

The Backward-Bending Supply Curve of Gender Specific Work Ethics In Emerging Third World Countries

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ABSTRACT

Most of the previous analyses on the work ethic posit that it occurs within the context of the job. The article suggests that the work ethic is, in part, a function of different socioeconomic environments and work ethics. The degree of additional labor pursued is a function of the variance in socioeconomic development between less developed countries and highly developed countries. The addition of the socioeconomic variable to the backward bending supply curve causes several questions to arise. These questions concern the value of additional money income compared with the loss of leisure time or the amount of additional goods an individual is able to purchase with the income from the additional labor.

The current article suggests that the nature of this labor-leisure tradeoff differs for males in highly developed countries as compared to males in lesser developed countries. Partly due to the pooling of family income, males in lesser developed countries have a greater preference for leisure over consumption. Due to these differences, the labor mobility of the female gender varies between highly developed countries and lesser developed countries. Specifically, male workers in highly developed countries inhibit the mobility of women in the work force, while the opposite is true in lesser developed countries.

INTRODUCTION

The author will attempt to examine the laborer's preference for variables in the labor-leisure tradeoff model. These variables include money income, additional hours of labor, consumption, leisure time, and female and male gender mobility differences in the global labor market. There are different work ethics between less developed and highly developed countries. These differences influence the degree to which married men and women seek additional labor or leisure under conditions of marginally rising wages.

For example, there are two factors to consider when an individual decides how many hours to work. One is the utility that hours of leisure bring. A second is the utility that hours of working bring by generating income and thereby allowing the individual to purchase consumption goods and services. When wage rates are higher rather than lower, working generates more income and a greater ability to purchase consumption goods and services. This influences workers to supply more labor hours when wages are higher rather than lower. This is known as the substitution effect. However, the substitution effect is not always decisive. When wage rates are higher rather than lower, working the same number of hours would generate a greater income as compared to when wages are lower. The change in earnings refers to the income effect or the wealth effect. Because of this effect, when wages are higher rather than lower, the worker could decide to take more leisure (supply fewer hours of labor). Suppose a worker initially earns \$20 per day by working 10 hours per day. This is a wage of \$2 per hour. If the wage is \$3 per hour, then the worker would earn \$30 per day if the worker continued to supply 10 hours of labor per day. The worker may choose to work 8 hours per day. In this case, the worker would earn \$24 per day, which is more than the amount earned before the increase in wages occurred.

According to classical economic theory, individuals determine how many hours to work (their labor supply) by making a tradeoff between two factors. These factors are the utility generated by hours of leisure, and the utility generated by the consumption of goods and services. The income earned from hours of work determines consumption. In the current article, the author examines the influences of socioeconomic development upon the labor-leisure tradeoff model, and the existence of female and male gender

mobility in the global labor market. In highly developed countries (HDCs), if the wage rate rises, male workers will increase the number of labor hours supplied. The value of additional consumption generated by working more hours outweighs the value of lost leisure hours. In technical terms, the substitution effect dominates the income effect. A different assumption exists for lesser developed countries (LDCs). If the wage rate rises in LDCs there are several possible responses for married male workers. These responses are a weak increase in the number of labor hours supplied, no change in the number of labor hours supplied, or a decrease in the number of labor hours supplied. As compared to males in HDCs, males in LDCs place a higher value upon leisure relative to the increased consumption possibilities.

If the above assumptions are correct, then one consequence would be that employment mobility for females would differ between LDCs and HDCs. Specifically, as compared to females in HDCs, females in LDCs would experience fewer barriers to employment mobility.

HYPOTHESIS

Wage earners in highly developed countries seek less leisure time as the wage rate increases. Conversely, wage earners in less developed countries seek more leisure time as the wage rate increases.

Male workers in highly developed countries restrict the mobility of women in the work force due to the value of additional money income. Consequently, female workers in HDCs move in lesser numbers to a narrower array of work positions than female workers in LDCs.

By contrast, male workers in less developed countries encourage the mobility of women in the work force due to the marginal value of additional money income. Consequently, female workers in LDCs move in greater numbers to a wider array of work positions than female workers in HDCs.

The hypothesis are based on a two year field study of laborers in Swaziland, Southern Africa.

