



# Summaries pre-master

Business Administration

Study Association Stress  
RAVELIJN BUILDING | RA1336



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## Stress

Stress is the study association for Business Administration (BA), International Business Administration (IBA) and Industrial Engineering and Management (IEM) of the University of Twente. Stress was founded on May 21st, 1974. Currently, Stress has over 2100 members and is the largest UT (study) association. Stress organizes various activities to support, expand and complement all of its studies. Stress has five principles, which will greatly enhance your time as a student: Study, Meet, Practice, Develop and International. Following these, several activities are organized by the roughly 120 active members, and are partially made possible thanks to the sponsorship and participation of various companies. Moreover, we have regular contact with other business and management study associations across the Netherlands.

## Education

As a study association, Stress represents its members towards the faculty. Therefore we have a Commissioner of Educational Affairs who, with help of the Education Committee, deals with everything concerning your education. From collecting summaries to handling complaints to organizing educational events. If you have any questions concerning your study, the teachers, the faculty or anything else, feel free to ask the Commissioner of Educational affairs!

### Education Committee

The committee consists of representatives of every cohort. The representative of the freshmen will be introduced during the first module. This committee is aimed at forming the bridge between teachers and students and therefore, improving the quality of the study. They keep the summary database on the Stress site up to date, organise study evenings and try to keep an eye out for the quality of our education. When there are complaints from the students concerning education, about one of the courses of one of our studies for example, they will be handled by this committee.

### Summaries

Next to handling complaints, we also collect and check summaries of all the courses you follow! So it does not matter if the course is in the first, fifth or eighth module, you can send your summary in and we will check if your summary will make a good addition to our collection. To hand in your summary, simply send the file to [ec@stress.utwente.nl](mailto:ec@stress.utwente.nl). The Education Committee will then check the summary and if it is found to be sufficient, you will be compensated for your efforts. If your summary is the first one of a course, you will receive €15. If it is the second one, €10, and for the third one you will get €5. If you think you have made a better summary than the ones online, you can also send yours in and earn €5,-. Our summary collection can be found at the bottom of the 'study' page on [www.stress.utwente.nl](http://www.stress.utwente.nl).

### Panel Meetings

The panel meetings are organised in every module to improve the education. Here, the teachers of the module together with some students discuss the module. The students are able to give their opinion about the module and what they would like to see improved. The teachers can also ask questions about the opinions of the students. This way teachers know what went right in a module and what went wrong so they can improve the module for next year. The panel meetings are for all the students which are taking the module. You can also join the feedback panel. This means that you join a group of student who attends the panel meeting each module and gives valuable feedback to the programme.

## Study sessions

For some courses, Stress organises study sessions. During these afternoons or evenings one or two student assistants of the course will be present. The study sessions are free to attend and coffee, tea and snacks are provided for you by Stress. If you think a study session will be valuable for a course you are following, please contact the Commissioner of Educational Affairs or the Education Committee. They will check if there is more demand for a study evening for this course and act accordingly.

## Complaints

If you have a complaint, you can submit it at the 'Study' page on [www.stress.utwente.nl](http://www.stress.utwente.nl) or talk to someone of the Education Committee. However, if you feel it is a really important complaint or you want to explain it personally, you can come to the Stress room and talk to the Commissioner of Educational Affairs or send an email. We will then contact the programme management team and discuss what actions can be taken. They value bundled complaints greatly because it tells them a lot more when multiple people have the same complaint, this is the most important reason to always voice your opinion.

## Ordering Books

For the first module, you can order your books during the Kick-In. For the following modules, you will have to order them by yourself. You can do this online, at our website. The only requirement to order the books is that you are a member of Stress.

To order books online you have to go to the 'Study' page on [www.stress.utwente.nl](http://www.stress.utwente.nl). On the left of the screen you find a header: 'BOOKSALE', and below the option: 'Order your books'; select this option. Next, you can use the dropdown menus to select your study and module. Once you have chosen the correct options, press 'To booklist'. After this, you can select all the books you would like to order, and then proceed to 'Checkout. After paying, the books will be shipped to the address you enter.

For any questions about the books you need, the ordering of the books or anything else book-related, you can send an email to [books@stress.utwente.nl](mailto:books@stress.utwente.nl).

## Tutor platform

If you are having trouble studying for a course, we have the tutor platform to provide you with the right student for your struggles. We have a wide variety of students who have gone before you and who are willing to help you out for a small compensation. Send an email to [tutor@stress.utwente.nl](mailto:tutor@stress.utwente.nl) and mention your study, study-year, course you need help with, how many hours you need and any requirements you might have for the tutor. The payment of the tutor can be negotiated but keep in mind that students get paid €10 to €15 by the university when working as a teaching assistant, and you have to pay for it yourself.

The other way around, we are always looking for new tutors. If you are interested in joining our tutor pool let us know. We will add you to the WhatsApp group and you can reply to students asking for tutoring.

## HELP!

Often, students do not know where to go with any problems, either study-related or personal. Here you find some information about the most common places to find help.

## Study advisor

The study advisor is not only there to answer all your questions about your study, but also there to help you with any personal conditions or other issues that might affect you or your study progress. If

you have any problem at all, go see your study advisor. Even if they are not the person who can help you, they can send you to someone who can. Every talk with the study advisor is confidential and she will always do her best to help you. You can make an appointment with the study advisor on [www.bms.planner.utwente.nl](http://www.bms.planner.utwente.nl). The study advisors for BA are Charlotte Röring and Eline de Ruiter. The office of Charlotte is RA3254 and the office of Eline is RA3276. Their emails are [c.g.m.roring@utwente.nl](mailto:c.g.m.roring@utwente.nl) and [e.j.deruiter@utwente.nl](mailto:e.j.deruiter@utwente.nl).

### Red desk / Student Affairs Coaching & Counselling

If your study and personal life are all on track, this bit of information might not be really relevant for you. But if it is not the case, when your study is completely going the wrong way, or you find it hard to adapt to living away from your parents or you have a difficult situation back at home, the Student Affairs Coaching & Counselling, also called the 'Red Desk', is the place where they can help you. Every possible question about study or personal issues will be answered here, or you will be forwarded to a trained professional. The Red Desk can be contacted at [sacc@utwente.nl](mailto:sacc@utwente.nl) and is located in the Vrijhof (building 47), third floor, room 311.

### Become active at Stress!

Next to your study, you can become an active member of our association! Stress offers many different committees which have organisational tasks or supporting tasks. On our website, you can check out all the committees from Stress. To find out which committee suits you best, email the Commissioner of Internal Affairs at [internal@stress.utwente.nl](mailto:internal@stress.utwente.nl).

### Member Initiative

Have you always wanted to organize something big, but never had the resources? We appreciate initiatives from our members! So, if you have a clever idea for something within Stress or the committees, please contact us and we can see what is possible.

### More information about Stress

Do you want to know more about Stress? Or do you want to check out our website and social media? Make sure to scan the QR code:



## Part one

! Disclaimer: always check what you need to study corresponds with the content of the summaries, courses can be changed which could cause changes in study material for your exams

*If you made a summary for a course this module you can send them to [education@stress.utwente.nl](mailto:education@stress.utwente.nl) and depending on how many summaries we have for this course you will receive compensation for your work.*

All courses will consist of training in research methods and techniques and academic skills. Where possible, the topics are related to Business Administration fields. The courses for the first quartile can be found in the list below.

### Courses

- Organization Theory	202001402	5 EC
- Research Methodology and Descriptive Statistics	202001400	5 EC
- Academic Writing	202000260	5 EC

### Summary 1

**Course:** Organization Theory

**Book:** McAuley, J., Johnson, P., & Duberley, J. (2013). Organization Theory: Challenges and Perspectives (2nd ed.). Pearson.

**Chapters:** 2, 3, 4, 5, 6, 7, 9, 10 + papers

**Year the summary was received:** 2021\*

### Summary 2

**Course:** Research Methodology and Descriptive Statistics test one

**Book:** -

**Chapters:** Units 1 -11, 13, 23

**Year the summary was received:** 2019/2020

### Summary 3

**Course:** Research Methodology and Descriptive Statistics test two

**Book:** -

**Chapters:** Units 12, 14 - 22

**Year the summary was received:** 2019/2020

\* There is another summary available on [www.stress.utwente.nl](http://www.stress.utwente.nl)

## Summary 1: Introduction to the Organisation Theory

### CHAPTER 1 – An overview

Main features of an organization:

- goals have to be set
- key areas of responsibility that are necessary to achieve the goals have to be identified
- pressures from the environment have to be identified and responded to -> subsequent changes in the organisation goals
- culture of the organization is necessary (including the standards of behaviour and attitudes towards work that reflect the values and necessary attitude)  
= successful establishment, correct organisation theory and design

**Organization** is a consciously managed and coordinated social entity with an identifiable boundary, which functions on a continuous basis to achieve a set of goals

- Managed and coordinated = involving management hierarchy in decision-making
- Social entity = people interacting with each other
- Identifiable boundary = distinguishing members from non-members

The interaction patterns that people follow in an organization are deliberately channelled in directions which promote the organization's interests, which means that interaction patterns have to be coordinated and the results of that interaction have to be monitoring.

**Organizational structure** - the degree of complexity, formalization and centralization in an organization

- **complexity** means the extent of differentiation within the organization, includes the degree of specialization and division of labour
- **formalisation** means the degree to which an organisation relies on rules and procedures to direct the behaviour of employees
- **centralization** means where the responsibility for decision-making authority lies
  - centralized: just a few executives, or even one person, make the relevant decisions
  - decentralized: a greater number of people are involved in decision-making

**Organization Theory** - the discipline that studies the structure and design of organizations

**Organization design** - the construction and change of an organization structure to achieve the goals

**Organisational behaviour** - the study of the way in which individuals and teams behave in the workplace

**System** - a set of interrelated and interdependent parts which interact to produce a unified outcome

- *closed system* is self-contained system that has no interaction with its environment

Doesn't exist solely closed-system organization apart from utopian communities or self-contained religious groups. Even those are only temporarily closed

- *open system* is a dynamic system that interacts with and responds to the environment

Characteristics of an open system:

- environment awareness means that the organization constantly interacts with its environment
- feedback means that the system adjust to information from the environment
- cyclical character (consists of cycles of events)
- tendency towards growth
- steady state means that the system is unchanged over long periods of time
- movements towards growth and expansion (sophisticated system)
- subparts are in balance and able to adapt to the environment
- equifinality is the ability to reach the same state by a variety of paths

*Organizational life cycle* - the pattern of predictable change through which the organization moves from start-up to dissolution

Life cycle stages:

