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Income vs Education Level Report – Washington, DC

GIS – Assignment 3-1

Figure 1 : Scatter plot showing relation between income and education attainment

Observations:

Figure 1 shows a clear positive trend between education attainment and the income earned. But there are few areas within Washington DC which show no positive relation between education level and per capita income of that area. This can be observed in figure 2 which is a map of Washington DC area showing relation between education levels and per capita income for each area. For example: North east part of Washington DC area has low percentage of population older than 25 years having at least bachelor’s degree, but their per capita income is greater than $80k.

A close up of a map

Description automatically generated

Figure 2 : Map showing relation between education attainment and per capita income for Washington dc area

**Regression Results:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SUMMARY OUTPUT |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| *Regression Statistics* | |  |  |  |  |  |  |  |
| Multiple R | 0.713382124 |  |  |  |  |  |  |  |
| R Square | 0.508914054 |  |  |  |  |  |  |  |
| Adjusted R Square | 0.506139558 |  |  |  |  |  |  |  |
| Standard Error | 17646.88581 |  |  |  |  |  |  |  |
| Observations | 179 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| ANOVA |  |  |  |  |  |  |  |  |
|  | *df* | *SS* | *MS* | *F* | *Significance F* |  |  |  |
| Regression | 1 | 57121072971 | 57121072971 | 183.4257088 | 3.88281E-29 |  |  |  |
| Residual | 177 | 55120026427 | 311412578.7 |  |  |  |  |  |
| Total | 178 | 1.12241E+11 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
| Intercept | 23082.91273 | 1826.598094 | 12.63710545 | 1.66605E-26 | 19478.19956 | 26687.62589 | 19478.19956 | 26687.62589 |
| PopBachDeg | 522.2499654 | 38.56100258 | 13.54347477 | 3.88281E-29 | 446.1514772 | 598.3484536 | 446.1514772 | 598.3484536 |