

A SOCIOLOGICAL ANALYSIS OF RURAL POVERTY IN THE REPUBLIC OF KOREA

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I. Introduction

Since the 1960's, the Republic of Korea has recorded high rates of economic growth. Today, the Republic of Korea is considered to be a success story in its economic development. However, this "success" is misleading. Korean development has been extremely unbalanced among different sectors and regions of the country. Even though poverty has been alleviated substantially, the current poverty level in Korea remains high.

The problem of poverty in Korea has been studied by many social scientists and governmental research institutes (Chung 1985; Hong 1986; Ju et al. 1989; Kim 1985; Lee and Ho 1988; Lim 1979; Lim et al. 1989; Suh et al. 1981). Yet, these studies focused almost exclusively on urban areas. Rural Korea has long had a disproportionate share of the nation's poverty. However, rural poverty has been the direct focus of only a small number of studies by social scientists (Chung et al. 1989; Chung 1991; Kim 1980; Lee 1993; Wang 1989).

Most previous studies of Korean rural poverty (including general poverty) have various limitations. First, the vast majority of research has focused on the characteristics of individuals and has been driven largely by a social psychological research framework. As a result, these studies did not adequately address structural aspects of poverty.

Second, most previous studies tended to be descriptive. Enumeration of frequencies and percentages were used as the

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analytical methods. Multi-variate analysis such as multiple regression was rarely applied. In addition, there were very few exploratory studies to test research hypotheses for the development of poverty theories.

Third, most previous research did not consider the importance of regional effects in understanding poverty. One study (Lim et al., 1989) considered the regional dimension of poverty. However, the analytical units of the study were cities, not rural areas.

The major purposes of this study are as follows: (1) to investigate structural correlates of rural poverty in Korea; (2) to test the relevance of the research model of rural poverty across different regional settings; and (3) to suggest some policy alternatives to help reduce and alleviate rural poverty in Korea.

II. Sociological Explanation of Rural Poverty

Analysts have classified perspectives on poverty into two general schools: the individual level-based perspectives and the structural level-based perspectives (Schiller 1989; Tomaskovic-Devey 1988b). The individual level-based perspectives locate the causes of poverty in the personal and socio-cultural characteristics of the poor, while the structural level-based perspectives locate the causes of poverty in social structure.

In this study, the individual level-based perspectives (e.g., the human capital theory, the culture of poverty theory, and the status attainment theory) will not be reviewed because the focus of this research is on the structural correlates of rural poverty in Korea.

The structural level-based perspectives focus on "the context in which inequality is created, that is, on the social order that constrains individuals' choices and generates the positions individuals occupy" (Lobao 1990:7). The structural level-based perspectives of poverty can be divided into the Marxian perspectives and the non-Marxian perspectives.

Marxian Perspectives:

Considering the political/economical context of Korea, the Marxian class theory and dependency/world system theory may be

two good examples of the Marxian perspectives of poverty.

Marx believed that societies follow historically determined economic forces. He argues that history is a series of inevitable conflicts between economic classes. Private property and capitalism are considered as the causes of poverty and alienation in society. Marx argues that successive systems for the production and distribution of wealth primarily condition accompanying social and cultural institutions (Marx 1867/1967; Marx and Engles 1848/1948; Mayer 1991).

According to Wood(1987, 7), the struggle between capital and labor over “the rate of surplus value is not only the basis of class conflict in capitalist society but also the major determinant of the amount of profit, the rate of capital accumulation, and the general living standards.” The Marxists argue that if capitalism was eliminated, the poverty problem would go as well. Marx argues that poverty is neither necessary nor justifiable (Marx 1867/1967). In Marx’s view, class is determined by one’s relationship to the means of production. Class exists basically in two major forms: the bourgeoisie who owns the means of production and the proletariat who must support themselves by selling their labor to those who own the means of production. The bourgeoisie seeks to maximize their profit by minimizing the amount of return to the proletariat.