LABOR MARKET SEGMENTATION: A FUNCTION OF POOLED FAMILY INCOME

Divisions among global workers by race, sex, education, and socioeconomic levels differ between less developed countries and highly developed countries. Depending on the socioeconomic development of a country, different groups have varied working conditions, promotional opportunities, and wages. (Reich, pg. 232)

Increasing wages and pooled family income influences the distribution of consumption and leisure among male and female family members. The family makes decisions regarding which family members will be the sources of income, the determiners of the distribution of that income, and the division of leisure time. The family member with the greatest influence in decision making is the male head of the household. Changes in income cause a redistribution of consumption patterns and leisure time. (Mincer, pg. 44)

Specifically, in less developed countries where female family members are encouraged to secure employment due to the extra income they can earn, male family members may perceive this as an opportunity for greater leisure time. In less developed countries, an increase in income generated by the female family member causes an

increase the leisure time of the male family members. The income generated by the female family member negates the need for the male family member to secure employment or additional hours of work to increase income due to pooled family income. There is a preference for leisure time over consumption by married males in LDCs for two reasons. One, because the utility of additional wages in LDCs is small. Two because the female family member can provide increased labor for increased income.

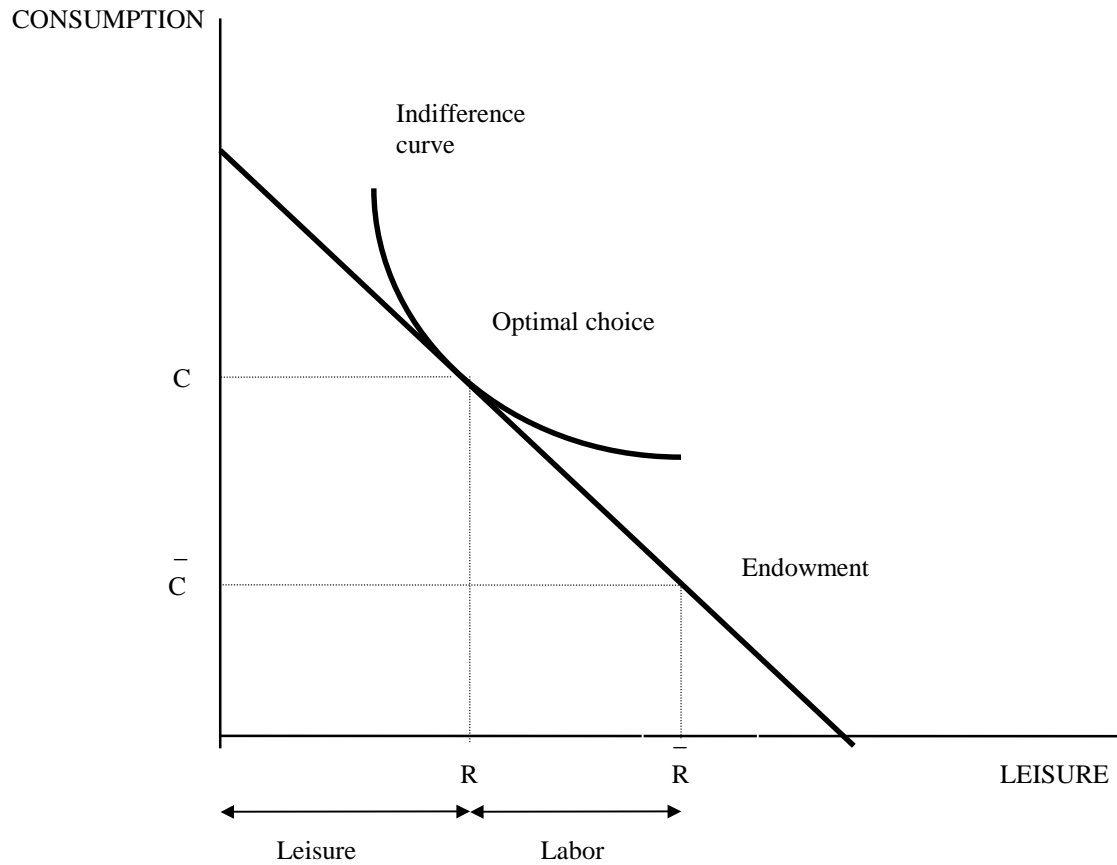
A BACKWARD-BENDING MODEL OF GENDER MOBILITY

An individual may choose to increase consumption capabilities by supplying additional labor hours, or may choose to increase leisure time by reducing the number of labor hours. (Varian, pg. 171) Shown in Figure 1 is the labor-leisure tradeoff model.

