

Week-05-L-03

Data Presentation and Interpretation

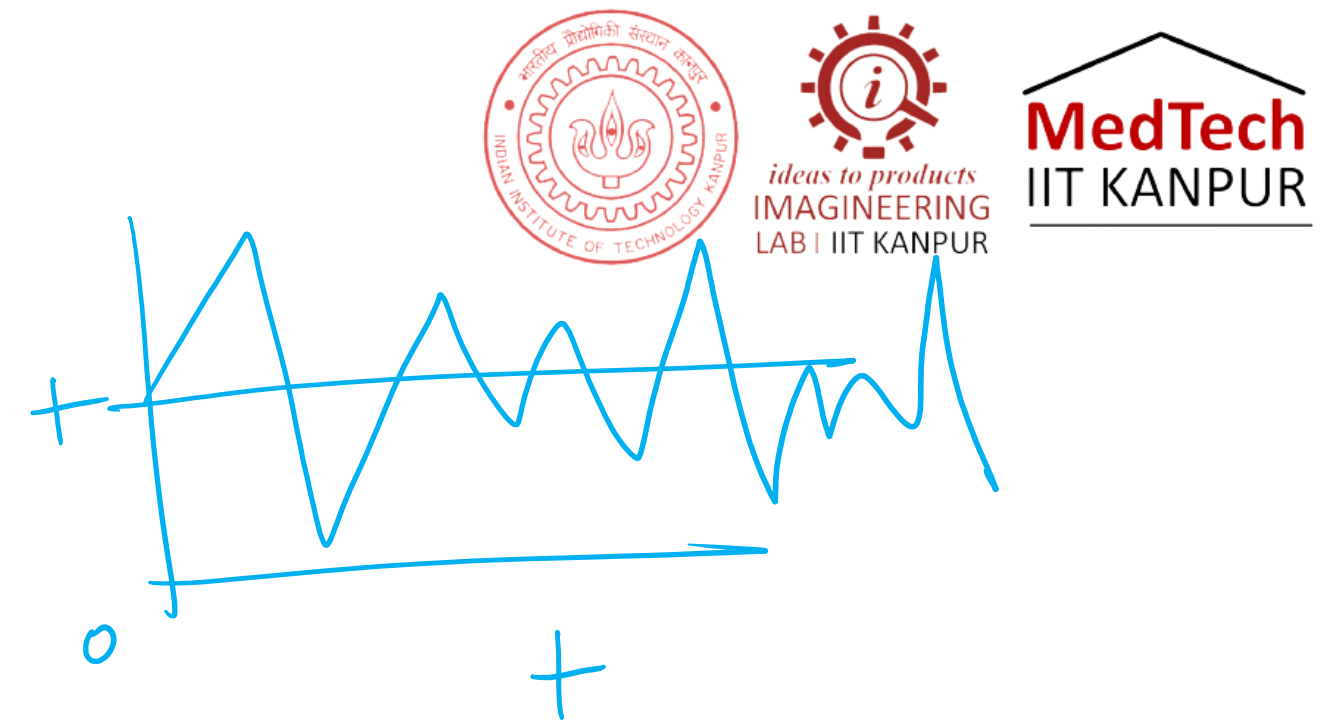