1. Entrepreneurial stage: the formation stage
  - uncertain goals
  - high creativity and managerial input
  - maintaining a steady supply of resources such as capital and labour
2. Collectivity stage: the stage continues the innovation of earlier stage
  - organization's mission is clarified
  - communication and structure within the organization remain informal
  - high commitment, long hours of work
3. Formalization-and-control stage: stabilization of the operation of the organization
  - formal rules and procedures are introduced
  - decision-making is clarified
  - efficiency and stability become more important
4. Elaboration-of-structure stage: reaching a large size and bureaucracy
  - searching for new products and growth opportunities
  - structure becomes more complex and elaborated
  - decision-making is decentralized
5. Decline stage: demand for its products or services shrinking
  - new opportunities searching
  - conflict promoted by shortage of resources and disagreements over strategy
  - making decisions become more centralized
  - the organization ceases to exist



### Organization theories:

- positivism: an assumption that the world may be known and improved by extending knowledge through research
- normative: developing theories which may be applied across a wide range of situations
- critical theory: an approach to studying organizations which concentrates on their perceived shortcomings and deficiencies
- postmodernism: an approach to studying organizations which emerged from European philosophical origins and rejects traditional approaches to studying organizations

## CHAPTER 2 – The evolution of Organisation Theory

### Before the Industrial Revolution:

- farmers and labourers were hunting and forming their own food making own supplies
- manufacturing was done in people's homes using hands tools or basic machines
- almost fully self-sufficient

People worked for themselves not for a wage. In 1820 only 20% of U.S. population dependent on wage

### After the Industrial Revolution:

- mass production appeared = low-skilled workers, repetitive tasks, high-tech and new machinery on the production
- modern industrial structure = departmentalization, division into workers, managers and general managers, working for wages, management control – supervisor)

### Basic principles of modern organizations:

1. division of labour = breaking down tasks into simple components, repetition and specialization
2. bureaucracy = hierarchy, written rules and laws, formal selection procedures - selection of employees who fit in
3. rational system perspective = goal specification and formalization

## CLASSICAL PERSPECTIVE 1900 – 1930

- closed system perspective (without considering the impact of environment)
- managerial problems such as disciplining labourers, enhancing efficiency and controlling labour unrest

Gold: to organize jobs as efficiently as possible (to minimize inputs and maximize output)

### Frederick Taylor and *scientific management*

Frederick aimed to improve efficiency of factory work organizing work at the lowest level of the organization.

He initiated a movement oriented to achieve the “one best way” jobs should be done by systematizing and standardizing jobs:

- equal division of responsibility between managers and workers
- shift in power from worker to manager
- managed production as a science
- deskilling of work
- centralization of decision-making
- manager's responsibility was to train and motivate and workers (using punishments)

### Henry Fayol and *the 14 principles of organization*

Henry developed principles for the whole management to identify the functions which a manager should perform:

1. Division of labour, specialisation
2. Authority must equal responsibility
3. Discipline (obeying and respecting rules)
4. Unity of command ( only one superior for the group of employees)
5. Unity of direction (same tasks for one departments)
6. Subordination of individual interests to the general interests (no individual interests)
7. Remuneration (fair wages)
8. Centralization
9. Scalar chain (communication should follow the line of authority)
10. Order (people and materials should be in the right place at the right time)
11. Equity (being kind in fair)
12. Stability of tenure or personal (replacement has to be available to fill vacancies)
13. Initiative by employees
14. Espirit de corps (team spirit for the harmony)

### Max Weber and *bureaucracy*

Weber created the “ideal type” organization structure based on:

- division of labour
- clear authority hierarchy
- formal selection procedures (finding best employees for the job)
- detailed rules and regulations
- impersonal relationship
- employment decisions based on merit
- career tracks

- separation of members' organizational and personal lives

Ralph Davis and *rational planning perspective*

- development of clear goals
- plan to achieve these goals is identified
- the structure of organization is contingent on the organization's objectives

#### NEOCLASSICAL PERSPECTIVE 1930 – 1960

- closed system perspective
- managerial problems such as motivating people, strengthening commitment, coordination and planning

Elton Mayo and the *Hawthorne Studies*

Elton considered the individual and social context realizing that employees have social and psychological needs

- responded to the way employees were treated in scientific management so that human/social element became more important in the workplace (for example, interrelationship between co-workers and group work)
- social factors became as important as financial factors for productivity
- individual workers considered as part of a group

Douglas McGregor and Theory X and Theory Y

- Assumptions of managers according to the Theory X about the nature of human beings:
  - employees dislike work and are lazy
  - employees must be coerced, controlled or threatened with punishment to achieve goals
  - employees display little ambition without an appropriate incentive system

Assumptions lead to the authoritarian management style

- Assumptions of managers according to the Theory Y about the nature of human beings:
  - work is natural as play
  - employees can be ambitious, self-motivated, exercise self-control and take responsibility
  - employees want to do well at work

Assumptions lead to the management style based on climate of trust and employee development

*Socio-technical Systems*

As the result of a great number of strikes new system appeared. Employees' work lacked challenge and opportunity to advancement, so sociotechnical system was an attempt to make work more interesting and challenging by improving the quality of working life:

- job design principles were developed
- involving workers in decision-making
- multidisciplinary of group (different disciplines working together)
- autonomous work groups (workers were provided with responsibilities)

### *Human Relations School*

Efficiency in Human Relations School stay as important as in the classical school (early management theories)

- closed system perspective
- social aspect of work was next to the efficiency and productivity levels
- most managers were aware of the influence that human behaviour had on organizational outcomes

### UNMANAGEABLE ORGANIZATIONS 1950 – 1970

- very large and complex organizations with a great number of hierarchy levels
- no focus on customers and environment, still a closed-system perspective
- strict management control
- a lot of strikes
- complex bureaucracies
- lifetime employment

### *The Peter Principle* - promotion until incompetence

Peter researched large organizations and suggested that people get promoted on the regular basis until they become incompetent. So the decision was to move managers horizontally by giving them longer job titles

### *Parkinson's law*

Parkinson proposed a number of laws relating to organizations:

- work expands to fill the time available for its completion
- expansion of the number of administrators compared with workers
- time spend on any item on the agenda is in inverse proportion to its importance

### Herbert Simon and *satisficing decision making*

Simon studied decision-making in complex organizations and noted that:

- there is no possibility to fully processed all the information available in their organization

- rational decision-making was replaced by satisfying decision-making which was good enough

March - *garbage can of choices*

March observed the process of decision-making in complex and large organisations and noted that:

- organization had problems with coordinating the flow of information in constantly changing external environment
- garbage can of choices means that decision-making process was unlikely rational

## MORDEN ORGANIZATION THEORY 1960 -1980

- open system perspective (considering the environment, understanding the outside influence)
- managerial problems such as coping with the complexities of scale and scope
  - different products, markets, technologies and countries, determining the best structural form

### *Contingency Theory*

- open system approach
- there is no best way to organize a company
- the structure of an organization is contingent which means that structure depend on outside pressures that can be identified and analysed
- improving organizational effectiveness instead of efficiency

Contingency factors:

- environments (stable or dynamic)
- strategy (to be as efficient as possible/to increase production outcomes/to be more Innovative or creative)
- technology (division of labour/non-routine work, the level of specialization, autonomy)
- size (large or small organizations)

## POSTMODERN THEORIES 1980 – today

- managerial problems such as coping with competition from low-wage countries, variety of goals, flexibility, innovativeness, quality, ..
- effectiveness instead of efficiency
- configurations of different systems
- power and politics (decision making is for the people with power)
- culture becomes important
- criticism (assumption that organisations of classical school are arenas of exploitation - poor work conditions, low quality)
- equality (organizations depend on actions of individuals (the meaning of equality was redefined))
- social construction of reality (interpretations and perceptions for employees and managers differ)

### *Symbolic-interpretive perspective:*

- concerns more with behavioural than structural issues
- concentrates on relationships between people and different interpretations of the language
- realization that business researchers are lacking knowledge of psychology, anthropology and other behavioural disciplines

### Peter and Waterman's *"In search of Excellence"*

- culture had a significant impact on effectiveness (national and corporate culture is the key to the strength of the company)

**Efficiency** – reducing input and increasing output (produce as much as possible for less time)

## CHAPTER 3 - Organizational effectiveness

**Organisational Theory** clarifies which organization structure will lead to, or improve, organizational effectiveness

**Organization** means collective of people

Organizational Effectiveness criteria:

1. overall effectiveness
2. productivity
3. efficiency
4. profit
5. quality
6. accidents
7. growth
8. absenteeism
9. turnover
10. job satisfaction
11. motivation
12. morale
13. control
14. conflict/cohesion
15. flexibility/adaptation
16. planning and goal-setting
17. gold consensus
18. internalization of organizational goals
19. role and norm congruence
20. managerial interpersonal skills
21. managerial task skills
22. information management and communication
23. readiness
24. utilization of environments
25. evaluation of external entities
26. stability

27. value of human resources
28. participation and shared influence
29. training and development emphasis
30. achievement emphasis

All 30 criteria cannot be relevant to every organization, and certainly some are more important than others.

**Organizational effectiveness** - the degree to which organization attains its short and long-term goals, the selection of which reflects strategic consistencies, the self-interest of the evaluator and the life stage of the organization.

- **The goal attainment approach** states that an organization's effectiveness should be judged by whether it has achieved what it sets out to achieve

(Goal attainment approach is probably the most widely used approach to measure effectiveness)

For goal attainment approach to be viable measure of effectiveness:

- organization must have goals
- goals must be explicit, sufficiently clear and widely known
- goals should be of a manageable number and should reflect areas important to the organization
- there must be general consensus on these goals
- progress towards goals must be measurable and there should be a time limit attached to them

Drawbacks of the approach:

- in the large company's goals varies according to the person who is setting them
- the difference between goals that the company sets officially and real ones
- the difference orienting of short-term and long-term goals
- goals that are compatible to each other because of the diversity of interests within organization

Organizations exist to achieve goals - the problem lie in their identification and measurement.

- **System approach** states that an organization's effectiveness should be judged on its ability to acquire inputs, process them, distribute the outputs, and maintain stability and balance between the various subsystems of the organization

System approach implies that:

- organizations are made up of interrelated subparts
- if any of these subparts performs poorly, it will negatively affect the performance of the whole system
- management should maintain good relations with all the consistencies
- vacancies created must be filled, outdated technology replaced etc.
- mechanism produces goods and services in the repetitive cycles

Drawbacks of the approach:

- not all process variables are easy to measure
- hard to understand is the whole system improving or not

System approach increases the managers awareness of the interdependence of organizational activities and of the need for continuous improvement and that such improvement takes time

- *Strategic-consistencies approach* - an organization's effectiveness is determined by how successfully it satisfies the demands of those consistencies in its environment from which it requires support for its continued existence

Strategic-consistencies approach implies:

- the organization becomes a “political arena” in which vested interests compete for control over resources in order to satisfy environmental demands

*Political arena* - the organization has a number of important consistencies, each with different degrees of power and each trying to have its demands satisfied

- managers pursue a number of goals and that those selected represent a response to those interest groups that control the resources necessary for the organization to survive

Examples of consistencies: shareholders, employees, customers, locals, suppliers..

