REGRESSION

PAPLIN ON PARENT OCCUPATION (LITERACY)

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| OLS Regression Results | | | |
| **Dep. Variable:** | Literacy | **R-squared:** | 0.476 |
| **Model:** | OLS | **Adj. R-squared:** | 0.473 |
| **Method:** | Least Squares | **F-statistic:** | 124.0 |
| **Date:** | Tue, 18 Aug 2020 | **Prob (F-statistic):** | 3.39e-75 |
| **Time:** | 17:02:02 | **Log-Likelihood:** | -2186.3 |
| **No. Observations:** | 550 | **AIC:** | 4383. |
| **Df Residuals:** | 545 | **BIC:** | 4404. |
| **Df Model:** | 4 |  |  |
| **Covariance Type:** | nonrobust |  |  |

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|  | **coef** | **std err** | **t** | **P>|t|** | **[0.025** | **0.975]** |
| **intercept** | 61.3956 | 0.959 | 63.989 | 0.000 | 59.511 | 63.280 |
| **Civil Servant** | 11.0981 | 1.407 | 7.885 | 0.000 | 8.333 | 13.863 |
| **Petty Trader** | -19.0791 | 1.458 | -13.085 | 0.000 | -21.943 | -16.215 |
| **Trader** | 15.2044 | 2.551 | 5.961 | 0.000 | 10.194 | 20.215 |
| **Private Employee** | 12.2142 | 2.238 | 5.458 | 0.000 | 7.819 | 16.610 |

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| **Omnibus:** | 13.360 | **Durbin-Watson:** | 2.031 |
| **Prob(Omnibus):** | 0.001 | **Jarque-Bera (JB):** | 13.824 |
| **Skew:** | -0.373 | **Prob(JB):** | 0.000996 |
| **Kurtosis:** | 2.782 | **Cond. No.** | 5.54 |

PAPLIN ON PARENT OCCUPATION (NUMERACY)

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| OLS Regression Results | | | |
| **Dep. Variable:** | Numeracy | **R-squared:** | 0.531 |
| **Model:** | OLS | **Adj. R-squared:** | 0.527 |
| **Method:** | Least Squares | **F-statistic:** | 154.0 |
| **Date:** | Tue, 18 Aug 2020 | **Prob (F-statistic):** | 4.47e-88 |
| **Time:** | 17:03:08 | **Log-Likelihood:** | -2160.6 |
| **No. Observations:** | 550 | **AIC:** | 4331. |
| **Df Residuals:** | 545 | **BIC:** | 4353. |
| **Df Model:** | 4 |  |  |
| **Covariance Type:** | nonrobust |  |  |

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|  | **coef** | **std err** | **t** | **P>|t|** | **[0.025** | **0.975]** |
| **intercept** | 60.0824 | 0.916 | 65.605 | 0.000 | 58.283 | 61.881 |
| **Civil Servant** | 19.8290 | 1.343 | 14.760 | 0.000 | 17.190 | 22.468 |
| **Petty Trader** | -9.6723 | 1.392 | -6.950 | 0.000 | -12.406 | -6.939 |
| **Trader** | 19.6509 | 2.435 | 8.072 | 0.000 | 14.869 | 24.433 |
| **Private Employee** | 26.7225 | 2.136 | 12.511 | 0.000 | 22.527 | 30.918 |

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| **Omnibus:** | 7.697 | **Durbin-Watson:** | 1.987 |
| **Prob(Omnibus):** | 0.021 | **Jarque-Bera (JB):** | 7.716 |
| **Skew:** | -0.290 | **Prob(JB):** | 0.0211 |
| **Kurtosis:** | 3.036 | **Cond. No.** | 5.54 |

PAPLIN ON HOUSEHOLDSIZE (LITERACY)