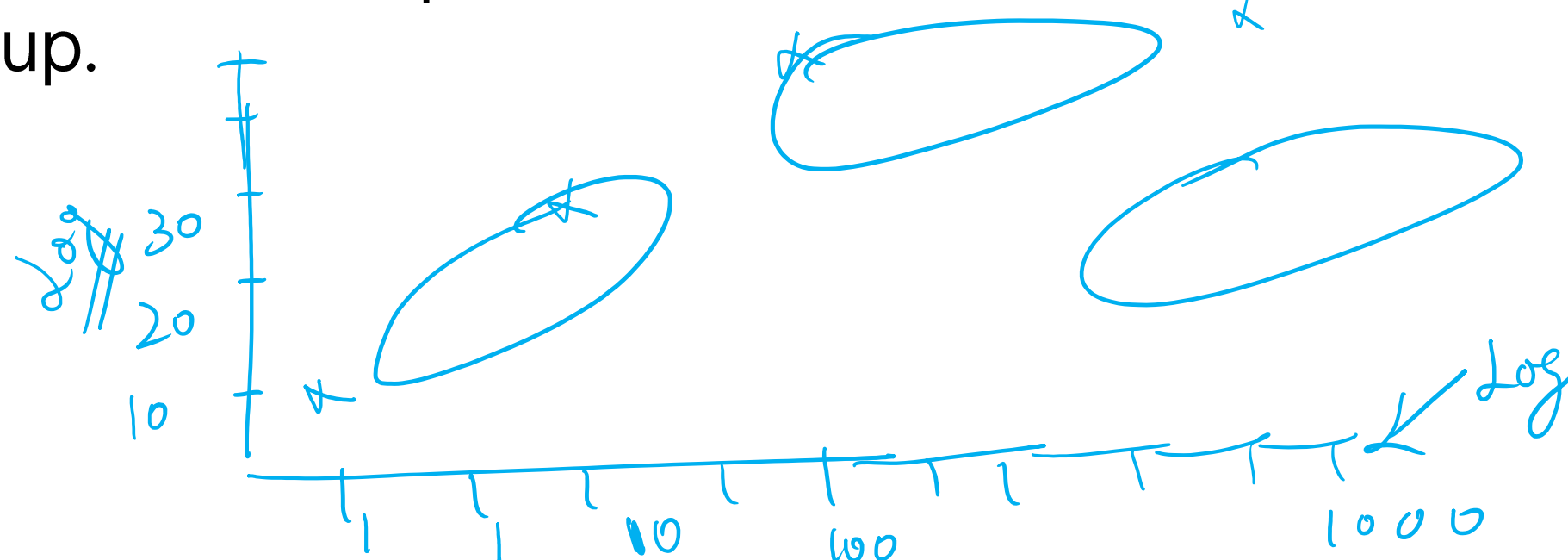
Practice on Selecting Graphs

