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LIFETIME OCCUPATIONAL ACHIEVEMENT OF KOREAN FEMALE WORKERS

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Due to the lack of an appropriate data set, little has been known about the lifetime occupational achievement of female workers in Korea. Using data from the "Survey on Women's Labor Force Participation", this paper examines the pattern of women's lifetime occupational achievement and the factors that explain the variation among women in lifetime occupational achievement. The results show that women in Korea do not experience occupational status growth as they age. While human capital variables have no effect in explaining variation in occupational status growth, employment status of the job one enters in the later life cycle stage has significant implications for women's lifetime occupational achievement pattern.

INTRODUCTION

The gender gap in wages is a more or less universal fact throughout the countries of the world and has been well documented in the case of Korea as well (Bauer and Shin 1987; KWDI 1990; Uh 1991). This earnings differential between men and women is observed not only at certain points in lifetime but also in the lifetime earnings profile. For example, in the United States, whether measured by prestige or by socioeconomic index of occupation (SEI), the profile of occupational returns over the life cycle for males has an increasing slope until it reaches a plateau. However, that of females reveals a different pattern; it is usually flat, or sometimes shows even a slight decrease (Rosenfeld 1979).

The human capital theory explains this difference in the earnings profile of men and women in terms of the productivity difference between the two groups of workers. In human capital theory, people obtain education and training as an investment, expecting returns in the labor market. Women invest less than men in human capital, because they expect a discontinuous lifetime labor force participation pattern. Also, since the accumulation of human capital occurs not only through formal schooling and training but also through work experience, time spent in the labor force is directly

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related to the amount of human capital and productivity. Furthermore, while working itself contributes to increases in one's productivity, breaks in work life not only hamper one's accumulation of more human capital but also cause depreciation of already acquired human capital. For these reasons, the discontinuous lifetime labor force participation pattern of women leads them to be less productive workers with lower human capital than men, and this productivity difference explains the different patterns of occupational achievement over the lifetime between men and women.

The objective of this paper is to test the explanations of human capital theory concerning women's lifetime occupational achievement, as applied to the Korean female labor force. The Korean female labor force stands as a challenging case to test the human capital perspective for several reasons.

First, Korean women's investment in education seems to be somewhat different from preparation to enter the labor market. Women's labor force participation in Korea is positively related to one's educational attainment level previous to marriage. However, women with higher education are likely to leave the labor force with marriage or first birth, and the influx of women into the labor force after marriage occurs among women with low schooling (Kim 1990). Therefore, it appears that the market returns are far from being the most important factor determining individual investment in education among Korean women.

Second, the Korean female labor force is composed of a large segment of non-employee workers, working as self-employed or family workers (Table 1). As human capital theory has developed in the United States, where over 90 percent of the labor force work as employees, variation in employment status of workers is not taken into consideration in the theory. It is simply assumed that the variation in employment status does not exert any influence in the basic relationship between human capital and returns in the labor market (i.e., earnings). However, in examining the Korean labor force, about one-third of which work as non-employees, it is important that we do not simply accept such assumption of homogeneous labor market but instead examine the feasibility of such an assumption.

To question whether individual returns in the labor market are influenced by factors other than individual human capital variables is not unfamiliar in the sociological literature. A challenge to the assumption of homogeneity of labor markets in human capital theory comes mainly from the dual labor market theory. According to this perspective, the economy consists of two or more distinct sectors, and there exists significant sectoral variation in the way that worker characteristics are rewarded. Following this, sector exerts an independent effect of its own in determining individual returns in the

TABLE 1. DISTRIBUTION OF EMPLOYMENT STATUS (%) IN THE NON-AGRICULTURAL SECTOR: SELECTED NATIONS

Males			
Country	Employers and self-employed	Family enterprise workers	Employees
United States	8	0	91
Japan	13	2	85
Korea	25	1	74
Singapore	17	0	82
Britain	14	0	86
France	12	0	88
Females			
Country	Employers and self-employed	Family enterprise workers	Employees
United States	6	0	94
Japan	11	12	77
Korea	18	14	68
Singapore	5	3	91
Britain	6	0	94
France	5	3	91

Source: ILO, Yearbook of Labour Statistics, 1989-1990.

Note: Figures indicate the percentages of labor force in each employment status.

labor market. Researchers diverge in how they identify and distinguish the sectors (Althauser and Kalleberg 1981; Wallace and Kalleberg 1981; Baron and Bielby 1984; Hodson 1984), but occupations, jobs, and industries are frequently used as indicators of economic sectors in the United States.

Economic sectors are often measured differently in studies on countries other than the United States. In developing countries, in particular, the urban labor force has a significant proportion of non-wage workers (i.e., self-employed, family enterprise workers). Researchers have applied a formal-informal sector dichotomy to labor markets in such settings. Just as the appropriate basis for distinguishing the primary and secondary sectors in the United States has been contested, definitions of the formal and informal sector vary (Mazumdar 1976; Bromley 1978; Feige 1990). Nevertheless, it is generally agreed that wage vs. non-wage work is an important basis for demarcating sectors in developing economies, with the informal sector including a substantial number of non-wage workers.

The parallel between the primary-secondary labor market dichotomy and the formal-informal dichotomy in developing economies is easy to see. Central to these approaches is the rejection of the assumption that the rules

which determine individual returns are uniform across the labor market sectors. In this study, I examine employment status as the basis for testing the feasibility of such an assumption among female workers in urban Korea.

