MULTIPLE REGRESSION ANALYSIS

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**Multiple Regression Analysis**

Notably, a multiple regression entails predicting a dependent value in an element based on two or more other independent elements (Cohen, J., Cohen, P., West, and Aiken, 2013). As a result, multiple regression analysis allows a researcher to predict and evaluate the existence of an association between dependent elements with two or more independent variables. Thus, multiple regressions play a pivotal role in the desire of a scholar establishing whether there exists a statistical significance between associations of a dependent element in respect to the independent variables in a study. The multiple regression seeks to establish a country's extent of democracy based on various factors such as the region, politics, and government as well as the present economic condition among the African countries.

**Research Question**

Is there any association between the extent of democracy, based on the region, and the politics and government complications as well as the present economic condition?

**Hypothetical Statement**

**Null Hypothesis**

H0: There is no association between the extent of democracy based on the country politics and government, the region, country’s present economic condition.

**Alternative Hypothesis**

H1: There is an association between the extent of democracy based on the country politics and government, the region, country’s present economic condition.

**Multiple Regression Analysis SPSS Results**

The table below reveals the ANOVA result assuming a P-value less than 0.05 at 95 percent level of confidence.

Table 1: ANOVA Table (N, 51,587)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVAa** | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 2219.846 | 3 | 739.949 | 933.598 | .000b |
| Residual | 36231.890 | 45714 | .793 |  |  |
| Total | 38451.736 | 45717 |  |  |  |
| a. Dependent Variable: Q42. Extent of democracy | | | | | | |
| b. Predictors: (Constant), Q16. Politics and government too complicated, Country by region, Q3a. Country's present economic condition | | | | | | |

**Inference**

Notably, based on the ANOVA table 1 above, the significant value is 0.000, which is less than the assumed mean of 0.05 at 95 percent level of confidence. Thus, there exists a statistical significance among the variables extent of democracy, region of the country, politics and government complication as well as the present economic condition of the nation. Therefore, we reject the null hypothesis, which reveals that there is no association between the extent of democracy based on the country politics and government, the region, country’s present economic condition. As a result, we accept the alternative hypothesis and conclude that there was an association between the extent of democracy based on the country politics and government, the region, country’s present economic condition at 95 percent confidence level.

Table 2: Regression Coefficients (N, 51,587)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | 2.451 | .014 |  | 172.287 | .000 |
| Country by region | -.096 | .004 | -.111 | -24.503 | .000 |
| Q3a. Country's present economic condition | .161 | .003 | .217 | 47.615 | .000 |
| Q16. Politics and government too complicated | .002 | .003 | .003 | .566 | .572 |
| a. Dependent Variable: Q42. Extent of democracy | | | | | | |

**Inference**

Table 2 above, reveals various coefficient in the multiple regression models, where all the independent factors in the multiple regression analysis reveal statistical significance to the dependent variable with a p-value of 0.000 in an exemption of the variable politics and government too complicated, which depict a p value of 0.572 that is greater than 0.05. Thus, we are 95 percent confident that there was no association between the extent of democracy and the politics and government too complicated.

**Appendix 1**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | |
|  | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| Country in an alphabetical order | 51587 | 100.0% | 0 | 0.0% | 51587 | 100.0% |

**Appendix 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model Summary** | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .240a | .058 | .058 | .890 |
| a. Predictors: (Constant), Q16. Politics and government too complicated, Country by region, Q3a. Country's present economic condition | | | | |

Reference List

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences*. Routledge.