Prof. J. Ramkumar
Department of ME & Design
Indian Institute of Technology Kanpur



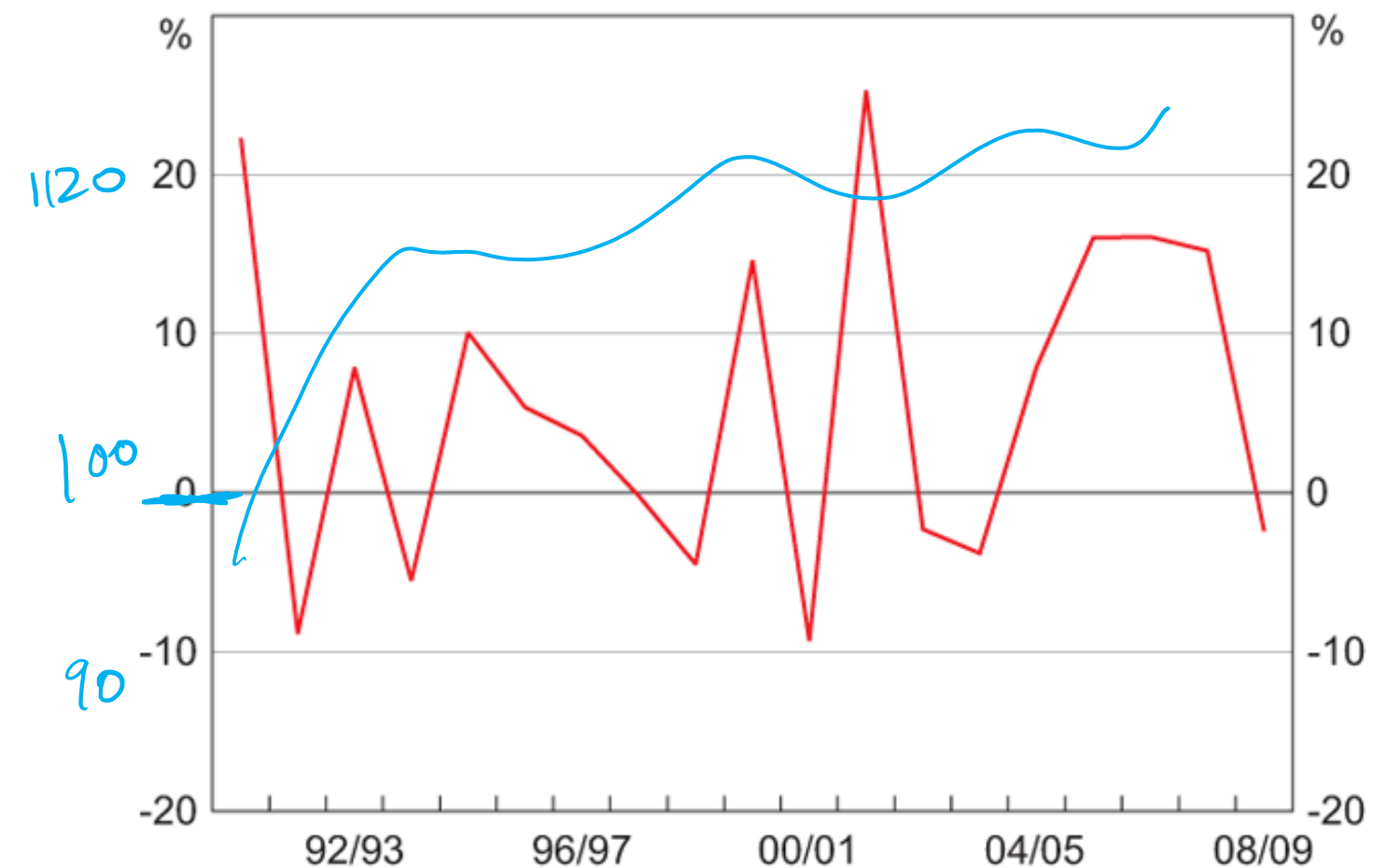
Choosing Graphs- Line Graph

- Line graphs are used to track changes over short and long periods of time.
- When smaller changes exist, line graphs are better to use than bar graphs.
- Line graphs can also be used to compare changes over the same period of time for more than one group.



