell the socio-economic status of the household and the next two are the variables for

demographic characteristics. This paper established the general hypothesis H1 that "there is a significant causal relationship between the socio-economic status and demographic characteristics of each household, and the level of relative deprivation in consumption," and explain the relationship between each index and relative deprivation.

1. Residential Class

Research on housing and residential environments in Korea reported that the gaps between housing classes have been widening in large cities since the 1970s. Particularly, it is suggested that the construction of apartment building complexes has facilitated inter-class residential segregation (Lee 1980, 1982; Kim & Park 1984; Hong and Kim 1988; Hong 1992; Park 1992). Residential class can be divided into two groups; poor residential class (PRC) representing those living in the squatting areas, and middle residential class (MRC) referring to those living in ordinary residential areas. In this study, the residential class was considered an important variable for describing the control of resources in society, therefore, hypothesis H1-1 that "the level of deprivation in PRC is higher than that in MRC" was established.

2. Nonasset Income

As one of the determinants of relative deprivation in consumption, nonasset income was explained by using Keynes' absolute income hypothesis. According to him, the amount that the community spends on consumption obviously depends (i) partly on the amounts of its income, (ii) partly on the other objective attendant circumstances, and (iii) partly on the subjective needs and the psychological propensities and habits of the individuals composing it and the principles on which the income is divided among them. In general, however, holding the subjective factors as given, the propensity to consume depends only on changes in the objective factors such as a change in the wage unit, changes in fiscal policy, and so forth. Since the other factors are capable of varying, the income measured in terms of the wage-unit is the principal variable (Keynes [1936] 1973, pp. 90-96).

3. Assets

Modigliani, Brumburg, and Ando proposed a life cycle hypothesis, based on varied consumption behavior depending on the different stage in life. Consumption is almost constant or slightly increases throughout life, while income is, in general, the highest in middle age and lowers both among newlyweds and in old age. The consumption function in this hypothesis

was found to be the function of the present value of the expected income flow, and income was classified into property income and labor income (Ando and Modigliani 1963; Modigliani and Brumburg 1955). This consumption function has two points as follows. First, it includes assets as an independent variable to explain the consumption phenomenon. Second, it treats income in terms of labor income or asset value which are easily observed. Therefore, both nonasset (labor) income and assets should be considered as the determinants of relative deprivation in consumption.

This study enunciated H1-2 as "the lower the level of nonasset income of household, the higher the level of deprivation" and H1-3 as "the lower the level of assets of household, the higher the level of deprivation."

4. Education

Human capital is investments in human resources to improve human productivity. A laborer with more human capital can, thus, be paid higher, due to a higher productivity(Mincer 1974; Becker 1964; Schultz 1963). The human capital invested in each member of a household can be divided into three types; (i) formal education, (ii) on-the-job training and experience, and (iii) health (Bryant 1991, p.170). Among them, formal education can be varied with the amount invested which is obviously different according to the classes. And the education level of household head determines the size of labor income, having important effects on relative deprivation. Therefore, in this study, the hypothesis H1-4 that "the lower the level of education of household head, the higher the level of deprivation" was established.

5. Age

The age of household head can be considered as a proxy variable in the family life cycle. The life cycle hypothesis above mentioned is "a theory of consumer expenditure based on considerations relating to the life cycle of income and of consumption 'needs' of households" (Ando and Modigliani 1963, p. 55). First, the consumption needs of general households could be almost constant throughout the whole life of households. It is because relative deprivation indices are composed of necessities which are ordinarily available in their society. Second, income consists of present labor income, expected labor income, and asset income. If we assume that assets and labor income of all households are constant, age has effect on expected labor income. In old age, expected labor income is small, the consumption becomes less, and the level of relative deprivation would be increasing. Among newlyweds, expected labor income can be large due to a long life expectancy, as a result, consumption would be increased, and level of

relative deprivation would be decreased. Therefore, this study set up hypothesis H1-5 that "the larger the age of household head, the higher the level of deprivation."