Drawbacks of the approach:

- separating the strategic consistencies from the larger environment is difficult, especially in quickly changing world
- approach also assumes that an organization's basic goal is survival, which may not be the case in many situations

It is important for managers to understand who it is that survival depends upon. If management knows whose support it needs if the organization is to maintain its health, it can modify its preferred ordering of goals as necessary to reflect the changing power relationships with its strategic consistencies

- *The balanced scorecard approach* – technique to evaluate effectiveness which seeks to balance the various demands in the organization with its capabilities

Making the balanced scorecard approach operative:

- all organizations must have access to finance and hence they have financial demands and constraints
- it is important how the product or service contributes to creating value for customers
- concentration on what the company must do internally to meet the customer's expectations
- searching for ability to develop and introduce new products of value to customers and clients

Drawbacks of the approach:

- the utility may be limited if what is chosen to be measured is not important
- organizations long-term survival depends on having sufficient slack of resources in order to avoid crisis



Approach involves reasonably wide range of managers and stakeholders in the process of nominating what is important for their organization

#### VALUE TO MANAGERS:

##### ○ *Goal attainment approach*

- managers ensure that goals of the organization are SMART = specific, measurable, achievable and time-bound
- managers ensure that input is received from all those who have a major influence on formulating and implementing the official goals
- managers observe the behaviour of organization managers
- managers reduce the degree of incompatibility between goals
- managers ensure the organization pursue both short and long-term goals
- managers realize that goals have to change over time, they are not fixed purpose

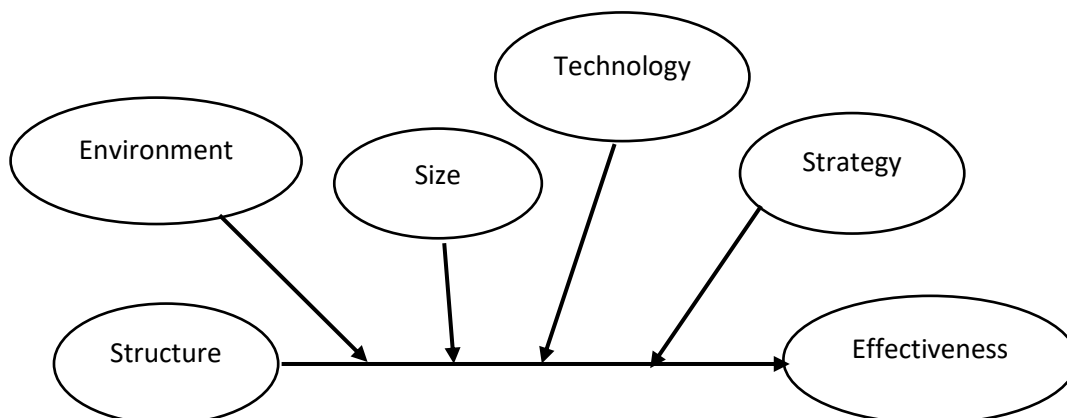
##### ○ *System approach*

- focused on continuous improvements
- managers are aware of the interdependence of organizational activities
- approach is applicable where end goals are not clear or measurable
- system is efficient as organization work in repetitive cycles

##### ○ *Strategic consistency approach*

- managers understand who it is that's why all depends upon
- ghosts are ordered to make sure supports from the consistencies will be received
- the system is efficient

The effectiveness of an organization structure is contingent upon the fit between the structure and various contingency variables (strategy, size, environment and technology)



#### CHAPTER 4 – Dimensions of organisation structure

**The structure** of an organisation refers to its overall dimensions, characteristics and areas of responsibility.

Organisational structure;

- complexity

- formalization
- centralisation
- coordination

## COMPLEXITY

- *Horizontal differentiation* - the degree of differentiation among units based on the orientation of members, the nature of the tasks, their education and training (refer to the number of departments of the organisation)

Types of horizontal differentiation:

- By task or function

+ efficiencies similar specialities with common skills, knowledge, orientations

- poor communication

- By product or service

+ specialisation in particular products, experts in their industry, being close to customers

- duplication of function

- By location geography

+ effective handling of specific regional issues

- duplication of functions, being isolated from other areas

- By customer or client

+ close to customer demands and expectations

- duplication of functions, limited view on organisational goals

- By process customer project flow

+ efficient flow of work activities

- only usable for a certain type of products

Benefits from the division of labour (horizontal differentiation):

- physical limitations (for one person to perform all required tasks it will take months of full-time effort)
- solve limitations of knowledge (the greater the skill levels required, the more likely the jobs will be highly specialised)
- efficiency (skills and knowledge of a task increase through repetition and concentration)

- simplify training ( it is easier and less costly to train workers to undertake specific and repetitive tasks)
- workers undertake tasks that they are good at
- areas of responsibilities are clearly defined

- *Vertical differentiation* - the number of layers of management

The more levels exist between top management and lower management workers:

- the greater the potential for communication breakdown
- the more difficult it is to coordinate the decisions of managerial personnel
- the more likely that political and power plays will slow decision-making

Many layers of hierarchy -> tall organisation

Only a few levels of hierarchy -> flat organisation

*The span of control* - the number of subordinates that a manager can supervise effectively

A large number of subordinates -> wide span of control -> flat organisation

Only a few subordinates -> narrow span of control -> tall organisation

*Spatial dispersion* - the extent to which the organisation facilities and personnel are spread over a wide geographical area

Layers of management:

1. Top management - sets the strategic direction of the organisation
2. Middle management - implements the plans of senior management + supervise lower level management
3. Lower level management - completes day-to-day tasks of supervising the production of goods and services

The higher the complexity, the greater amounts of attention management must give to dealing with problems of communication, coordination and control, and the maintenance of the organisation itself.

FORMALIZATION - the degree to which jobs and procedures within the organisation are standardized

Formalized organizations are plenty of rules and procedures which determine:

- what is to be done
- when it is to be done
- how it should be done

Work is standardized -> strict procedures are followed to run the process, problems are standard, for solving them standard solutions are used.

The greater the professionalization of a job, the less likely it is to be highly formalised.

Formalisation techniques:

- Selection (choosing employees that will fit into the organisation)
- Role requirements (task requirements are explicit and defined in great detail)
- Rules, procedures and policies
- Rules state a particular and specific required behaviour pattern
- Procedures - a series of interrelated sequential steps that employees follow to accomplish tasks
- Policies - guide employees in decision making in order to show a direction to the goals
- Socialisation (adaptation process by which individuals learn the values, norms, expected behaviour patterns for the job and the organisation)
- Training (the program used to teach employees preferred job skills, knowledge and attitudes, as well as to introduce employees into organisation's objectives, history, rules and policies)
- Rituals (essentially communal activities like informal lunches, drinks, sports activities. Rituals can extend to the style of clothes and company songs)

**CENTRALISATION** - the degree to which decision-making authority is centralised at the top

Centralisation of decision making:

- a comprehensive perspective is needed to choose actions that will benefit the whole organisation
- improved efficiency by controlling financial decisions and avoiding special interests
- helps survive in times of crisis

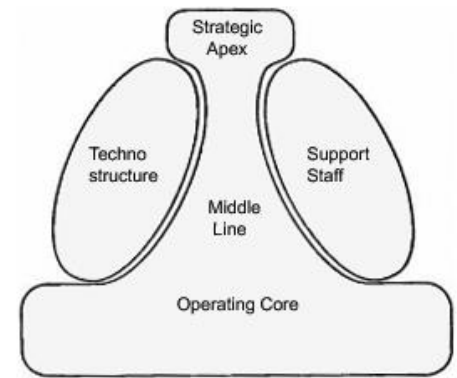
Decentralisation of decision making:

- avoid information overload for managers
- avoid the need to process information through all vertical hierarchy making the response to changes faster
- more detailed input in decision making

- ability to have the input of different specialists in decision-making process
- motivate employees by allowing them to participate in the decision-making process
- develops decision-making skills in lower-level management

**COORDINATION** - the process of integrating the objectives and activities of the separate units of the organisation in order to achieve organisational goals efficiently

- Programmed coordination includes planning, goal setting, scheduling, timetabling, sequencing, developing various types of standard operating procedures
- Individual coordination includes coordinating the work of others, especially when unusual circumstances demand a unique solution to a problem
- Informal coordination - coordination of employees among themselves on a day-to-day basis, which includes discussions, formal/informal meetings, emails, telephone calls, casual talks



## ORGANISATION DESIGN OPTIONS

**Configuration** - a complex clustering of elements that are internally cohesive and where the presence of some elements suggests the reliable occurrence of others

Common elements in organisations:

1. Operating core - employees, who perform the basic work related to the production of products and services
2. Strategic apex - top-level managers, who are charged with the overall responsibility for the organisation
3. Middle line - managers, who connect the operating core to the strategic apex
4. Technostructure - analysts who have responsibility for developing the programs, procedures and rules, which standardise the work of the organisation
5. Support stuff - people who feel the stuff units that provide indirect support services for the organisation

There are five distinct design configurations and each one is associated with the domination by one of the five basic parts.

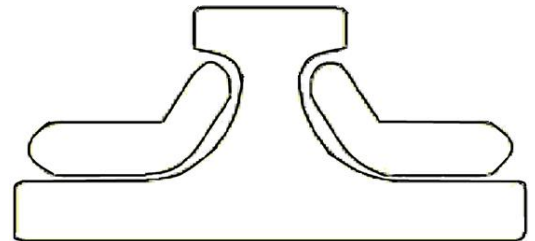
## THE SIMPLE STRUCTURE (Strategic apex is dominant)

Features of the simple structure:

- Low in complexity
- Little formalisation
- Authority centralised in a single person (usually owner)
- Flat organisation (few levels of hierarchy)
- Only strategic apex and operating core

Strengths and weaknesses:

- + simplicity of the structure
- + fast decision making
- + operations are flexible and require little cost to maintain
- + accountability is clear
- + goals are clear
- applicable only to small organisations
- power is concentrated in one person, who could be in lack of managerial skills etc.
- organisation's decision making centre is irreplaceable

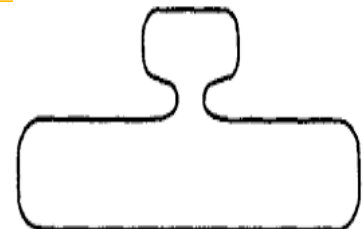


### *Examples of machine bureaucracy*

#### MASS PRODUCTION FIRMS:

- CAR AND STEEL INDUSTRIES
- BANKS
- INSURANCE COMPANIES
- POST OFFICES
- AIRLINES
- RAILWAYS

The simple structure is effective when the number of employees is small, informal communication is generally effective and the cost of production is low.



