

# Does Leisure Time Use Contribute to a Wage Increase of the Thai People?

Siriwan Saksiriruthai

**Abstract**—This paper develops models to analyze the relationship between leisure time and wage change. Using Thailand's Time Use Survey and Labor Force Survey data, the estimation of wage changes in response to leisure time change indicates that media receiving, personal care and social participation and volunteer activities are the ones that significantly raise hourly wages. Thus, the finding suggests the stimulation in time use for media access to enhance knowledge and productivity, personal care for attractiveness and healthiness in order to raise productivity, and social activities to develop connections for possible future opportunities including wage increase. These activities should be promoted for productive leisure time and for welfare improvement.

**Keywords**—Leisure, wage, time use, Thailand.

## I. INTRODUCTION

THIS paper explores whether changes in leisure activities affect the wage increase. According to theory of utility maximization, besides consumption, leisure is the activity consumed for individual's utility maximization. Leisure is recognized as the non-market activity that contributes relaxation and utility maximization. It provides benefits both by fulfilling physical and psychological needs by driving individual's utility. Though leisure takes a substantial proportion of time as it is physically necessary as well as it mentally improves activities, current research does not emphasize on leisure since it is believed that leisure is an unproductive time-consuming activity. The relationship between leisure and wages has been examined since the theory relating time allocation decisions to wage does not give a clear prediction. A variety of those studies have linked their findings to the labor supply issues, which are strongly related to leisure and time use. Empirical works that illustrate how wage is related to leisure include [1]-[3]. The findings varied since the period of time studied and the characteristics of the observations are different.

For investigating whether time use in specific leisure activities causes wage change, the regression by using time for those specific leisure activities is applied. According to previous research studies, the activities that were significantly found impact to individual wage include computer use, media receiving, personal care, sport and exercise, recreation, learning in leisure time and social participation and volunteer

activities. As computer use plays a key role in raising productivity at the workplace (for instance [4]-[5].) Personal care develops physical appearance and is proved positively correlated to wage since beauty is a factor causing discrimination in labor market [6]-[7] and healthiness boosts individual's productivity which improve wage. Physical activities by playing sport and exercising generate good health as well as improved physical and mental condition [8]-[9], whereas learning brings about higher skills and knowledge, thus yielding better performance and labor productivity [10]. Social participation and volunteer activities create social network, which consequently increases performance of the connected works and yields the rises in wage [11]-[12].

From the previous studies on the relationship between leisure time use and wage, there is still no research on the impact of leisure time use on Thai people's wage change. Furthermore, this paper fills the research gap by exploring which kinds of leisure activities that influence wage increase. The findings can be applied to human development issues by encouraging productive leisure activities in order to raise labor productivity and wages.

## II. CONCEPTUAL FRAMEWORK

To explore whether leisure activities significantly influence wage increase, data from Thailand's Time Use Survey and Labor Force Survey 2009 are employed to examine whether time use for each type of leisure activity significantly influences individual's wage of the Thai by using regression analysis. The findings report the determinants of leisure time use as well as how different leisure activities raise individual's wage change and whether leisure time consumption for those leisure activities plays a key role on wage change. How leisure in different definitions, leisure activities are categorized, and how the empirical estimation is applied in the study are explained in this section.

Though leisure activities theoretically provide only utility, some activities categorized as leisure are reported to contribute to wage change, for example, computer use evidently provides a greater labor productivity and a rise in wages [13]-[14]. This paper examines whether an individual's leisure activities contribute to the improvement of skills and knowledge that raise an individual's productivity and consequently lead to a wage increase. Fig. 1 illustrates the conceptual framework illustrating how various leisure activities are related to a rise in wages.

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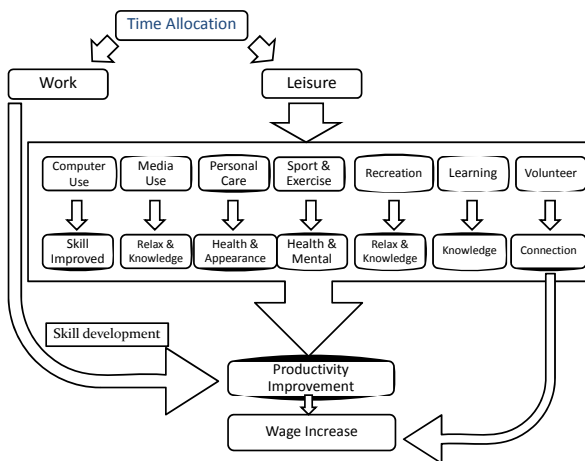


Fig. 1 Conceptual Framework

From Fig. 1, an individual's time is allocated mainly to two types of activities, work and leisure. Work activities include market work and home production and housework, while leisure time activities are separated into 7 types: computer use, mass media receiving, personal care, sport and exercise, recreational activities, learning, and social participation and volunteer activities. Experiences with time allocated for work, together with leisure activities, lead to the development of an individual's skills and productivity, which consequently enhance one's wage.

