

Evidence on Screening: a Comment

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IN A RECENT ISSUE of *Economics of Education Review* two articles have been published that both apply a method proposed in Psacharopoulos (1979) to test the screening hypothesis (Lambropoulos, 1992; Ziderman, 1992). The so-called *P* test comes down to comparing rates of return to education in the competitive (private) and non-competitive (public) sectors. Although I share Ziderman's reservations regarding the *P* test as a tool to probe the screening hypothesis, I think that conclusions about this test should rely on the best estimation method currently available, and calculation of the rates of return by estimating with ordinary least squares (OLS) the standard Mincer earnings equation for both sectors separately is not the best method available.

This method ignores two important phenomena, namely ability bias and selectivity bias. Ability bias refers to the fact that the schooling coefficient in the Mincer earnings equations is biased because no ability measure is included in the regression. If ability has a positive effect on earnings and the correlation between schooling and ability exceeds zero, the estimated rate of return is larger than the true rate of return (see Griliches, 1977). Because of self-selection, there is no *a priori* reason to assume that the ability bias is equal in both sectors. On the contrary, if workers believe that the public employer uses pay schedules based more on education and

working experience and less on ability than private employers do, it is likely that the public sector attracts workers who are, given their level of education, of below average ability.

This argument suggests that the outcome of the *P* test might change if a richer dataset and/or a more sophisticated estimation technique is employed. And according to the results in a recent study by Hartog and Oosterbeek (1992) this is precisely what happens. Estimating sector-specific earnings equations with OLS and without an ability measure, the rate of return in the public sector amounts to 2.8% and in the private sector to 3.3% (although the difference is not statistically significant, but it seems as if the *P* test is only based on the point estimates). In the model that takes account of selectivity bias and that includes an ability measure, the authors report exact opposite outcomes: a rate of return in the public sector of 3.0% and in the private sector of 1.7%. A similar picture emerges in Van der Gaag and Vijverberg (1988). Without correcting for endogenous sector choice, the returns to schooling in the private sector exceed those in the public sector, whereas this conclusion no longer holds for the results that correct for self-selection.

To conclude, this comment points to the fact that caution is required when comparing rates of return from sectors that consist of non-random samples of the workforce.

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