## THE MACHINE BUREAUCRACY (Technostructure is dominant)

Features of the machine bureaucracy:

- Highly routine operating core
- Functional departments
- Formalised rules and regulations
- Centralised authority
- Standardisation

Strengths and weaknesses:

- + ability to perform highly standardised activities in a highly effective manner
- + economies of scale
- + minimalisation of duplication of personnel and equipment

- + simplifies the way people communicate as they have the same background
- + requires less talented and less costly middle and lower level managers
- poor at adapting to change
- subunit conflicts in the process of setting goals and transfer of knowledge

The machine bureaucracy is effective when matched with large size, a stable environment and a technology that permits standardised routine work

## THE DIVISIONAL STRUCTURE (middle management is in control)

Features of the divisional structure:

- A set of autonomous self-contained units, each typically configured as a machine bureaucracy
- Each division has the divisional manager responsible for its performance
- Managers hold strategic and operating decision-making authority in relations to their businesses
- Divisions have support services
- Divisional general managers are answerable to the senior managers in the head office

Strengths and weaknesses:

- + clear accountability and responsibility for their performance of each division
- + Head Office staff is focused on the long-term problems
- + strategic decision-making is done at headquarters
- + trained and qualified general managers
- + a loss of one division will have a minimal effect on the entire organization
- duplication of activities and resources, which leads to increasing costs and reducing efficiency
- it is hard to make cooperation between divisions as well as coordination of personnel

The structure is necessary because of the product or market diversity. With increasing size of the organisation it becomes more and more relevant to make divisionalisation. To make the structure applicable environment has to be neither very complex nor very dynamic, as well as technology must be divisible.

## THE PROFESSIONAL BUREAUCRACY (operating core is in charge)

Features of the professional bureaucracy:

- highly trained specialists in the operating core
- decentralisation of decision making
- support staff focused on serving the operating core
- structure is high in complexity
- many rules and regulations

Strengths and weaknesses:

+ ability to perform specialised tasks

+ autonomy helps to do managers' jobs effectively

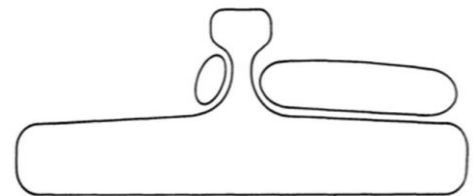
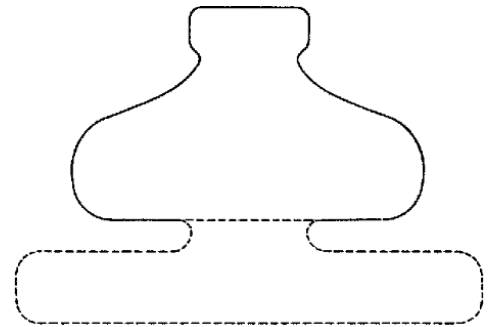
-conflicts between subunits, because employees place their interests over organisation's ones

-difficulties with adapting to changes

-limitations on the complexity of work that can be carried out

-difficult to set strategic priorities as there is no clear strategic apex

The professional bureaucracy is most efficient when a complex and stable environment exists.



## THE ADHOCRACY (dominant -?)

Features of the adhocracy:

- high horizontal differentiation
- low vertical differentiation
- intensive coordination
- great flexibility
- responsiveness
- few rules and regulations
- decision-making is decentralized
- little standardization and formalization
- no technostructure

### *Examples of professional bureaucracy*

- HOSPITALS, SCHOOLS, UNIVERSITIES
- MUSEUMS, LIBRARIES
- SOCIAL SERVICE AGENCIES
- ENGINEERING DESIGN FIRMS
- MANAGEMENT CONSULTANCIES

Strengths and weaknesses:

+ ability to respond quickly to change and innovation



- + ability to facilitate the coordination of diverse specialists
- + ability to be creative
- no clear boss-subordinate relationships
- inefficient configuration
- vulnerable design

The adhocracy is applicable only under certain circumstances. Structure is used to solve non-routine problems, where environment will be dynamic and complex.

Is often used as temporary structure.

## CHAPTER 5 – Strategy

**Strategy** - the adoption of courses of action and the allocation of resources necessary to achieve the organization's goals (+determination of the basic long-term goals)

Strategy is one of the fundamental influences on the way organisation is managed

**Tactics/tactical decisions** (≠ strategy) are day-to-day decisions associated with implementing plans and operating the expertise

Two approaches how an organisation can determine its strategy:

- **Planning mode** - views strategy as a plan or explicit set of guidelines developed in advance
  - starts with identifying the direction, then develops a systematic and structured plan to get there
  - rationality plays a significant role to create a well-thought-out process
- **Evolutionary mode** - views strategy as a pattern in a stream of significant decisions that evolves over time
  - acknowledges the unpredictable process involved in strategy formation

Environmental factors and organisational capabilities -> strategy -> structure

Levels of strategy:

- Corporate level strategy (more than one line of businesses)
  - defines the nature of businesses in which the firm should operate
  - defines the role of each businesses in the organisation
- Business level strategy
  - defines the way to compete in each of our businesses
  - for the small organisations in only one line of activity or the large organisations that avoided diversifications

## STRATEGY-STRUCTURE RELATIONSHIP

- Miles and Snow's four strategic types:

They classified organisations into 1 of 4 strategic types based on the rate at which they changed their products and markets

1. **Defenders** - organisations whose strategy is to produce a limited set of products directed at a narrow segment of the total potential market
  - fight aggressively to prevent competitors from taking market share or customers from them - aggressive pricing or production of high-quality products
  - ignore developments and trends outside their current areas of interests
  - intensive learning oriented towards costs and other efficiency issues

Features:

- high horizontal differentiation and normalization
- highly specialised tasks, division of labour
- centralised control and decision making
- formal hierarchy for communication and coordination

2. **Prospectors** - organisations whose strategy is to find and exploit new product and market opportunities
  - innovations are more important than high profitability
  - develop and maintain the capacity to survey a wide range of environmental conditions, trends and then introduce new products based on their research

Features:

- flexibility
- standardization and routinisation
- decentralisation
- formalization is low
- lateral and vertical communication

Examples: internet biotechnology companies, magazine publishers, fashion companies, advertising agencies

3. **Analysers** - organizations whose strategy is to move into new products or markets only after their viability has been proven
  - minimisation of risks, adaptation of only proven innovations
  - maximisation opportunity for profit

Features:

- flexibility and stability
- parts of organisation - manufacturing and distribution have high levels of standardization, routinization and automatization
- parts of organisation - marketing and product development are adaptive and flexible

Examples: mass market fashion and retailers

4. **Reactors** - organisations that follow inconsistent and unstable patterns (one of the other three strategies is pursued improperly)
  - respond inappropriately, perform poorly
  - are reluctant to commit themselves to specific strategy
  - lack of response mechanisms with which to face a challenging environment

Strategy is the result of management mistakes

- Porter's competitive strategies:

Porter suggests 3 strategies for organisations, the choice of which has to develop on the organization's strengths and competitor's weaknesses

1. **Cost leadership strategy** aims to achieve the lowest cost within an industry
  - high in complexity, high in formalisation and high in centralisation
  - efficiency of operations
  - economies of scale and minimalisation of overheads
  - technological innovations
  - low-cost labour
  - preferential access to raw materials
2. **Differentiation strategy** aims to achieve a unique position in an industry in ways that are widely valued by buyers
  - low in complexity, low in formalisation and low in centralisation

- flexibility
  - high quality/extraordinary service/innovative design/technological capability/unique brand image
3. **Focus strategy** aims at cost advantage or differentiation advantage in a narrow segment
    - special focus for selected segment of industry (product variety, type of buyers, distribution channel,..) with the goal to develop a narrow segment of market
  4. **Stuck in the middle** organisations are unable to gain a competitive advantage through one of varieties strategies and are unlikely to achieve long-term success

- Bartlett and Ghoshal's strategy and globalisation:

	<i>Low pressure for local responsiveness</i>	<i>High pressure for local responsiveness</i>
<i>High pressure to reduce costs</i>	<p><b>Global strategy</b> is adapted where a product can be sold in most markets with very little modification. Strategy is to lower costs by selling common products on a global basis.</p> <p>Examples: motor vehicle manufacturers and oil companies</p>	<p><b>Transnational strategy</b> attends to achieve maximum local responsiveness while achieving world wide economies of scale. Firms are considered as stateless with no obvious country of location</p> <p>(rarely found in practice)</p>
<i>High pressure to reduce costs</i>	<p><b>International strategy</b> requires firms to transfer valuable skills and product knowledge to overseas markets. Research and development is centralised in a home market, but manufacturing, distribution and marketing is carried out locally. Head</p>	<p><b>Multidomestic strategy</b> aims to achieve maximum local responsiveness with products customised to meet local conditions. Organisation has to be close to the customers.</p>

	office maintains tight control over key technologies.  Examples: McDonald's, Microsoft and Nestlé	Examples: building material companies, service industries (banks)
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## THE INDUSTRY STRUCTURE RELATIONSHIP

Industry -> strategy -> structure

**Industry** - an important factor influencing strategy, which differs in terms of growth possibilities, regulatory constraints, barrier to entry, capital requirements, product life cycle, long-term prospects, technologies..

	<i>High capital requirements</i>	<i>Low capital requirements</i>
<i>High product innovation rate</i>	A type - large organisation with limited number of competitors. High in complexity and decentralisation, procedures are standardised.  Examples: telecommunication firms, aerospace	B type - small firm with task specialisation and formalization (lower than D), high product innovation.  Examples: Computer Software manufacturers, magazine publishers
<i>Low product innovation rate</i>	C type - large organisation with limited competitors. High in complexity, procedures are standardised, less decentralized than a type  Examples: metal and mining, appliance manufacturers	D type - small firm high task specialisation and formalization. Low product innovation  Examples: retail building materials sales, bicycle manufacturers

## CHAPTER 6 - Organisation size

Organisation size - the total number of employees in the organization

Peter Blau: there is an increase in complexity of organization as size increases, but the rate of increase diminished once a certain size is reached.

Size is one of the most important conditions affecting the structure of organization

Increase in size -> increase in complexity, differentiation, specialization and formalisation (+ decentralization)

## SIZE-STRUCTURE RELATIONSHIP

- Size and complexity

Size affects complexity at a decreasing rate in government organizations (for business firms it is questionable)

Size generates differentiation, whereas increasing differentiation also generates increasing size

Size has strong effect on vertical differentiation, it is dominant predictor of vertical differentiation, explaining between 50% and 59% of the variance

Size and horizontal differentiation has relationship in the way that increasing size increases the division of labour, but a decreasing rate

- Size and formalisation

Increase in size increases the level of formalisation (more rules and regulations)

If a small firm is a subsidiary of a larger firm, we can expect the former to have higher formalisation than its size alone would dictate.