The paper is organized as follows. In section one, I briefly summarize arguments from the two groups of studies that examine what produces individual occupational achievement and the gender differences in the pattern: human capital theory and the dual labor market theory. In the context of this study, however, studies of labor market structure in the dual labor market theory are incomplete in the sense that they do not address the variation in the employment status of workers. Therefore, following the discussion of dual labor market theory, I briefly examine studies on labor market dualism and urban non-employee workers in developing countries. In section two, I describe the data set analyzed in the study and the methods of analyses. Results are reported in section three, and the final section explores the implications of findings in this study.

REVIEW OF LITERATURE

In human capital theory, individual resources are considered a stock of capital that determines a person's productivity and, hence, earnings. One can increase one's stock of capital by investing in education and training, which will be followed by an increase in one's productivity that will be rewarded with an increase in earnings. When an economically rational individual makes this investment decision, one's age and expected time in the labor force enters one's consideration, for they determine the costs of investment and the pay-off period. Generally speaking, investment tends to be concentrated at younger ages, and the age profile of investment has a gradually declining slope. This is due to several reasons. First, the expected time in the labor force determines the total return on investment, which suggests that investment at younger ages is more profitable. Second, investment at older ages is more costly due to foregone earnings (Becker 1965, 1975; Ben-Porath 1967).

This theoretical reasoning is consistent with the observed age-earnings profile, which has an increasing slope until it reaches a plateau, followed by a slightly declining slope. While the increase in earnings comes from an increase in one's productivity as a result of investing in education and training, as the gross addition of investment gets small and the gross stock of human capital becomes large, the earnings reach a plateau. After this point, earnings decrease slightly due to the deterioration in the stock of human capital, which makes the net investment become negative (Ben-

Porath 1967). Therefore, in human capital theory, the major factor that determines the individual occupational achievement level (which is indicated by earnings) is the person's resources, and change in the occupational achievement level comes about only when there is a change in one's resources.

The theory can be applied to explain the difference in occupational mobility patterns of men and women, because men and women expect different overall time in the labor force and a different pattern of labor force participation over lifetime. Since women expect discontinuous labor force participation whereas men expect continuous work activities, the optimal investment patterns differ between them (Corcoran et al. 1984). Expecting discontinuity, women invest less in human capital formation, both in formal schooling and in on-the-job training. Employers are also more reluctant to provide on-the-job training to female workers under the same reasoning. Consequently, female workers accumulate a lower overall stock of human capital than men.

The theory goes further to suggest "depreciation or obsolescence effects" (Mincer and Polachek 1974; Polachek 1975) in women's earning profiles over time. During the period of women's non-participation due to childbearing and childrearing, the skills acquired at school and at work depreciate, resulting in a depreciation of earning power.[1] Therefore, according to human capital theory, it is women's own work pattern over time that is responsible for the flat mobility patterns observed for them.

In contrast to the focus of human capital theory on individual resources, the structural approach stresses the importance of the employment context in determining individual occupational returns. In his "vacancy competition theory", Sørensen (1974, 1975, 1978) argues that one changes jobs only when there is a vacant position. Whereas one can change into a better job without increasing resources when there are vacant positions, one who increases his resources may not be able to move to better jobs if there is no vacant position. Therefore, he argues, the major factor that determines individual occupational mobility is the opportunities for mobility (mobility to better jobs that increases returns on a given level of resources) rather than change

[1]Standing at the center of the controversy (Sandell and Shapiro 1978; England 1982; Corcoran et al. 1984), this idea of "depreciation" was modified later with the notion of "restoration or repair of the previously eroded human capital" by Mincer and Ofek (1982). The idea is that "reconstruction of occupational skills is more efficient than new construction of human capital" (Mincer and Ofek 1982, p. 4), which is evidenced by the observed wage rebound following a temporary period of wage reduction after the return (Corcoran et al. 1983).

in individual resources. This implies that it is important to analyze individual occupational achievement not only with individual resources, but also with structural characteristics that determine opportunities for occupational advancement.

In examining gender differences, occupational sex segregation stands as the most salient structural feature which affects the economic outcomes of men and women. Accordingly, many studies have examined the existence and extent of occupational sex segregation (Beller 1984; Bielby and Baron 1984; Blau 1984; Jacobs 1989), its effect on earnings (Roos 1981), and its origins (Greenberger and Steinberg 1983; Marini and Brinton 1984; Roos and Reskin 1984). However, occupational sex segregation theories are less clear in explaining occupational mobility patterns of men and women. Do female occupations entail less opportunity for upward mobility, and if so, why? Answers to this question come mainly from studies on the dual labor market, which often include the "degree of sex segregation" as one of the bases for dividing the labor market into segments—male sector, neutral sector, and female sector. In order to answer this question, therefore, we first need to understand the general ideas in theories of labor market segmentation.

Since the famous study by Doeringer and Piore (1971), dual labor market theories have stood at the center of much stratification research in sociology. The core of the argument is that, contrary to neo-classical economists' view of an open labor market where everyone is in competition with each other, the labor market is segmented into internal (primary) and secondary labor markets, and competition occurs within the boundary of each labor market.[2] Labor markets differ in many dimensions, including the attributes of employees, the characteristics of jobs, and the occupational returns which include the chance for upward mobility.

