4. CONCLUSION

In this research, the relationship between three slope, STKN and the elevation error parameters upon ASTER GDEM was investigated in two study areas. Using the reference DEM gives us this ability to do cell by cell investigation. Thus, the high volume of information had be available for assessment. According to this analysis, the important matters are represented in the following:

- Although the range of STKN is different in two study areas, the STKN of 19 has the minimum value of mean absolute error in both study areas. This minimum error has small difference with other STKN.
- The value of mean absolute error increase by changing the topography and the increase of slope values and height on cells. Changing in STKN has no important effect on error values.
- The effect of STKN has been applied, because in both study areas, the minimum value of STKN is 10. Also, higher value of STKN destroyed the robust correlation between the slope, STKN and error values.
- Tazehabad study area has slightly height. The increase of STKN values in this region leads the error values to under-estimation. In Bomehen, this issue is vice versa so that, the over-estimation has happened. This subject is stronger than when the STKN increases.

In general, it can be concluded that the availability of STKN as an external data to estimate the height of cell in ASTER GDEM, had be mandatory to receive the acceptable result. Of course, by increasing STKN, the discipline of relationship between error value, STKN, and slope has been destroyed, and no high correlation coefficient between them are observed.

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