

HUMAN CAPITAL AND OCCUPATIONAL SEGREGATION IN INDONESIA: A STUDY BY GENDER AND SECTORS OF EMPLOYMENT

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The objective of this study is to examine the pattern of employment differentials separately for women and men in Indonesian labour market. This study uses the data from the 1993 Indonesian Family Life Survey (IFLS), a periodic joint survey which has been run by Lembaga Demografi, Faculty of Economic, University of Indonesia and RAND. Using logistic model, the result suggests that education is a particularly important of sector employment outcomes. Experience was also notably important in determining whether a male worker was in professional or in managerial and administrative occupation.

Keywords : Occupation, Gender, Discrimination, Indonesia

INTRODUCTION

In Indonesia gender issue has become all the more important with the launching of Garis Besar Haluan Negara (GBHN). One of the principal objectives of the GBHN is to ensure equitable opportunities for women. In spite of this, government policies, for instance as reflected in the Rencana Pembangunan Jangka Panjang Tahap II, do not appear to be based on any detailed analysis of the difference in male-female earnings. In Indonesia research devoted to the problems of women in the labour market is important for a number of reasons. Firstly, the government is exploring the issues involved in the future ratification of the International Labour Organization (ILO) Equal Remuneration Convention, 1951; which is concerned with the question of non-discriminatory wages for female labour. An overall assessment of the status of female workers in the economy is thus timely.

Secondly, the island has experienced economic growth rates approximately seven percent annually in recent years. Employment scenarios for the period up to 1986 suggest that labour supply is likely to be an indicator of the increasing women labour force participation. Indeed, government policy explicitly favours increased female labour force participation. Therefore, it is important to explore the constraints on Indonesian women, one of which may

be unequal treatment in the labour market, and to design policies that will induce more women to seek employment.

Thirdly, in accordance to the United Nation Decade for Women, there is a need to evaluate the role of women in Indonesia and, possibly, to suggest ways of improving their lives and conditions of work. More generally, however, studies of occupational segregation and wage differentials according to gender have been concentrated in the developed countries of Western Europe and The United States. To the author's knowledge, the present analytical study is the first of its kind to be attempted in Indonesia.

While thorough study of the women's position in Indonesian labour market is desirable, this is not quite possible due to data, time and other constraints. Consequently, the analysis in this study may be narrower in scope and is confined to specific areas of interest.

LITERATURE REVIEW

Segmented Labour Market Approach

The dual labour market theory has later introduced the theory of labour market segmentation. The stress is not on the two major labour market divisions (the Dual Labour Market Theory) but on a market consisting of many separate groups of workers. Gordon (1982) comments that, because of the continuing drive for accumulation and control of workers, it becomes more and more likely that employers will try to divide the labour market into highly stratified clusters of jobs which are clearly separated from each other. He claimed such segmentation of jobs, according to race, age and gender, has political and economic imperatives for capital. The analysis views divisions within the labour market not only as a means of increasing productivity, that is by hiring different types of workers at lower rates. However, it also views it as a means of ensuring workers' stability by limiting the potential spread of class consciousness among the most disadvantaged workers. The segmentation of the labour market is seen as intimately related to the division of labour, and both are seen as a means of ensuring production at a lower cost and preventing groups from focusing upon their common condition by emphasizing fine distinctions of status and a multiplication of occupational worlds. In short, segmented labour market (SLM) is the result from the attempt, which is made by employers to capture strategic control over product and factor markets through the policy of "divide and rule".

The essence of SLM theory is the all-pervasive nature of barriers to mobility. Labour supply schedules may differ among otherwise similar groups because of differences in education and training, geographical location and work history, while labour demand schedules may differ because of differing industrial structures, discrimination by race and gender, or trade union barriers to entry. As a result, there is a whole series of possible wage and employment balance for a particular group of employees.

Education is seen as a predominant tool used to enhance the differences within the working class. Educational credentials are used to divide a routine business and legitimize entry to jobs and earnings differentials. In addition, employers are supposedly required to play an active role in shaping up educational institutions to serve these channeling functions.

Labour market segmentation has been a popular theory among radical writers in Australia. Power (1975) has been highly influential with her analysis of the sexually segmented labour market. She noted that women are employed in many occupations that are similar to housework such as work that often involves cleaning, cooking or washing or caring for the young or the sick. Even in the relatively high level occupations, administrative and executive positions in highly feminized areas such as teaching or social work tend to be held by men.

This section has discussed the contributions made by institutional labour-market economists pertaining to pay differentials between men and women. They viewed the wage differentials, as a collective nature and institutionally rooted, and not the consequences of personal differences in productivity. In these theories, female wages are low because they are at a lower level within the organization's hierarchy and are trapped in the sectors where wages are low.

Factors Related to Female Labour Force Participation

Female economic activity rates, in contrast to male rates, manifest remarkably great variability and are highly dependent on factors that differ greatly between countries. It is generally perceived that females have greater responsibilities as wives, mothers and house workers than they have as workers. Hence, many factors have played important roles in determining whether or not a woman works. Barrett (1982) has concluded that the desire of women to take gainful employment is to a large extent "a function of demographic variables such as age, place of residence, marital status and the number of children". Many other studies have pointed out that differences in female activity rates (hereinafter abbreviated to FARs) between countries or within a given country result from different socio-economic as well as cultural factors (Boserup, 1970; Jones, 1986; Standing, 1978). Married women may enter the work force for more complex reasons, which, according to Standing (1989), can be classified into three groups: economic considerations, the family as a social unit and personal considerations of the wife as an individual.

Previous studies (Chiswick, 1980; Evenson 1983) have found that demographic factors including ages, marital status, the number of children born, the presence or absence of young children, and migration status as well as residence differences, determine the likelihood that women will participate in the work force. Socio-economic factors such as female education, husband's income, level of economic development as well as social attitudes also influence women's decisions about whether to enter the work force. Recent study has considered the importance of work during one stage of the life cycle in explaining whether a woman works during later stages of life (Floro, 1995).

The pattern of female activity rates (FARs) has changed dramatically during the last century, particularly in the developed countries. Changes in technology, both in the household and in factories, changes in women's education, economic pressures on the family (expansion of the cash economy), changes in social attitudes, smaller family sizes and the expansion of institutional child-care facilities have influenced the pattern of FARs in both developed and developing countries (Boserup, 1970; Jones, 1984).

Researchers explained variations in rates of female employment have influenced various socio-economic factors. Education of women is one of the key factors postulated for these variations. It is generally believed that education equips women with the necessary knowledge for many modern roles, including modern economic activity. Sinha (1965) argues "education is the most potent factor that alters not only social attitudes but also the employability of women".