6. Number of Household Members

If we assume that assets and labor income of all households are constant, the larger the number of household members, the higher consumption needs are. As a result, the material resources for each member of the household should be decreased and the level of relative deprivation would be increased. Therefore this study enunciated H1-6 as "the larger the number of household members, the higher the level of deprivation."

In addition to the above six variables, there are such variables as employment, occupation, health, gender of household head, family type, and type of family employment to be considered (Desai and Shah 1988; Mack and Lansley 1985: Mayer and Jencks 1988; Townsend 1987a).

HYPOTHESES AND MODEL

Based on the theoretical overview, the following hypotheses and model were established.

Hypotheses

Hypotheses mentioned before were summarized as follows:

H1. There is a significant causal relationship between the socio-economic status and demographic characteristics of each household, and the level of relative deprivation in consumption.

H1-1. The level of deprivation in the PRC (Poor Residential Class) is higher than that in the MRC (Middle Residential Class).

H1-2. The lower the level of nonasset income of household, the higher the level of deprivation.

H1-3. The lower the level of assets of household, the higher the level of deprivation.

H1-4. The lower the level of education of household head, the higher the level of deprivation.

H1-5. The larger the age of household head, the higher the level of deprivation.

H1-6. The larger the number of household members, the higher the level of deprivation.

Model

The level of relative deprivation in consumption is a function of six variables, i.e., residential class, nonasset income, assets, education, age of household head, and the number of household members. The level of deprivation was measured whole and categorically.

The equation can be expressed as the following:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e$$

where Y is the level of deprivation, X_1 is the residential class (PRC=1, MRC=0), X_2 is nonasset income of household, X_3 is assets of household, X4 is education of household head, X_5 is age of household head, X_6 is number of household members, and e is a random error term.

METHODS

Data

1. Operational Definition of the Residential Class

The residential class was divided into two groups, Poor Residential Class (PRC) and Middle Residential Class (MRC), and their operational definition was the MRC who reside in the general residential area, and whose assets are more than thirty million won, share the average lifestyles and enjoy the chance of life above the ordinary level in Inchon city. While, the PRC, who live in the squatting areas required for reforming the residential environment, and whose assets are below thirty million won, cannot share the average lifestyles and only have the chance of life below the ordinary level.[2]

2. Sampling and Data

The sample size was 602 households and the ratio of the PRC:MRC was 2: 1. The population of the PRC was 75 regions in Inchon city which were designated as "regions for reforming the residential environment for the urban low income residents by Inchon city (1991. 8)", and 20 out of 75 regions were selected as the PRC sample regions. The survey population of the MRC was "24 middle class regions by the administrative unit called *gu* in the city of Inchon (1991. 10)" and all of the regions were selected as the MRC sample regions. 400 households from the PRC (20 regions) and 202

[2]In 1989, the average of household assets in Korea was 100 million won (Korean Research Committee for Public Concept of Land 1989; Kim and Lee 1989). Thirty percent of this was applied as a demarcation between the MRC and the PRC in this research.

TABLE 1. RELATIVE DEPRIVATION INDEX (RDI)

Consumption Category	Consumption Items
Foods	1. No frequent better quality rice 2. Neither milk nor yoghurt every day 3. No fruit every day 4. Neither meat nor fish once a day 5. Shortage of foods due to lack of living expenses during last 12 months
Clothing	1. No formal outfits (dress or suit) 2. No winter clothes from cold weather 3. Fewer than two sets of winter underwear per one family member 4. No pair of socks of famous brand 5. No footwear of famous brand
Housing	1. No exclusive use of indoor rest room 2. No water supply and sewage disposal system in the kitchen 3. No house heating by petroleum 4. Not free from damp spots inside the house 5. Not sufficient room per two more than 4 year old household members
Home equipment	1. No electric washer 2. No refrigerator 3. No gas range 4. Neither clothes chest nor closet 5. Neither desk nor chair
Location & environment	1. No security system against robbery, rape and theft during day and night 2. Bad odor from the contaminated watercourses or inadequate drainage 3. No pavement on alley 4. No discount shop near the house 5. Neither bus nor subway station within walking distance
Health & medicare	1. No dental treatment 2. Problem of chronic disease of one of household members 3. No medical treatment from doctors 4. No excerise for health such as pingpong, tennis or mountain climbing 5. No equipment for sports or mountain climbing
Family activity	1. No invitation of guests during last three months 2. No family picnic or journey during last three months 3. No newspaper 4. No audio system 5. No camera
Education	1. Not being able to afford education expenses such as tuition, school fee, or kindergarte and nursery school fee during last six months 2. Neither encyclopedia, Korean dictionary, children's books, novels, nor science books 3. No help session with private tutor 4. No consulting with children's school or kindergarten teacher 5. No subscription of study materials

