**Pearson Linear Correlation Analysis of Parking and Renewal Rates**

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**Description**

Two data sets are correlated if change in one variable is accompanied by change in the other. A Pearson linear correlation analysis demonstrates the strength of the relationship between two variable sets (in this case, parking rates and renewal rates) through statistical significance testing. In other words, it allows us to determine whether the variation between the two data sets are or are not due to random chance.

**Method**

1. Calculate average 1-2 year renewal rate for new and legacy gTLDs for July – December 2016
2. Run Pearson Correlation Analysis on averaged renewal rates August – December 2016 and December 2016 parking rates for new and legacy gTLDs

**New gTLD Analysis**[[1]](#footnote-1)

**Output**

|  |  |  |  |
| --- | --- | --- | --- |
| Correlation Coefficients Matrix | | | |
| Dec. 2016 parking rate – Jul-Dec 2016 avg renewal rate | R | 0.052310912 | 1 |
|  | R Standard Error | 0.014884531 |  |
|  | t | 0.428770322 |  |
|  | p-value | **0.669465831** |  |
|  | H0 (5%) | **accepted** |  |
|  |  |  |  |
| R | |  |  |
| Variable vs. Variable | R | No# of valid cases |  |
| Corrected average renewal rate vs. Dec. 2016 parking rate | 0.052310912 | 69 |  |

**Interpretation/Analysis**

We accept the null hypothesis at a 95% confidence interval. The data shows no statistically significant correlation between average renewal rates for Aug – Dec 2016 and parking rates for December 2016 in the observed new gTLDs.

**Legacy gTLD Analysis**

**Output**

|  |  |  |  |
| --- | --- | --- | --- |
| Correlation Coefficients Matrix | | | |
| Dec. 2016 parking rate – Jul-Dec 2016 avg renewal rate | R | 0.270892563 | 1 |
|  | R Standard Error | 0.066186944 |  |
|  | t | 1.052957681 |  |
|  | p-value | **0.31019539** |  |
|  | H0 (5%) | **accepted** |  |
|  |  |  |  |
| R | |  |  |
| Variable vs. Variable | R | No# of valid cases |  |
| Dec. 2016 parking rate vs. Average renewal rate | 0.270892563 | 16 |  |

**Interpretation/Analysis**

We accept the null hypothesis at a 95% confidence interval. The data show no statistically significant correlation between average renewal rates for Aug – Dec 2016 and parking rates for December 2016 in the observed legacy gTLDs.

1. The new gTLD analysis excludes “brand” and ROCC (Registry Operator Code of Conduct)-exempt gTLDs and only includes those launched prior to 1 July 2015. [↑](#footnote-ref-1)