India – Agricultural Investment

Real annual growth in gross capital formation

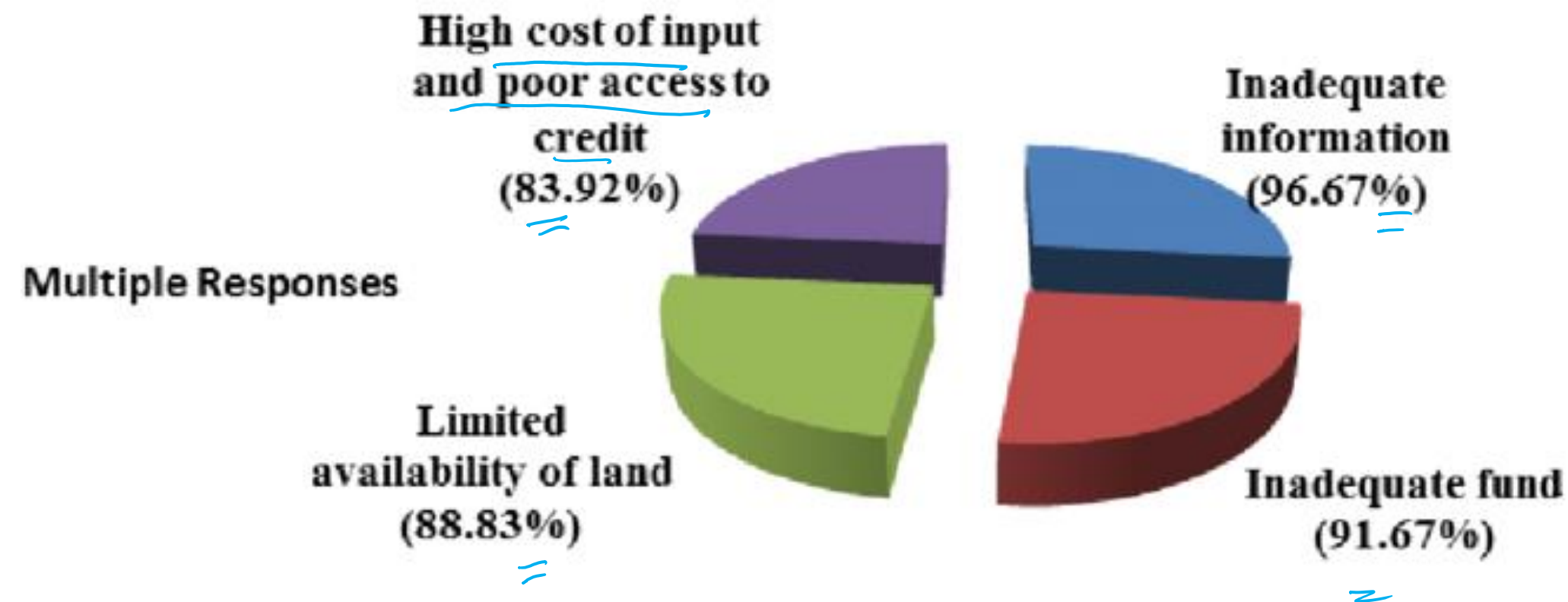


Sources: Central Statistical Office; RBA

Choosing Graphs- Pie Chart