A common assumption is that education has a positive impact on female participation in the work force. This relationship has been more commonly supported by evidence from developed countries. The strength of the relationship, however, depends largely on other factors such as marital status, number of dependent children and husband's income.

In developing countries, however, the relationship between education and FARs is more complex. Standing (1978), provided a comprehensive review of empirical research in low-income countries. Although many studies have found that education tends to have a positive relationship with FARs, some evidence shows no relationship or even a negative relationship. Another type of relationship that is also quite familiar in many developing countries is the curvilinear, or more specifically the U-shaped relationship. This pattern indicates a high rate of participation in the work force among women who have a very low and also a relatively high level of education. However, participation of women with minimal schooling is lower. In India, a J-Shaped pattern has been reported, with substantially lower participation rates among non-matriculated literate females compared to the participation rates of illiterate females and those with higher levels of education (Sinha, 1965). This curvilinear pattern is also suggested by national statistics as a typical pattern of female employment in Indonesia (Raharjo and Hull, 1982).

It has been suggested that the low participation rates among women with minimal schooling reflects a "status frustrations effect", where by women prefer to stay at home and remain unemployed rather than accept low status or low paid jobs (Standing, 1978; Jones, 1989). This status frustration effect is more pronounced in conditions where the growth of the labour market is slower than educational expansion or when education does not fit job requirements. The observation that a significant proportion of middle-class women in a rural area prefer to stay at home because no "proper" jobs are available for them seems to confirm to this hypothesis.

Although the tendency towards a generally positive relationship between higher education and female employment in both developed and developing

countries has been supported by many studies in the past, the theoretical basis for this relationship is debatable. It has been asserted that women with relatively high education have more employment opportunities than those with less education. In addition, income aspiration, which generally has a positive association with education, encourages more educated women to participate in the work force. Cain (1976), noted that the net relationship of wives' labour force participation to their educational level was consistent with past findings and with economic theories regarding the wives' wage effect. In other cases, the likelihood of working may also encourage women to improve their educational levels, especially if it would increase their income and status (Jones, 1986). In recent years education has become more readily available in both developed and developing countries and employment opportunities for educated women have expanded, particularly in urban areas. Both factors are probably important in accounting for higher FARs in urban areas in several South-east Asian countries in recent years. Highly educated women generally have a better chance to participate in various modern occupations. This is often explained by the human capital approach, in which education may be regarded as human investment. People will decide to undertake this expenditure only if they can expect a higher probability of employment and better-paid employment in the future.

Although education seems to be an important factor in explaining female employment, in some societies, mainly in developing countries, socio-cultural factors are a significant influence on both education and economic activity. Neuman (1992), found in some Middle-Eastern countries that levels of education and female work participation were relatively low due to cultural barriers that excluded females from various activities. Katjasungkana (1995), emphasized that socio-cultural factors rather than education are more important in understanding female employment in the Indonesian society.

The income aspirations of educated women may encourage women to work. However, husband's income has generally been found to have a negative impact on FARs. This inverse relationship between husband's income and the participation of wives in the labour force has been intensively studied in developed countries, mainly in the United States (Mincer, 1962; Cain, 1976). Standing (1978) provides a review of empirical studies in LDCs. In recent years, the increasing demand for female labour is reflected from the changes in job structures. This facilitates female entry into the work force, rather than income levels themselves.

Many explanations of the labour force participation of married women are in terms of economic considerations. The need to increase family income is considered one of the major motivations for married women to enter the work force. The need for additional income as a factor encouraging many wives to work is not only found in subsistence economies. It is also considered as an important factor in the developed countries (Smith 1989). Although Javanese tradition supports high levels of female economic activities, evidence suggests that the pressure of poverty has influenced this pattern. Elite women in

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urban areas and middle and upper income level women in rural areas are less likely to enter the work force. This is because of their families' higher socio-economic status (Katjasungkana 1995).

Poverty has also been suggested as an important reason why many women in developing countries migrated to urban areas to find work. The study shows that poverty forces married women to break down the cultural stereotype of the ideal married women. Generally, the likelihood of married women working has been stimulated by the need to reduce the household economic burden. Therefore, it has been hypothesized that the likelihood of married women working will decrease as husbands' income rises.

Theoretically, income as an important motivation for work is based on the classical theory of labour supply behavior. This concept has been developed and modified using the family unit as the basis of analysis for the employment of married women, instead of the individual basis as in classical theory (Mincer, 1962). It has been hypothesized that a wife's labour supply decision depends on several of the household's characteristics such as husband's income and income aspirations of the wife.

Using American data, Mincer (1962) and then Cain (1966) found that the participation of married women in the labour force had a positive relationship with their own wage but a negative relationship with the husband's or other family members' income. Recent evidence also suggests that the negative impact of husband's income on the participation of wives in the labour force is becoming less uniform (Standing, 1978; Jones, 1986). The income aspirations or career orientation of educated wives has played an important role in reducing the negative effect of the husband's income. The study explains the different attitudes of husbands, which in some societies have been influenced by culture as well as education. More recent studies stress the importance of relative socio-economic status of husband and wife as a causal factor in wives' labour force participation. The assessment of relative economic status is not only based on husbands' income but also their occupational and age-related reference groups.

Another economic variable that has been observed as explaining differentials in the FARs of married women is previous work experience. The participation of married women in the work force at any stage of the life cycle depends strongly on their participation at earlier stages. However, other factors such as financial need and career orientation or seniority of work, which are generally associated with future income, have probably influenced the likelihood of married women continuing their jobs.

In past reviews of factors related to female economic activity, it has been stressed repeatedly that cultural attitudes are important in explaining FARs. In some societies, religion or other cultural aspects are often suggested as influencing social attitudes towards working women, especially those working outside the home. It has been observed that less restrictive attitudes of parents or husbands towards their daughters or wives would encourage women to work. Religion has been claimed to be a factor that influences the low eco-

economic participation rates of women in many Islamic countries (Boserup, 1970). However, in Malaysia and Indonesia, where women have been traditionally active in the work force, Islam, the predominant religion, does not restrict women indoors to domesticity. In a comprehensive study comparing non-agricultural activities in certain Middle-Eastern and Latin American countries, Boserup (1970) reached the conclusion that cultural differences between the regions have influenced attitudes towards working, though the levels of economic development are roughly similar. The importance of cultural aspects as variables determining the economic activity of women has been indicated in several other studies of regional differentials between countries as well as within countries (Durand, 1975; Jones, 1977; 1982). Other researcher has argued that changing social attitudes have been partly responsible for the substantial increase in the numbers of working women in developed countries during this century (Durand, 1975).