- Size and centralisation

When organisation increases in size, some activities or parts of organisation remain centralised, where is became more decentralized

(Decisions anyway have to be made in accordance with the desires of top management)

Organisation with less than 1500 employees tend to be labelled as small

Once in organisation has approximately 2000 members, it is considered as large one and adding employees would have a minimal impact on its structure

Common problems to most large organisations:

- the growth of bureaucracy, environment changes faster than the rules and regulations, leading to misfit between what organisation is actually doing and what the environment is demanding
- the need to gather and process information and turn it into knowledge (there is a significant amount of data, that in themselves are of little use, it has to be processed)

- the need to adapt to changing technologies and product life cycles
- extended time frames for action ( it can take a long time to realise that the change is required as well as determine if change is working or not)
- knowing where profits are being made and costs incurred (it is difficult to allocate costs and revenues to individual products)
- difficulty in managing over a wide geographic area (as most large organisations operate in different markets and regions, they have difficulties with employing people from different cultures, adapting products and services to suit local conditions and maintaining control over operations that are far away from the head office)
- bounded rationality (it is impossible for one person or even a group of people to fully understand all that is going on)

Several structural solutions can be applied to these problems that can contribute to the efficient management:

- divisionalisation, when organisation is divided into small manageable parts their own goals, management, staff and facilities
- outsourcing parts of organisation by letting other firms to undertake some operations
- finding a balance between what's this season's centralise and decentralize
- structuring to facilitate change - reduce power distance, support new ways of recognising and solving problems, respond to current and future needs
- ensuring that important tasks have someone responsible for them
- physically separate those areas of the organisation which undertake different types of work

## SMALL BUSINESSES

- minimal degree of horizontal, vertical and spatial differentiation
- low formalization
- high centralisation (usually one owner)
- have small influence over their environments

The reasons leading to downsizing:

- increased competition, which means that all in an industry must strive to match the lowest cost producer
- computerisation and automation, which means that fewer people can do an equivalent amount of work
- technological obsolescence, which means that new technologies and innovations reduce the need for technicians
- declining profitability

- information technology and middle management. By the increasing use of IT many middle managers no longer have meaningful work, as controlling, coordinating and decision-making could be done without them
- the realisation that size itself doesn't bring advantages – poor adaptation to change
- changes in strategy
- changes in structure
- the rise of outsourcing (it is easier and cheaper to purchase goods and services from specialist companies than produce them)

Benefits from downsizing:

- lowered overheads
- Less bureaucracy
- faster decision making
- smoother communication
- great entrepreneurship (more innovative behaviour on the part of management)
- Increased productivity

## CHAPTER 7 - Technology

Technology - the information, equipment, techniques and procedures required to transform inputs into outputs (include physical processes as well as mental concepts which are part of the information required to complete tasks )

- o Joan Woodward's research

Her research was the first major attempt to view organisation's structure from technological perspective.

The research is manufacturing based, so it is applicable only to manufacturing industries, which represent less than a third of all organizations.

Three types of technologies:

1. Unit production - technology where units are custom-made and work is non-routine (small-batch production)

- the least technological complexity
- low vertical differentiation
- moderate span of control
- low proportion of administrative and support staff personnel
- high proportion of skilled workers
- low overall complexity
- low formalization
- low centralisation

Examples: locomotives, turbines for hydroelectric installations, special purpose vehicles)



## 2. Mass production - large-batch or mass-produced technology, routine in nature

- moderate technological complexity
- moderate vertical differentiation
- the highest span of control
- moderate proportion of administrative and support staff personal
- low proportion of skilled workers - high division of labour
- high overall complexity
- high formalisation, clear line of authority
- high centralisation

Examples: refrigerators, motor cars

## 3. Process production- highly controlled standardized and continues processing technology

- the highest technological complexity
- the highest vertical differentiation
- the lowest span of control
- the highest proportion of administrative and support staff
- high proportion of skilled workers
- low overall complexity
- low formalization
- low centralisation

Examples: oil production, chemical refiners

### ○ Perrow's contribution

Perrow concentrated on knowledge technology to operationalise technology in more general way.

Hence Perrow's model is applicable to all types of work in all nature of industries.

Dimensions of the knowledge technology:

### 1. Task variability - the number of exceptions encountered in performing a task

High predictability -> low task variability -> few exceptions

### 2. Problem analysability - the type of search procedures followed to find successful methods for adequately responding to task exceptions, from well-defined and analysable to ill-defined

- Craft technology (non-routine) contains difficult problems but with a limited set of exceptions
  - moderate formalization
  - low centralisation

- moderate-wide span of control
- coordination and control is accomplished through trainings and meetings

Examples: custom tailoring, furniture restoring, work of performing artists

- Non-routine technology contains many exceptions and difficult to analyse problems
  - low formalization
  - low centralisation
  - moderate-narrow span of control
  - coordination and control is accomplished through group meetings

Examples: strategic planning, research activities

- Routine technology contains few exceptions and easy to analyse problems
  - high formalization
  - high centralisation
  - wide span of control
  - coordination and control is accomplished through planning and rigid rules

Examples: motor cars, fast food

- Engineering technology (routine) contains a large number of exceptions, which can be handled in a relational and systematic manner
  - low formalization
  - high centralisation
  - moderate span of control
  - coordination and control is accomplished through reports and meetings

Examples: construction of buildings, work of accountants

- Thompson's contribution

1. Long-linked technology (routine technology)- a fixed sequence of connected steps: sequentially interdependent tasks

Input -> A -> B -> C -> D -> Output

- High level of coordination between activities
- High uncertainty
- Vertical differentiation
- Standardization
- Moderate complexity
- Moderate formalization

Examples: mass-production, aeroplane journey

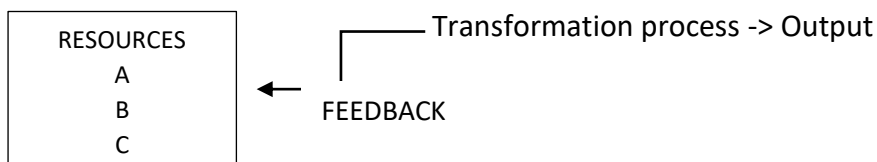
2. Mediating technology (routine technology)- the process of linking together different clients in need of each other's services: pooled interdependence

Client A -> Transformation process-> Client B

- Reducing variability in client expectations and behaviour
- High uncertainty
- Standardizing transactions
- Low complexity
- High formalization

Examples: banks, employment agencies, telephone companies, retail stores, insurance companies, post offices

3. Intensive technology (non-routine) - the utilization of a wide range of customized responses, depending on the nature and variety of the problems: reciprocal interdependence



- Flexibility of response
- Uncertainty
- Availability of a variety of resources
- High complexity
- Low formalization

Examples: hospitals, universities, research laboratories, consulting firms, military teams

#### ○ Galbraith 's contribution

He considered that as task uncertainty increased, so did the amount of information that had to be processed among decision makers in order to achieve the desired level of organisational performance.

The amounts of information and how this information was processed, became the major determinant of the structure of the organisation.

The processes of transformation - from input to output - has different levels of uncertainty.

Uncertainty is the difference between the amounts of information required to perform a task and the amount of information already processed by the organisation.

General strategies for handling uncertainty:

1. Rules and regulations
2. Hierarchical referral
3. Goal setting

When handling uncertainty is no longer effective, the organisation can:

- reduce the need for information processing - low uncertainty

4. creation of slack resources (increase the time necessary to achieve the goal make stacks of inputs)

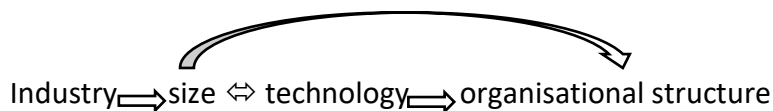
5. creation of self-contained tasks (reduce complexity by creating groups which have all the necessary resources to complete their tasks, reduce the need to coordinate and communicate with other groups)

- increase the capacity to handle information - high uncertainty

6. Investment in vertical information systems

7. Creation of lateral relations (create coordinating positions)

## TECHNOLOGY AS A CONTINGENCY



In smaller organizations the structure of operations is likely to be dominant by the production process, whereas in large organisations the impact of technology is not so powerful.

## MANUFACTURING AND SERVICE TECHNOLOGIES

### 1. Service technology

- simultaneous production and consumption
- output to suit customers' needs
- customer is part of the production process
- intangible output
- Often labour-intensive

Examples: hairdressers, law firms, medical services, education providers, transport operators

### 2. Manufacturing technology

- goods can be produced for inventory and later consumption
- output is largely standardised
- few in the company interact with customers
- output is tangible
- generally high levels of capital investment

Examples: car producers, aircraft manufactories, mineral producers, software writing, book production

3. Combined product and service industries: fast food, real estate agents, pension plan providers, retail industries, car hire firms

## TECHNOLOGY AND INFORMATION PROCESSING

**Information technologies** - a generic term covering the application of computerized information- processing techniques to organizational operations

- day-to-day operations (routine accounting tasks, inventory control, information storage, payroll calculations) are used to improve efficiency, particularly in the resource usage
- technologies that improve communication (email, internet, file sharing, teleconferencing) are essential for organization which have a wide geographic spread and a complex range of tasks to undertake
- control systems, that monitor and evaluate the performance of organization (stock management, monitoring bank balances, maintaining budgets, keeping the track of the cost)
- decision support system supports the intellectual process of planning and decision-making (calculating potential rates of return, generating a spreadsheet, scenario planning, quality control)
- codifying the knowledge, implies codification of knowledge and dissemination throughout the organization
- promotes innovations - provides opportunity for areas such as research, design and strategy be dispread, but still communicate with each other
- interorganisational systems - information exchange within organization

The influence of IT on structure

### 1. Extent of it usage

- decentralized decision-making
- non-routine work
- dynamic environment

=>

more intensive  
use of it

### 2. IT and formalization

- more intensive use of it =>
  - increased formalisation

- reduces routinalisation

### 3. Impact on communication and coordination

- more intensive use of IT =>
  - improved coordination
  - increased complexity
  - improved communication

### 4. Impact on middle managers

- more intensive use of IT in centralized organizations =>
  - reduction in the number of middle managers
- more intensive use of IT in decentralized organizations =>
  - increasment in the number of middle managers

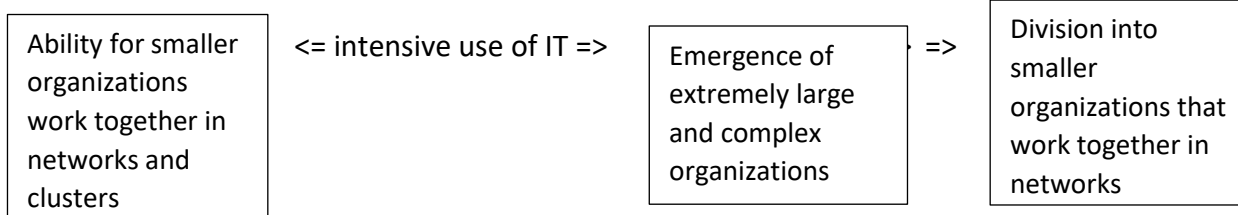
### 5. Impact on decision-making

- decentralised decision-making on the lower-level of organization => more intensive use of IT
- centralized decision-making on higher-level of organizations => less intensive use of it

### 6. Impact on communication technologies

- more intensive use of it =>
  - dispersion of organizational activities
  - formation of networks and clusters
  - reduced the cost of coordination and integration

### 7. IT and size



### 8. structure of IT department

- centralized decision-making within the organization => centralized decision-making in the department

## TECHNOLOGY AND STRUCTURE

- technology and complexity
  - routine technology -> low complexity
- technology and formalization
  - routine technology -> high formalization
- technology and centralisation
  - routine technology -> high formalization -> decentralization
  - routine technology -> centralisation

## CHAPTER 8 - Environment

Organizations exist within an environment which they must respond to.