Economic theory also suggests that the supply of labor increases as income increases. (Figure 2) This supposition changes with the addition of the socioeconomic variable. Specifically, as individuals in highly developed countries earn an increasing wage rate for each additional hour of labor, they desire more labor and less leisure time. Conversely, as individuals in less developed countries earn marginally greater wages for each additional hour of labor they desire less labor and more leisure time. As stated in the introduction, the worker may choose to work fewer hours per day and still earn more than the amount earned before the increase in wages occurred.

Figure 1

CONSUMPTION AND LEISURE PATTERNS FOR HDCs



Labor Supply. The optimal choice describes the demand for leisure measured from the origin to the right, and the supply of labor measured from the endowment to the left. Where:

C = the amount of consumption the consumer has

\bar{C} = the amount of consumption that the consumer would have if she did not work

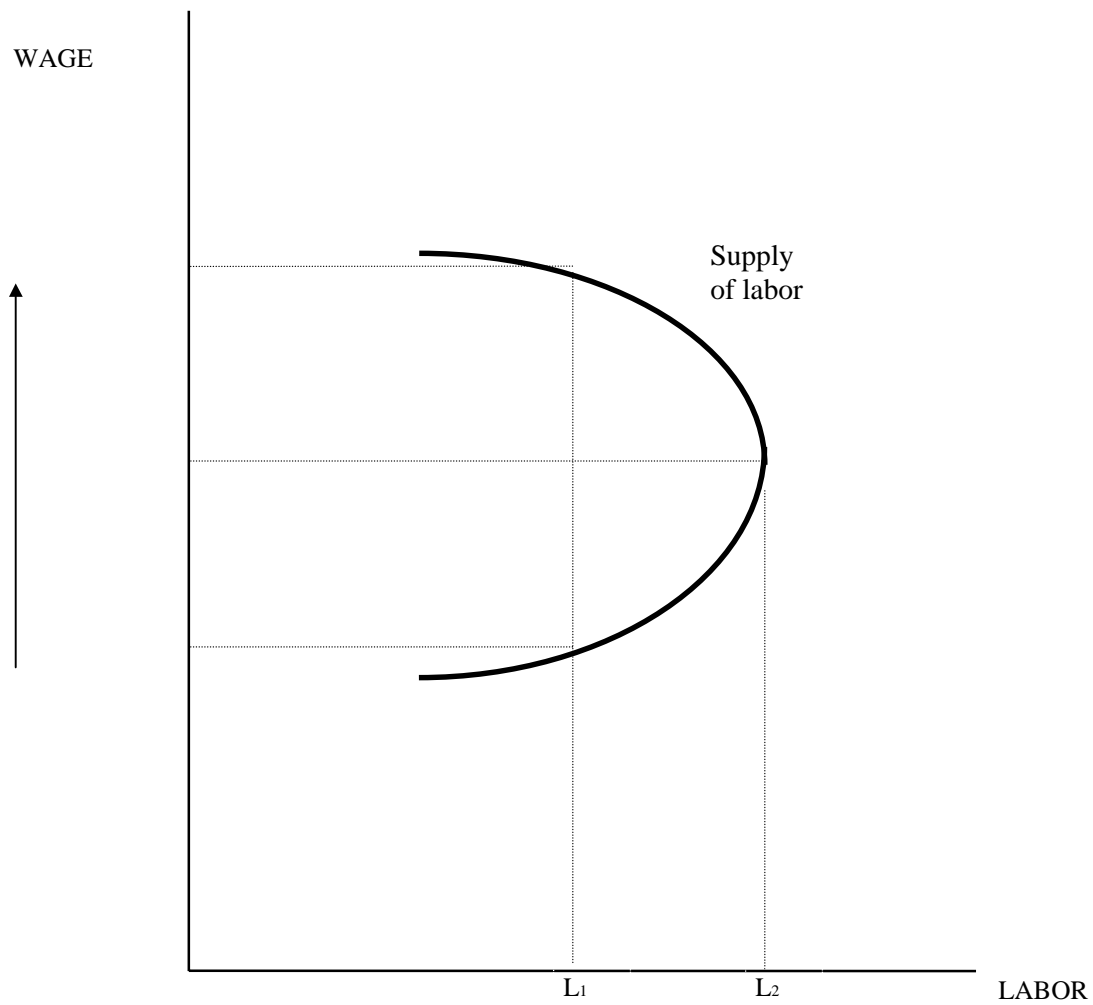
R = the cost of relaxation or leisure time