households from the MRC (24 regions) were selected as sample by means of systematic sampling.

After a preliminary survey, data on 602 households were collected by the author through interviews in the month of November 1991. Ninety-four percent (N = 563) of 602 questionnaires were used for final analysis.

Variables

1. Dependent Variables

Based on Townsend (1987a) and Mack and Lansley (1985), the Relative Deprivation Index (RDI) was constructed. RDI is presented in TABLE 1. Through the pilot study, content validity test and the preliminary survey, RDI was obtained from the total 40 consumption items, which were five consumption items per each consumption category of foods, clothing, housing, home equipment, location and environment, health and medicare, family activity, and education. Deprivation was indicated by the score of 0 in case of nondeprivation, and by the score of 1 in case of deprivation. The level of deprivation in the consumption category was assigned from 0 to 5 adding the scores from five items.

Only when the total level of deprivation was calculated, the location and environment consumption category was included in the housing consumption category, yielding WHousing. It is because the price of house depends on the location and environment consumption category such as pavement, traffic, market environment, drainage, and crime prevention. The score of the level of deprivation in each consumption category was standardized, and the level of total deprivation was obtained by adding the weighted values of the standardized scores in each consumption category. The weights were calculated from the percentages of the consumption expenditures of the seven consumption categories in regard to the Standard Living Expenditures Model of Federation of Korean Trade Unions (FKTU) (1992). Among the eight consumption expenditure categories of FKTU Model except non-consumption expenditure, traffic and communication category was excluded. The level of total deprivation was divided into two groups: i.e., the level of total deprivation I excluding the education consumption category, and the level of total deprivation II including the education consumption category.[3]

[3]The level of total deprivation I = WFoods + WClothing + WHousing + W(Home equipment) + W(Health & medicare) + W(Family activity).
The level of total deprivation II = The level of total deprivation I + WEducation,

2. Independent Variables

The important determinants of relative deprivation in this study were residential class, nonasset income of household, assets of household, education of household head, age of household head, and number of household members. The residential class (dummy variable) was divided into PRC and MRC, with assigned MRC as a reference. Nonasset income was total household income excluding asset income. Nonasset income more than 3 million won, corresponding to the top 6.6%, was top-coded as 3 million won, and the assets above 400 million won, corresponding to the top 4.8% was also top-coded as 400 million won. The number of parents and unmarried children who shared income and consumption were counted as number of household members.

Analysis

To test the hypotheses, multiple regressions using the ordinary least square (OLS) method were performed. Some assumptions of linear regression like normality, homoskedasticity, and linearity were tested to assess the validity of the OLS estimates. The existence of multicollinearity was checked by calculating the variance inflation factors (VIF) and the condition index. All the values of VIF were below 2 and those of the condition index were below 30. Both indicated that severe multicollinearity did not exist (Kennedy 1985, p. 153). Thus all proposed variables were used in the analysis.

RESULTS

Characteristics of the Residential Class of the Sample

1. Socio-Economic Status and Demographic Characteristics

The socio-economic status and demographic characteristics of the sample

where WFoods = ZFoods[a] × 38.6[b], WClothing = ZClothing × 0.9
WHousing = Z(Housing + Location & Environment) × 28.2
W(Home equipment) = Z(Home equipment) × 4.1
W(Health & Medicare) = Z(Health & Medicare) × 6.5
W(Family activity) = Z(Family activity) × 6.7
WEducation = ZEducation × 9.0.

a. The standardized score of food category.
b. The percentage of the consumption expenditure of food category in reference to the FKTU Model.

