PYTHON HOMEWORK 3 REPORT

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The homework which was about the estimation of dollar/try rates consisted of three parts and a large data set. In the given data sat there was a sudden increase towards the end of data set. After running the codes for three questions we can see that increase in trend plots with the change in line towards upper right part. These plots named with “b” tag also indicate that our data set has unit-root and is not stationary. Same observation can be made by checking the dickey fuller test results. In each method, it was observed that the test results were more positive than critical values and p-values in these results were greater than 0.025.

While making the estimations two methods were used; Holt and SES. When RMSE values for these estimations it was observed that (1)*Holt method was more preferable.* Relatively because alpha and slope values. With these two indicators one can find the closest values, which has lowest RMSE values, by changing the values of them.

(2)In the code written, the smoothing techniques did not change the results in the sense that the data was still not stationary and had unit-root, as it can be observed by checking the dickey-fuller results given in the code or from the figures named under q3bi. In the RMSE values, there were greater RMSE values than the original data, which might be the result of problematic parts in the code.

(3)Due to the lags, a smaller window size for the close estimations would be preferable and a larger window size would be better for the estimation for the value in next day.