Some of the empirical researches are considered relevant to the present study have been outlined in this section. Many other factors have been observed elsewhere help explain variations in female economic activity. Standing (1978), summarized that factors such as husband's employment status, health, savings/wealth, migration status and race/tribe as determinants of female labour force participation in several case studies in low income countries. Some of the variables considered but that are beyond the scope of the present study include government policy, laws relating to women's work, job opportunities and the availability of childcare.

In conclusion, it seems that women enter or refrain from entering the work force because of the interactions of complex factors, demographic, socio-economic and cultural aspects that are difficult to treat in isolation.

A more consequential type of discrimination is occupational discrimination. This occurs when women are excluded in one way or another from certain desirable occupation, and are then crowded into less desirable occupation where their presence depresses wages. Wages are higher than they otherwise would be in those occupations from which women have been excluded. Occupational segregation has existed because it has been possible for society at large to prevent women from having access to certain occupation. By tradition, women are excluded from certain positions. As a consequence women are crowded into a limited number of occupation, thereby lowering the wage in those occupations. At the same time, the supply of labour is less than it otherwise would be in the 'male only' occupation, with the result that wages will be higher in these occupations than they would be in the absence of segregation.

It should be noted that segregating occupation is not the only causes to the low wages for woman, but the number of occupation available for women also be limited. Using the Supply side approach, the Human Capital model can provide a clean, consistent theoretical explanation for gender differences in earnings and occupations in terms of the voluntary choices women and men make. It is believed that this model provides the sole explanation for gender differences in economic outcomes, economic inequality between men

and women in the labour market would perhaps not be considered a serious social problem.

Supply side explanations, focus on the observation that men and women may come to the labour market with different tastes and with different qualifications. Human Capital is a unique set of abilities and acquired skills that one brought into the labour market: education, general training, on-the-job training, and experience. Other productivity - related characteristics, that is the demographic characteristics of the worker such as gender, age and marital status also play an important role in labour force participation decision and their productivity (Chiswick, 1980). A number of supply side factors influence women's occupational choice. This include the socialization process and various barriers to their obtaining training in traditionally male fields.

Human Capital theorists also argue that since women generally anticipate shorter and less continuous work lives than men, it will be in their economic self - interest to choose female occupation, which presumably require smaller human capital investments and have lower wage penalties for time spent out of the labour market.

The overall condition of the economy is the most important set of demand side factors that determines the wage rate and employment. Furthermore, long - term economic growth has been the main force in increasing everyone's living standards. In the short - run, economic growth alters the income distribution because it helps the unemployed more than those who already have jobs. Therefore, aggregate economic growth may be effective in reducing the gender wages and employment discrimination, as well as in reducing relative and absolute poverty. The factors that represent country's economic growth are Gross Domestic Product (GDP), Investment and Rate of Employment.

From literature review discussed above, the formulated hypotheses for each sectors of employment that will be tested is:

H₁: There is a difference in probability for male and female to enter the labour market

RESEARCH METHODOLOGY

Data Collection

This study uses the data from the 1993 Indonesian Family Life Survey (IFLS), a periodic joint survey which has been run by Lembaga Demografi, Faculty of Economic, University of Indonesia and RAND. The Indonesian population data showed that most of the country's population are engaged in the agriculture sector. The mean value of selected variables showed that there are differences in male and female characteristics within the sector.

Variables

The independent variables used to estimate the occupational assignment model include education (EDUC1, EDUC2, EDUC3), experience, marital status, area of respondent and working hours. The dependent variable is the probability of being in agriculture sector.

Data Analysis

The first step in the estimation of the model is to estimate the sector assignment equations. A likelihood ratio test shows that the coefficients, taken as a group, are significantly different from zero at the one percent level of significance. By employing logistic function for parameter estimation with probability > $\chi^2 = 0.000$; log likelihood of 1444,5425 for male and 797,969 for female, this thesis then estimates multinomial logit separately by gender. The probability of an individual locating in occupation j , conditional on her/his characteristics, is given by

$$P_{is} = P_r(\text{i observed in occ } s) = \frac{e^{\beta_s X_i}}{\sum_{j=1}^J e^{\beta_j X_i}} \quad s = 1..j$$

where X is a vector of exogenous variables affecting supply and demand decision, which influence a given individual's observed occupation.

The model's specification includes variables expected to influence the individual's occupational choice.

In the multinomial logit regression, the non-agriculture sector is taken as a norm, against which another group, which is agriculture sector, is compared.

Research Finding and Discussion

A likelihood ratio test shows that the coefficients taken as a group are significantly different from zero. This Logit function is significant at one percent significant level with log likelihood = -2911.5147 for male workers and -3042.4004 for female workers. This test rejected the null hypotheses, which indicates that there is a different probability between male and female to enter agriculture sector.

It must be lighted that this thesis adopts the non - agriculture sector as the reference sector. This means the sector assignment equation must be interpreted as the propensity of workers being in the agriculture sector rather than in the non-agriculture sector.

Table 1 shows that the value of estimated parameter of independent variables shows that marital status have discriminatory effect for male workers and female workers to work in the agriculture sector. It is possible that mar-

riage is proxy for genuine productivity differences in job commitment and stability. Agriculture sector in Indonesia is a very traditional sector, which requires human energy more than skills, because of the lack of agricultural technology.

A likelihood ratio test shows that the coefficients taken as a group are significantly different from zero. This Logit function is significant at one percent significant level with log likelihood - 3484.0326 for male workers and - 2744.1907 for female workers. This test rejected the null hypothesis, which indicates that there is a different probability for male and female to enter formal job status.

Further, Multinomial logit shows more detail analysis of the variables that affect the probability differences between male and female to enter formal job status.

Male workers, with relatively low level of education attainment (EDUC2 and EDUC3) are more likely to be employed in formal job status. Women who have higher level of education, EDUC1, will have more opportunity of being employed in formal status than men.

Males and females workers' experience gives them more or less opportunity to enter formal job status, while marital status gives a very different probability between male workers and female workers. Married male workers gain very high probability to work in formal job status. This situation is very possibly supported by the assumption that married male workers will have very strong commitment to work. On the contrary, married female workers get less opportunity to work in formal job status, because employers say that married female workers will spend most of their time doing domestic job, such as child rearing and child bearing.