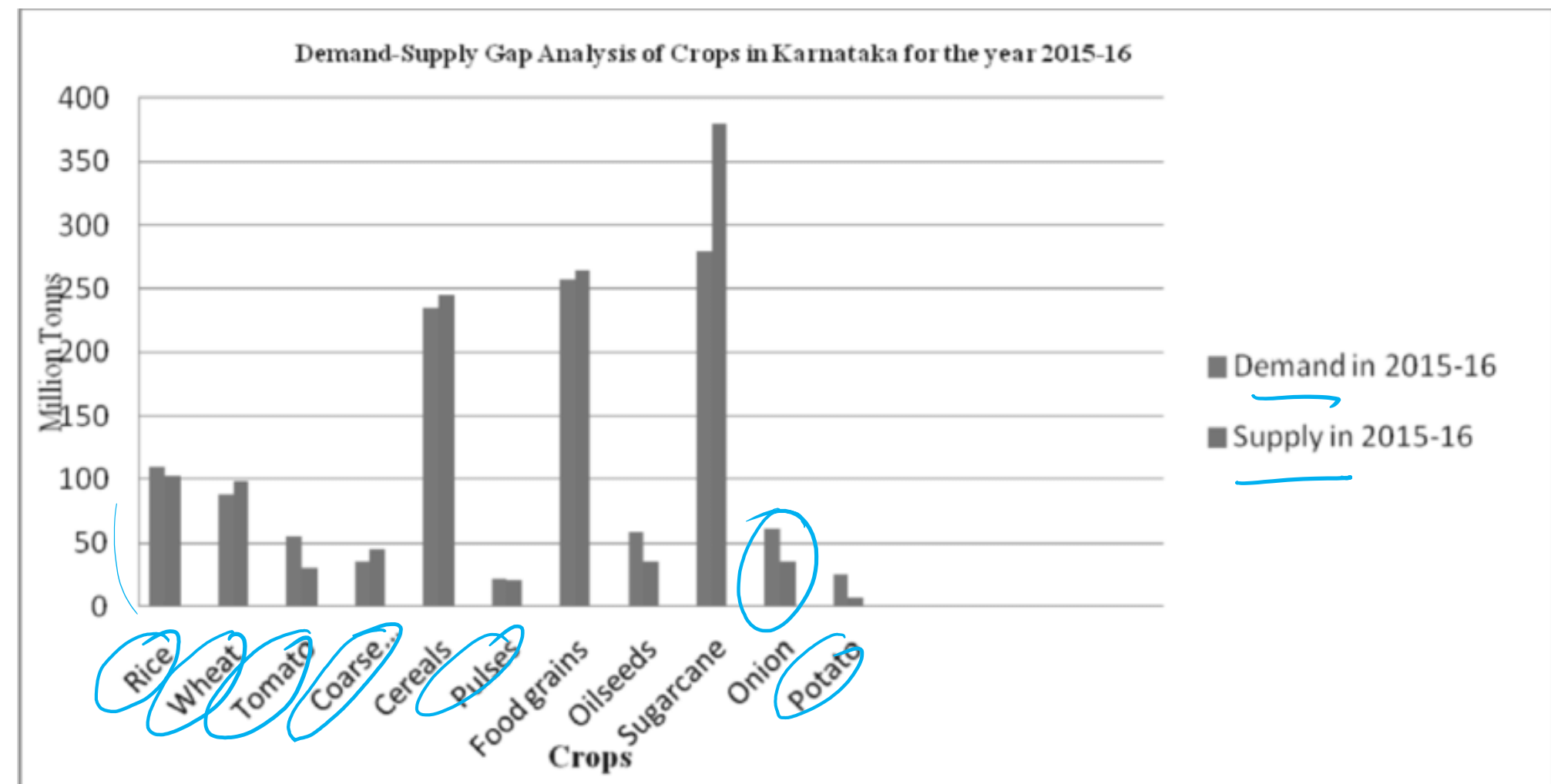
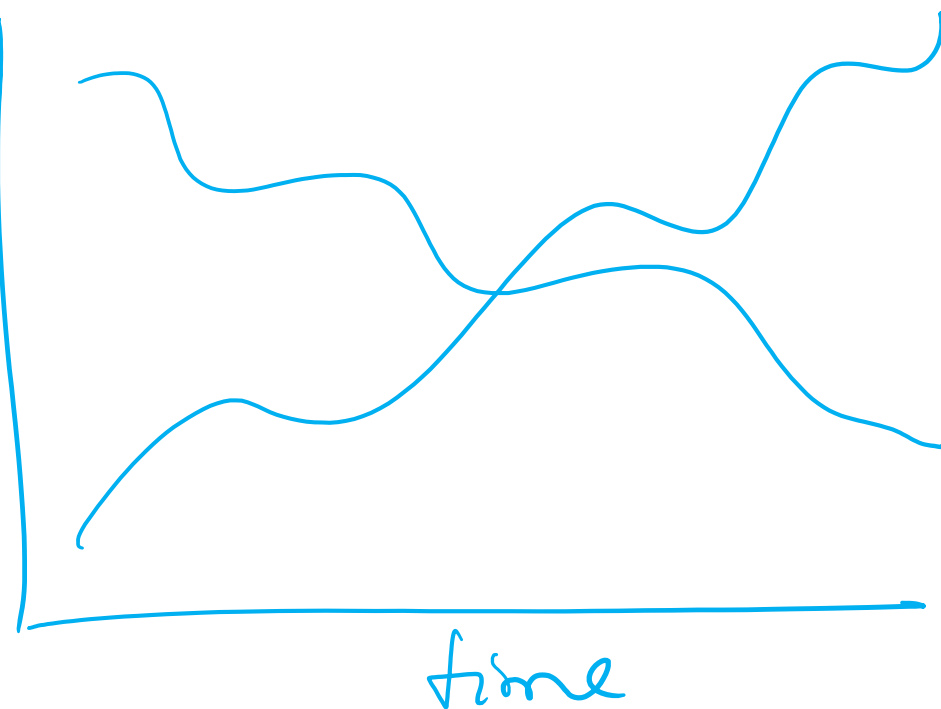
- Pie charts are best to use when you are trying to compare parts of a whole.
- They do not show changes over time.