It is not well established how much the female occupations are concentrated in the secondary labor market. However, empirical studies under the segmentation perspective find that women are over-represented in the periphery sector, which is characterized by a secondary labor market (Bibb and Form 1977; Beck, Horan and Tolbert 1978; Rosenfeld 1983). Furthermore, studies also find that the process of earnings attainment differs between the core and the periphery, providing evidence that one's

[2]From a broader point of view, it is argued that economies are divided into core and periphery sectors, and that the core is characterized by a primary labor market while the secondary labor market applies to the periphery sector. There exists some disagreement as to the correct typology for the division of the economy and labor markets (Althauser and Kalleberg 1981; Wallace and Kalleberg 1981; Hodson 1984; Kalleberg and Berg 1988)

place within the economic structure is an important factor determining one's occupational career.

This study follows the structural tradition in the sense that I divide the female labor force into two sectors which parallel the dichotomy of core and periphery used in most research within the dual labor market perspective. The difference is in the basis of defining the sectors, and this difference comes from differences in the labor market structure between the United States and many developing countries.

In conceptualizing the labor market dualism in developing economies, there has been a general belief that non-employee workers in urban areas constitute a low productivity sector that exists primarily in the developing countries as a transitory phenomena, resulting from the labor surplus and underdevelopment of the economy (Harberger 1971; Harris and Todaro 1970; Todaro 1969). Due to this belief, urban non-employee workers in developing countries have not been properly incorporated into the studies on economic stratification. When given attention, they have been treated as a distinct stratum who have a low level of human capital and stand at the bottom of the socioeconomic hierarchy with little opportunity to move out.

However, studies in recent years have begun to challenge the approach that links the informal sector consistently with underemployment or with low productivity workers. In many developing countries, there is no sign of urban non-employee workers disappearing over time (Portes and Benton 1984; Castells and Portes 1989). Several studies find that urban non-employees are not necessarily the ones with low levels of resources and who receive low economic returns (Chiswick 1976 on Bangkok; Bertrand and Squire 1980 on Thailand; Sumner 1981 on Guatemala; Teilhet-Waldorf and Waldorf 1983 on Bangkok; House 1984 on Nairobi; Blau 1985 on Malaysia; Smart 1990 on Hong Kong). Furthermore, there is a great deal of voluntary movement of workers from the formal to the informal sector (Nihan, Demol, and Jondoh 1979 on Lomé; Peattie 1982 on Columbia; Fortuna and Prates 1989 on Uruguay), challenging the view of urban non-employees as being forced into the low productivity sector due to their own characteristics. Therefore, following these studies, the urban non-employees in developing countries are not an insignificant minority associated with social problems which would disappear with the advance of economic development but rather active workers whose distinct rationality needs to be understood in relation to the characteristics of labor market structure.

DATA AND METHODS OF ANALYSES

Data

The data set used for the micro-level analysis of the study is the "Survey on Women's Labor Force Participation: Focus on Married Women", collected by the Korean Women's Development Institute in 1985. It comes from interviewing 4416 women in 4123 households selected through a systematic sampling of households, with the response rate of 97.7%. The sampling of households, in turn, is based on the systematic sampling of 81 sampling districts as used in the "Survey of Economically Active Population".

A subset of the sample is used for the analyses in this study. First, I limit my concern to women who lived in urban areas at the time of the survey (N = 2566). Second, since the data are only on ever-married women, there is a selection problem for the younger group of women.[3] For this reason, I include only women who are 25 years old and over (N = 2402), excluding those younger than 25 years old (N = 164). Third, since I limit the concern of this paper to changes in occupational status that occur with changes in women's job, I select women who reported having worked in two or more different jobs (N = 910).[4] With this sample, I examine the changes in women's occupational status from their first job (since school completion) to the last job (at the time of the survey).

Measurement of Sector

Following the tradition of most studies on labor market dualism in developing countries, I distinguish between the formal and informal sectors of the labor force. I use different definitions of sector for single and married women. In examining women's work before marriage, I define the sector using information on employment status. Employment status is defined as employer, self-employed, family enterprise worker, and employee. Among single women, I consider formal sector workers to be employees. On the

[3]The mean age at marriage in Korea was 24.8 in 1985 (25.0 in urban and 24.0 in rural areas) (KEPB 1985).

[4]The fact that I only examine changes in occupational status that result from job change may not be a serious limitation in analyzing the lifetime occupational status growth among women in urban Korea. In this data set, for example, 89 percent of women who worked before marriage left the job before or at marriage (98 percent up to the survey time). Considering this, job change is likely to be observed among most women who have been employed for some time throughout the life cycle.

other hand, in examining women's work after marriage, I define the sector by combining information on employment status and place of work. Many married female employees in Korea, especially production workers, work in their own house, report regularly to an employer, and are paid on a piece rate basis. Although these home-based employees work for an employer, their employment resembles that of informal sector labor as it is unprotected and unregulated (they do not receive benefits and are not protected by labor laws). Therefore, I exclude these home-based employees from the formal sector in examining women's work after marriage.

The informal sector includes everybody not in the formal sector, encompassing various types of workers: employers, self-employed, family enterprise workers (hereafter called family workers), and home-based employees (among married women). I combine employer and self-employed into one category in the analyses. Not only is the number of employers small, employers in our data are more like the owners of small businesses who hire small numbers of workers.[5] Since the informal sector is so heterogeneous, I keep several categories of employment status within the informal sector rather than collapsing various types of workers into one category.