Although there are some variations within dependency/world system school, its members share general assumptions. First of all, they argue that under-development and poverty of the third world result from past and present exploitation by the first world’s dominant economic system. Secondly, they argue that the world capitalist system is a direct cause of under-development and persistent poverty in the third world. Finally, dependencyworld system theorists argue that a radical political movement toward socialism can interrupt the vicious cycle of under-development in the third world (Arndt 1989; Bergesen 1990; Chirot and Hall 1982; Howe and Sica 1980; Long 1980; Staniland 1985).

Non- Marxian Perspectives:

The non-Marxian perspectives focus on the structure of industry and farming. Segmented (dual) Economy Theory and Goldschmidt Hypothesis are two representative non-Marxian

perspectives of rural poverty and well-being.

The dual economy theorists use "the concept of economic sector to emphasize the impact of economic organization on socio-economic processes" (Tolbert et al. 1980, 1101). The dual economy theorists view "economic sectors as structural entities which derive from the nature of modern industrial capitalism" (Beck et al. 1978, 706). The dual economy theory views the capitalist dynamics of concentration and centralization as the origin of a dual economy (Hodson and Kaufman 1982). The dual economy theorists argue that there are two distinct privatized economic sectors and their specific firms in the U.S economic structure: core (monopoly and oligopoly) sector and peripheral (competitive) sector (Tolbert et al. 1980). Also, many dual economy theorists recognize the third sector, which is organized by the state (Bloomquist and Summers 1982). According to the dual economy theory, these sectors are different "not only with respect to market structure, but also in their work arrangements, employment patterns, and opportunity structures" (Baron and Bielby 1984, 454-455).

The dual (segmented) economy theory contributes to explaining the existence of the working poor that persists despite various job training programs. The major contribution of dual (segmented) economy theory has been "to shift the awareness of researchers to the characteristics of jobs and the concomitant realization that some jobs are poverty-level jobs" (Tomaskovic-Devey 1987, 57). That is, the dual economy theory can account for why some workers remain poor. Also, the dual economy theory can explain the fact that some unions and workers have benefitted from the market power of monopoly or oligopoly firms.

The Goldschmidt hypothesis parallels the non-Marxian dual economy theory, but this time applied to farming. The essence of the Goldschmidt hypothesis is that increased farm scale negatively affects the quality of life in rural communities. In a study of two Californian communities (Arvin and Dinuba) in 1944, Goldschmidt (1978a, 281) tried to test the "hypothesis that the institution of small independent farmers is indeed the agent which creates the homogeneous community, both socially and economically democratic." Goldschmidt(1978a) argued that the two communities were very similar on many demographic, economic, and ecological factors,

except for the farm structure of their respective hinterlands. Arvin (Kern county) was dominated by large, industrial type farms while Dinuba (Tulare county) primarily consisted of small, family farms. Goldschmidt(1978a) found that Dinuba (small-farm community) had more economic and social vitality than Arvin (large-farm community). Compared with Arvin, Dinuba had a better quality of life in such areas as per capita business establishments, retail trade, average standard of living, physical facilities, schools, parks, recreation centers, churches, and so on (Goldschmidt 1978a, 282-284). Goldschmidt(1978a) argued that farm size was the most important cause of these differences, therefore, as farms become more concentrated, the quality of life in rural communities will decline.

In a more recent study, using state level data derived from the 1959 census of agriculture and the census of population and the 1964 census of agriculture, Goldschmidt(1978b) found a strong positive correlation($r = 0.76$) between the proportion of large-scale farming and the proportion of farm population in the "lower class".

Since Goldschmidt's seminal work, a number of studies have examined the relationship between the farm structure and the socio-economic well-being. Although studies in the Goldschmidt tradition do not unequivocally demonstrate that large-scale farming jeopardizes its immediate locality, much empirical evidence does support this hypothesis(Lobao 1990). In general, the purpose of most studies is to examine the impact of indicators of one or both farm concepts — farm scale and organizational characteristics — on socio-economic well-being. Farm scale is the concept used by nearly all studies. Farm scale is generally considered in terms of sale or acreage.

The Goldschmidt hypothesis related studies have greatly contributed to the recent development of the sociology of agriculture. These studies have offered a good opportunity to bring increased attention to the socio-economic conditions of rural communities

III. Research Model and Hypotheses

Research Model:

A structural perspective-oriented research model of rural poverty in the Republic of Korea was constructed by combining various

structural perspectives on rural poverty. The research model consists of three groups of independent variables: farm structure/characteristics, non-farm characteristics, and spatial/political economical characteristics.