The Indonesian economy presents an opportunity to study the gender wage discrimination and occupational attainment. Recent economic reform has brought great changes to the economy, especially in the growth of sector employment. This thesis examines the issue of male and female employment discrimination in blue and white - collar occupation. To meet this objective the derived hypotheses that to be tested are:

A likelihood ratio test for male and female in blue collar occupation shows that the coefficients taken as a group are significantly different from zero. The Multinomial Logit function is significant at one percent significant level with log likelihood -1444.5425 for male and -797.9699 for female. This test rejected the null hypotheses, which indicates that there is a different probability between male and female to enter blue collar occupation.

Further, Table 3 shows the probability for male and female to enter blue collar occupation. According to the education attainment, female workers with all levels of education attainment (EDUC1, EDUC2, EDUC3) have greater probability to work in blue collar occupation compared to male workers with the same levels of education.

Furthermore, marital status also gives advantages to women in entering blue-collar occupation.

Occupation is defined at a very aggregated level, namely the blue and white-collar occupation (Brown et al; 1980). The section below examines the probability of male and female to enter nine classifications of occupations: professional, administrative and managerial, clerical, sales worker, service worker, agriculture, production, and transportation. Labourer is used as the reference variable.

The independent variables used to estimate the occupational assignment occupational model include level of schooling attainment (EDUC1, EDUC2, EDUC3), experience, marital status, working hours, and area of respondent. The inclusion of these independent variables is to control for differences in background to assert the impact of gender upon entry into different occupations in the labour market. The dependent variable is the probability of being in each occupational category. Separate models are estimated for male and female.

The results of multinomial logit job attainment model for the separate male and female samples are presented in Tables 4 and 5. In the regression, the labourer occupation is taken as the norm, against which each other group is compared. These coefficients record the impact of the various variables on the log odds of being in the occupations listed in the first row of the table relative to the reference category of occupations. A positive coefficient implies a higher probability of being in the designated occupation rather than in the reference occupation (labourer). Among the male worker, relative to attaining a job in the labourer occupation, a primary school individual (EDUC3) is more likely to obtain a job as a production worker, but has less opportunity to find work in either the professional, administration, clerical, sales worker, service worker, agriculture, transport, other things being equal. This finding indicates a very great difference from the female multinomial logit job attainment model, which shows that a primary school female worker (EDUC3) has more opportunity to obtain a job not only as a production worker, but also in service worker, agriculture, production, transport – the occupations that could be classified as blue collar occupation. The female worker is less likely to find work in white-collar occupation: professional, administration, clerical and sales worker.

Males, particularly those who have junior high school education (EDUC2) have more chances to work in the clerical and sales work, whereas individual male with the same level of education are less likely to work in the blue-collar occupation classification. Men, who have higher education (EDUC1), have more opportunity to get a job in professional, clerical and sales worker occupation, while other male workers with the same level of education are less likely to work in agriculture, production, and transportation. On the other hand, female workers with either primary, junior high school or senior high school education level, have less opportunity to attain a job in professional, administrative & manager, clerical and sales. However, an individual female with the same level of education has more opportunity to find work in blue-collar occupations: service worker, agriculture, production, and transportation.

Females who have primary school education (EDUC3) are equally likely to work in service worker and transportation occupation. The higher the level

of education that an individual female has, the more likely she will work in an agriculture occupation. The discussion above indicates that for individual female workers, agriculture occupation is the highest occupation that they can work among the blue-collar occupations. From those two tables we can see that only men who have higher level of education (EDUC1) has greater opportunity to gain entry into the white collar occupation. In contrast, female in all levels of education only have opportunity to work in blue-collar occupation. Experience variable does not seem to make any difference for female worker to attain occupation, such as professional, administrative and managerial, and sales worker. Individual male workers with the same level of experience as women are equally likely to work in the production or sales worker occupation. The more level of experience that the male has the more likely he will work in the clerical occupation. The length of male experience is not influencing the probability of entering into professional and administrative and managerial occupation. Marriage variable for male multinomial logit equation has positive signs for all types of occupation. These findings are as expected, consistent to the human capital theory. In fact, Indonesian labour market gives more opportunities for married male to attain a job in all types of occupation. The married female workers have the highest likelihood of being employed as sales workers, but less the likely of being employed in transportation. It is probably because of the energy that is required for men to be employed this kind of job.

The wage earners living in urban areas is more likely to be in production occupation (blue-collar occupation), compared to the wage earners residing in rural areas. Female employees in urban region are more likely to be employed in almost all type of occupations except production and agriculture.

All multinomial logit models rejected the hypotheses for coefficients other than the constants which were equal to zero. The results suggest that education is a particularly important determinant of sector of employment outcomes. Experience was also notably important in determining whether a male worker was in professional or in managerial and administrative occupation.

CONCLUSION AND IMPLICATION

Conclusion

The questions addressed by this study are important from policy perspective. This is the case particularly for many developing countries, including Indonesia, which are implementing policy reforms aimed at economic liberalization and expansion of private sector. A prominent aspect of reform in Indonesia and several countries has been a reduction in the size of civil service. The consequences of such measures, both for economic growth and for equity, will depend on how the labour market functions - in particular, on the access of men and women to wage and self employment and on the returns to

schooling and experience in the labour markets. Improving economic opportunities for women in Indonesia is also an important objective. Little information currently exists, however, on gender differences in employment determinants and earnings and on how policy can effectively influence labour market outcomes for women. Finally, this study is one of the few for Indonesia that examines the determinants of earnings of the informal sector. Since this is a sector in which both women and the poor are likely to be found, policies targeting the informal sector are potentially effective means of raising incomes particularly the vulnerable groups.

Are occupational segregation necessarily detrimental to women? While it is clear that many of the female dominated occupations are in lower income or status attributes, there may be some reluctance to argue for a policy of female entry into traditionally male occupations such as transport operation. The position is rather different, however, when entry to relatively modern occupations that have not yet been associated to gender within the value system of the society is considered.

In assessing the implications of occupational segregation by gender one important consideration is earnings differentials by occupation. If the returns to labour in the male and female occupations are very similar, then there need be little concern over labour market segregation from the economic welfare viewpoint. Adequate income data by occupation are not currently available for Indonesia, therefore it is not possible to show conclusively whether or not women are concentrated in lower paying occupations. However, one detailed study of the manufacturing sector has concluded that 'marked differences in the average wages of males and females may be partly explained by discrimination against female in employment in many modern sector industries rather than discrimination in wages between the sexes'. This suggests that access to better paying occupations is a major problem for women as compared to men. Another important question in considering the future development of female employment in Indonesia is how the occupational structure will change over time. There are considerable urban - rural differences in occupational structure for the labour force. For females the share of white - collar occupations and service occupations is higher in urban areas while the share of blue - collar occupations is much lower in urban areas. Urban - rural differences in the occupational structure of the male workforce are somewhat different: while the share of upper level occupations is also higher in urban areas and the share of blue - collar occupations is lower, there is little urban - rural difference in the share of service occupations. It is generally presumed that the distribution of occupations between men and women is the major determinant of the gender gap in earnings and that changes in the occupational distribution provide the primary way of altering relative earnings. This condition highlights the importance of the within - sector wage ratios and thus the role of factors like increased education and sectoral shifts in the demand for labour.