Measurement of Occupational Status

In the sociological literature, occupational status is usually measured with either the prestige score or the socioeconomic index (SEI) of occupations.[6] However, there has been an increasing awareness of the inadequacy of these scales, especially the prestige score, in capturing the actual hierarchy in occupational returns. The basic problem is that scales based on occupational categories mask the variation in the actual job performed within a single occupational category.

An alternative measure of occupational status is earnings, a measure adopted in most economic analyses of occupational mobility. In the data used for this study, however, the information on earnings is provided only for the jobs that respondents were engaged in at the time of the survey. Faced with this problem, I adopt an alternative measure of earnings, the

[5]For example, in the data, thirty women (3.1 percent of women working at the survey date) report that they are employers. Among them, sixteen have one employee, eight have two employees, two have three employees, three have four employees, and only one has more than five (nine) employees.

[6]It is suggested that the difference between the two measures is substantive, in the sense that prestige measures status or rewards while SEI measures resources of occupations (Treiman and Yip 1989).

occupational wage scale. I construct the occupational wage scale for female workers in Korea by combining information from the "Occupational Wage Survey" in 1985 (Korean Ministry of Labor 1985) and the earnings information provided in the data used for this study. The annual "Occupational Wage Survey" (OWS) in Korea reports the monthly earnings and yearly bonuses for workers in each occupational category, specified to three digits by the International Occupational Classification scheme. The survey is based on a sampling of employees who work in a place where there are at least ten regular employees. Therefore, it excludes all non-employee workers as well as employees who work in small firms (fewer than ten workers). Using information in the data used for this study, I construct hypothetical earnings for non-employees in each employment status within each occupational category.

The basic strategy is as follows. The first three steps use information from the data used for this study. First, since earnings are not reported for family workers in the data set, I estimate their earnings by dividing the monthly earnings of the person primarily responsible for the earnings of the household by the number of household earners.[7] Second, I compute the mean monthly earnings of workers in each employment status (employees in the formal sector, self-employed, family workers, and home-based employees) within each three-digit occupational category. Third, I compute the fractional differences between earnings of non-employee workers in each employment status and the earnings of employees in the formal sector within each occupational category. Finally, I multiply the monthly earnings of employees (within each occupational category) reported in OWS by the obtained fractional differences between earnings of non-employees in each employment status and earnings of employees. This produces the hypothetical earnings of non-employee workers in each employment status (within each occupational category) used for the occupational wage scale.

Simply speaking, using the data analyzed in this study, I examine the variation in earnings of women by employment status within each three-digit occupational category. Then I apply these to the earnings information in OWS to produce the hypothetical earnings of non-employee workers. It is to be noted that I use the monthly earnings of employees (in OWS) to

[7]In 86 percent of cases, the number of earners in the household includes only the woman and her husband. In the sample, the primary earner is the husband in 97 percent of cases. I only count women whose husband work as employers, self-employed, or family workers, thereby excluding cases where he either works as an employee or is unemployed (N = 7). I also exclude cases where the primary earner is not the husband (either father-in-law or son), since employment status information is not available for that person.

compute the hypothetical earnings of non-employee workers. This is because the earnings of employees in the data analyzed for this study include only the monthly earnings. However, in the occupational wage scale, the earnings of employees in the formal sector include the monthly earnings plus the yearly bonus (divided by 12). In this way, the occupational wage scale used for the analyses in this study reflects the actual earnings gap between employees and non-employees.

The obtained occupational wage scale measures the pay level of a particular job (combining information on employment status and occupation). Although it is also an approximate and indirect measure of occupational status like the prestige scale or SEI, it has the advantage of reflecting the variation in both occupation and employment status, which is critical in examining the female labor force in Korea.

A Model of Occupational Careers

To examine the effect of human capital and other variables in explaining the variation in women's occupational status gains over time, I use the occupational career model developed by Sørensen (1974, 1975, 1978). Defining occupational careers as "age variations in earnings and occupational prestige" (Sørensen 1974, p. 44), Sørensen argues that careers are discontinuous, representing a succession of job shifts. This suggests that the age variation in occupational achievement is produced by job shifts. Therefore, his model of occupational careers takes the outcome of job shifts as a point of departure.

The model is an application of Coleman's (1968) mathematical model of changes where change in a certain variable is a function of the variable itself and a set of exogenous variables. The basic model is

$$\Delta X_1 = b_1 X_{11} + b_2 X_2$$
$$\Delta X_1 = X_{12} - X_{11}$$

where X_{11} stands for the occupational status of the job left, X_{12} stands for the occupational status of the job entered, and X_2 stands for a comprehensive measure of other exogenous variables assumed to have effects on changes in occupational status.

Therefore, the model sees the outcome of job shifts (gains or losses in occupational status) as a function of the achievement level of the job left (occupational status of the job left) and other explanatory variables.

$$X_{12} = (1 + b_1)X_{11} + \sum_{i=2}^{n} b_i X_i + b_0$$

Rewriting the equation to include a set of independent variables instead of one comprehensive measure, the model is

In this model, b_1 measures the effect (usually negative) of occupational status of the job left on the status gain. The source of this effect is in part the negative feedback through unmeasured variables and in part a measurement error in X_1 that will produce a regression toward the mean (Coleman 1968). According to Sørensen, b_1 is the value that determines the shape of the occupational status profile which develops over the life cycle, reflecting the level of opportunities for occupational status growth (the closer b_1 is to 0, the more opportunities there are in the society). In general, we can expect that the value of b_1 would lie between 0 and -1 (a concave pattern of occupational status growth), since neither the situation of $b_1 > 0$ (occupational status grows linearly over the life cycle) nor the situation of $b_1 < -1$ (occupational status oscillates over the life cycle) seems reasonable.