The relationships between farm structure/characteristics and rural poverty are based on the Goldschmidt hypothesis and the related studies. Two farm structure variables (percent middle farming, and percent larger farming) were included in the model because the farm structure variables have been investigated as very important factors affecting rural socio-economic conditions (Gilles and Dalecki 1988; Goldschmidt 1978a and 1987b; Green 1985; Harris and Gilbert 1982; Lobao 1990; Lobao and Schulman 1991; Skees and Swanson 1988). Percent part-time farming and rate of tenancy were included in the research model because part-time farming and tenant farming are now interpreted as regular features of almost all farming societies including rural Korea (Fuller 1976; Hong 1988).

The relationships between non-farm characteristics and rural poverty are based on the insight of dual economy theory. Non-farm characteristics affecting rural poverty include such variables as percent non-farm population, percent female, and percent high school graduates.

The relationships between spatial/political economical characteristics and rural poverty are based on the insight of the dependency/world system theory and the regional political economical studies. Spatial characteristics that affect rural poverty include region 1 (YOUNGNAM), region 2 (HONAM), and proximity to metropolitan cities. In this study, region is divided into three categories: YOUNGNAM (43 counties located in South-East districts), HONAM (34 counties located in South-West districts), and OTHERS (58 counties located in North districts and 2 counties located in Jeju Island). International competition strongly affects peripheral sector employment, such as agriculture and textiles industries (Bluestone and Harrison 1982; Tigges and Tootle 1990). Tigges and Tootle (1990) found that industrial restructuring in the form of an increased foreign competition and an increased loss of core transformative jobs are especially threatening to rural men's employment adequacy. Thus, international competition power of commodities was included in the research model.

Hypotheses:

Reif (1987) found that the middle-size category in farming was negatively related to poverty. Also, following the Goldschmidt tradition, it is hypothesized that percent middle farming will be inversely related to rural poverty and that percent larger farming will be positively related to the level of rural poverty.

Barlett(1986) found that the reasons for part-time farming reveal a merging of income and life-style benefits. Buttle argued that part-time farming has played a considerable historic role in slowing the pace of centralization of capital in agriculture and reducing the polarization of the agricultural class structure (Barlett 1986). Thompson et al.(1986) found that the farm operators who engaged in off-farm employment were less likely to live in poverty than those who did not engage in off-farm employment. Thus, it is hypothesized that percent part-time farming will be inversely related to rural poverty.

Many empirical comparisons of the tenant farm and the full-owner farm indicate that the tenant farmer has numerous disadvantages (Albrecht and Thomas 1986). Researchers have noted that the high level of tenancy results in problems for communities because tenants are less involved than owners in all types of community-level social and political organizations (Anderson and Ryan 1943; Slocum 1962). According to the Korean studies (Chung et al. 1989; Hong 1988), most tenant farmers were at the poverty level and below. Thus, it is hypothesized that the rate of tenancy will be positively related to rural poverty.

Many researchers found significant variation in poverty levels by the type of rural economy, with resource-based economies (e.g. agriculture) consistently showing lower socio-economic well-being (Colclough 1988; Tickamyer and Bokemeier 1988; Tomaskovic-Devey 1987). Weinberg(1987) found that the percentage of production on farms in a county was positively related to poverty rates. Therefore, it is hypothesized that percent non-farm population will be inversely related to rural poverty.

Women are especially vulnerable to job insecurity. Women have much more limited employment opportunities, much flatter earning curves, and higher poverty rates in rural areas dominated by

agriculture and mining (Tickmyer and Bokemeier 1988; Weinberg 1987). In the empirical study on rural Bangladesh, Kabeer(1991, 245) found a strong evidence that more women lived in poverty and more acutely than men. Thus, it is hypothesized that percent female will be positively related to rural poverty.