\bar{R} = the cost of not relaxing or no leisure time

$$C + R = \bar{C} + \bar{R} \text{ (Varian, pgs. 171-172, Figure 1)}$$

Source: Hal R. Varian. Intermediate Microeconomics: A Modern Approach (New York: W.W. Norton & Company, Inc., 1996), 172.

Figure 2
BACKWARD-BENDING LABOR SUPPLY CURVE FOR HDCs



Backward-bending labor supply. As the wage rate increases, the supply of labor increases from L1 to L2. But a further increase in the wage rate reduces the supply of labor back to L1.

Source: Hal R. Varian. Intermediate Microeconomics: A Modern Approach (New York: W.W. Norton & Company, Inc., 1996), 174.

According to economic theory, an increase in wages has two outcomes. One, the value of working more increases and two, the cost of leisure increases. As wages increase, the cost of leisure time becomes more expensive and people want less of it. This is called the substitution effect. (Varian, pg. 172) The addition of the gender specific socioeconomic variable causes the two outcomes to change as follows. One, as wages increase marginally, the value of working more does not increase. Two, the cost of leisure remains constant or decreases. The change in the two outcomes occurs because of the substitution of male labor for female labor. As wages in LDCs increase in very small increments, the cost of leisure time remains constant or decreases and male family workers want more of it. The relationship between variables is different in LDCs and HDCs.

While these graphs demonstrate some validity and reliability in highly developed countries, it becomes more convoluted in less developed countries. The tradeoff between leisure and labor in less developed countries is complicated by the ability of the male family member to acquire additional wages without working. How is this possible? It is possible by inducing the female family member to increase the number of hours worked. This causes a tradeoff between additional consumption generated by the female family member and leisure acquired by the male family member. (Figure 3)

The Stucky equation suggests that the labor-leisure tradeoff model moves up and to the left for male family members. It moves up and to the right for female family members. Specifically, the extra income derived from a wage increase does not offset the equivalent decrease in leisure time. For example, in LDCs the additional wage for one hour of labor is so small that it compares unfavorably with the equivalent decrease in