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| --- | --- | --- | --- |
| OLS Regression Results | | | |
| **Dep. Variable:** | Literacy | **R-squared:** | 0.562 |
| **Model:** | OLS | **Adj. R-squared:** | 0.561 |
| **Method:** | Least Squares | **F-statistic:** | 702.4 |
| **Date:** | Tue, 18 Aug 2020 | **Prob (F-statistic):** | 3.11e-100 |
| **Time:** | 17:05:47 | **Log-Likelihood:** | -2137.4 |
| **No. Observations:** | 550 | **AIC:** | 4279. |
| **Df Residuals:** | 548 | **BIC:** | 4287. |
| **Df Model:** | 1 |  |  |
| **Covariance Type:** | nonrobust |  |  |

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|  | **coef** | **std err** | **t** | **P>|t|** | **[0.025** | **0.975]** |
| **intercept** | 88.6028 | 1.140 | 77.731 | 0.000 | 86.364 | 90.842 |
| **Household\_size** | -2.5549 | 0.096 | -26.502 | 0.000 | -2.744 | -2.366 |

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| **Omnibus:** | 78.402 | **Durbin-Watson:** | 2.093 |
| **Prob(Omnibus):** | 0.000 | **Jarque-Bera (JB):** | 110.842 |
| **Skew:** | 1.001 | **Prob(JB):** | 8.53e-25 |
| **Kurtosis:** | 3.910 | **Cond. No.** | 26.9 |

PAPLIN ON HOUSEHOLDSIZE (NUMEACY)

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| --- | --- | --- | --- |
| OLS Regression Results | | | |
| **Dep. Variable:** | Numeracy | **R-squared:** | 0.617 |
| **Model:** | OLS | **Adj. R-squared:** | 0.617 |
| **Method:** | Least Squares | **F-statistic:** | 884.3 |
| **Date:** | Tue, 18 Aug 2020 | **Prob (F-statistic):** | 2.05e-116 |
| **Time:** | 17:07:07 | **Log-Likelihood:** | -2104.4 |
| **No. Observations:** | 550 | **AIC:** | 4213. |
| **Df Residuals:** | 548 | **BIC:** | 4221. |
| **Df Model:** | 1 |  |  |
| **Covariance Type:** | nonrobust |  |  |

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|  | **coef** | **std err** | **t** | **P>|t|** | **[0.025** | **0.975]** |
| **intercept** | 95.0394 | 1.074 | 88.522 | 0.000 | 92.930 | 97.148 |
| **Household\_size** | -2.7001 | 0.091 | -29.737 | 0.000 | -2.879 | -2.522 |

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| **Omnibus:** | 68.534 | **Durbin-Watson:** | 1.973 |
| **Prob(Omnibus):** | 0.000 | **Jarque-Bera (JB):** | 120.025 |
| **Skew:** | 0.769 | **Prob(JB):** | 8.65e-27 |
| **Kurtosis:** | 4.694 | **Cond. No.** | 26.9 |

PAPLIN ON PARENT EDUCATION (LITERACY)

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| OLS Regression Results | | | |
| **Dep. Variable:** | Literacy | **R-squared:** | 0.567 |
| **Model:** | OLS | **Adj. R-squared:** | 0.565 |
| **Method:** | Least Squares | **F-statistic:** | 238.5 |
| **Date:** | Tue, 18 Aug 2020 | **Prob (F-statistic):** | 7.13e-99 |
| **Time:** | 17:11:08 | **Log-Likelihood:** | -2133.9 |
| **No. Observations:** | 550 | **AIC:** | 4276. |
| **Df Residuals:** | 546 | **BIC:** | 4293. |
| **Df Model:** | 3 |  |  |
| **Covariance Type:** | nonrobust |  |  |

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|  | **coef** | **std err** | **t** | **P>|t|** | **[0.025** | **0.975]** |
| **intercept** | 72.7333 | 0.915 | 79.458 | 0.000 | 70.935 | 74.531 |
| **Primary** | -35.7333 | 1.472 | -24.273 | 0.000 | -38.625 | -32.842 |
| **Secondary** | -13.8360 | 1.259 | -10.989 | 0.000 | -16.309 | -11.363 |
| **Tertiary** | 1.0271 | 1.509 | 0.680 | 0.496 | -1.938 | 3.992 |