Educational qualifications have been identified as a major factor accounting for rural socio-economic conditions (Chung et al. 1989; Skees and Swanson 1988; Tigges and Tootle 1990; Wang 1989; Weinberg,1987). Many researchers (e.g. Skees and Swanson 1988) found that education was inversely associated with poverty. Therefore, it is hypothesized that percent high school graduates will be inversely related to rural poverty.

Region embodies historical and contemporary social forces that determine levels of inequality among their components (Lobao 1990). Historically, the socio-economic condition of HONAM (South-West districts of Korea) has been poorer, while that of YOUNGNAM(South-East districts of Korea) has been richer. The YOUNGNAM region has been aligned with the majority party of Korea and most rulers of Korea have been natives of YOUNGNAM. In contrast, the HONAM region has been the location for leaders of the opposition party. As a result, the political and economical characteristics of the two regions are very distinct from each other. Thus, it is hypothesized that region 1 (YOUNGNAM) will be inversely related to rural poverty and that Region 2 (HONAM) will be positively related to rural poverty.

Proximity to metropolitan areas affects the location of economic structures as well as local inequality (Lobao 1990). Lobao(1990) found that poverty was higher in counties distant from metropolitan centers. Therefore, it is hypothesized that proximity to metropolitan cities will be inversely related to rural poverty.

International competition strongly affects the agricultural sector. World system theorists conceptualized agrarian structures as globally formed through the dynamic of states negotiating an international division of labor (McMichael and Buttel 1990). Tickamyer and Duncan(1990) argued that industries in rural areas are particularly vulnerable to foreign competition and unfavorable exchange rates. The predominant occupation in rural Korea is still farming. Therefore, it is hypothesized that the international

competition power of commodities in the region will be inversely related to rural poverty.

In sum, it is hypothesized that three independent variables (percent larger farming, rate of tenancy, and percent female) will be positively related to rural poverty. Also, it is hypothesized that six independent variables (percent middle farming, percent part-time farming, percent non-farm population, percent high school graduates, proximity to metropolitan cities, and international competition power of commodities) will be inversely related to rural poverty.

IV. Research Methodology

Data Units and Collection:

The counties of Korea were used as data units in this study. In order to empirically examine the relationship between rural poverty and related variables, the data of all counties (137) in the Republic of Korea were collected. Data were obtained mainly from "1990 Agricultural Census", various "Annual Statistical Reports" and other statistical reports and documents from the relevant governmental ministries and research institutes.

The Measurement of Variables:

The measurement of the independent variables will be presented first, then the dependent variables (rural poverty) will be presented.

Percent middle farming was measured as the percentage of farming having .5-2.0 ha in farmland size to the total number of farm households in a county.

Percent larger farming was measured as the percentage of farming having more than 2.0 ha in farmland size to the total number of farm households in a county.

Percent part-time farming was measured as the proportion of farms which received 50 percent or less of their gross family income from the farm.

Rate of tenancy was measured as the percentage of borrowed farmland acreage to total farmland acreage in a county.

Percent non-farm population was measured as the proportion of non-farm population to the county's total population.

Percent female was measured as the proportion of females to total county population. In multiple regression analysis of this research, percent female was measured as a dummy variable: more than 50 percent=1, 50 percent or less=0.

Percent high school graduates was measured as the proportion of high school graduates to farm household population at the age of 15 and above.

Region 1 (YOUNGNAM) was measured as a dummy variable: YOUNGNAM=1, Others=0.

Region 2 (HONAM) was measured as a dummy variable: HONAM=1, Others=0.

In Korea, metropolitan cities generally refer to cities of 500,000 or more inhabitants. The proximity to metropolitan cities was measured as a dummy variable: Adjacent county to metropolitan cities=1, not adjacent county to metropolitan cities=0.

International competition power of agricultural commodities was measured using a Ministry of Agriculture, Forestry and Fisheries' Report(1991a): "Countermeasures to Improve International Competition Power of Agriculture and Stock-breeding Products Item by Item". According to this report, 65 main agricultural commodities were evaluated by four degrees of international competition power: "Very Low", "Low", "Equal (average)", and "High". In this study, the international competition power of main agricultural commodities in a county were measured using a 4 point scale: Very Low=1, Low=2, Equal=3, and High=4. Ten main agricultural commodities in a county were used to develop a summated scale of international competition power of main agricultural commodities. Ten main agricultural commodities in a county were selected according to the proportion of farms in a county.

