Project Overview:

An econometric analysis investigating nonlinear and multiple linear regressions between workers’ earnings and other relevant factors such as years of schooling, years of experience, year, whether a worker lives in a boom town, and various industry dummies.

**Visualizing Relationships**

Figure 1.2 Relationship between Earnings (Dependent Variable) and Workforce Experience (Independent Variable)

A graph with lines and a curve

AI-generated content may be incorrect.A graph of a graph of earnings

AI-generated content may be incorrect.

Figure 1.1 Relationship between Earnings (Dependent Variable) and Years of Education (Independent Variable)

**Figure 1.1: Relationship between Earnings (in $1000s) and Education (in Years)**

The relationship between both variables is positive, as observed by an increase in earnings when education increases and by the upward curved quadratic regression line. The curve suggests a non-constant growth in earnings, as the rate of earnings growth increases with time, thus displaying a nonlinear relationship.

**Figure 1.2: Relationship between Earnings (in $1000s) and Work Experience (in Years)**

A nonlinear relationship is observed between earnings and workforce experience. Earnings initially increase before they decline as the years of workforce experience increase. This is represented by the concave regression line observed in Figure 1.2, suggesting eventual diminishing returns relative to workforce experience. Thus, we observe a nonlinear relationship between annual earnings and workforce experience.