Salary Commensurate with Social Capital

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The main purpose of our research is to examine the relationship between wages and social capital in Japan.

The major contribution of human capital theory introduced by Becker (1964) is to develop a production function approach to the specification of the total quantity of skills such that it may be expressed as a function of observable variables such as time allocation on schooling and OJT. Since Mincer (1974) developed the famous Mincerian wage regression based on Becker (1964)’s human capital theory, the estimation of the returns on human capital has become one of the most widely analyzed topic in applied econometrics. Most papers focusing on this topic claim that human capital is one of the strong factors affecting the individual wage level.

However, previous paper also revealed that socio-demographic variables together with human capital cannot fully explain about how individual wage is determined. It is quite conceivable that there exists at least one unknown factor affecting the individual wage level. According to Putnam (2000) “Trust”, “Network” and “Norm of reciprocity” consist social capital and they cut transaction costs through efficient communication among labours. If so, like human capital, employers regard a labour’s social capital level as a signal of labour’s productivity. Since a labour with rich social capital benefits the company, an employer will use salary as a form of payment to rich social capital. Then the labour will make every effort to accumulate more social capital in order to obtain more salary.

Although this scenario has been widely developed in the sociologic literature, scarce economist has focused on theoretic and econometric effects of social capital on wages. Therefore, it is important to develop the Mincer wage equation adding a tinge of social capital and examined the effects of social capital on wages. Our econometric study is based on Japanese General Social Survey (JGSS). General Social Survey (GSS) in the United States is served as a model for JGSS.

Mincer wage equation with social capital in this paper is given by

\[
\text{wage}_i = \alpha + \sum_{j=1}^{p} \beta_{ij} X_{ij} + \sum_{k=1}^{r} \gamma_{ik} SC_{ik} + \varepsilon_i, \quad i = 1, 2, 3 \ldots n
\]

\[
\text{wage}_i = j \text{ if } A_{j-1} < \text{wage}_i < A_j, \quad j = 1, \ldots, J, \quad A_0 = -\infty, \quad A_J = +\infty
\]

where \(\text{wage}_i\) and \(\text{wage}_i\) are unobservable and unobservable variables, respectively.

A wage data is given as a categorical data according to JGSS. \(X_{ij}\) is socio-demographic variables such as sex, age, human capital level (school attainment) and so on that are considered to affect the individual wage level. \(SC_{ik}\) is elements of social capital, that is “Trust”, “Norm of reciprocity”, and “Network”. \(\beta_{ij}, \gamma_{ik}\) are coefficients of explanatory variables. \(\varepsilon_i\) is an error term with \(\varepsilon_i \sim N(0, \sigma^2)\). Because of the specification of Mincer wage function, each threshold of wage level has to be natural logarithm. This grouped data estimation can be carried out with the flame work of Tobit.

Several main results from the estimation can be summarized as follows.

(1) Labours with rich networks earn more than those with poor networks.

(2) Labours who trust people earn more than those who do not trust people.
(3) Norm of reciprocity does not affect the individual wage level.

(4) The higher his or her educational attainment is the more he or she can earn. However, a male can earn more than a female even if their educational attainments are the same level.

(5) The longer his or her job experience is the more he or she can earn. However, a male can earn more than a female even if their job experiences are the same level.

Given with these findings, our analysis implied that “Trust” and “Network” have positive effects on the individual wage in the Japanese wage system while “Norm of Reciprocity” has no effect on the individual wage. Our analysis also suggested that human capital positively affected more on male salary than female salary, and therefore, there exists a gender based problem on the individual wage in terms of return on human capital investment. However, there exists no gender based problem on the individual wage in terms of return on social capital.


Japanese General Social Survey (website).
http://jgss.daishodai.ac.jp/english/eframe/englishtop.html