TABLE 2. SOCIOECONOMIC STATUS AND DEMOGRAPHIC CHARACTERISTICS BY RESIDENTIAL CLASS

Variables	Total (N = 563) Mean (SD)	PRC[a] (N = 380) Mean (SD)	MRC[b] (N = 183) Mean (SD)
Total household income (1,000 won)	1,269(1,387)	760 (396)	2,325(1,988)
Total household assets (1,000,000 won)	94 (287)	12 (9)	264 (459)
Total household debts (1,000,000 won)	4 (13)	1 (3)	10 (22)
Net household assets (1,000,000 won)	90 (284)	11 (9)	254 (458)
Education	10.5 (4.3)	8.8 (3.8)	14.0 (2.7)
Age	43.7 (11.1)	44.0(11.9)	43.1 (9.2)
Number of household members	3.8 (1.1)	3.6 (1.1)	4.2 (.9)

[a] Poor residential class.

[b] Middle residential class.

are presented in Table 2. Total monthly average household income[4] of the PRC (760,000 won) was almost one third of that of the MRC. Total household assets in the MRC were about 23 times of those in the PRC. Total debts in the MRC were 10 times high, compared to those in the PRC, because, in Korea, loans from formal financial institutions are available only when real estate as a flexible mortgage is covered. Therefore, the PRC who do not own real estate could not borrow to stave off financial liabilities. The net household assets of the MRC excluding total household debts from total household assets, were approximately 20 times higher than those of the PRC.

The average level of education of household head was 10.5 years, which means either high school drop-out or having graduated. In the MRC, the average was 14.0 years with more than one-half of the sample graduated from junior college, while in the PRC, 8.8 years was the average and 90% of the PRC was below having graduated from high school.

Table 2 also shows demographic characteristics of the sample. The average age of household head was 44 years.[5] The average number of household members was 3.8 persons and that in the MRC (4.2 persons) was larger than that in the PRC (3.6 persons), because there were many types of family deficiency in the PRC.

[4]It included labor income, business income, asset income, and public and private transfer income.

[5]In this survey, the percentage of the elderly older than 60 years in the PRC was higher than that in the MRC.

TABLE 3. THE LEVEL OF RELATIVE DEPRIVATION OF RESIDENTIAL CLASS

Variables	Total (N = 563) Mean (SD)	PRC (N = 380) Mean (SD)	MRC (N = 183) Mean (SD)	Difference
Total deprivation I	.02 (.77)	.44 (.50)	−.86 (.40)	1.30
Total deprivation II	−.06 (.83)	.42 (.54)	−.9 (.41)	1.17
Foods	1.89(1.23)	2.43 (.97)	.77 (.93)	1.66
Clothing	2.07(1.51)	2.77(1.26)	.62 (.78)	2.15
Housing	1.72(1.44)	2.49(1.07)	.11 (.42)	2.38
Home equipment	.71 (.95)	.99(1.02)	.12 (.33)	.87
Location & Environment	1.51(1.36)	2.01(1.31)	.49 (.78)	1.52
Health & Medicare	2.58(1.32)	3.13(1.04)	1.43(1.09)	1.70
Family activities	2.31(1.69)	3.11(1.36)	.64 (.90)	2.47
Education	1.85(1.39)	2.38(1.29)	.82 (.90)	1.56

2. The Level of Relative Deprivation

At first, it was attempted to summarize in a descriptive manner how the level of deprivation was changed with the residential class. In Table 3, the level of deprivation in the PRC was higher than that in the MRC, both in total and in each consumption category. In the PRC, the level of relative deprivation in all consumption categories except home equipment was

TABLE 4. MULTIPLE REGRESSION ANALYSIS OF RELATIVE DEPRIVATION ON LABOR INCOME AND ASSETS (TOTAL DEPRIVATION I, II) (N=563)