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| **Omnibus:** | 5.099 | **Durbin-Watson:** | 1.850 |
| **Prob(Omnibus):** | 0.078 | **Jarque-Bera (JB):** | 4.164 |
| **Skew:** | 0.117 | **Prob(JB):** | 0.125 |
| **Kurtosis:** | 2.644 | **Cond. No.** | 4.53 |

PAPLIN ON PARENT EDUCATION (NUMERACY)

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| OLS Regression Results | | | |
| **Dep. Variable:** | Numeracy | **R-squared:** | 0.711 |
| **Model:** | OLS | **Adj. R-squared:** | 0.709 |
| **Method:** | Least Squares | **F-statistic:** | 447.9 |
| **Date:** | Tue, 18 Aug 2020 | **Prob (F-statistic):** | 9.81e-147 |
| **Time:** | 17:12:11 | **Log-Likelihood:** | -2027.2 |
| **No. Observations:** | 550 | **AIC:** | 4062. |
| **Df Residuals:** | 546 | **BIC:** | 4080. |
| **Df Model:** | 3 |  |  |
| **Covariance Type:** | nonrobust |  |  |

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|  | **coef** | **std err** | **t** | **P>|t|** | **[0.025** | **0.975]** |
| **intercept** | 76.4727 | 0.754 | 101.430 | 0.000 | 74.992 | 77.954 |
| **Primary** | -35.2035 | 1.213 | -29.033 | 0.000 | -37.585 | -32.822 |
| **Secondary** | -15.3268 | 1.037 | -14.780 | 0.000 | -17.364 | -13.290 |
| **Tertiary** | 9.9544 | 1.243 | 8.007 | 0.000 | 7.512 | 12.396 |

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| **Omnibus:** | 61.560 | **Durbin-Watson:** | 1.878 |
| **Prob(Omnibus):** | 0.000 | **Jarque-Bera (JB):** | 31.861 |
| **Skew:** | -0.427 | **Prob(JB):** | 1.21e-07 |
| **Kurtosis:** | 2.187 | **Cond. No.** | 4.53 |

PAPLIN ON SOCIO-EDUCATIONAL CHARACTERISTICS (LITERACY)

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| OLS Regression Results | | | |
| **Dep. Variable:** | Literacy | **R-squared:** | 0.814 |
| **Model:** | OLS | **Adj. R-squared:** | 0.808 |
| **Method:** | Least Squares | **F-statistic:** | 136.6 |
| **Date:** | Tue, 18 Aug 2020 | **Prob (F-statistic):** | 2.43e-181 |
| **Time:** | 17:22:41 | **Log-Likelihood:** | -1902.3 |
| **No. Observations:** | 550 | **AIC:** | 3841. |
| **Df Residuals:** | 532 | **BIC:** | 3918. |
| **Df Model:** | 17 |  |  |
| **Covariance Type:** | nonrobust |  |  |