Rural poverty (Dependent Variable) was measured as the proportion of poverty population to total population in a county. That is, the rural poverty refers to the head count ratio of poverty population in a county. In this study, the poverty population consists of "protected at home population" and "self-supporting low income population." This rural poverty scale has various limitations. However, we do not have reliable county level data on rural poverty

which were measured on the basis of the minimum cost of living and household incomes. Thus, this rural poverty scale was used as the second best indicator of rural poverty in the Republic of Korea.

Methods of Analysis:

The data analysis was conducted using the Statistical Package for the Social Sciences (*SPSSX*). The multiple regression analysis was employed in order to test the hypothesized relationships on rural poverty. The multiple regression analyses were conducted first at the national level and then by regions (YOUNGNAM, HONAM, and OTHERS). At the national level, the blocked regression analysis was added.

V. FINDINGS

Table 1 shows the distribution of rural poverty. Forty-six counties (35.4 %) had less than 10 percent in poverty population. Seventy-one counties (54.6 %) had between 10 and 20 percent in poverty population. Thirteen counties (10.0 %) had 20 and more percent in poverty population. Seven counties had no data of poverty population. Mean (ungrouped) and Standard Deviation (ungrouped) were 12.42 and 6.03, respectively. The range of rural poverty was from 2.01 to 31.67.

Counties having high levels of poverty population (more than 20 %) numbered 13. Among these counties, 9 counties were located in HONAM region, while YOUNGNAM and OTHERS regions had 1 and 3 counties, respectively. About one quarter (26.1 %) of total HONAM counties (34) had high levels of poverty population. In YOUNGNAM and OTHERS regions, the proportions were 1 percent and 5.1 percent, respectively. That is, HONAM region had a disproportionate share of the rural poverty.

Inter-correlations among independent variables were checked for the possibility of multicollinearity (Schroeder et al.,1986). All inter-correlation coefficients were at acceptable levels for the multiple regression analysis.

Multiple Regression Analysis:

When rural poverty was regressed on the farm structure/characteristics, non-farm characteristics variables, and

TABLE 1 Distribution of Rural Poverty

Rural Poverty (Percent)	Frequency	Percent	Cumulative Percent
Less Than 5	17	13.1	13.1
5 - 9.99	29	22.3	35.4
10 - 14.99	41	31.5	66.9
15 - 19.99	30	23.1	90.0
20 and more	13	10.0	100.0
Total	130	100.0	

Missing Cases = 7 Mean (ungrouped) = 12.42
 Standard Deviation (ungrouped) = 6.03
 Range = 2.01 - 31.67

spatial/political economical characteristics, 71 percent of the variance was explained (Table 2). Counties with greater proportions of middle farming, as opposed to the small farming (the reference category), had lower poverty rates (Beta=-.245), as hypothesized. Counties with greater proportions of larger farming, as opposed to the small farming (the reference category), had lower poverty rates (Beta=-.394). This was contradictory to the research hypothesis that percent larger farming would be positively related to rural poverty. This seems to be partly attributable to the fact that; 1) in 1990, only farm households with "more than 2.0ha" in farm size had farm incomes above living expenses, 2) most larger farming in Korea are family farming, not industrialized farming. Counties with a greater proportion of part-time farming had lower poverty rates (Beta=-.346), as hypothesized. Counties with higher rates of tenancy had higher poverty rates (Beta=.190), as hypothesized. Among non-farm characteristics, percent non-farm population had positive effects on rural poverty (Beta=.364). This was contradictory to the hypothesis that the percent non-farm population would be inversely related to rural poverty. This seems to be partly attributable to the fact that; 1) many in the non-farm population of rural Korea are the old who are lacking in ability to earn income, 2) most non-farm jobs in rural Korea have been concentrated in the periphery sector, which is noted for low wages and labor intensity. Percent female had a positive effect on rural

TABLE 2 Regression of Rural Poverty (N=130)