	Total deprivation I		
Independent Variables	Eq.1 b (β)	Eq.2 b (β)	Eq.3 b (β)
Nonasset income	−.398 (−.379)**		−.691 (-.658)**
Assets	−.029 (−.399)**	−.048 (−.665)**	
Constant	.631	.322	.761
Adj. R^2	.513	.441	.432
R^2	.515	.442	.434
R^2 increment		.073**	.081**
	Total deprivation II		
Nonasset income	−.354 (−.311)**		-.725 (-.636)**
Assets	−.035 (−.461)**	−.052 (−.680)**	
Constant	.608	.304	.797
Adj. R^2	.508	.460	.403
R^2	.511	.462	.404
R^2 increment[a]		.048**	.106**

*p < .05, **p < .01.

[a] R^2 increment in reference to Eq.1.

more than two consumption items among five. In particular, family activity and health and medicare consumption categories whose levels of relative deprivation was more than three consumption items among five, showed the highest level of deprivation. While, the MRC was deprived less than one consumption item in all consumption categories except health and medicare, and was nearly not-deprived in the housing as well as home equipment consumption categories. With respect to the difference in the level of relative deprivation between the PRC and the MRC, such consumption categories as family activities, housing, and clothing showed a difference of more than two items of the level of deprivation. Difference in housing equipment consumption category was less than one item, and in the other consumption categories the gaps were in between.

Both the PRC and the MRC were relatively highly deprived in health and medicare consumption category, possibly because some of the consumption items (exercise and sports goods) related to the maintenance of health and the cure for disease in health and medicare consumption category were not necessities. And, the highest difference in the level of relative deprivation between the PRC and the MRC was shown in family activities, housing, and clothing consumption categories.

Determinants of the Level of Relative Deprivation

1. Determinants of Level of Total Deprivation

First of all, the levels of total deprivation I and II were regressed on nonasset income and assets separately, then they were regressed on all six independent variables. The results of the former are presented in Table 4, and those of the latter are in Table 5 and 6. In Table 4, assets (R^2 change = .081; .106) were more effective than nonasset income (R^2 change = .073; .048) both in the levels of total deprivation I and II

In Table 5 and 6,[6] total levels of deprivation I and II, there was an interaction effect since nonasset income effect and the asset effect varied

[6]The following steps were used to analyze the determinants of relative deprivation. At first, it was examined whether nonasset income effect or asset effect would be changed with residential class by using the four stepwise regression, for the whole sample. When at least one interaction effect was found, regression analysis was conducted under the control of residential class, in order to understand how nonasset income effect or asset effect would be changed with respect to the residential class. Next, to compare nonasset income effect with asset effect relatively, three stepwise regression analysis was performed over all households when there was no interaction effect, and on the PRC and the MRC individually in case of interaction effect. The effects of education, age, and number of household members were analyzed by using the regression equation in the total sample.

TABLE 5. MULTIPLE REGRESSION ANALYSIS OF RELATIVE DEPRIVATION ON SIX INDEPENDENT VARIABLES (TOTAL DEPRIVATION I[a])

Independent Variables	Eq.1 β	Eq.2 β	Eq.3 β	Eq.4 β
Entire Households (N=563)				
Residential class	.520**	.727**	.635**	.794**
Age	.086**	.060*	.099**	.077**
Education	-.197**	-.194**	-.192**	-.190**
# of household members	-.005	.021	.026	.043
Nonasset income	-.117*	.001	-.115**	-.019
Assets	-.096*	-.140**	-.085*	-.122**
Nonasset income*RC[b]		-.203**		-.168**
Assets*RC			-.159**	-.143**
Adj. R^2	.695	-.703	.709	.715
R^2	.698	.707	.713	.719
R^2 increment[c]		.009**	.015**	.021**
PRC (N = 380)				
Age	.137*	.169**	.084**	
Education	-.289**	-.326**	-.306**	
# of household members	.147**	.072	.084	
Nonasset income	-.241**		.269**	
Assets	-.247**	-.271**		
Adj. R^2	.289	.246	.236	
R^2	.298	.254	.244	
R^2 increment[c]		.044**	.054**	
MRC (N = 183)				
Age	.131	.125	.090	
Education	-.149	-.153*	-.184**	
# of household members	-.123	.124	-.132	
Nonasset income	-.023		-.124	
Assets	-.265**	-.273**		
Adj. R^2	.117	.121	.068	
R^2	.141	.141	.088	
R^2 increment[c]		.000	.053**	