The estimates of other exogenous variables (b_i in the above equation) can be interpreted in two ways. If the values of variables do not change from time 1 to time 2, estimates of these variables measure the increment in return on these variables. On the other hand, if the values of variables change from time 1 to time 2, estimates of these variables measure the return on an increment change. Distinguishing these two cases is important in Sørensen's occupational career model.

According to human capital explanations of occupational status growth, the source of occupational status growth lies in increases in the individual stock of human capital. Therefore, the growth of individual occupational status through job shifts is associated with increments in individual human capital variables, while the rates of return on these variables do not necessarily change through the job shifts. On the other hand, Sørensen argues that occupational status growth results more from responses to opportunities for job shifts than from changes in individual resources. Following this, the source of occupational status growth is the job shifts which result in increments in returns for a given level of resources.

Independent Variables and Hypotheses

I include three sets of independent variables to examine variation in women's lifetime occupational status growth. First, human capital variables include women's educational attainment, months of labor force experience at the time of starting the last job (excluding experience in the last job), a dummy variable for whether the respondent has had a period of labor force interruption before starting the last job, and months of labor force

interruption at the time of starting the last job (period not employed since leaving the latest job). The last three variables are used as measures of women's lifetime employment experience: while the first measures the extent of women's lifetime labor force participation, the latter two variables measure the continuity in women's lifetime employment pattern. Women's education is measured with seven categories: elementary school, middle school, vocational high school, academic high school, some college, junior college, and university or more.

Among these four variables, women's education remains constant from time 1 (time of starting the first job) to time 2 (time of starting the last job). Therefore, according to human capital explanations, there is no reason to expect that women's education would have an effect on occupational status growth, since the estimates on these variables measure the increment in return on women's education that occurs through the job shifts. On the other hand, values of the other three variables do change from time 1 to time 2. Since the values for these variables are 0 at time 1 for everybody in the sample, values at time 2 are increments in these variables. According to human capital theory, these changes in individual human capital are major sources of lifetime occupational status growth. While the extent of women's lifetime employment is expected to have a positive effect on the growth of occupational status over time, having a labor force interruption or the length of interruption is expected to have a negative effect.

Second, I use cohort variables as an indicator of historical change. Third, to control for local labor market conditions, I include variables on the logged size of the city and the city industry structure (percent employed in manufacturing within the city).

RESULTS

Before I discuss the lifetime occupational status changes, it would be helpful to provide a picture of the "average" pattern of lifetime labor force participation of women in this sample. In the sample for the following analyses, the average age of women is 40, and the average number of jobs held over the life cycle is two. The average woman starts her first job at the age of 19 and leaves the job at the age of 24. Then she returns to the labor force at the age of 30. Therefore, at the time when she returns to the labor force, she has about five years of labor force experience and six years of labor force interruption. She stays in the job for about six years and leaves the job at the age of 36 and has not been employed since then.

Of women in the sample, the mean occupational status (occupational

TABLE 2. REGRESSIONS ON LOGGED OCCUPATIONAL WAGE OF THE LAST JOB

Variable	Everybody		Excluding family workers	
Intercept	10.83***	(.90)	10.99***	(1.25)
Logged occupational wage of the first job	.19***	(.06)	.22***	(.08)
Education				
Primary school	—	—		
Middle school	.18***	(.06)	.23***	(.09)
Vocational high	.35***	(.10)	.20	(.13)
Academic high	.37***	(.09)	.45***	(.11)
Some college	.76**	(.34)	.82**	(.36)
Junior college	.74***	(.22)	.80***	(.24)
University or more	.87***	(.20)	.83***	(.25)
Logged labor force experience	-.04	(.03)	-.03	(.05)
Interruption	.01	(.07)	.03	(.10)
Interruption period	-.0002	(.0004)	-.0002	(.0006)
Age				
25-29	-.08	(.14)	-.02	(.31)
30-34	.02	(.14)	.11	(.30)
35-39	.20	(.14)	.37	(.30)
40-44	.27**	(.14)	.41	(.31)
45-49	.27*	(.14)	.43	(.31)
50-54	.42***	(.14)	.67**	(.32)
55-59	.22	(.16)	.23	(.35)
60-64	—	—		
Logged city size	-.06*	(.03)	-.12**	(.05)
Percent manufacturing	-1.43***	(.32)	-1.29**	(.50)
Adjusted R-squared	.12		.17	
N	867		437	

*p < .10, **p < .05, ***p < .01.
Note: Numbers in parentheses are standard errors.

wages) of the first job is 188,835 (won), while that of the last job is 187,496 (won). That is, average female workers in urban Korea experience a slight decline of occupational status from their first job to the last job. The variance in occupational status is significantly larger among the last jobs than among the first jobs (118, 181 vs. 74,700 won), indicating that the earnings differential among female workers increases as they get older. The pattern stays similar when I exclude from the sample women who worked as family

workers either in their first job or in the last job (Table 3).