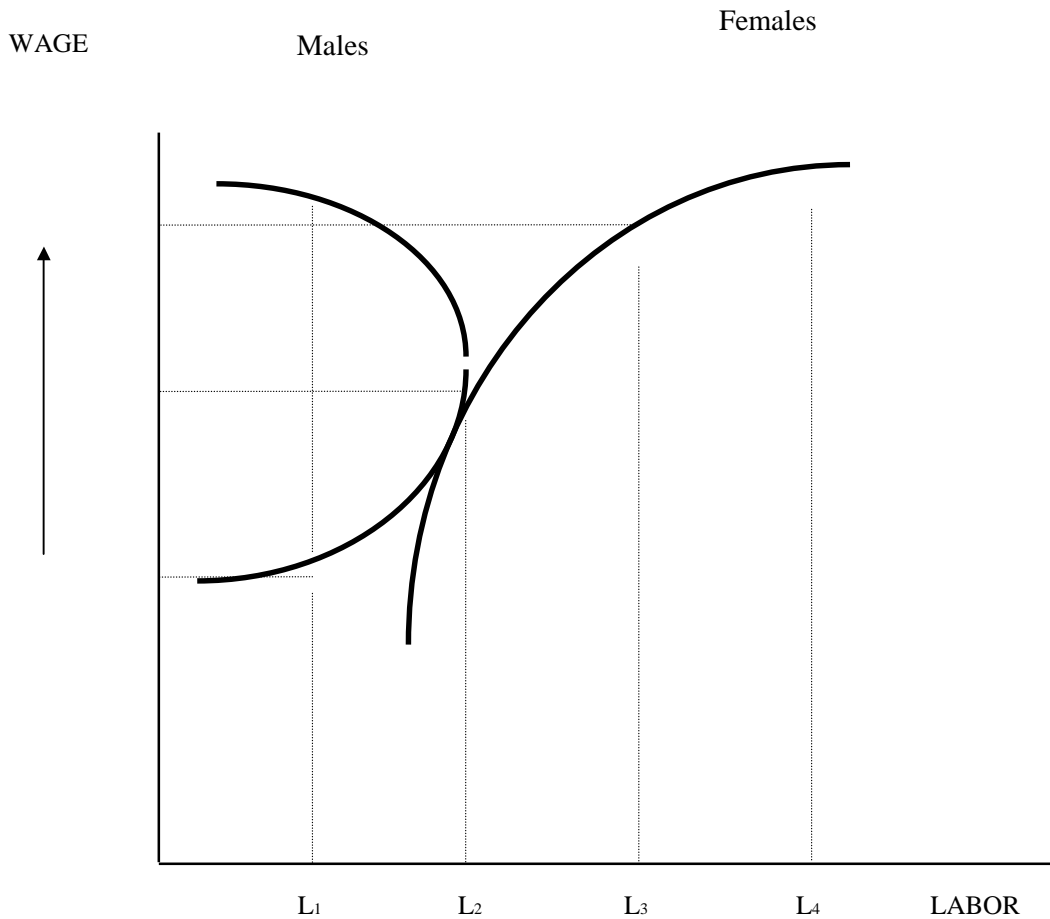
leisure time. The value of extra income to the worker for additional work should be equal to the value of the lost leisure necessary to generate the additional income. When this is not the case, as in less developed countries, the male worker has no incentive to trade leisure time for additional income. This is especially true when female family members are willing to forgo their leisure time to acquire the small amount of extra wages derived from extra hours of work. The male worker's unfavorable perception of the marginal utility of an additional hour of labor provides opportunities for the female family member's employment and/or advancement in the corporation.

Multinational corporations invest labor intensive capital into LDCs thereby increasing the wage rate and money income for the worker. Varian suggests that the demand for leisure under the substitution effect has an ambiguous sign. That is, "As the wage rate increases, people may work more or less." (Varian, pg. 173) The ambiguity of the sign diminishes with the incorporation of an additional variable--the socioeconomic development of a country. Specifically, as wages increase, the demand for leisure increases rather than decreases among male family members in LDCs. This occurs because increased consumption results from increased labor among female family workers. Figure 3 indicates that the curve for female family members moves up and to the right as wages increase. Figure 3 also indicates that the curve for male family members moves up and to the left as wages increase.

In highly developed countries when the wage rate increases, the substitution effect indicates that the worker may choose to increase the number of hours he/she works because the cost leisure increases. However, in LDCs where the additional increment in wages is so small that it affords little if any additional consumption, the preferences if for

leisure time over additional wages among male workers. This is particularly true when the female family member provides extra income through extra hours of work. Stucky's socioeconomic equation demonstrates this relationship. (Figure 3)

Figure 3
STUCKY'S SOCIOECONOMIC EQUATION
CONSUMPTION AND LEISURE PATTERNS FOR MALES AND FEMALES IN
LDCs



Stucky's socioeconomic equation. In LDCs, as the wage rate increases marginally, the female family member seeks more labor whereas the male family member seeks less labor due to pooled family income. Where:

IN HDCs

- >W => cost of not working
- >W => number of hours worked
- >W =< leisure time consumed

IN LDCs

- >W =< cost of not working
- >W =< number of hours worked
- >W => leisure time consumed

**GLOBAL WORK ETHICS:
A CULTURAL ANALYSIS OF VARIANCE
BETWEEN MALE AND FEMALE WORKERS**

The work ethic refers to the preference for leisure time over the accumulation of wealth. There is a direct relationship between the work ethic and the socioeconomic development of a country. Specifically, males in less developed countries have a lower work ethic and prefer the accumulation of leisure time over wealth. Conversely, males in highly developed countries have a higher work ethic and prefer the accumulation of wealth as opposed to leisure time. These assumptions influence the work choices available to women who wish to enter or progress within the work force.