*p < .05 **p < .01.

[a] The sum of the standardized weighted scores of consumption categories excluding the education consumption category.

[b] Residential class.

[c] R^2 change in reference to Eq.1.

with the residential class. When two interaction terms, nonasset income by residential class, and assets by residential class, were added into Eq. 1, 2.1% (total deprivation I) and 2.5% (total deprivation II) of total variance can be further explained in Eq. 4. And, when both effects of nonasset income and assets were compared to the R^2 decrement under the control of the

residential class, in the PRC both nonasset income and assets were significantly effective, while in the MRC only assets were significantly effective in both levels of total deprivation I and II. According to the Eq. 4, the older and the less educated household head, the higher the level of

TABLE 6. MULTIPLE REGRESSION ANALYSIS OF RELATIVE DEPRIVATION ON SIX INDEPENDENT VARIABLES (TOTAL DEPRIVATION II[a])

Independent Variables	Eq.1 β	Eq.2 β	Eq.3 β	Eq.4 β
Entire Households (N = 335)				
Residential class	.568**	.812**	.683**	.901**
Age	.096**	.088**	.106**	.097**
Education	−.184**	−.183**	−.184**	−.182**
# of household members	.028	.037	.043	.050
Nonasset income	−.119**	.024	−.126**	.008
Assets	−.066*	−.125*	−.046	−.102
Nonasset income × RC[b]		−.239**		−.221**
Assets × RC			-.158**	−.148**
Adj. R^2	.690	.701	.703	.713
R^2	.695	.708	.709	.720
R^2 increment[c]		.013**	.014**	.025**
PRC (N = 220)				
Age	.141*	.142*	.108	
Education	−.260**	−.293**	−.272**	
# of household members	.163**	.115	.129*	
Nonasset income	−.266**		−.271**	
Assets	−.241**	−.245**		
Adj. R^2	.245	.181	.192	
R^2	.263	.196	.207	
R^2 increment[c]		.067**	.056**	
MRC (N = 183)				
Age	.266**	.261**	.205*	
Education	−.160	−.156	−.229*	
# of Household Members	−.145	−.142	−.123	
Nonasset income	.031		−.069	
Assets	−.266*	−.254**		
Adj. R^2	.135	.142	.091	
R^2	.173	.172	.123	
R^2 increment[c]		.001	.050**	

*p < .05, **p < .01.

[a] The sum of the standardized weighted scores of consumption categories including the education consumption category.

[b] Residencial class.

[c] R^2 change in reference to Eq.1.

deprivation, but the number of household members was not significantly effective on the levels of total deprivation I and II.

The above results can, thus, be interpreted as follows. First, asset effect was higher than nonasset income effect over all households, possibly because the inequality of wealth is more serious than that of nonasset income in Korea. Second, as explained above, both effects of nonasset income and assets were changed with residential class. Therefore, it could be concluded that there exists obviously different residential class (PRC and MRC) and it is the critical variable for the relative deprivation of urban poor households in Korea. Third, education had negative effect on the level of total deprivation, implying that education is important human capital for decreasing the level of deprivation. Fourth, age had positive effect on the level of total deprivation. As age is the proxy variable for the family life cycle, in the elderly, the amount of the expected labor income would be small due to the short period of life expectancy. Therefore, the older the household head, the level of total deprivation would be higher. And fifth, the number of household members had no significant effect on the level of total deprivation. Even if the same number of household members, the number of employed members and that of unemployed members would be different by the family type. Therefore, the accurate effect of the number of household members may be measured by controlling the family type.

