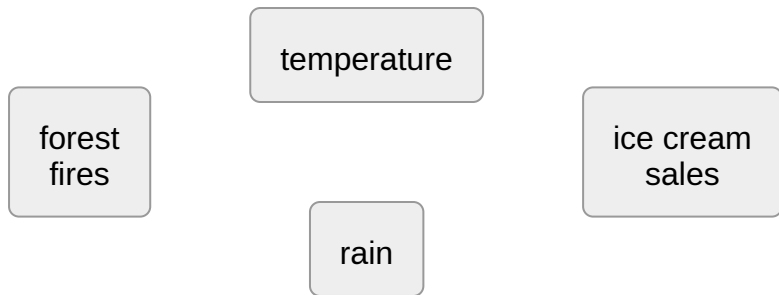**Applied Data Analytics**

Data analysis — Interpretation challenges

Using graphs for modelling

Hans-Martin von Gaudecker and Aapo Stenhammar

Forest fires and ice cream sales

temperature

forest fires

ice cream sales

rain

Marshmallows and education

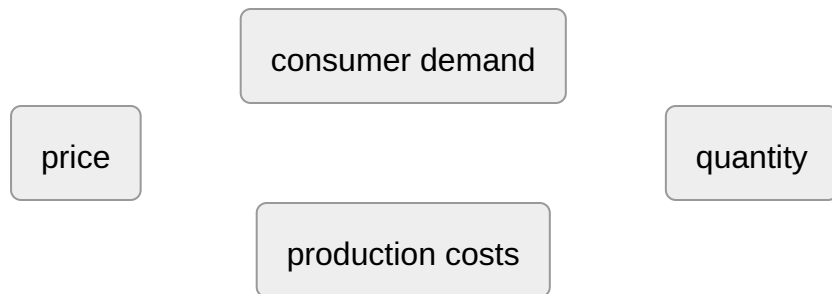grab marshmallow immediately

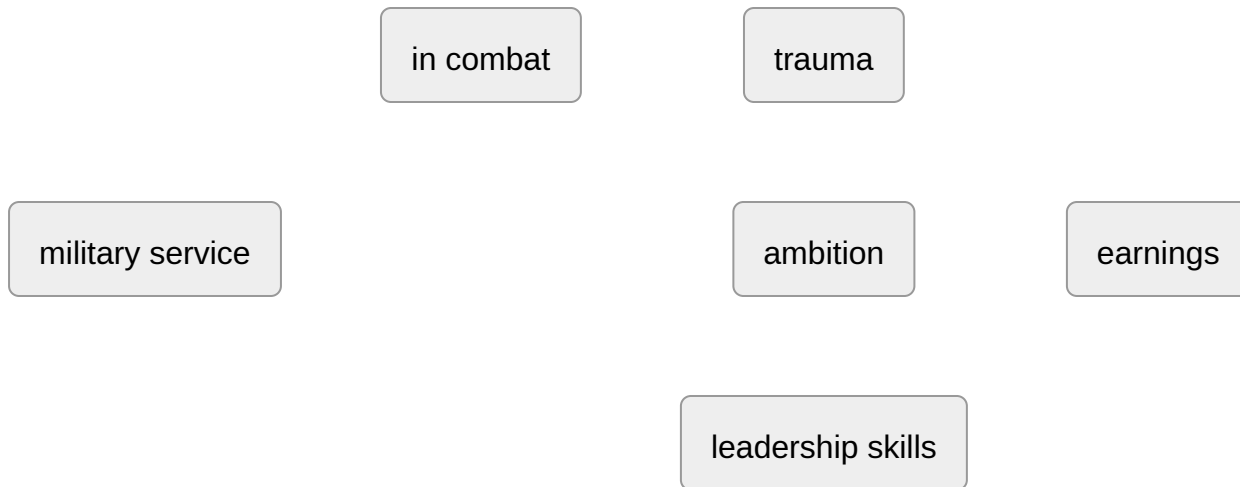patience at age 15

educational attainment

parental background

Supply and demand

consumer demand

price

quantity

production costs

Income and health

doctor visits

food

income

health

earnings capacity

cogn. / personality

Military service and earnings

in combat

trauma

military service

ambition

earnings

leadership skills

Steps to structure models

1. Start from a large model with many variables.

2. Only then remove paths based on arguments about how the world works (theory!)

Missing paths are restrictions!