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|  | **coef** | **std err** | **t** | **P>|t|** | **[0.025** | **0.975]** |
| **intercept** | 97.4155 | 5.572 | 17.483 | 0.000 | 86.470 | 108.361 |
| **HHhead age** | -0.3596 | 0.067 | -5.364 | 0.000 | -0.491 | -0.228 |
| **Age** | 0.4347 | 0.280 | 1.552 | 0.121 | -0.115 | 0.985 |
| **Household\_size** | -1.1676 | 0.130 | -8.949 | 0.000 | -1.424 | -0.911 |
| **F** | -10.6595 | 1.367 | -7.798 | 0.000 | -13.345 | -7.974 |
| **Islam** | -3.2166 | 1.269 | -2.535 | 0.012 | -5.709 | -0.724 |
| **Guardian** | -2.6230 | 1.035 | -2.534 | 0.012 | -4.657 | -0.589 |
| **Footballing** | -10.9005 | 2.507 | -4.348 | 0.000 | -15.825 | -5.976 |
| **Singing** | -25.2984 | 2.541 | -9.954 | 0.000 | -30.291 | -20.306 |
| **Movies** | -3.0724 | 2.442 | -1.258 | 0.209 | -7.869 | 1.724 |
| **Dancing** | -17.6540 | 2.250 | -7.847 | 0.000 | -22.073 | -13.235 |
| **Artisan** | 10.3077 | 1.225 | 8.413 | 0.000 | 7.901 | 12.715 |
| **Civil Servant** | 4.4273 | 2.116 | 2.093 | 0.037 | 0.271 | 8.583 |
| **Trader** | 0.2784 | 2.968 | 0.094 | 0.925 | -5.553 | 6.109 |
| **Private Employee** | -1.5993 | 2.393 | -0.668 | 0.504 | -6.300 | 3.102 |
| **Secondary** | 9.0951 | 1.743 | 5.217 | 0.000 | 5.671 | 12.520 |
| **Primary** | -7.3062 | 2.351 | -3.107 | 0.002 | -11.926 | -2.687 |
| **Tertiary** | 2.2752 | 1.241 | 1.833 | 0.067 | -0.164 | 4.714 |

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| **Omnibus:** | 21.902 | **Durbin-Watson:** | 1.973 |
| **Prob(Omnibus):** | 0.000 | **Jarque-Bera (JB):** | 34.711 |
| **Skew:** | 0.306 | **Prob(JB):** | 2.90e-08 |
| **Kurtosis:** | 4.068 | **Cond. No.** | 1.08e+03 |

PAPLIN ON SOCIO-EDUCATIONAL CHARACTERISTICS (NUMERACY)

|  |  |  |  |
| --- | --- | --- | --- |
| OLS Regression Results | | | |
| **Dep. Variable:** | Numeracy | **R-squared:** | 0.910 |
| **Model:** | OLS | **Adj. R-squared:** | 0.908 |
| **Method:** | Least Squares | **F-statistic:** | 318.3 |
| **Date:** | Tue, 18 Aug 2020 | **Prob (F-statistic):** | 9.76e-266 |
| **Time:** | 17:23:44 | **Log-Likelihood:** | -1705.0 |
| **No. Observations:** | 550 | **AIC:** | 3446. |
| **Df Residuals:** | 532 | **BIC:** | 3524. |
| **Df Model:** | 17 |  |  |
| **Covariance Type:** | nonrobust |  |  |

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| --- | --- | --- | --- | --- | --- | --- |
|  | **coef** | **std err** | **t** | **P>|t|** | **[0.025** | **0.975]** |
| **intercept** | 109.8945 | 3.892 | 28.236 | 0.000 | 102.249 | 117.540 |
| **HHhead age** | -0.3718 | 0.047 | -7.939 | 0.000 | -0.464 | -0.280 |
| **Age** | -1.3748 | 0.196 | -7.027 | 0.000 | -1.759 | -0.990 |
| **Household\_size** | -1.8610 | 0.091 | -20.421 | 0.000 | -2.040 | -1.682 |
| **F** | -6.3580 | 0.955 | -6.659 | 0.000 | -8.234 | -4.482 |
| **Islam** | 6.8892 | 0.886 | 7.773 | 0.000 | 5.148 | 8.630 |
| **Guardian** | -2.4890 | 0.723 | -3.442 | 0.001 | -3.909 | -1.069 |
| **Footballing** | 8.4751 | 1.751 | 4.840 | 0.000 | 5.035 | 11.915 |
| **Singing** | 11.1529 | 1.775 | 6.283 | 0.000 | 7.666 | 14.640 |
| **Movies** | 22.8377 | 1.705 | 13.391 | 0.000 | 19.488 | 26.188 |
| **Dancing** | 11.3573 | 1.571 | 7.227 | 0.000 | 8.270 | 14.444 |
| **Artisan** | -4.5476 | 0.856 | -5.314 | 0.000 | -6.229 | -2.866 |
| **Civil Servant** | -9.3479 | 1.478 | -6.325 | 0.000 | -12.251 | -6.445 |
| **Trader** | -0.1773 | 2.073 | -0.085 | 0.932 | -4.250 | 3.896 |
| **Private Employee** | -9.2710 | 1.672 | -5.546 | 0.000 | -12.555 | -5.987 |
| **Secondary** | 0.0546 | 1.218 | 0.045 | 0.964 | -2.337 | 2.447 |
| **Primary** | -3.1230 | 1.642 | -1.901 | 0.058 | -6.350 | 0.104 |
| **Tertiary** | 7.0669 | 0.867 | 8.150 | 0.000 | 5.363 | 8.770 |