Implications

Certainly there are gender differences in employment and in characteristics employment in Indonesia, and more detailed analysis may well reveal more such differences. Do such differences necessarily mean that there is a problem: women face discrimination in these labour markets? If the women's wage average about 70% of men's, is it of any significance discrimination against women and that women receive lower return on their human resources? The study suggests that gender differences in activities or wages do not necessarily imply discrimination against women or that women receive lower returns on their human resources. In sectors and tasks that reward brawn and bursts of energy, men on the average, may have comparative advantages (that underlie part of the job segregation and wage differential by gender), and even if wage differentials are substantial, the return to some of women's human resources may be as great or greater than the to men's (as describe in informal sector).

Quite possibly women are disadvantaged in some important respects in the Indonesian labour market. This may be the large differences in the age-wage, schooling-age-wage patterns. But more detailed analysis is needed to observe the gender differences in employment patterns and outcomes in order to ascertain that indeed there is evidence of gender discrimination in Indonesia. In addition, as long as there are gender differences in other aspects of society importantly (including child care and other dimension of household production), there are likely to be gender differences in human resources in employment patterns and employment outcomes even if there is no discrimination in the labour market and no gender differences in human resources at the time of entry into the labour force. In addition, particularly in poorer societies whereby brawn and bursts of energy are relatively important, there maybe gender differences in human resources that favour males (though women may have more stamina for many physical tasks).

Traditionally, Indonesian women on average, have less continuous attachment to the labour force. Therefore, the expected returns firm-specific training are lower for women than for men from the firm's perspective of firms. At times, an individual young women is not sure about the extent of their attachment to the labour force, moreover, they have less incentives to invest in their general training. Firms/employers discriminate against women because of this. This will induce the women not to invest in their own human resources development. This kind of discrimination is probably a major aspect in the Indonesian labour markets because of the inefficient use of women human resources.

Higher education for women is thought to be an important means of improving their situation in the labour markets. Though assessment of the impact of schooling on wages and other labour markets outcomes are plagued by the usual tendency to confuse association with causality because the failure to control for unobserved characteristics such as ability and motivation, by analyst and policy maker. It is shown that considerable returns to school-

ing are at least as high for women as for men. With the process of development, moreover, the dimensions of human resources that are rewarded in labour markets have shifted from physical strength and bursts of energy to those dimensions that are developed in schools. Thus, schooling will probably will increase in importance, with a concomitant shift in comparative advantage in labour markets from men toward gender neutrality. It is suggested that schooling substantially increased the women labour markets option, increasingly so, as the traits developed in schools became increasingly important due to more rapid technological and market changes. Literacy attained largely from schooling is an observed characteristic that apparently has less uncertainty toward productivity of the individual workers and thereby less gender differential in labour markets.

Policy Recommendation

There clearly exists a need to improve the position of women workers in Indonesia – firstly, as workers, and secondly, as women who still occupy a subordinate position in the society. Indonesia has a Ministry of Women's Affairs, which at present mainly concentrates on family welfare issues. Consequently, only the Ministry of Manpower deals with affairs relating to employment. The National Constitution of 1945 recognizes equality between men and women but the reality has been very different. Therefore, it is important that gender sensitivity is incorporated into policy formulation.

As the analysis in this study has pointed out, broader national conditions usually dominate the narrower employment conditions in determining the situation of women workers, specific national – level policies and activities can further help the women's cause. These include: equal right for women under the law, including labour law.

The Followings are Some Examples:

The withdrawal of restrictive legislation for women under the guise of protection; to propagate sexual equality and the equal sharing of reproductive as well as productive tasks; improved training programs and equal promotional opportunities for women workers; public and private services and other provisions to facilitate and accommodate the reproductive responsibilities of working parents, such as child – care services; flexible working schedules and part – time work possibility for both sexes; improvement of public and social infra structure, such as housing and transportation; and, most important and difficult of all, the expansion of employment opportunities for both men and women in national development program.

A practical policy proposal is that the government should make the provision of appropriate technological training legally binding for enterprises, which employ a large number of women. This would help ensure jobs for women even when new technology are introduced. A second proposal is for

concrete measures to increase the involvement of women in training programs in non - traditional fields. Despite being eligible for such training, women were still reluctant to participate. Suggested measures include a quota system and a proactive campaign to disseminate information effectively to women.

A tax reduction policy should be formulated for enterprises that employ a large number of women. Many employers remain reluctant to employ women because of prejudice and fears of paying maternity and sick leave.

To enhance the empowerment of women in the workplace, a quota system should be introduced to enable women workers to take up leading positions, especially in industries where large numbers of women are employed. Women generally are the minority group in the decision - making positions.

Although education and occupation are associated with income, other factors may be involved in determining individual income. The crucial need to investigate levels of income, in less developed countries, is well recognized. However, the real impact of the husband's income or family economic status on the wife's participation in the work force can only be demonstrated if better information on the level of husband's income is available, and if this factor can be separated from other related factors such as the husband's attitude toward the wife's employment.

In studying the female life cycle in relation to female activity rates, parity history is one of the most important aspects because the maternal incompatibility role hypothesis would be better tested by data on the work status of women at each stage of the childbearing period. Research on this subject, which includes work histories would also help in understanding the continuity of work after marriage.

In conclusion, a study specifically of female employment and related factors should be undertaken in this country in order to get a better understanding of female employment patterns in Indonesia.