Independent Variables	b	Beta
Farm Structure/Characteristics		
Percent Middle Farming	-0.233	-0.245**
Percent Larger Farming	-0.364	-0.394**
Percent Part-time Farming	-0.230	-0.346**
Rate of Tenancy	0.172	0.190**
Non-farm Characteristics		
Percent Non-farm Population	0.180	0.364**
Percent Female	1.302	0.103
Percent High School Graduates	-0.094	-0.128*
Spatial/Political Economical Characteristics		
Region 1 (YOUNGNAM)	-0.928	-0.073
Region 2 (HONAM)	4.331	0.317**
Proximity to Metropolitan Cities	-0.317	-0.086
International Competition		
Power of Commodities	0.614	0.202**
Intercept	4.784	0.000
R ² = 0.71 F = 25.821 Signif. F = 0.000		

* $p \leq 0.05$ ** $p \leq 0.01$

poverty (Beta=.103), as hypothesized. Counties with greater proportion of high school graduates had lower poverty rates (Beta=-.128), as expected.

In the spatial/political economical characteristics, region 2 (HONAM), had a positive effect on rural poverty, as hypothesized (Beta=.317). However, region 1 (YOUNGNAM) and proximity to metropolitan cities had comparatively small negative effects on rural poverty (Beta=-.016 and Beta=-.071). The international competition power of commodities had a positive effect on rural poverty. This was contradictory to the hypothesis that the competition power of

commodities would be inversely related to rural poverty. It seems to be related to the fact that in Korea, many agricultural commodities had very low international competition power.

Table 3 shows the results of blocked regression for rural poverty. The block of farm structure/characteristics explained 30 percent of the variance. The next block entered is non-farm characteristics. The additional variance by the block of non-farm characteristics was 28 percent. The third block, spatial/political economical characteristics explained the additional 13 percent of the variance.

In the block of farm structure/characteristics, percent middle

TABLE 3 Blocked Regression of Rural Poverty (N=130)

Independent Variables	Bata (b)	Beta (b)	Beta (b)
Farm Structure/Characteristics			
Percent Middle Farming	-0.227 (-0.216)	-0.147 (-0.140)	-0.245 (-0.233)**
Percent Larger Farming	-0.499 (-0.462)**	-0.266 (-0.246)**	-0.394 (-0.364)**
Percent Part-time Farming	-0.634 (-0.420)**	-0.150 (-0.099)	-0.346 (-0.230)**
Rate of Tenancy	0.129 (0.118)	0.249 (0.226)**	0.190 (0.172)**
Non-farm Characteristics			
Percent Non-farm Population		0.419 (0.207)**	0.364 (0.180)**
Percent Female		0.228 (2.876)**	0.103 (1.302)
Percent High School Graduates		-0.269 (-0.198)**	-0.128 (-0.094)*
Spatial/Political Economical Characteristics			
Region 1 (YOUNGNAM)			-0.073 (-0.928)
Region 2 (HONAM)			0.317 (4.331)**
Proximity to Metropolitan Cities			-0.086 (-0.317)
International Competition			
Power of Commodities			0.202 (0.614)**
Intercept	0.000 (34.690)	0.000 (11.534)	0.000 (4.784)
R ²	0.30	0.58	0.71
R ² Change		0.28	0.13

* $p \leq 0.05$ ** $p \leq 0.01$

farming, as opposed to percent small farming (the reference category), had a negative effect on rural poverty ($b = -.216$), as hypothesized. Percent larger farming, as opposed to percent small farming (the reference category), had a negative effect on rural poverty ($b = -.462$). Percent part-time farming had a negative effect on rural poverty ($b = -.420$), as hypothesized. The rate of tenancy had a positive effect on rural poverty ($b = .118$), as hypothesized.

When the second block (non-farm characteristics) was added in the model, the relationships between farm structure/characteristics and rural poverty presented the same patterns. However, the relationships between the farm structure/characteristics and rural poverty became weaker, except for the rate of tenancy. In the block of non-farm characteristics, percent non-farm population had a positive effect on rural poverty ($b = .207$). This was contradictory to the research hypothesis. Percent female had a positive effect on rural poverty ($b = 2.876$), as hypothesized. Percent high school graduates had a negative effect on rural poverty ($b = -.198$), as hypothesized.