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| **Omnibus:** | 50.448 | **Durbin-Watson:** | 1.994 |
| **Prob(Omnibus):** | 0.000 | **Jarque-Bera (JB):** | 36.184 |
| **Skew:** | 0.519 | **Prob(JB):** | 1.39e-08 |
| **Kurtosis:** | 2.293 | **Cond. No.** | 1.08e+03 |

DESCRIPTIVES

Age

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Age in years | Frequency | Percentage | Cumulative Frequency | Cumulative Percentage |
| 6 | 14 | 2.55 | 14 | 2.55 |
| 7 | 113 | 20.54 | 127 | 23.09 |
| 8 | 142 | 25.82 | 269 | 48.91 |
| 9 | 43 | 7.82 | 312 | 56.73 |
| 10 | 54 | 9.82 | 366 | 66.55 |
| 11 | 11 | 2.00 | 377 | 68.55 |
| 12 | 18 | 3.27 | 395 | 71.82 |
| 13 | 45 | 8.18 | 440 | 80.00 |
| 14 | 75 | 13.64 | 515 | 93.64 |
| 15 | 35 | 6.36 | 550 | 100.00 |
| Total | 550 | 100.00 |  |  |

The mean age is 9.88 years, with a standard deviation of 2.83

Pupil Pastime

|  |  |  |
| --- | --- | --- |
| Pastime | Frequency | Percentage |
| Reading | 245 | 44.55 |
| Footballing | 135 | 24.55 |
| Singing | 74 | 13.45 |
| Movies | 60 | 10.91 |
| Dancing | 36 | 6.54 |
| Total | 550 | 100.00 |

Household Head Age

|  |  |  |
| --- | --- | --- |
| Age group | Frequency | Percentage |
| 30-39 | 76 | 13.82 |
| 40-49 | 146 | 26.54 |
| 50-59 | 99 | 18.00 |
| 60-69 | 201 | 36.54 |
| 70-79 | 28 | 5.10 |
| Total | 550 | 100.00 |

The mean Household head age is 52.96 years, with a standard deviation of 11.11.

Household head Occupation

|  |  |  |
| --- | --- | --- |
| Occupation | Frequency | Percentage |
| Artisan | 182 | 33.09 |
| Civil Servant | 158 | 28.73 |
| Petty Trader | 139 | 25.27 |
| Trader | 41 | 7.46 |
| Private Employee | 30 | 5.45 |
| Total | 550 | 100.00 |

Household head Education level

|  |  |  |
| --- | --- | --- |
| Education level | Frequency | Percentage |
| No-Formal | 104 | 18.91 |
| Primary | 185 | 33.64 |
| Secondary | 165 | 30.00 |
| Tertiary | 96 | 17.45 |
| Total | 550 | 100.00 |

Religion

|  |  |  |
| --- | --- | --- |
| Religion | Frequency | Percentage |
| Islam | 366 | 66.55 |
| Christianity | 184 | 33.45 |
| Total | 550 | 100.00 |

Sex

|  |  |  |
| --- | --- | --- |
| Sex | Frequency | Percentage |
| Female | 351 | 63.82 |
| Male | 199 | 36.18 |
| Total | 550 | 100.00 |