REFERENCES

- Agrawal, N., (1995). Indonesia Labor Market Policies and International Competitiveness. *Background Paper for the World Development Report 1995 and World Bank Policy Research Working Paper 1515*, Washington DC.
- Alder, N.J. (1993). Asian Women Management, *International Studies of management and Organization*, vol. 23, No. 4. Spring, 1993.
- Alderman H; Jere R. Behrman, Shahrulkh Kahn, David R. Ross and Richard S (1996) Decomposing the Regional Gap in Cognitive Skills in Rural Pakistan. *Journal of Asian Economics*. vol 7 (1) Spring 1996. pp 49 - 75
- Anker, R. and Hein, C. (1985). Why Third World Employers Usually Prefer Men. *International Labor Review* 124, no.1: 73-90.
- Anker, R. and Hein, C. (1986). *Sex Inequalities in Urban Employment in The Third World*, Macmillian Press, London.
- Appleton, S. P. Colher and P Horsnell, " Gender, Education and Employment in Cote d'Zoores, Social Dimensions of Adjustment". *Working Paper no. 8*. (World Bank, Washington DC., 1990).

- Azaradis C, Drazen A (1990). On the Organization of Rural Markets and Process of Economic Development. *American Economic Review*, vol. 78, June 1988.
- Barrett Nancy. S.(1982) The Impact Of Public Policy Programs On The Status Of Women: Obstacles to Economic Parity for Women. *AEA Papers And Proceedings*, vol. 72 No. 2, May 1982. pp 160 - 165.
- Barron, R. D. And Norris, G. M. (1976). *Sexual divisions and the dual labour market in Dependence and Exploitation in Work and Marriage*, (eds) Barker, D.L. and Allen, S.; London, Longman, 47 - 69.
- Behrman, J.R., and Deolalikar (1993). Unobserved household and community heterogeneity and the labor market impact of schooling: A case study for Indonesia. *Economic Development and Cultural Change*, vol. 41:111 - 39.
- Behrman, J.R., and Deolalikar (1995). Are There Differential Returns to Schooling by gender? The Case of Indonesian Labor Markets. *Oxford Bulletin of Economics and Statistics*, vol. 57, No. 1, pp 97-117.
- Behrman, J.R., and Wolf, B. (1984). Labor force participation and earnings determinants for women in the special conditions of developing countries. *Journal of Development Economics*, vol. 15: 259 - 88.
- Behrman, J.R., and Zheng Zang (1985). Gender issues and employment in Asia. *Asian Development Review*, vol. 13, no. 2: 313 - 57.
- Behrman, J.R., Nancy Birdsall, Anil Deolalikar (1995). Marriage markets, labour market, and unobserved human capital: an empirical exploration for South-Central India. *Economic Development and Cultural Change*, vol. 43:65 - 97.
- Beller, A. (1982). Occupational segregation by sex: determinants and changes. *The Journal of Human Resources*, 17: 371 - 92.
- Beller, A. (1982). The Impact of Equal opportunity policy on Sex Differentials in Earnings and Occupations. *AEA Papers And Proceedings*, Vol. 72., No. 2, May 1982. pp. 171 - 176.
- Beller, A. (1985). Changes in sex composition of U. S. occupations. *The Journal of Human Resources* 20: 235 - 50.
- Bielby, D. and Bielby, W. (1984). Work commitment, sex role attitudes and women's employment. *American Sociological Review* 49: 234 - 47.
- Biau, F.D. and Wallace, E. H. (1979). Occupational segregation by sex: Trends and Prospects. *The Journal of Human Resources* 14:197 - 210.
- Boserup (1970). *Population and the Status of Women in Rural Development: Obstacle to advancement of women during development*. New York, St Martin's Press
- Boserup, E. (1970). *Women's Role in Economic Development*. Allen and Unwin, London.
- Bridges, William P (1994). The Sexual Segregation of Occupations: Theories of Labor Stratification in Industry. *The American Journal of Sociology*., Vol. 88, No. 2, 1994. pp. 270 - 295.
- Buvinic, M and Yudelman, S., (1989). Women poverty and progress in the Third World. *Headline Series Foreign Policy Association* No. 289.
- Cain, G.G. (1976). The challenge of segmented labour market theory to orthodox theory. *Journal of Economic Literature*.
- Carrington, W.J., Kenneth R. Troske (1996). Gender segregation in small firms. *The Journal of Human Resources*, XXX(3), 1996.
- Carter, M. (1982). Competition and segmentation in internal labor market. *Journal of Economic Issues* 16 (Dec): 1063-77.
- Chiplin, B and Sloane, P. J. (1976). Personal characteristics and sex differentials in professional employment. *Economic Journal* vol. 86, pp. 729 - 45.
- Chiswick, C. (1980). The value of a housewife's time. *The Journal of Human Resources* xvii, 3, 413-25.
- Chow, G.S. (1960). Tests of equality between subsets of coefficients in two linear regressions. *Econometrica*, vol. 28, pp. 591-605.
- Cox Edwards, A. (1996). *Government Regulations and Industrial Relations in Indonesia*.

- Dixon Mueller, R and Anker, R. (1988). Assessing women's economic contribution to development training in population. Human Resources and Development Planning. *World Employment Program paper No. 6*, International labour Office, Geneva.
- Dta Gupta, N (1993). Probabilities of Job Choice and Employer Selection and Male - Female Occupational Differences. *AEA Papers and Proceedings*, Vol. 83, No. 2, May 1993. pp. 57 - 61.
- Fischer, C. (1987). Toward a more complete understanding of occupational sex discrimination. *Journal of Economic Issues*, vol. xxi no. 1: 323 - 40.
- Floro, M. (1992). Women work and agricultural commercialisation in Phillipines, in Folbre, N., Bergmann, B., Agarwal, B., and Flora, M., (eds), *Women's work in the World Economy*, New York University Press, New York, pp. 3-40.
- Floro, M., (1995). Economic restructuring, gender and the allocation of time. *World Development*, 23(11):1913-29.
- Funkhousen, E. (1997). Demand side and supply side explanation for barriers to labour market in Developing Countries: The Case of Guatemala *Economic Record*, vol. 69, No. 207, Dec. 1993.
- Gannicott, K. (1986). Women, wages, and discrimination: some evidence from Taiwan. *Economic Development and Cultural Change*, 34(4), 721-30.
- Glich, P. And David E. Sahn (1997). Gender and education impacts on employment and earnings in West Africa. Evidence from Guinea. *Economic Development and Cultural Change*, 34(4) 421 - 43.
- Gridly, T.H. (1991). Labor Market Segmentation and The Determination of Wages in The Public, Private Formal and Informal Sectors in San Jose, Costa Rica. *Economic Development and Cultural Change*, 39:385-605.
- Gordon, David M, Richard Edwards, and Michael Reich (1982). *Segmented Work, Divided Workers: The Historical Transformation of Labor in the U. S.* Cambridge University Press.
- Greenhalgh, C. and Steward. (1980). Work history patterns and occupational attainment of women. *Economic Journal*, vol. 94, pp. 493 - 519.
- Gundling T. H. (1993). Women's wages and economic crisis in Costa Rica. *Journal of Economic Development and Cultural Change*, 41, 278-97.
- Hill, M.A. (1983). Female labour force participation in developing and developed countries consideration of informal sector. *Review of Economics and Statistics*, 65(3):459-68.
- Hood Jacqueline N and Christine S. K (1994). Patterns of Differential assimilation and Acculturation for Women in Business Organizations. *Human Relations*, Vol. 47., No. 2., 1994. pp. 159 - 177.
- Houseman, Susan N and Katherine G. Abraham (1993). Women In The Labor Market: Female Workers as a Buffer in the Japanese Economy. *AEA Papers And Proceedings*, Vol. 83., No. 2, May 1993. pp. 45-51.
- Ihromi, T.O. (1995). Some Result of the Research on the Implementation of Article 11 of the Convention on the Elimination of All Forms of Discrimination Against Women in the Labor World. *Paper presented at the Panel Discussion in the Framework of the 45th Anniversary of the University of Indonesia*, Jakarta, April 1995.
- Jones, G. (1986). Differentials in Female Labour Force Participation Rates in Indonesia: Reflection of Economic Needs and Opportunities, Culture or Bad Data? *Majalah Demografi Indonesia* no. 26, Des. 1986.
- Katjasungkana, N. (1995). Where Are We 10 Years After the Ratification of the Convention on the Elimination of All Forms of Discrimination Against Women?, *Paper presented at the Panel Discussion in the Framework of the 45th Anniversary of the University of Indonesia*, Jakarta, April 1995.
- Kidd, M.P (1993). Sex discrimination and Occupational Segregation in the Australian labour market. *Economic Record*, March 1993.

