

# Instructions



## Empirical Research Methods in Software Engineering



# Why Empirical methods is used or needed ?

They are a standardized way of collecting data

They can be tested retrospectively

Quantitative

Data collection to perform research

not based in assumptions

Test and validate

To be more precise

# Name some empirical research methods ?

quantitative methods  
quantitative  
survey observation  
mixed qualitative  
experiment and case study  
observational

# Why do we experiment?

to introduce new ideas

To test cause and effect

To prove our assumptions

In order to collect data, which can then be used in order to create a number of conclusions/results

To improve or disapprove a theory

To generalize

**Read this paper and try to get the extract  
the main results ?**

<https://tinyurl.com/y3s8bnav>



# Try to summarize the paper here

Experimental analysis helped resolve the apparent paradox of weak ties in the world's largest professional social network. When considering structural tie strength, an inverted U-shaped relationship exists between tie strength and job mobility

They found out that weaker links had a greater impact than strong ties on the job mobility with diminishing returns. And in field with high amount of IT work the weaker ties had a greater effect than non IT fields

weak ties increases job mobility in the digital industries, whereas strong ties increases job mobility in less digital industries

The effect of weak ties were on both increased job applications and job transmission

The effect of weak ties on are non linear with u shaped l-e it give good result at some point and have marginal return at some point

LinkedIn experiments tested theory that weak ties increase job mobility in the world's largest professional social network. The experiments randomly varied the prevalence of weak ties in networks of over 20 million people over a 5-year period

# Group Discussion

- Reflect and discuss the randomized experiment used in this study .
- Identify pros and cons .
- Pros and cons of using other research methods for this study .
- Example : (Case study , Survey or Action research).