

The Skills Trap: Illuminating the Heterogeneous Economic Returns to High Cognitive Ability

Research shows that possessing high skills is crucial for economic success. While such arguments are often evidenced by the average skills effect on labor market outcomes, we know little about its heterogeneity. Among diverse components of skills and potential outcomes, this article sheds light on the heterogeneous effects of cognitive ability on earnings. Using the OECD data in the United States and leveraging propensity score (PS) matching for binary/continuous skills measures, I first confirm that cognitive ability generally contributes to earnings. However, the effect size varies substantially, with individuals in low or high PS strata receiving greater returns compared to mid-PS counterparts (i.e., U-shaped). Importantly, this nonlinear skills-earnings link reflects the coexistence of three distinct mechanisms: men enjoy larger returns than women, who are less likely to gain high skills (positive selection); individuals with less-educated parents (and hence a low likelihood of skills acquisition) see stronger skills effects than those with a tertiary-educated parent (negative selection); and no racial/ethnic difference is observed (homogeneous effects). These findings underscore the importance of examining the “skills trap” that structurally devalues high skills among certain groups of people, and from a methodological perspective, analyzing heterogeneous effects across both composite PS and its specific components.