#### A. Model Estimation

The regression analysis attempts to estimate the impact of factors, including time spent on some specific leisure activities on wage. Model (1) presents how wage change is estimated, when leisure time for specific activities is included.

$$\ln(wage_i) = \alpha_i + \lambda_1 S_i + \lambda_2 e_i + \lambda_3 e_i^2 + \lambda_4 Leisure_i + \lambda_5 R_i + \varepsilon_i \quad (1)$$

where  $i = 1, \dots, n$ .  $S_i$  refers to other socio-economic demographic variables, consisting of gender, age, age<sup>2</sup>, education dummies, marital status, area, occupation, industry and firm size dummy,  $e_i$  denotes years of experience,  $R_i$  represents percentage of each of 7 leisure activities times and some socio-demographic dummies; gender, area and marital statuses.  $R_i$  is applied to estimate whether people with equal percentage of time consumption for each leisure activity earn differently or not. For example, if a person in urban and rural area with equal length of time of leisure for computer use, and  $R_i$  indicates how different of hourly wages these two persons receive. The estimation result is revealed in Table I in the Appendix.

### III. RESULT

For exploring whether a number of specific leisure activities play a key role in wage increase of the Thai people is presented in Table I. The activities in the study include computer use, media receiving, personal care, sport and exercise, recreation, learning in free time, and social and

volunteer activities. With Thailand Time Use Survey and Labor Force Survey 2009 data, the estimation applies log [hourly wage] as the dependent variable whereas the independent variables include percentage of each specific leisure activity to all leisure time as well as other controlled variables which is run separately by activities. Table I presents determinants of those leisure activities, using time for computer use, media receiving, personal care, and sport and exercise, recreation, learning in free time, and social participation and volunteer activities respectively, as shown in column (1) to (7) in Table I.

The finding confirms unequal hourly wage between male and female, with 24% greater for male. Also, from the regression, one-year-older persons receive averagely 8% greater earnings than the younger. The result also reveals that there are differences in hourly wage among people in different occupations. Professionals and managers earn the highest wage per hour, more than 50% larger while technicians receive only 7.6% more than people working in low-skilled required jobs respectively. Employees in service sector receive the highest hourly wage while workers in agriculture sector earn the lowest amount of wage. The result also indicates the wage gap between people working in the large firms and those employed by small firms. From the evidence, large firms' employees receive 20% higher hourly wage. Considering status in the family, household heads in Thailand earn slightly greater amount of wage per hour than other members. Education is also a factor indicating wage gap of the Thai people. The finding significantly indicates that people spending unequal years in school receive unequal amount of wage. Marital status is another factor that also impacts the wage gap, as evidenced by 25% greater hourly wage for those whose marital status other than single. Furthermore, with indifferent time use for leisure activities, especially for media receiving and social participation and volunteer activities, the married clearly earn lower wage, compared with the single.

From the regression analysis to examine whether the leisure activities significantly impact log [hourly wage], it appears that some of those leisure activities evidently induce individual's hourly wage. Personal care slightly contributes to wage per hour rise, at 0.4% with 99% level of confidence. Media receiving contributes to 0.6% of positive wage change, with 95% level of confidence. In addition, one percentage increase in leisure time for social participation and volunteer activities gives a rise of hourly wage 0.8% approximately. However, the results do not confirm the relationship between wage and other leisure activities, computer use, sport and exercise, recreation and learning.

### IV. CONCLUSION

This study mainly explores how leisure time affects wage change. By employing Thailand's Time Use Survey 2009 together with Labor Force Survey 2009 data at the same year, leisure time activities are divided into 7 categories before regression in order to find how those 7 specific leisure activities impact wage change. The result replies the question whether leisure time use causes wage increase.