Environment consists of factors outside and organizations boundaries.

- **General environment** embodies conditions that potentially have an impact on the organization
- **Specific environment** is the part of the environments that is directly relevant to the organization in achieving its goals (the part of the environment with which management will be concerned, because of the consistencies that can positively or negatively influence the organization's effectiveness)

Environment is changing because of the new competitors, new technologies, pressure by public groups, new customers, loss of major customers, unpredictable price changes - all these factors are called **environmental uncertainty**.

Some of the environmental uncertainties are easier to predict, some of them - impossible (accidents)

- Burns and Stalker's contribution:

They found out that the type of structure that existed in rapidly changing and they dynamic environments was significantly different from that in origins wit stable environments

1. **Mechanistic structure** is characterised by high complexity, formalisation and centralization. Job specialization - each worker only making a small contribution to the final output

Efforts are concentrated on improving technical processes rather than final output. Power and knowledge reside in the management hierarchy. Flow of information and communication is vertical

2. **Organic structures** are a relatively flexible and adoptive, with an emphasis on knowledge. Formalization is low, control-diverse, low complexity, decentralization.

Power and influence derives from knowledge and expertise, rather than position in the hierarchy. Communication is lateral between individuals whatever they are located.

Burns and Stalker believed that the most effective structure is one that adjusts to the requirements of the environment -> mechanistic design for stable and certain environments and organic one for turbulent environments

- Lawrence and Lorsch' contribution:

1. **Differentiation** – task regimentation, job specialisation and attitudinal differences held by individuals in various departments

In terms of different goal perspective, time frame and interpersonal orientation, different interest and points of you appeared

2. **Integration** – the quality of collaboration that exists among interdependent units or departments that are required to achieve unity of effort

Integration devices include rules and procedures, formal plans, the authority hierarchy and decision-making committees.

Lawrence and Lorsch perceived both the organization and the environment as having subparts: parts of the organization deal with parts of their environments.

The more turbulent, complex and diverse the external environment facing an organization, the greater the degree of differentiation among its subparts.

- Duncan's contribution:
  1. First dimension - rate of change – some environments change only slowly, over time, when others are characterized by rapid change
  2. Second dimension - environmental complexity - the greater the number of elements there are in an environment, the more complex the environment

The combination of a stable environment and low complexity leads to low on uncertainty for organizations

	<i>Complex environment</i>	<i>Simple environment</i>
<i>Dynamic environment</i>	<p>High uncertainty- large number of unpredictable external elements =&gt; Structural elements:</p> <ul style="list-style-type: none"> <li>- decentralized, organic structure</li> <li>- many different departments</li> <li>- expensive integration mechanisms</li> <li>- extensive planning</li> <li>- extensive use of laundry spanners</li> </ul> <p>Examples: aerospace firms, telecommunication and biotechnology companies</p>	<p>Moderate to high uncertainty- few environmental elements, but each changes often and unpredictably =&gt; Structural elements:</p> <ul style="list-style-type: none"> <li>- decentralized with an emphasis on teamwork</li> <li>- constant environmental monitoring by boundary spanners</li> <li>- high level of coordination in order to promote imitation and innovation</li> <li>- production facilities often mechanistic</li> </ul> <p>Examples: fashion clothing, music industry, computer games and television programming</p>
<i>Stable environment</i>	<p>Low to moderate uncertainty- large number of dissimilar external elements, which change only slowly =&gt; Structural elements:</p> <ul style="list-style-type: none"> <li>- centralised, formalized and mechanistic structure</li> <li>- differentiated into many departments to meet environmental elements</li> </ul>	<p>Low uncertainty- small number of easily understood environmental elements, which change slowly Structural elements:</p> <ul style="list-style-type: none"> <li>- centralised, with high formalization mechanistic structure</li> <li>- few departments</li> <li>- coordination by programs and planning</li> </ul>



	<ul style="list-style-type: none"> <li>- large number of boundary spanners</li> <li>- programmed coordination and use of planning for integration</li> </ul> <p>Examples: motor vehicle manufacturers, banks, oil companies, retail chains</p>	Examples: cement manufacturers, self-drink bottlers, breweries, bakeries
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### THE ROLE OF THE BOUNDARY SPANNER:

**Boundary spanners**- people who operate at the periphery of the organisation, performing organisational relevant tasks, and relating the organisation to elements outside it.

Boundary spanners make a great contribution to managing environmental uncertainty:

1. they have expertise in understanding and interpreting the environmental segment with they are concerned with
2. they filter and process environmental information into a form which is useful to their organisation and transmit this information through established channels
3. they protect the core from undue disruption by removing the need for it to interact directly with the environment
4. they represent their organisation to the environment

Dimensions of an environment:

- capacity- the degree to which an environment can support growth (availability to finance, customers, resource inputs and managerial skills)
- stability- the extent to which there is a little change in the environment
- complexity the degree to which environment is concentrated on just a few elements

### POPULATION ECOLOGY APPROACH

**Population ecology view**- the environment selects certain types of organizations to survive and others to perish based on the fit between structural characteristics and the characteristics of their environment (The environment naturally select 'in' some organizations and select 'out' others)

Assumptions of population ecology:

- approach focuses on groups of population, not on individual organisations
- population-ecology defines organisational effectiveness as simply survival
- approach assumes that management has little impact on an organisation's survival
- carrying capacity of the environment is limited (there are only so many organisations that a given community size can absorb)
- the existence of a three stage process ->

## Variation-> Selection-> Retention

- Within any population of organizations there will be variations in organisational forms ->
  - Organisations that have a form that fits their environment are positively selected and survive ->
    - Selected organisational forms tend to emerge in populations that share common needs for economies of scale, technologies and control systems

## Limitations to the population ecology view:

- ignores managerial motives and abilities
- has reduced application to large and powerful organisations as they can insulate themselves against failure
- public-sector organisations efficiency and adaptation are not effectiveness criteria

⇒ population ecology - a special theory applicable to small and powerless organizations

## INSTITUTIONAL THEORY

*Institutional theory* - an approach which integrates an organisation's past actions and the social and environmental pressures on it to explain organisational practices

Theory proposes that organisations are influenced not only by their internal processes but also by the need to adapt to the institutional pressures in the external environment.

### Institutional demands:

- Economic and technical demands - to show a profit, innovate and respond to change, respond to the laws and regulations from the government
- Social demands - to confirm the societal values, norms, expectations, practices of other organisations

## RESOURCE-DEPENDENCE THEORY

*Resource dependence theory* - draws on the concept of the open system to promote the ways in which the organisation depends on the environment for its resources

Dependence on resources increases uncertainty for organizations. However, the direction of the uncertainty is generally predictable, its magnitude is not.

## THE ENVIRONMENT-STRUCTURE RELATIONSHIP

Some organisations are much more dependent on the environment and certain sub environments than are others. This dependency creates vulnerability for the organizations, which managers attempt to minimise.

Dynamic environment has more influence on structure than a static environment does.

- Environment and structure's complexity

High environment uncertainty leads to a greater complexity

- Environment and structure's formalization

Stable environment leads to high formalization (there is a minimal need for rapid response)

Dynamic environment leads to low formalization of boundary activities while maintaining a relatively high formalization within other functions

- Environment and structure's centralisation

The more complex the environment, the more decentralized is the structure

## CHAPTER 9 - Power-control

**Power control** – view states that an organisation structure, at any given time, is to a large extent the result of those in power, who select a structure that will maintain and enhance their control.

Power is necessary in order to move the organization towards its goals, it is essential component of organizational life.

Each contingency explains only some of the variations in organizational part, but power – control view can explain others.

- Strategic choice by John Child:

Environment, technology, size and strategy limit the choices that managers have (however there is opportunity for managers to make choices favourable to themselves).

1. Decision makers have more autonomy than that implied by those arguing for the dominance of environmental, technological and other forces. Managers can select from among a wide range of viable alternatives which all accommodate the needs of the environment and technology.
2. Organizational effectiveness should be constructed as a range instead of a point.
3. Organizations often have the power to manipulate and control their environment.
4. Perception and evaluation of events are an important intervening link between environments and the actions of organizations (ability to define the threats provides a strong power base)

**Rationality** – the belief that decisions are goal – directed and consistent.

1. A few assumptions according to rational choices:
2. Rational decision making assumes that decisions regarding structure are made by those charged with the responsibility for making the decisions.
3. Perfect understanding of the problem, no emotional attachment to any particular outcome.

4. It ignores the possibility that others in the organization besides the management might have the power to influence structural decisions.
5. Decision makers always act in the best interest of organization, there are no better alternatives.

**Non-rationality** – process of decision making that does not follow the principles of logical deduction and decision optimization. Nonrationality does not imply that decisions are random and ill – informed. There is a range of possible outcomes that are acceptable.

Choice making is reflected by self-interest, ideologies, beliefs, fashion and experience of management.

Modern management techniques aim to merge the interest of the decision makers using reward systems and socialisation.

**Coalition** – the individual who make up the organization coalesce into groups with familiar interests or values. Coalitions reinforces the political nature of organizations and even plays a part in deciding what is considered rational and what is not.

**Dominant coalition** – the group within the organization with the power to influence the outcome of decisions and structure (usually senior management / owner of the small organization).

**Power** – an individual's capacity to influence decisions authority the right to act, or to command others to act, towards the attainment of organizational goals.

**Authority** contributes to an individual's power, however it is not necessary to have authority to wield power, because one can move horizontally inward towards the power core without moving up the hierarchy (but in general those high in the hierarchy have greater power those lower down).

**Legacy systems** – the existing systems, rules, procedures, responsibilities and ways of doing things that are accepted within the organization. The existence of legacy systems leads to large organizations being slow to change, reflect past practices rather than current needs.

Power can be acquired by holding:

1. Hierarchical authority (right to reward and punish workers)
2. Control of resources and ability to reduce uncertainty. A resource must be both scarce and important to organization, because then its supply creates uncertainty to organization and increases the power of those who can reduce uncertainty.
3. Network centrality – the degree to which a position in an organization allows an individual to integrate other functions or reduce organization dependencies.