To examine what explains the variation in occupational status growth, I first apply the occupational career model and examine the effect of human capital variables on occupational status growth. Table 2 shows the results of regressions on the logged occupational status of the last job. While model 1 includes everybody in the sample, model 2 excludes women who worked as family workers either in their first or last job. The results are similar whether I include or exclude these women in the analysis. The two models in general have a poor fit, indicated by the adjusted R-squared values. Women's education has positive effects for every category and is significant (except that the effect of academic high school loses significance in model 2). Furthermore, as indicated by the size of the coefficients, the effects of women's education are more or less linear from the lowest to the highest level (except that the effect for some college education is larger than that for junior college). On the other hand, the three variables measuring lifetime employment experience do not have any significant effect on women's occupational status growth. There is a negative (but insignificant) effect of labor force experience on occupational status gain. Similarly, having a labor force interruption during the job change does not have the expected negative sign and is insignificant. Although the labor force interruption period does have the expected negative sign, the effect is not statistically significant. Therefore, among female workers in urban Korea, change in the individual stock of human capital is not an important factor that determines occupational status growth. Rather, changes in occupational status occur through job shifts that result in increments in returns for a given level of resources.

Can employment status be used to conceptualize differences among jobs in the level of opportunities for occupational status growth? In order to examine whether the pattern of women's occupational status growth varies with the pattern of women's mobility across employment statuses, I classify the sample into 16 different types of workers using information on employment status of the first and last job. Table 3 reports the mean occupational status of the first and last job for women in each type. Looking at this table, I find that the pattern of women's occupational status growth varies with the employment status of the last job. Among women whose last job is either in self-employment or family work, the mean occupational status of the last job shows an increase from that of the first job. On the other hand, among women whose last job is either in the formal sector or in home-based employment, the mean occupational status of the last job shows a decline from that of the first job (except those whose first job is in

TABLE 3. OCCUPATIONAL WAGE OF THE FIRST AND LAST JOB

Employment status of first job-employment status of last job	Occupational wage of the first job		Occuatipnal wage of the last job		
Type	Mean	SD	Mean	SD	N
Total	188,835	74,700	187,496	118,181	910
Excluding family workers	182,891	84,299	177,897	116,959	456
Formal sector formale sector	182,993	74,536	182,807	96,338	177
Formal sector self-employed	192,228	87,961	254,317	112,296	124
Formal sector-family worker	183,540	76,546	828,260	138,443	77
Formal sector-home-based employee	165,802	48,321	49,091	16,607	73
Self-employed-formal sector	220,267	82,876	199,627	88,865	19
Self-employed-self-employed	196,338	107,010	230,170	108,369	37
Self-employed-family worker	179,714	93,752	260,734	60,880	16
Self-employed-home-based employee	253,040	146,390	43,344	11,241	13
Family worker formal sector	194,307	29,955	163,163	134,201	114
Family worker self-employed	207,495	99,259	223,722	73,326	94
Family worker-self-employed	197,808	37,577	222,780	45,517	98
Family worker home-based employee	190,608	13,453	45,779	17,624	54
Home-based employee formal sector	48,003	17,400	136,344	39,933	5
Home-based employee-self-employed	—	—	—	—	0
Home-based employee-family worker	38,113	—	226,066	—	1
Home-based employee-home-based employee	44,294	14,114	38,113	0	8

Note: Unit is Korean Won.

home-based employment and last job in the formal sector).

This clear relationship between the employment status of the last job and the pattern of occupational status growth leads me to question if differences in employment status mobility pattern are associated with differences in individual resources. That is, do women who move into either self-employment or family work in later life cycle stages have more resources than women who move into the formal sector or home-based employment? In Table 4, I compare women in each type in terms of the three human capital variables included in the analyses of occupational status growth (excluding the dummy variable on having a labor force interruption).

Women whose last job is either in self-employment or in family work have more schooling than others, among those who started their first job either in the formal sector or in self-employment. However, among those who started their first job as family workers, women whose last job is in the formal sector have more schooling than other women. As for labor force experiences, women whose last job is in the formal sector have the longest labor force experience among women who started their first job in the formal sector. However, among those who started the first job either in self-employment or in family work, those who moved into home-based employment have the longest labor force experience. In terms of the length of labor force interruption, those who moved into self-employment have the shortest interruption period among women who started the first job in the formal sector. However, among those who started the first job in self-employment, those who moved into the formal sector have the shortest interruption period, and those who moved into another type of family work have the shortest interruption period among women who started the first job as family workers.

Simply speaking, there is no clear pattern that relates differences in women's employment status mobility patterns to differences in individual resources. That is, differences in the employment status mobility of female workers cannot be accounted for by differences in individual resources. Nevertheless, differences in employment status mobility have a clear relationship with the lifetime occupational status growth pattern. This suggests that each employment status differs in terms of its level of opportunities for occupational status growth. In order to elaborate this point further, I apply the occupational career model for two types of women: those who started their first job in the formal sector and worked in another formal sector job in their last job, and those who started the first job in the formal sector but moved into self-employment in the last job.