When the third block (spatial/political economical characteristics) was added in the model, the relationships between farm structure/characteristics and rural poverty presented the same patterns as the results of the first and second models. Also the relationships between the non-farm characteristics and rural poverty presented the same patterns as the results from the second model.

Table 4 shows the regression of rural poverty by region. In the three regions, the amount of explained variance for rural poverty was high (from 63 percent to 76 percent). In YOUNGNAM, significant variables were mainly the farm structure/characteristics and proximity to metropolitan cities. In HONAM, significant variables were the international competition power of commodities ($b = -2.668$) and percent non-farm population ($b = .261$). In OTHERS, significant variables were the non-farm characteristics, such as percent non-farm population ($b = .229$), percent female ($b = 3.169$), and percent high school graduates ($b = -.290$).

However, in general, the three regions (YOUNGNAM, HONAM, and OTHERS) presented very similar patterns except for the case of proximity to metropolitan cities. In farm structure/characteristics, percent middle farming, as opposed to percent small farming, had negative effects on rural poverty across the

the three regions, as hypothesized. Percent larger farming, as opposed to percent small farming, had negative effects on rural poverty across the three regions. These results were contradictory to the research hypothesis that percent larger farming would be positively related to rural poverty. Percent part-time farming had negative effects on rural poverty across the three regions, as hypothesized. The rate of tenancy had positive effects on rural poverty across the three regions.

TABLE 4 Regression of Rural Poverty by Region

Independent Variables	YOUNGNAM (N=43)	HONAM (N=34)	OTHERS (N=53)
	Beta (b)	Beta (b)	Beta (b)
Farm Structure/Characteristics			
Percent Middle Farming	-0.744 (-0.350) *	-0.239 (-0.195)	-0.142 (-0.157)
Percent Larger Farming	-0.388 (-0.391) **	-0.169 (-0.127)	-0.306 (-0.258)
Percent Part-time Farming	-1.058 (-0.347) **	-0.350 (-0.189)	-0.038 (-0.032)
Rate of Tenancy	0.289 (0.198)	0.194 (0.118)	0.130 (0.122)
Non-farm Characteristics			
Percent Non-farm Population	0.139 (0.043)	0.352 (0.261) **	0.546 (0.229) **
Percent Female	0.121 (1.763)	0.021 (0.364)	0.257 (3.169) *
Percent High School Graduates	-0.058 (-0.029)	-0.237 (-0.194)	-0.425 (-0.290) **
Spatial/Political Economical Characteristics			
Proximity to Metropolitan Cities	-0.424 (-4.041) **	-0.210 (-2.668)	0.201 (2.689)
International Competition Power of Commodities	0.231 (0.516)	0.471 (1.092) **	0.074 (0.190)
Intercept	0.000 (21.291)	0.000 (-9.280)	0.000 (9.447)
R ²	0.63	0.76	0.64

* $p \leq 0.05$ ** $p \leq 0.01$

In the non-farm characteristics, percent non-farm population had positive effects on rural poverty. This was contradictory to the research hypothesis. Percent female had positive effects on rural poverty across the three regions, as hypothesized. Percent high school graduates had negative effects on rural poverty across three regions, as expected.

In the spatial/political economical characteristics, proximity to metropolitan cities had Table 4 negative effects on rural poverty in YOUNGNAM and HONAM ($b=-4.041$ and $b=-2.668$), while a positive effect in OTHERS ($b=2.689$).

The international competition power of commodities had positive effects on rural poverty across the three regions.

VI. Summary and Conclusions

When rural poverty was regressed on the farm structure/characteristics, non-farm characteristics, and spatial/political economical characteristics, the variance explained was 71 percent. The research hypotheses on six independent variables (percent middle farming, percent part-time farming, the rate of tenancy, percent female, percent high school graduates, region 2) were accepted. However, region 1 (YOUNGNAM) and proximity to metropolitan cities had comparatively small negative effects on rural poverty. The research hypotheses on three independent variables (percent larger farming, percent non-farm population, and the international competition power of commodities) were rejected.