Work choices among women are a function of the countries' socioeconomic development and work ethic. Where subsistence and leisure time are the goals of male family members, women have a greater opportunity to enter the work force. Work force entry allows women to sustain subsistence for the family as a whole and leisure time for male family members in particular. According to Mincer, "Income is assumed to have a positive effect on the demand for leisure, hence a negative effect on [the] total amount of work." (Mincer, pg. 45) In less developed countries where the work ethic is low, female family members have a greater opportunity to enter the labor market. Additionally, where the work ethic is low, motivated female family members have greater opportunities to move in larger numbers into a wider array of jobs, occupations, and/or progress within the corporate hierarchy. When male family members in LDCs value leisure more than consumption, a motivated female family member may use this opportunity to advance her way through the corporate structure. Any increase in the family income decreases the motivation for the male family member to enter the work force and/or to secure additional

hours of work. Specifically, an increase in family income decreases the incentive of male family members in LDCs to seek work. (Mincer, 1980)

IMPLICATIONS FOR PRACTICE IN THE MULTINATIONAL CORPORATION

As foreign investors move into less developed countries they create jobs and alter the percentages of income earned by various family members. The multinational corporation (MNC) is able to pay slightly higher wages than local industries in order to attract the most competent among the labor pool. The entry of the MNC into the local labor market provides a positive effect on the potential for greater family income. Conversely, and ironically so, the MNC also creates the negative effect of decreased incentives for the male family member to enter the work force. MNCs provide an equal opportunity for family members to enter the work force and earn higher wages than the local market can afford. Ironically, this equal opportunity offers female family members a greater opportunity to enter the work force. Consequently, the male family member has a greater opportunity for increased leisure time due to the pooled family income theory.

Well-trained managers of multinational corporations understand the application of motivational techniques for workers in highly developed countries. When corporations expand overseas, qualified, competent managers are expatriated to the host country. These managers fully expect to develop motivated, productive workers within their factories. To the extent that this does not occur, the manager may need to look elsewhere for solutions to productivity problems.

Specifically, solutions for low productivity do not lie in typical pay for merit schemes. Instead, solutions to productivity problems in less developed countries have

less obvious scenarios. First, the labor-leisure tradeoff as explained in the Stucky equation suggests that pay increases may lead to fewer hours of work among male family members and more hours of work among female family members. The result for the corporation is a zero change in productivity per worker.

Solutions to low productivity lie in individual incentive systems rather than wage rate increases. Incentive systems provide workers with regularly occurring awards based on their performance. Predefined rules are known in advance to all. (Pritchard, pg. 64) Incentive systems that lead to increased productivity among workers in less developed countries include simple, easy to understand systems that tie pay to performance. The piece-rate system in which pay is determined by the number of items produced is one solution. Modified versions of the piece-rate system, such as a wage for the standard number of units produced plus a piece-rate for each item produced above the standard, also may lead to increased productivity.

More complex incentive systems such as employee stock ownership plans (ESOPs), and profit sharing or gain sharing (Blinder, pg. 35) mean little to a third world country worker with a subsistence standard of living. Other systems such as the Scanlon plan, skill-based pay, commissions and so forth also contribute little to increasing the productivity of workers in LDCs.

Expatriate managers operating in LDCs can increase productivity by designing their own incentive systems. Incentive systems which are custom made to tie pay to performance and satisfy the immediate, daily needs of the worker are more likely to increase productivity than those that do not. Systems that build in loyalty and commitment and those that defer rewards are not appropriate for workers in LDCs.

Pritchard suggests eight steps to designing a custom incentive system. (1) Define the measures of performance. (2) Link the performance measures, feedback, goal-setting, and incentive systems together. (3) Incentives are repeatable and available to all. (4) Choose between individual and group incentives. (5) Determine how to set the performance levels. (6) Determine how much influence the workers will have in setting the incentive levels. (7) Determine how to make performance levels equitable across units. (8) Make the incentive system powerful. (Pritchard, pgs. 64 - 68)

Custom made incentive systems are especially appropriate in LDCs. Individual pay systems are preferable to group pay systems for workers in LDCs because they satisfy the immediate, daily needs of the worker. Individual piece rate systems also have the advantage of providing the worker with a choice between the number of hours worked, the number of items produced and, the pay per day. It is important to note that an incentive system will produce results only when understanding exists. Simple piece-rate systems may produce the fastest, and most effective means of increasing productivity.