The results of regression on the two types of women are reported in Table

TABLE 4. CHARACTERISTICS OF WORKERS BY TYPE

Type	Schooling (years)	Labor force experience (months)	Interruption period (months)
Total	7.38	57.96	71.64
Ecluding family workers	8.80	57.15	73.50
Formal scetor-formal sector	8.74	56.49	88.81
Formal sector-self-employed	9.67	55.59	64.84
Formal sector-family worker	9.15	49.34	67.48
Formal sector-home-based employee	8.42	49.88	66.74
Self-employed-formal sector	8.29	70.00	36.00
Self-employed-self-employed	8.50	68.11	77.51
Self-employed-family worker	8.63	54.56	52.50
Self-employed-home-based employee	7.04	106.92	46.15
Family worker-formal sector	5.33	65.92	69.47
Family worker-self-employed	5.24	58.59	85.15
Family worker-family worker	5.22	50.52	51.18
Family worker-home-based employee	4.46	73.89	87.11
Home-based employee-formal sector	6.60	30.60	48.00
Home-based employee-self-employed	—	—	—
Home-based employee-family worker	9.00	60.00	0
Home-based employee-home-based employee	7.13	15.88	61.50

Note: figures indicate the mean values of women in each type.

5. The overall fit of the model improves significantly if I limit the analysis only to those whose first and last jobs are both in the formal sector (model 1). The effects of women's education are significant except for those with vocational high school, and some college education has the largest effect of all categories. The three variables measuring women's lifetime employment experiences again have no significant effect. On the other hand, among women who started their first job in the formal sector but moved into self-employment in the last job (model 2), neither women's education nor their employment experiences have any significant effect in explaining variation in occupational status gains.

As I described earlier, in the occupational career model used in this study, b_1 measures the level of opportunities in the society. Therefore, by comparing the value of b_1 in each model, I can see whether the two types of women face different levels of opportunities for occupational status growth. Comparing model 2 with model 1, occupational status of the first job has a larger positive effect in model 2. Since the effect of this variable measures the term $(1 + b_1)$ in the equation presented earlier, the parameter b_1 is hence

TABLE 5. REGRESSIONS ON LOGGED OCCUPATIONAL WAGE OF THE LAST JOB: SELECTED TYPES OF WORKERS

Variable	Formal sector-formal sector		Formal sector-self-employed	
Intercept	5.32**	(2.30)	6.55**	(2.66)
Logged occupational wage of the first job	.49***	(.17)	.59***	(.22)
Education				
Primary school	—		—	
Middle school	.19**	(.10)	.11	(.11)
Vocational high	.26	(.17)	-.39**	(.15)
Academic high	.49***	(.13)	.04	(.14)
Some college	1.35***	(.50)	.09	(.28)
Junior college	.63**	(.26)	-.37	(.30)
University or moer	.65*	(.38)	-.15	(.30)
Logged labor force experience	-.01	(.07)	-.06	(.06)
Interruption	-.14	(.13)	-.03	(.14)
Interruption period	.001	(.001)	.001	(.001)
Age				
25-29	1.65***	(.59)	.01	(.33)
30-34	1.66***	(.57)	.11	(.33)
35-39	1.88***	(.57)	.22	(.32)
40-44	1.95***	(.57)	.43	(.34)
45-49	1.72***	(.57)	-.15	(.35)
50-54	1.94***	(.56)	.11	(.36)
55-59	1.55***	(.59)	.01	(.45)
60-64	—		—	
Logged city size	-.08	(.05)	-.07	(.06)
Percent manufacturing	.12	(.58)	-.49	(.56)
Adjusted R-squared	.31		.15	
N	174		117	

*$p < .10$, **$p < .05$, ***$p < .01$.

Note: Numbers in parentheses are standard errors.

-.51 (.49-1) in model 1 and -.41 (.59-1) in model 2. That is, compared with women who stayed in the formal sector, women who moved into self-employment in their last job experience a less negative effect of occupational status of the first job on status gains. In other words, this difference in the parameter b_1 of the two models indicates that opportunities for occupational status growth are greater among women who moved into self-employment than among women who found another type of formal

sector employment.

SUMMARY AND IMPLICATIONS

Among women in urban Korea who have held more than one job over the life cycle, the occupational status of the last job does not in general show any increase from that of the first job. Furthermore, the application of an occupational career model shows that changes in individuals' stock of human capital (indicated by lifetime employment experience variables) do not contribute to lifetime occupational status growth of female workers in urban Korea. That is, the major source of occupational status growth is not the increase in the stock of human capital through extensive or continuous lifetime employment but the opportunity for mobility into better jobs (jobs that increase returns for a given level of resources). What is the source of variation in opportunity for mobility into better jobs? The findings in this study suggest that employment status is an important source of variation that provides different levels of opportunities for occupational status growth.

In section one, I pointed out that there has been a general tendency to equate the informal sector in developing economies with underemployment and urban poverty. The findings in this study contradict such belief and suggest that women's involvement in the informal sector in itself cannot be argued to be an indicator of the marginality of the female labor force or women's exclusion from the economy entirely. At the same time, these findings cannot be argued to provide a rosy picture of the situation of married women workers in urban Korea due to the fact that the informal sector offers women employment with good economic returns. It is important that we interpret these findings within the context of various constraints placed on women's (especially married women's) employment in the formal sector, especially in white-collar occupations. Therefore, the findings reflect the "situational advantage" of informal sector employment among married women workers in urban Korea.

However, this is not to argue for the superiority of formal sector employment over informal sector employment as a whole. In order to elaborate on this issue, it is helpful to review some of the issues that recent research on the informal sector in developing countries has raised. Recent studies on the informal sector in developing countries have led to the general rejection of the dual economy perspective, and there is a growing awareness that the relationship between the formal and informal sector needs to be viewed more as a continuum, that the informal sector is as

much a vital part of the developing economies as the formal sector. Even so, there are two radically different interpretations on whether such a development strategy is benign or exploitative (on the part of employers) at the individual level, and desirable or harmful at the national economy level.

