| **Table 3.1 Autocorrelation check of residuals** | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **To Lag** | **Chi-Square** | **DF** | **Pr > ChiSq** | **Autocorrelations** | | | | | |
| **6** | 8.36 | 5 | **0.1372** | -0.051 | 0.170 | -0.057 | -0.071 | -0.079 | -0.019 |
| **12** | 11.76 | 11 | **0.3822** | 0.036 | -0.063 | -0.064 | 0.056 | 0.008 | -0.074 |
| **18** | 15.79 | 17 | **0.5389** | -0.042 | -0.077 | -0.062 | 0.044 | 0.027 | 0.080 |
| **24** | 18.55 | 23 | **0.7268** | -0.005 | 0.040 | -0.056 | 0.028 | -0.077 | -0.046 |

(c) Residual: white noise or not?

Table 3.1 is the autocorrelation table of residuals where χ2 testing results are shown. The χ2 testing basically shows whether the residual term {εi} is a white noise series. For χ2 testing, there is null hypothesis H0: {εi} is unautocorrelated to the lag of 6/12/18/24, versus alternative hypothesis Ha: {εi} is autocorrelated to at least one lag smaller than 6/12/18/24. With all P-values greater than 0.05, we could not reject any of the null hypotheses, and must conclude statistically that all autocorrelations up to a lag of 24 are 0. Since autocorrelation dies out with lag increasing, all autocorrelation can then be seen as equal to 0. Therefore, the residual term is a white noise series on a statistical basis.