CONCLUSIONS

The laborers' preferences for variables in the labor-leisure tradeoff model have been examined. The preference for labor or leisure is dependent upon the amount of money earned and the entry of female family members into the work force. Wage earners in highly developed countries seek less leisure time as the wage rate increases. Conversely, wage earners in less developed countries seek the same or more leisure time as the wage rate increases.

The preference for labor or leisure among male family members determines the entry of female family members into the labor market. Female workers in highly developed countries encounter greater barriers to employment than female workers in less developed countries.

The Socioeconomic Equation suggests that the labor-leisure tradeoff model in less developed countries moves up and to the left for male family members and up and to the right for female family members. The male worker's unfavorable perception of the marginal utility of an additional hour of labor provides opportunities for the female family member's employment and/or advancement in the corporation.

Managers of multinational corporations expect to develop motivated, productive workers within their factories. To the extent that this does not occur in less developed countries, managers should use individual incentive systems rather than wage rate increases to increase productivity.

FUTURE RESEARCH

One view taken in this paper regards the tradeoff between income and leisure time in LDCs. The tradeoff between income and leisure is so marginal that it facilitates the entry, by female workers, into the labor market and the earning of income. Conversely, the tradeoff between income and leisure time in HDCs is so significant that it hinders the entry of women into the labor market and/or their progression in the corporate hierarchy.

Another view taken in this paper is that the backward bending supply curve for labor is more applicable to males in LDCs than to males in HDCs. Future research should determine why this appears to be so.

An important question, and one not analyzed in this paper, is why this is so. For example, is the reason that male workers in LDCs have an inherently greater preference for leisure time over consumption as compared to males in HDCs? Is the reason that the working opportunities and working conditions faced by male workers in LDCs are inferior to those available to males in HDCs?

APPENDIX

Definitions

Backward-bending labor supply curve. This phenomenon occurs when an increase in the wage rate results in a decrease in the supply of labor. (Varian, pg. 173)

Female gender mobility. The degree to which female workers in different socioeconomic environments enter the labor force, measured by the number of people and the array of work positions.

Highly Developed Countries. A highly developed country (HDC) refers to a country whose economy has industrial production with a relatively high per capita income and one that employs a market economy. (Grosse, pg. 710) HDCs include the United States, Western Europe, Japan, Canada, Australia, and New Zealand. These countries dominate the world system politically, economically, scientifically, and technologically. (Brinkerhoff, pg. 590)

Labor Market Segmentation. The segmentation of the labor market is defined as “the historical process whereby political-economic forces encourage the division of the labor market into separate sub-markets, or segments, distinguished by different labor market characteristics and behavioral rules.” (Reich, pg. 233)

Less Developed Countries. A less developed country (LDC) refers to a country in the third world. Countries listed as LDCs include African, Asian, and Latin American countries. They have low per capita incomes and a high dependence on primary materials industries. (Grosse, pg. 712) These countries comprise approximately 75 per cent of the world's population and hold a peripheral status in the world capitalist system. Because of low productivity and large populations, these countries have a lower standard of living. (Brinkerhoff, pg. 591) The current study is based on a two year field study of laborers in Swaziland, Southern Africa.

Multinational Corporation. A multinational corporation refers to a corporation composed of affiliated firms, in different countries that linked by common ownership, resources, and strategies. (Vernon, pg. 31)

Socioeconomic Status. Measures of socioeconomic status “rank individuals on income, education, occupation, or some combination.” These measures “result in a ranking of the population from high to low on criteria such as years of school completed, family income, or occupation.” (Brinkerhoff, pg. 226)

Substitution Effect. The substitution effect suggests that “when the wage rate increases, leisure becomes more expensive, which by itself leads people to want less of it.” (Varian, pg. 172) If the substitution effect is dominant, then when the wage rate rises, the individual works more hours and buys more consumption goods and services. Hence, consumption is substituted for leisure.

Typology of Countries. Countries of the world divide into three classifications based on their position in the world economic system. The classifications are first world

(highly developed), second world, and third world (less developed). Brinkerhoff, pg. 590)

Work Ethic. The degree to which the accumulation of wealth is preferred over leisure time.

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