For those who hold an optimistic view, the "substantive rationality or the high degree of initiative" (Roberts 1990) of those involved in the informal sector provides the basis for such optimism. An extreme version of this position is found in De Soto's (1989) approach to the informal economy in Peru. For De Soto, informality "represents the irruption of 'real' market forces in an economy straitjacketed by mercantilist regulation" (Portes and Schauffler 1993, p. 40). Although informal economic activities were originally a survival mechanism of migrants, they expanded into the real economic core of many industrial and service activities, contributing to about 40 percent of the gross domestic product (GDP) recorded in the national accounts. The reason for this lies in the excess regulation of the economy ("bad laws") which creates various costs for informal workers to operate within the protection of the law. Therefore, De Soto calls for the removal of all state regulations (deregulation and decentralization) in order for the reserve of productive human resources to be fully utilized and the entrepreneurial spirit to flourish in a free market.

In contrast, for those who hold a negative view, any advantage that the informal sector offers (for the individual as well as for the national economy) is only "situational" for the short term and is self-destructive in the long run (Long and Richardson 1978; Moser 1978; Tokman 1978; Davies 1979; Scott 1979; Banerjee 1982; Remy 1982). At the individual level, the informal sector represents the exploitation of workers who, in general, must cope with low wages, poor working conditions, and insecure jobs. At the national economy level, the linkage between the formal and informal sectors is basically a relationship of subordination in the sense that the development of the informal sector is highly dependent on the operation of the formal sector. Furthermore, the practice of informal employment and small businesses' production inhibits large firms' incentive for technological innovation and capacity for expansion. Therefore, the state needs to play a stronger role to control those "unscrupulous" employers and to create more jobs through the expansion of the formal sector.

In between these two positions, many take a rather intermediate position and argue that the informal sector performs positive functions for the labor force and the economy despite the serious deficiencies in its undertakings. For example, small business not only creates the basis for fostering and channeling entrepreneurial skills and developing productive forces in

general, it also represents the core of the flexible production and decentralized networks and is in this sense more adaptable to the economic conditions prevalent in the Third World (Beneria 1989).

Going back to the discussion of the female labor force in urban Korea, the first thing to note is the need to remove the restrictions placed on married women's employment in the formal sector. This is not because of the superiority of formal sector over informal sector employment. Rather, as long as there are restrictions on married women's employment in the formal sector, women's employment in the informal sector is a choice without much alternative. This is undesirable not only at the individual level as it may well indicate the "exploitation" of women's labor, but it is equally undesirable for the economy in the sense that it indicates an inefficient utilization of human resources. Therefore, the first thing to do is to remove the barriers against married women's employment in the formal sector: open up white-collar occupations, provide more flexible work schedules including part-time jobs, and provide more day care facilities (Park 1988).

At the same time, it is equally important to recognize that a complete absorption of the female labor force into the formal sector is not a realistic goal (at least not for the near future). This is due to several factors. First, there is the problem of job creation. Second, there are many important nonmonetary considerations which attract women into the informal sector, such as the location, flexible schedule and informal atmosphere, work environment where discipline is relaxed and they can associate with a small group of friends and relatives, and the feeling of independence (Nelson 1979). Under the given division of labor within the household, these nonmonetary benefits of informal sector employment may provide strong incentives for married women to find employment in the informal sector.

Equally important, complete absorption of the female labor force into the formal sector may not be a desirable goal as well (at least not for the near future). Recent studies in the United States on the gender gap in wages find that women are more disadvantaged in sheltered bureaucratic organizational settings and less discriminated against when exposed to market and competition (Bridges and Nelson 1989; Baron and Newman 1990). Given this finding and considering that there exists severe discrimination against women in the Korean labor market (not only in finding employment but also in developing careers), informal sector employment may well provide better employment opportunities for many women to develop their potential.

Therefore, it is important to recognize that informal sector employment is a viable option for many women for various reasons and will probably

remain so for some time. Based on this recognition, efforts should be directed toward the protection and support of these workers. For example, as for women in self-employment or in family businesses, it is important to recognize that although the small business sector is not the "engine" of economic development, it has many positive functions for the economy. As many studies on the role of the small business sector find, the small business sector does contribute significantly to growth "as the recipients of the technological diffusion, as sources of on-the-job innovations, as active investors in new (and used) equipment, as major suppliers of consumer goods and services, and as flexible users and absorbers of most of the labor force" (Patrick and Rohlen 1987, p. 341).

Based on this recognition, the government could step in and act as an "entrepreneurial incubator" with active programs that provide support such as training, credit facilities, and marketing assistance. However, support must go well beyond economic measures. For example, examining a few cases of growth economies based on the flexible specialization of the small business sector (i.e., Italy, Miami, Hong Kong), Portes, Castells and Benton (1989) note that there are three points of convergence in these cases: government support, entrepreneurial environment, and bonds of solidarity. Therefore, they argue, the central condition is the "environment in which entrepreneurial opportunities are both visible and within reach of persons of modest resources" (Portes, Castells and Benton 1989, p. 307).

If the small business sector could be placed in such a protective and supportive environment, it may well provide an important outlet through which women's pursuit for realizing their own potential may be actively laid out within a less discriminating environment. This may be equally desirable for the society as well, since this may help society to realize a more efficient utilization of its human resources.

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