

1. The main purpose of the research was to develop methods to assess how climate change affect current agricultural practices in Africa. From this statement it can be depicted that climate change is an independent variable. Since the agricultural practices is a dependent variable, the practices will change to try to adapt to the continuous changing climate.

The questionnaire was generated using categorial variable, which is discrete. Categorical variable can either be Nominal, dichotomous or ordinal and from the research questionnaire, nominal variable was used. For example, “ crop type” is a nominal variable with 56 different crop types. Another examples is the “irrigation methods” has 5 categories that farmers can use.

2. This study was established to quantify the relationship between two factors, climate change and agriculture. This is an analytical approach, the effect on an intervention (climate) on an outcome (success of agriculture) was looked at. The households were chosen randomly in districts that are representative for key agro-climate zones and farming systems. This survey was done between 2002/2004 season, at that point it was already established that climate change is more prevalent. So this is a cross sectional survey since it was done as the climate change occurred and that was when the outcomes where determined. The multistage stratified sampling was used to select households to be surveyed.

3.

3.1 Factors that determine agricultural productivity between subsistence and commercial farmers.

3.2 Introduction of agricultural machinery and their effect on climate change.

4.

- Research question: Factors that determine agricultural productivity between subsistence and commercial farmers
- Datasets to be used: use of pesticides, fertilisers(types), frequency of use of the fertilisers
- Exclusion: no exclusions
- Variables to be looked at in the main analysis: pesticides and fertilisers usage
- Statistical method: regression

I will use the t-test and regression since I want to see a relationship between two variables.

H_0 = the use of fertilisers and pesticides in commercial farming doesn't have effect on productivity

Alternate= the use of fertilisers and pesticides in commercial farming results in higher productivity

Significance test will be determined using standard deviation.

5. I will compare the standard deviation with the P-value. P-value less or equal to standard deviations is deemed as statistically significant. Commercial farmers will have more livestock and crops due to the use of pesticides and fertilisers.
6. Network analysis- will be used to cluster all places with subsistence farming and commercial and can be used to tie up all areas with same type of crop, irrigation or farming experience. Histogram can be used to represent and analyse production. Bar graph can be used to compare livestock and crop production in the different countries sampled.
7. Data on fertilisers and pesticides is important because nitrogen fertilizers results in Nitrous oxide which plays a major role in climate change, using cow dung as well means methane is generated. This research looks at climate change and agriculture hence these two variables cannot be left out.