2. Determinants of the Level of Deprivation in the Consumption Category

(1) In Table 7, results of multiple regression analysis of the level of deprivation in the category of all six independent variables over all households and (2) the comparison of nonasset income effect with asset effect in terms of R^2 change for all households, for the PRC and the MRC are presented.

First, the comparison of nonasset income effect and asset effect in the consumption category of all households is as follows : assets had higher effect than nonasset income in housing, foods, location and environments, and education consumption categories, while nonasset income had higher effect than assets in family activity, clothing, and health and medicare consumption categories. And, only nonasset income had negative effect in home equipment consumption category.

Second, residential class had effect in location and environment and education consumption categories for the entire households. In the other six consumption categories nonasset income effect and asset effect were changed with the residential class: nonasset income effect became insignificant in foods, clothing, and health and medicare consumption

TABLE 7. SUMMARY OF MULTIPLE REGRESSION ANALYSES RESULTS OF RELATIVE DEPRIVATION IN EACH CONSUMPTION CATEGORY

	(1)Entire Households[a]		(2)Comparison of income[b] with asset effects(R^2Change)					
Variables	Demographic characteristics	SES	Entire[c] (N = 563)		PRC[d] (N = 380)		MRC[d] (N = 183)	
			Income	Asset	Income	Asset	Income	Asset
Foods	Age (+) # of Hou[e](NS)	Education(–) Assets(–) IncomE*RC[f]	.047 < .054		.019 > .010		NS	.041
Clothing	# of Hou(+) Age (NS)	Education(–) Income*RC Assets(NS)	.073 > .037		.033	NS	NS	NS
Housing	# of Hou(+) Age (NS)	Education(–) Assets*RC Income(NS)	.039 < .093		NS	.137	NS	.037
Home equipment	# of Hou(–) Age (NS)	Education(–) Income*RC Assets*RC	.090	NS	.033 > .032		NS	NS
Health & medicare	Age (NS) # of Hou(NS)	Education(–) Assets(–) Income*RC	.055 > .050		.046 > .014		NS	.037
Family activity	Age(+) # of Hou(NS)	Education(–) Assets*RC Income*RC	.098 > .036		.025 < .049		NS	NS
Location & environment	# of Hou(+) Age	RC(+) Income(–) Education(NS) Assets(NS)	.025 < .036					
Education	Age(+) # of Hou(NS)	RC(+) Education(–) Assets(NS) Income(NS)	.033 < .041					

[a] Results of multiple regression analyses of the level of deprivation on all six independent variables.

[b] Income hereafter means nonasset income in Table 7.

[c] Results of multiple regression analyses of the level of deprivation on nonasset income and assets.

[d] Results of multiple regression analyses of the level of deprivation on five independent variables except the residential class.

[e] Number of household members.

[f] Residential class.

categories, while asset effect was changed a little bit in housing consumption category with the residential class. And both effects of nonasset income and assets became insignificant in home equipment and family activity consumption categories with the residential class. The comparison of nonasset income effect with asset effect, holding the residential class constant, was as follows. For the PRC, in housing consumption category only assets had effect, while only nonasset income had effect in clothing consumption category. For the PRC, there were higher nonasset income effect than asset effect in foods, and health and medicare consumption categories, while higher asset effect than nonasset income effect in family activity consumption category. And both effects were similar in home equipment consumption category. For the MRC, asset effect was significant in foods, housing, and health and medicare consumption categories, and in other consumption categories nonasset income effect and asset effect were insignificant.

Third, education of household head had negative effect in seven consumption categories except location and environment.

Fourth, age of household head had positive effect in foods, family activity, and education consumption categories, but, negative effect in location and environment consumption category.

Fifth, the number of household members had positive effect in clothing and housing consumption categories, however, negative effect in home equipment consumption category.