**Power control thesis** - an organisation's structure is to a large extent the result of those in power selecting a power that will maintain and enhance their control.

Five areas within organisation where structure creates political arenas:

1. position in hierarchy (status =influence)
2. resource allocation
3. interdepartmental coordination. Relationships between departments are part of organisational life, but this department can really differ from each other, so procedures need to be set and territory defined.
4. Responsibility exceeding out authority. A principle of sound management is that authority should always equal responsibility.
5. structural change - redefining authority and power.

Political tactics are used in the way of:

- Building coalitions based on liking, trust and respect.
- Defining the nature or problems, which will become the main area for political activity as those who define the problem are closer to the decision making.
- Enhancing legitimacy and expertise (reputation).
- Making preferences explicit but keeping power implicit
- Expanding networks of influence

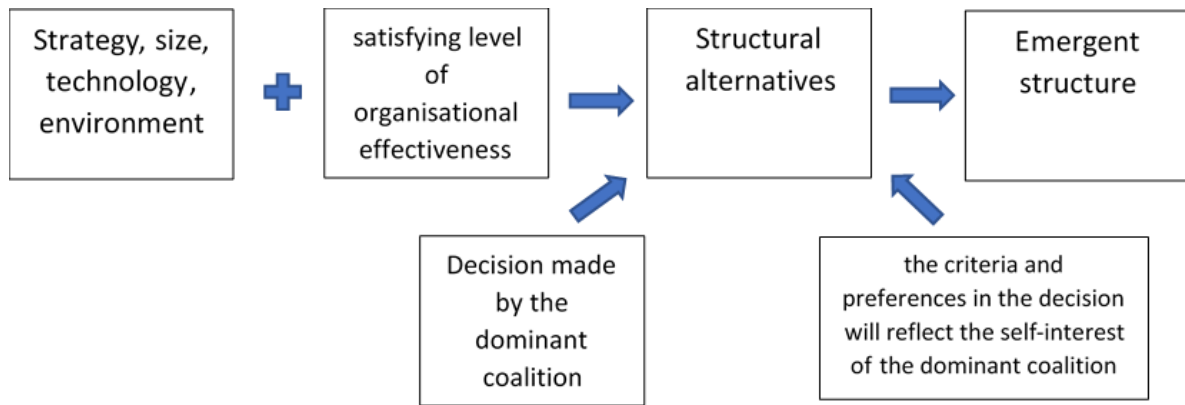
The higher a person is in management, the more likely he / she is to use politics as part of their job.

**Organizational slack** – a cushion of excess resources that enables an organisation to adjust to environmental change -> opportunity to respond to environmental change without changing the organisation.

The less slack an organisation has, the greater the pressure to optimise organisation structure and tighter the decision parameters will be.

Thus, those in power will select technologies and environments that will facilitate their maintenance of control - stable environments and routine technology.

POWER-CONTROL VIEW ON CONTINGENCY FACTORS AND STRUCTURE.



Decrease in the degree of complexity => increase in the level of control

Increase in degree of formalisation => increase in the level of control

Increase in centralization => increase in the level of control

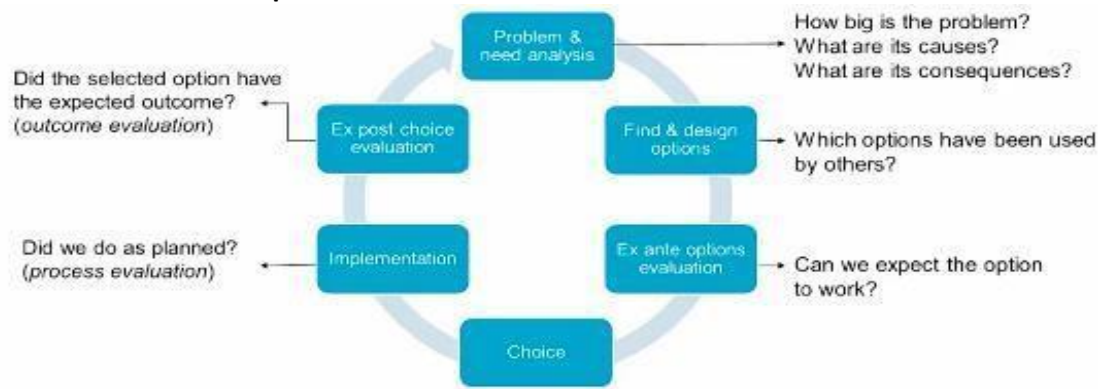
## Summary 2: Research Methodology and Descriptive Statistics test one

### Unit 1: empirical research

Empirical research: reach with data

Empirical questions: systematically answering empirical Excluding that others have a better answer  
About things we can observe.

#### Wheel of science → important for test



Deduction = Theory and how to test the theory

Induction = Data and trying to arrive conclusions

Need a problem analysis: how big is the problem?

Important for test:

**Ex ante evaluation** (previous) evaluation of options → can we expect an option to work? Program monitoring

**Ex post evaluation** (effect / impact research): did the selected option have the expected outcome? (outcome evaluation)

#### Confirmation bias (myside bias = cherry picking)

**Confirmation bias** = search for analyses and recall **information** in a way that **confirms pre-existing beliefs**, while giving disproportionately less consideration to alternative interpretations.

Affects what we think is true

Like crime: looking for evidence of a suspect and not looking further.

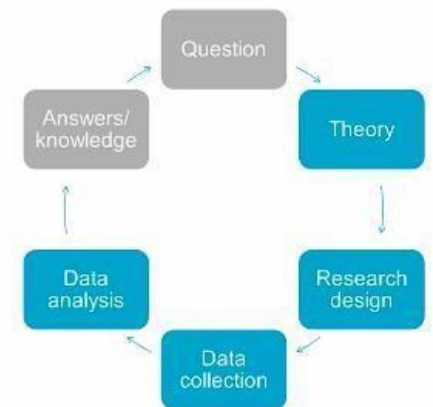
Consequences → mistake knowledge + bad decisions → avoid by procedure

Procedure: think, plan, observe, analyse, conclude

Wheel of science: is important logic, it is not logistical / empirical cycle

**Type of research → important for test**

1. Problem definition and -analysis: identify, describe and analyse a problem/opportunity
2. Design: develop options/design options
3. Multi-criteria analysis/ex ante (before) analysis: compare options, using criteria
4. Decision-making rules: select a preferred alternative on the basis of evaluation
5. Implementation/process: act on the decision/implement the decision
6. Ex post (after) outcome: monitor and evaluate the consequences





## Unit 2: clear research question

An empirical research question is only clear if it refers to meaningful

- Units of analysis: who or what is the question about
- Variables: possible characteristics (attributes) of these units?
- Settings: time and place

Three types of RQ	
Normative questions	Describing which it should be, is justifiable, cannot be answered by observation only, not asking for legal facts
Conceptual questions	What does it mean? Often starts with "what is...", cannot be answered using observations
Empirical questions	only and fully be answered using observations
	Descriptive questions: NOT about cause and effects Explanatory questions: cause and an affect, often 2 variables. Testing causal relationships

**How to** questions can be 'broken up' into descriptive and explanatory (causal) research questions.

## Unit 3: what are data

### UNITS

#### Two aspects of observation

Research questions are about theoretical variables, describing units

Theoretical variable(s) --> Conceptualization, operationalization, measurement --> data

Unit(s) --> sampling --> data

**Units of analysis:** couples --> unit mention in the RQ

**Units of observation:** two people --> actual unit which is observed

**Ecological fallacy:** Drawing conclusions about lower level units solely on the basis of aggregate data.

Mixing up UOO and UOA

### VARIABLES

**Variable:** is a complete and mutually exclusive set of attributes or values. Used to describe units.

Example: age (of a human being) has attributes or values between 0 and 120

#### Attributes or values

The words value and attributes refer to the same thing however

- **Values** is more often used to refer to **numerical attributes** (age or weight)
- **Attributes** is more often used to refer to 'non-numerical' attributes (colors, religions)  
Attributes have numbers in SPSS.

5 levels of measurement			
SPSS	Levels	Explanation	Example
Nominal	<b>Dichotomy</b>	If a variable has only two attributes	0-18 or >18
	<b>Nominal</b>	attributes with no numerical value, no order	Gender
Ordinal	<b>Ordinal</b>	If values can be ordered, distance is unknown.	Age in categories 0-18, 19-35, 36-64, >65

Scale	<b>Ratio</b>	If the values can be ordered, the distance between the values is known. Has a meaningful zero point. (you can say, twice as much)	Age of a person, weight, income,
	<b>Interval</b>	Scale where the order and the difference between the variables is known. Equally spaced values. No zero point	IQ, Celsius temperature

Did not participate in survey	Non-response
Question not asked - filter question	Filter question (INAP)
Question not asked - mistake by interviewer	
Refuses to answer a question in the survey	Item non-response (NA)
Does not know the answer to a question	Item non-response (DK)

**Mutually exclusive:** every unit should have only one value of a variable

- Are you 20-50 or 50-70? --> 50 is in two categories --> wrong

**Exhaustive:** every unit should have a value of the variable

- Do you love women or men? --> both is not possible --> wrong

#### SPSS

- Respondent didn't want to answer: 998
- Question not asked – filter: 999

#### Consequences of missing values

- Filter questions: no loss of information
- Does not know: sometimes loss of information - bias
- Refusals, mistakes: often loss of information, bias = invalidity

--> can give different averages, graphs etc.

#### Labeling variables

A codebook describes: the meaning of variables and values used in the data matrix.

- Variable name (short): work or workYN
- Variable label (clear): meaning of variable (V1 = is respondent working or not?)
- Value label: meaning of the value (0= no work; 1 = work; 999 = no answer)

#### Unit 4 How to handle data with SPSS?

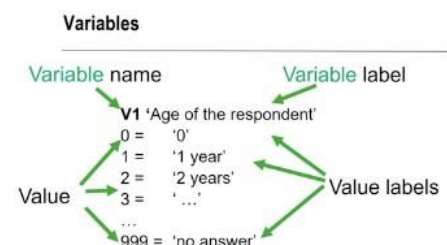
Create 1 **syntax file** for analyzing a data matrix in a project. A syntax file shows all your actions in SPSS so is transparent towards others.

Always click on PASTE to put it into the syntax file.