Choosing Graphs- Bar Graph



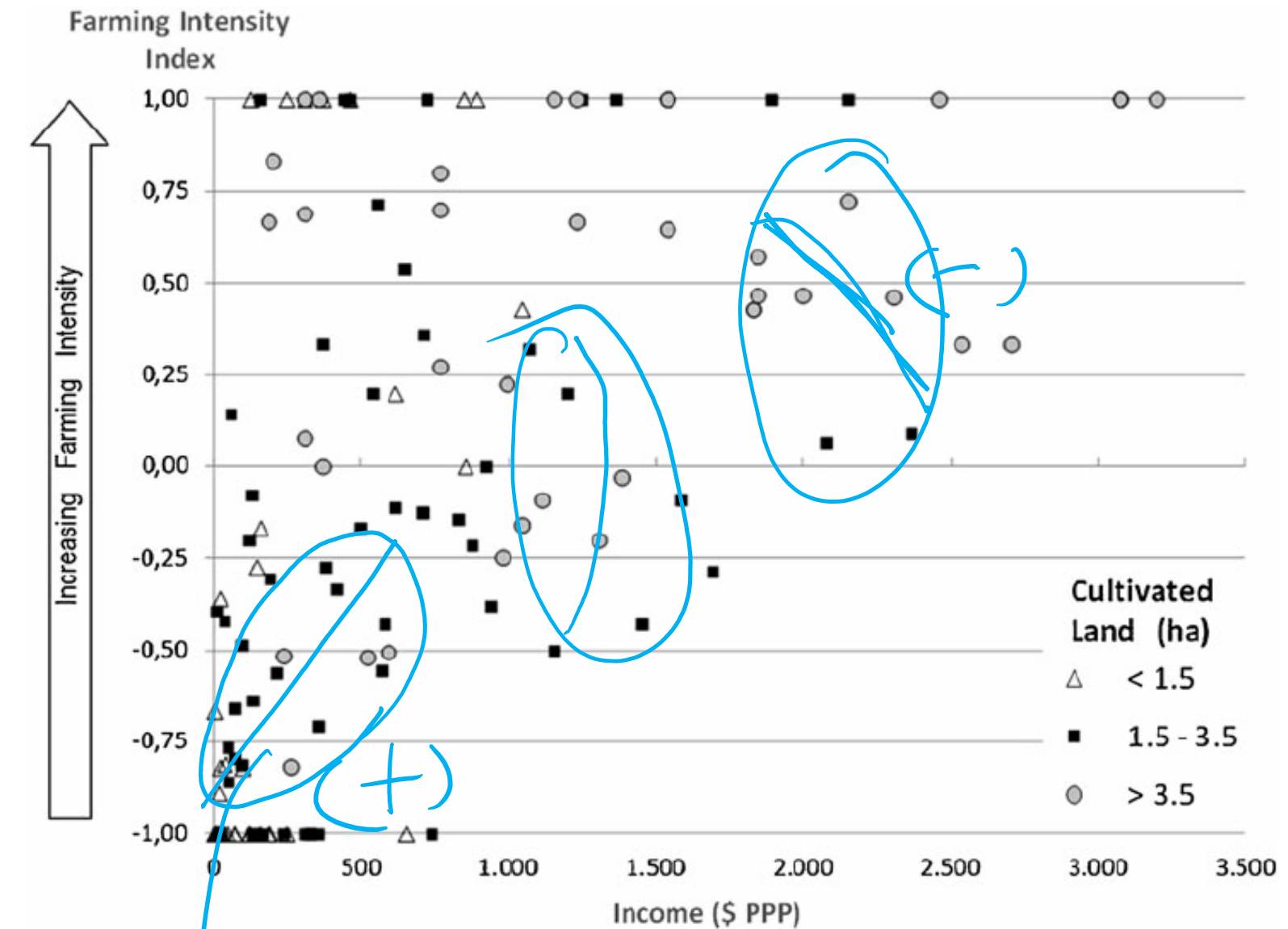
- Bar graphs are used to compare things between different groups or to track changes over time.
- When trying to measure change over time, bar graphs are best when the changes are larger.



Choosing Graphs- X-Y Plot



- X-Y plots are used to determine relationships between the two different things.
- The x-axis is used to measure one event (or variable) and the y-axis is used to measure the other.
- If both variables increase at the same time, they have a positive relationship.
- If one variable decreases while the other increases, they have a negative relationship. Sometimes the variables do not follow any pattern and have no relationship.