3. Tests of Hypotheses

Based on the regression results, the hypothesis H1 in the section of HYPOTHESES AND MODEL was examined as follows. First, nonasset income effect and asset effect were different in residential class. In the level of total deprivation, the PRC showed both effects, while the MRC had only the latter. For the levels of deprivation in consumption categories, residential class had effect in location and environment, and education over all households, while there were interaction effects between either nonasset income or assets, and residential class in the other six categories. Therefore, the hypothesis H1-1 was, in general, accepted. Second, without controlling residential class, the labor income was significantly effective in the total level of deprivation and in all consumption categories. Therefore, the hypothesis H1-2 was accepted. Third, without control of residential class, assets had significant effect in the levels of total deprivation and of deprivation in all consumption categories except home equipment. The hypothesis H1-3 was, thus, practically accepted. Fourth, education showed

negative effect on the level of total deprivation and on that of deprivation in all consumption categories except location and environment. Therefore, H1-4 was mainly accepted. Fifth, age had positive effect on the level of total deprivation and clothing, family activity, and education consumption categories, but negative effect on location and environment. The hypothesis H1-5 was, thus, partially accepted. And sixth, number of household members had positive effect on clothing and housing consumption categories, and negative effect on home equipment consumption category. However, the level of total deprivation was generally insignificant and that of deprivation in all remaining consumption categories was insignificant too. Therefore, hypothesis H1-6 was only accepted in clothing and home equipment consumption categories.

In conclusion, the hypothesis H1 that "there is a significant relationship between socio-economic status of the household and demographic characteristics, and the level of relative deprivation in consumption" was generally accepted.

CONCLUSIONS

Based on the theoretical overview and empirical analysis, it can be concluded as follows. First, the concept of deprivation is more useful than that of the poverty in order to analyze the level of consumption in urban poor households. As a result, the consequence of being poor due to the inequality of economic resources can be compared relatively at the level of consumption, and the actual level of consumption in each household can be obtained clearly. In the past, poverty has been conceptualized merely by the level of economic resources of household, not by actual consumption.

Second, without controlling the residential class over all households, assets had stronger effects on the level of total deprivation than nonasset income. It implies that the inequality of wealth, compared to that of nonasset income, was much more serious in its effects.

Third, residential class was the most important variable in determining the level of deprivation. But nonasset income and assets had different effects depending on the residential class. For the poor residential class, two variables had the significant effects. For the middle residential class, however, only the asset variable had significant effect. These results imply that the household consumption in Korea shows remarkable difference according to residential class, and that it seems dangerous for the middle residential class to be inclined to seek only the non-labor income rather than earnings.

Fourth, education had negative effect, age had positive effect, and the number of household member had no significant effect on the level of total deprivation. The results imply that education is important human capital for decreasing the level of the deprivation, and that welfare policy for the elderly should be prepared. The accurate effect of the number of household members may be measured by controlling the family type.

Fifth, the determinants of the level of deprivation in the consumption category were compared. Assets had stronger effect than the nonasset income in housing, foods, location and environments, and education consumption categories. Therefore, it could be concluded that relative deprivation was serious in those consumption categories.

Based on the above conclusions, some suggestions for the welfare policy for urban poor households can be made. First, to alleviate deprivation in urban poor households, the redistribution of the wealth, which could contribute to decreasing the ratio of capital gain, should be strengthened. Specifically, Real Name Financial System should be strengthened, and Real Name Real Estate System should be established. Taxation standard should be realized and price of real estate should be stabilized. And employment stability of workers in unstable jobs should be guaranteed. In addition, urban poor households should have a chance to make assets for their housing stability by guaranteeing the rate of the raise in wages in the pace of that of increase in labor productivity.

Second, policies to solve the problems in housing, foods, and education deprivation in the urban poor households should be prepared. (1) For the housing deprivation, licensing the residence in squatting areas, supplying with small size rental apartment, and providing a long-term low interest rate loan system without security should be considered. (2) For the food deprivation, policy for securing stability of food price should be made. (3) For the education deprivation, the quality of public education should be improved enough to decrease the expenses for the private education in the poor as well as the middle class houeholds.

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