- Killingsworth, Mark R (1993). Analyzing employment Discrimination: From The Seminar Room to the Courtroom. *AEA Papers and Proceedings*, Vol. 83, No. 2, May 1993. pp. 67 - 72.
- Meng, X. And Miller, W.P. (1995). Occupational segregation and its impact on gender wage discrimination in China's rural industrial sector. *Oxford Economics Papers*, 47(1):136-55.
- Miller, P. (1987). The wage effect of the occupational segregation of women in Britain. *The Economic Journal* 97, 885 - 97.
- Mincer, J. (1962). Labour force participation of married women, in Lewis, H.G. (ed), Aspects of Labour Economics, *Universitie National Bureau Conference Series No. 14*, Princeton, University Press, princeton, NJ.
- Neuman S. and Fiderman A. (1992). Benefits of women's education within marriage: Results for Israel in a dual labor market context. *Journal of Economic and Cultural Change* 40, 411-24.
- Oppenheimer, Valerie (1970). The Female Labor Force in the United States: Demographic and Economic Factors Governing its Growth and Changing Composition. *Population Monograph Ser. 5*, Berkley, Ca, 1970.
- Pasaribu, Bomer (1994). Human Resources Development in Indonesia's Economic Development in the Sixth Five-Year Development Plan (Repelita VI). *Makalah pada ILO Tripartite Workshop on Human Resources Development and International Competitiveness in ASEAN Countries*, Manila 12-13 December 1994.
- Pasaribu, Bomer (1994). Memasuki PJP II, Reformasi Politik Ketenagakerjaan, Paradigma: Demokrasi, Integrasi dan Keadilan. Didalam : *Hubungan Industrial dan organisasi ketenagakerjaan*. Djoko Pitojo (ed). Yayasan Tenaga Kerja Indonesia (YKTI) dan Freidrich-Ebert-Stiftung (FES), Jakarta.
- Power, M. (1975). *The making of women's occupation*. Hecate, 1, 2, pp. 25.
- Rahardjo, Y. And Hull, V (1984). 'Employment patterns of educated women in Indonesian cities', in G. W. Jones (ed): Women in the Urban and industrial workforce: Southeast and East Asia. Canberra, *Development Studies Centre Monograph Series*, Australian National University.
- Rama, Martin (1996). The Consequences of Doubling the Minimum Wage. The Case of Indonesia. *Research Working Paper, the World Bank*, Washington DC.
- Reder M. (1975). The theory of occupational wage differentials. *American Economic Review* 65: 833-50.
- Schultz, T.P. (1990). *Women's changing participation in the labour force: a world perspective*, *Economic Development and Cultural Change*, 38(3):457-88.
- Semyonov, Moshe, and Shenhav, Y. (1988). Investment dependence, economic development, and female employment opportunities in less developed countries. *Social Sciences Quarterly*, 69: 961 - 78.
- Sim, C.N.C and Yong, C. (1995). *Information technology, gender and employment: a case study of the telecommunications industry in Malaysia*, in Mitter S. And Rowbotham, S. (1995).
- Simha, J.N (1965). Dynamics of female participation in economic activity in a developing economy, in *Proceedings of the World Population Conference*, Belgrade, Vol. IV, Migration, Urbanisation, Economic Development and cultural Change, 39, pp 336-7.
- Snyder M, Fran B, and Paul M (1996). Gender Policy in Development Assistance: Improving Implementation Results; *World Development*, vol 24, no. 9, pp. 1481 - 1496
- Solomon, S. W. (1981). Occupational self selection: A human capital approach to sex differences in occupational structure. *Review of economics and statistics*, 63: 60 - 69.
- Standing, G (1978). Labor commitment, sexual dualism and industrialisation in Jamaica. ILO Population and employment *Working Paper* no. 64. Geneva, ILO.
- Standing, G. (1989). *Global feminisation through flexible labour*, *World Development*, 17(7), 1077-95

TABLE 1

**Multinomial Logit Male and Female in Agriculture Sector
(Non-Agriculture as Reference)**

Variables	Male		Female	
	Odd ratio	z	Odd ratio	z
educ1	0,1385	-15.234**	0,1748	-8.141**
educ2	0,3358	-8.792**	0,4124	-5.329**
educ3	0,5561	-7.601**	0,5353	-6.865**
exper	0,9978	-1.014**	0,9948	-2.249**
marr	0,9783	5.745**	1,4451	4.205**
Area	0,1079	-30.222**	0,0987	-24.000**
jkbar	0,5207	-9.908**	0,6009	-8.833**
Constant	2,8022	9.645**	1,5803	15.6476**
Log likelihood	-2911,5147		-3042,4004	
Number of obs	3.842		2.706	
Prob> chi2	0,0000		0,0000	

Source: Processed IFLS, 1993

TABLE 2

**Multinomial Logit Male and Female in Formal Status
(Informal Status as Reference)**

Variables	Male		Female	
	Odd ratio	z	Odd ratio	z
educ1	2,7536	10,936**	3,2784	10,929**
educ2	1,1180	1,121	0,5196	-4,162**
educ3	0,9842	-0,216	0,5371	-5,765**
exper	0,9687	-15,010**	0,9790	-7,954**
marr	3,3959	10,616**	0,6417	-5,049**
Area	2,6007	15,597**	1,2611	3,067**
jkbar	1,2366	9,403**	1,1282	1,650
Constant	-1,7604	6,5788**	-1,2927	-4,253**
Log likelihood	-3484,0326		-2774,1907	
Number of obs	1.453		1.284	
Prob> chi2	0,0000		0,0000	

* Significant at 5% level; ** significant at 1% level

Source: Processed IFLS, 1993

TABLE 3

Multinomial Logit Male and Female in Blue Collar Sector
(White Collar as Reference.)