m ± SD

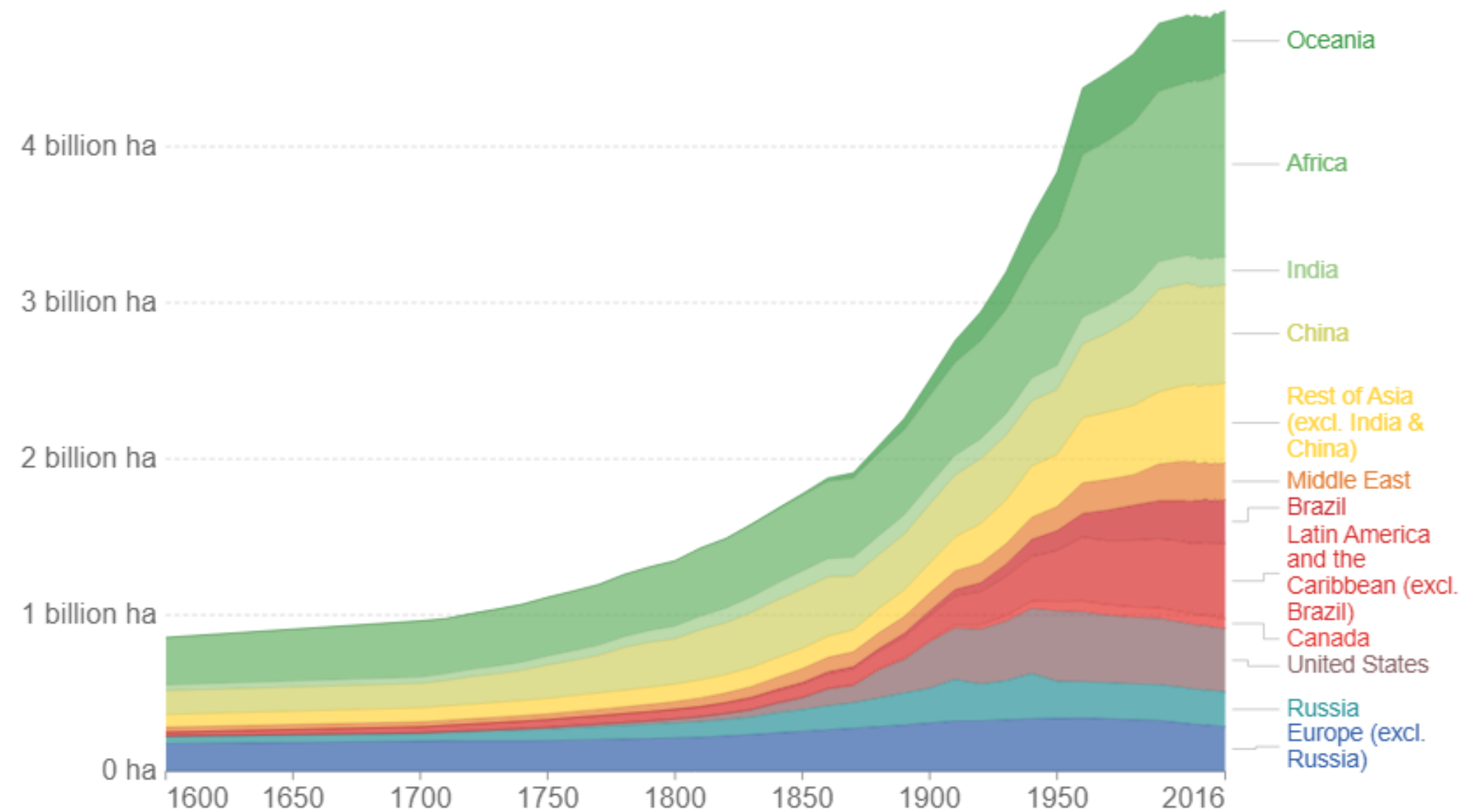
Choosing Graphs- Area Graph



- Area graphs are very similar to line graphs.
- They can be used to track changes over time for one or more groups.
- Area graphs are good to use when you are tracking the changes in two or more related groups that make up one whole category (for example public and private groups).

Agricultural area over the long-term, 1600 to 2016

Total areal land use for agriculture, measured as the combination of land for arable farming (cropland) and grazing in hectares.



Source: History Database of the Global Environment (2017)

OurWorldInData.org/yields-and-land-use-in-agriculture/ • CC BY

Source: www.ourworldindata.org

Thank you