This study has proved that leisure and labor improvement for wage increase are not trade-off; it is not necessary to substitute leisure time for wage improvement. Some leisure activities themselves can create a wage rise, not just fulfill an individual's utility by the enjoyment. People devoting more time use for personal caring receive slightly more earning. This confirms the importance of physical appearance and indicates the opportunity of healthcare business and beauty, as workers are possibly motivated to spend longer time and efforts for personal care not only for a better health, but also in order to gain higher probability for improvement of earning from employment opportunities. Connections have also become a way for getting a better-earning job. Though, according to the estimation, social participation and volunteer activities give a small but positive effect on hourly wage change, social network has become an interesting activity

increasing possibility for individual's earning rise. Time for accessing media is another leisure activity that positively influence in wage. Therefore, supporting productive leisure time helps raise Thai people's work efficiency, as well as develops their welfare through pleasure from leisure and the possibility of consumption gain through wage increases. For instance, promoting Thai people to perceive useful data and knowledge, which potentially induces productivity, or creating activities that help improve productivity presenting through the media that accessible by the targeted groups of people, should be one of the policies implemented by the government. This channel is a potential wage to improve Thai workers' productivity and wages, which would not only provide economic benefits, but also would improve the utility and welfare of the Thai people.

## APPENDIX

TABLE I  
ESTIMATION OF HOURLY WAGE CHANGE USING COMPUTER USE, MEDIA RECEIVING, PERSONAL CARE, SPORT AND EXERCISE, RECREATION,  
LEARNING AND VOLUNTEER ACTIVITIES AS THE INDEPENDENT VARIABLE

Independent Variables	log Hourly Wage						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Percentage of Computer Use to Leisure Time	-0.001 (0.001)						
Percentage of Media Receiving to Leisure Time		0.0006** (0.0002)					
Percentage of Personal Care to Leisure Time			0.0004*** (0.001)				
Percentage of Sport and Exercise to Leisure Time				-0.0007 (0.001)			
Percentage of Recreation to Leisure Time					-0.0003 (0.0009)		
Percentage of Learning to Leisure Time						0.07 (0.05)	
Percentage of Social Participation and Volunteer Activities to Leisure Time							0.0008** (0.004)
Female (Male as the reference)	-0.24*** (0.08)	-0.22** (0.09)	-0.12 (0.09)	-0.24*** (0.09)	-0.24*** (0.09)	-0.24*** (0.09)	-0.23*** (0.09)
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Municipal Area (Rural area as the reference)	0.11*** (0.22)	0.01 (0.07)	0.15* (0.09)	-0.03 (0.07)	-0.03 (0.07)	-0.03 (0.07)	-0.01 (0.07)
Experience	-0.06*** (0.02)	-0.06*** (0.017)	-0.06*** (0.02)	-0.06*** (0.017)	-0.06*** (0.017)	-0.06*** (0.017)	-0.06*** (0.017)
Experience <sup>2</sup>	-0.004*** (0.00001)	-0.0004*** (0.00001)	-0.0004*** (0.00001)	-0.0005*** (0.00001)	-0.0005*** (0.00001)	-0.0005*** (0.00001)	-0.0005*** (0.00001)
Marital Status	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age	0.08*** (0.01)	0.08*** (0.02)	0.08*** (0.02)	0.08*** (0.02)	0.08*** (0.02)	0.08*** (0.02)	0.08*** (0.02)
Age <sup>2</sup>	0.0001 (0.0001)	0.0001*** (0.0001)	0.0001*** (0.0001)	0.0001*** (0.0001)	0.0001*** (0.0001)	0.0001*** (0.0001)	0.0001*** (0.0001)
Household Head (Non-household head as the reference)	0.05*** (0.019)	0.05** (0.02)	0.05** (0.02)	0.05** (0.02)	0.05** (0.02)	0.05** (0.02)	0.05** (0.02)
Size of the firm (Small as the reference)	0.21*** (0.018)	0.21*** (0.02)	0.21*** (0.02)	0.21*** (0.02)	0.21*** (0.02)	0.21*** (0.02)	0.21*** (0.02)
Occupation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Percent of Leisure Activity × Female	No	No	No	No	No	No	No
Percent of Leisure Activity × Municipal Area	No	No	No	No	No	No	No
Percent of Leisure	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Activity × Marry Percent of Leisure Activity × Other Marital Statuses	No	No	Yes	No	No	Yes	Yes
Observations	7,245	7,245	7,245	7,245	7,245	7,245	7,245
R-squared	0.21	0.21	0.21	0.21	0.21	0.21	0.21

Note: Standard errors in parentheses and \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

#### ACKNOWLEDGMENT

The author is thankful to Professor Dr. Piriya Pholphirul for his detailed and constructive comments. Also, the author is also thankful to Associate Professor Dr. Pungpond Rukumnuaykit, Assistant Professor Dr. Amornrat Apinunmahakul and Dr. Watcharas Leelawath, for their valuable comments and suggestions. It is a pleasure to extend thanks also to the National Institute of Development Administration (NIDA) for their financial support and the National Statistical Office (NSO) for the supporting data. The author is responsible for any mistakes happened in this research.

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