Variables	Male		Female	
	Odd ratio	z	Odd ratio	z
educ1	3,6883	13,915**	4,3207	11,359**
educ2	1,8612	6,274**	1,8686	5,493**
educ3	1,4833	5,630**	1,6171	6,647**
exper	1,0090	4,623**	1,0130	6,735**
marr	0,4983	7,085**	0,8855	1,743
area	3,0550	19,317**	2,3179	14,789**
jkbar	1,6180	8,050**	1,6875	10,523**
Constant	-2,4418	9,387**	-1,9706	9,084**
Log likelihood	-1444,5425		-797,9699	
Number of obs	2.315		2.069	
Prob>chi2	0,0000		0,0000	
Odds ratio value in parentheses				

* Significant at 5% level; ** significant at 1% level

Source: Processed IFLS, 1993

TABLE 4
Gender Discrimination and Segregation
Multinomial Logit Estimates for Female Occupation Allocation Equation

	Profesio nal	Adminis trative & Manage rial	Clerical	Sales Worker	Service worker	Agricul ture	Product ion	Trans port
educ1	-1,1854 (0,397)	-3,1710 (1,431)	-2,5796 (1,011)	-1,4155 (0,827)	0,6998 (0,400)	1,5688 (1,220)	0,9843 (2,522)	0,0710 (0,226)
educ2	-3,2266 (2,896)	-4,9116 (3,343)	-5,3663 (3,080)	-4,1146 (3,116)	0,1904 (0,819)	0,6789 (1,034)	0,5337 (0,312)	2,8104 (1,264)
educ3	-3,4926* (5,154)	-5,7766* (9,406)	-6,8365* (5,557)	-5,1538* (4,552)	0,2882 (0,657)	1,0208* (2,000)	1,1418* (2,479)	0,2224 (0,489)
exper	0,0205 (1,335)	0,0208 (1,734)	0,0518* (2,865)	0,0332 (1,917)	0,0014 (0,186)	0,0090 (1,051)	0,0006 (0,086)	0,0255* (3,126)
mar	0,0783 (0,171)	0,4635 (1,287)	0,5865 (1,285)	0,7083 (1,517)	0,0051 (0,023)	0,4184 (1,544)	0,1657 (0,690)	-0,1430 (0,548)
ikbar	0,3088 (1,170)	0,5479* (2,646)	0,9615* (2,118)	0,9100* (2,542)	0,4310* (2,924)	-0,2939 (1,894)	-0,2467 (1,751)	0,0500 (0,326)
area	1,4002* (3,311)	0,3651 (1,225)	1,7984* (3,030)	2,1645* (4,578)	1,1357* (5,292)	-2,3331* (9,363)	-1,2627* (5,643)	1,2399* (5,464)
Constant	2,7335* (2,096)	1,9614 (1,917)	-10,9102* (4,655)	-7,9445* (4,178)	-0,1202 (0,173)	1,3597 (1,814)	3,5766* (5,376)	1,5512* (2,145)

z value are given in parentheses
 Number of obs = 3730
 Prob > chi2 = 0.0000
 Log likelihood = -4848.0912

labour as reference
 * indicates significance at the 5 percent level
 LR chi2(63) = 2719.99
 Pseudo R2 = 0.2191

Source: Processed IFLS, 1993

TABLE 5
Gender Discrimination and Segregation
Multinomial Logit Estimates for Male Occupation Allocation Equation

	Profesional	Administrative & Managerial	Clerical	Sales Worker	Service worker	Agriculture	Production	Transport
educ1	1,5509* (2,341)	0,2972 (0,708)	1,6950* (2,867)	1,8716* (5,116)	-0,0342 (0,273)	-0,3159 (1,843)	-0,3512* (3,393)	-0,2160 (1,242)
educ2	-2,6786 (4,051)	1,4757* (3,269)	2,8504* (4,723)	2,7556* (7,159)	-0,0751 (0,445)	-0,7112* (3,374)	-0,5098* (3,265)	-0,7095* (3,396)
educ3	-4,2376 (6,579)	-4,9963 (14,003)	-5,4509 (9,597)	-4,5673 (12,149)	-0,8069 (4,659)	-1,1782* (5,269)	0,1610 (0,927)	-1,3284* (6,152)
exper	-0,0133 (1,148)	-0,0395* (5,172)	0,0498* (5,482)	0,0328* (4,667)	0,0206* (4,872)	0,0280* (5,181)	0,0347* (9,719)	0,0166* (2,988)
marr	0,4438 (0,965)	0,0398 (0,105)	0,8164 (2,135)	0,2207 (0,640)	0,4929* (2,235)	0,7615* (2,943)	0,6147* (3,111)	0,7461* (2,933)
jkbar	1,0772 (4,329)	1,8599 (11,788)	0,9944 (4,487)	0,8145 (4,511)	0,4174* (3,277)	0,7154* (4,743)	1,0874* (10,291)	0,5385* (3,410)
area	0,7751 (2,351)	0,8618* (4,842)	0,4116 (1,630)	0,2192 (1,218)	-0,0646 (0,605)	0,7630* (4,792)	-2,2405* (23,246)	0,2332 (1,609)
Constant	1,4454 (1,212)	2,0469* (2,853)	2,5629* (2,387)	1,9074* (2,254)	0,9123 (1,640)	0,3752 (0,562)	5,1208* (11,085)	0,5051 (0,742)
z value are given in parentheses				labour as reference				
Number of obs = 5436				* indicates significance at the 5 percent level				
LR chi2(63) = 3558.38				Prob > chi2 = 0.0000				
Log likelihood = -8169.7129				Pseudo R2 = 0.1788				

Source: Processed IFLS, 1993