In the case of blocked regression analysis, the variance explained by the block of farm structure/characteristics was 30 percent. The variance added by the block of the non-farm characteristics was 28 percent. The variance of rural poverty added by spatial/political economical characteristics was 13 percent. That is, each block added a significant amount of explained variance. However, the relationships between farm structure/characteristics and rural poverty were not greatly changed when the non-farm characteristics and spatial/political economical characteristics were controlled, although the magnitude of the coefficients were changed a little bit.

The amount of explained variance for rural poverty was

comparatively high (from 63 percent to 76 percent) across the three regions. In general, the patterns of relationships between the independent variables and rural poverty presented variations across the regions. In YOUNGNAM, significant variables to explain rural poverty were mainly the farm structure/characteristics and proximity to metropolitan cities. In HONAM, significant variables to explain rural poverty were percent non-farm population and the international competition power of commodities. In OTHERS, significant variables to explain rural poverty were mainly the non-farm characteristics, such as percent non-farm population. Therefore, the solution of rural poverty in Korea will require locally specific policy packages. In particular, HONAM presented the highest level of rural poverty compared to the other regions. The research hypotheses on six independent variables (percent middle farming, percent part-time farming, the rate of tenancy, percent female, percent high school graduates, and proximity to metropolitan cities) were accepted across the three regions. The research hypotheses on three independent variables (percent larger farming, percent non-farm population, and international competition power of commodities) were rejected across the three regions.

Policy Implications:

Based on the multiple regression analyses and the review of previous poverty studies, some policy implications and alternatives to help reduce and alleviate poverty in the rural Korea are suggested.

First, historically, the Korean rural development policies have been mainly top-down approaches. As a result, the needs and demands of local people have not been adequately reflected in the planning and implementation processes of development projects. The results of this research indicate that factors associated with poverty rates are not uniform across rural Korea. Therefore, we need people-centered, bottom-up rural development policies to alleviate poverty in rural Korea. People centered development requires basic reforms in political and administrative structures which move the locus of development initiative from the central government to the people (Korten 1984; Maeda 1981).

Second, the rural sector of Korea has been treated as a production field to provide cheap food in the national development

processes. This is wrong. Today, rural problems are no longer synonymous with farm problems. Therefore, policies to alleviate rural poverty should be focused on the non-farm sectors as well as the farm sector. In this study, percent part-time farming had consistently negative effects on rural poverty. Thus, it is necessary to enlarge the opportunities of off-farming jobs. Therefore, it is important to consider the types and quality of jobs in developing rural industries.

Third, it is very important to provide the structural opportunities for the upward mobility of the rural poor. That is, it is necessary to strengthen institutional mechanisms in favor of the rural poor. That is, the scale of farming had reverse relationships with rural poverty. It was contradictory to the hypothesis that increased farm scale negatively affects the quality of life in rural communities. Therefore, it is necessary to enlarge the financial support to help small-sized competent farmers expand their farms. According to this study, in general, the rate of land tenancy presented positive effects on rural poverty. Thus, it will be important to lower the rate of land tenancy in alleviating rural poverty. Therefore, the rent for land tenancy should be lowered in a reasonable level. In addition, current land tenancy regulations should be revised. The cultivation right of tenants should be fairly protected. Fourth, in this study, relationships between the independent variables and rural poverty had some variations across the three regions. According to many previous studies, persistent regional socio-economic differences in Korea have resulted mainly from the discrimination and intervention of the Korean government. In Korea, the state has had more significant effects on the socio-economic in regions than the logic of capital to extract maximum surplus. That is, the Korean government has used various unbalanced (uneven) development strategies as major means to keep political power. Therefore, it is very important to enlarge the political autonomy of regional government in lowering regional differences and rural poverty.

Finally, in Korea, the protection level of welfare program has been very low and unrealistic. Therefore, it is necessary to adjust the protection level of welfare programs to meet the minimum standard of living. Also, the level of public welfare budget of Korea has been very low. Therefore, the Korean government should enlarge the public welfare budget, step by step. What is needed in order to alleviate

alleviate poverty in rural Korea is welfare reform.

One limitation of this study is that the use of county-level secondary data constrained the selection of variables. Another limitation of this study is the reliability problem of official data. The government statistics of poverty may be underestimated values of the real poor.

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