Want to change the variable? --> create a new variable by recoding the other one = transforming

#### Transforming/ recoding:

SPSS --> recode into different variables



#### Unit 5 Conceptualizing variables

Four types of relationships between terms(concept) & facets (dimensions)

- **And:** necessary & sufficient conditions ('not' being a bachelor)

- **Not** Typologies (type of welfare state): not relationships between F&T
- **Or**: family resemblance, sufficient relationships (being sick): you need one of the conditions
- **Missing**: a set of similar variables

AND gewoon alles moet hebben om een goede leraar te zijn

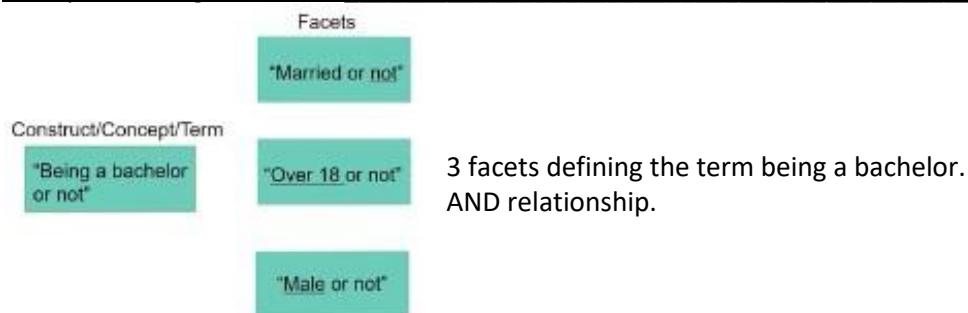
OR een van allemaal minimaal 1 moet hebben om een goede leraar te zijn,

NOT is met stijlen

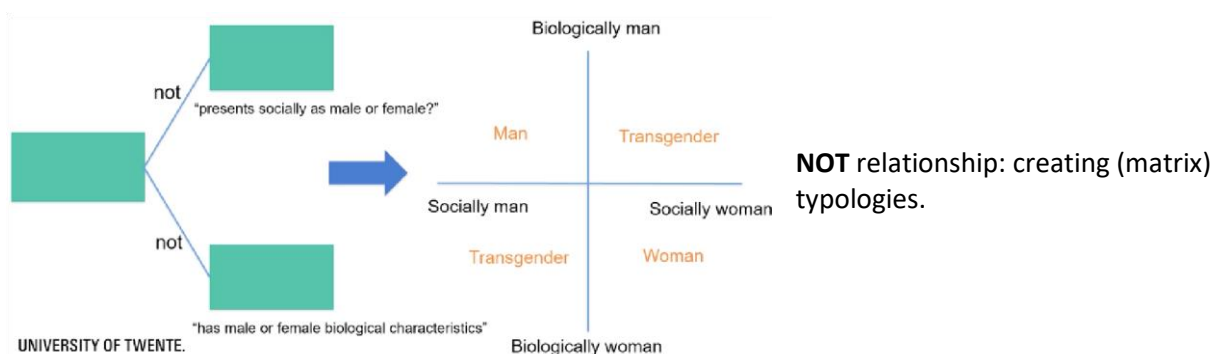
MISSING is met traits

**Conceptualizing because:** people have different understandings of words

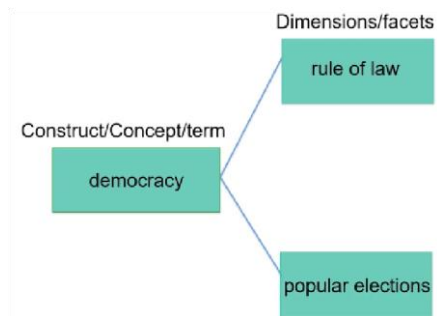
Example 1: being a bachelor:



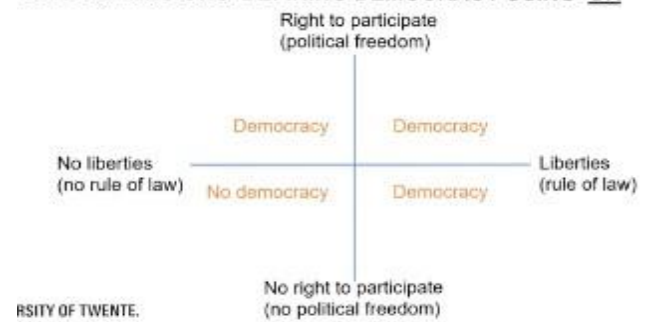
Example 2: gender as normal variable typology



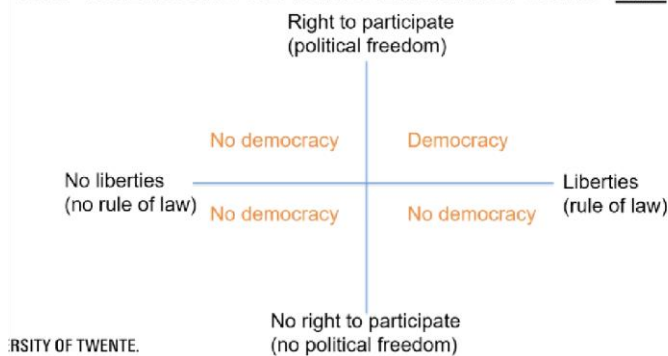
Example 3: democracy



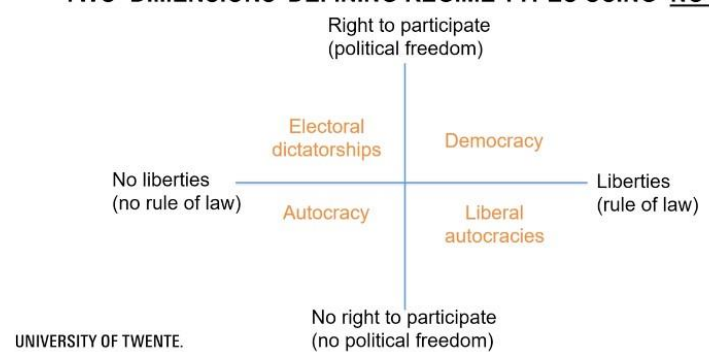
## TWO 'DIMENSIONS' DEFINING DEMOCRACY USING 'OR'



## TWO 'DIMENSIONS' DEFINING DEMOCRACY USING 'AND'

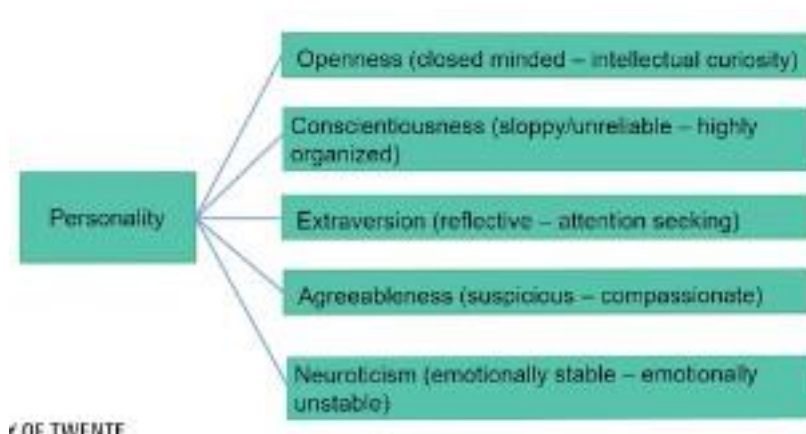


## TWO 'DIMENSIONS' DEFINING REGIME TYPES USING 'NOT'



### Example 4

Missing: just a set of 'somehow related variables': personality --> a lot of independent characteristics which don't have a relationship.



### Traits or types?

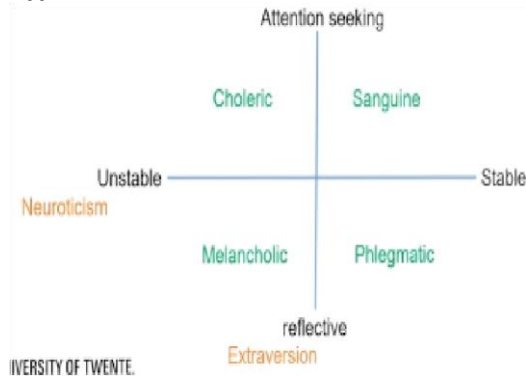
Personality:

1. As a set of (five) (unrelated) 'traits', or
2. As a set of types (often based on dichotomous traits)

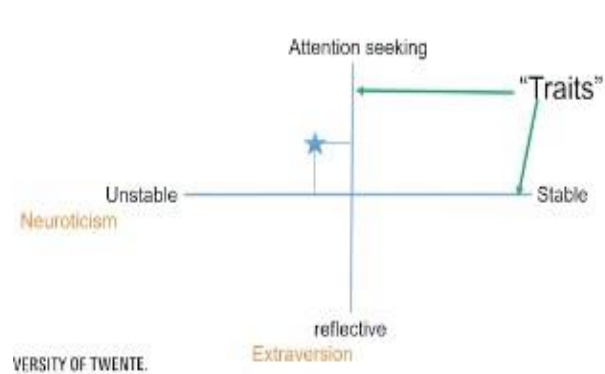
**TYPES:** a combination of traits (don't mix traits up with values)

**TRAITS:** are used to define types

### Types



### Traits



### Observables and constructs

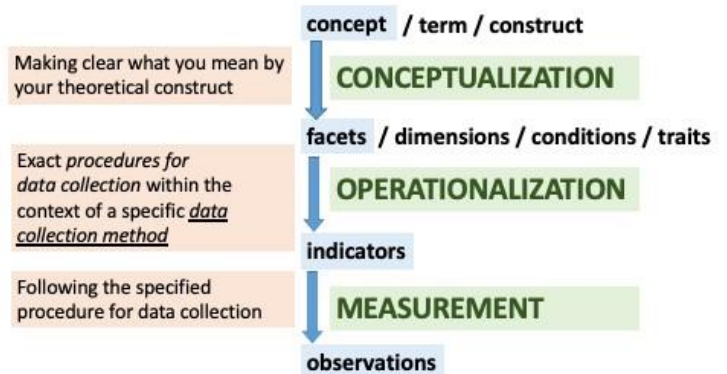
Some 'theoretical variables' are relatively simple: (direct or indirect) observables.

Example: gender, age --> you only need one question to know

Other 'theoretical variables' are complex, consisting of various dimensions or aspects: constructs

**Conceptualization (DEF.):** Making clear what you mean with the theoretical constructs, it's possible dimensions or aspects, and its attributes values.

**Content validity:** if all aspects of a constructed are included in the operationalization, 'content validity'. Example: mathematical abilities: include not only addition and multiplication! That is not enough to say something about the mathematical abilities

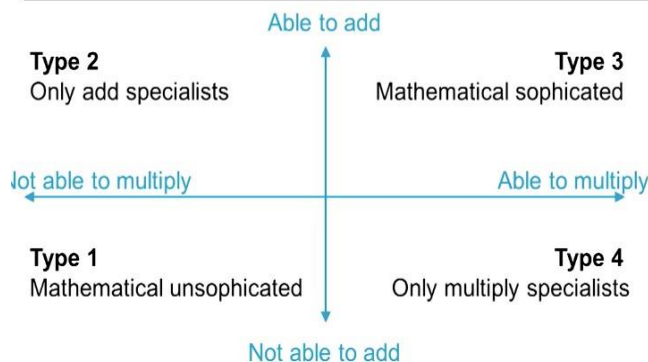


### Combining indicators into one construct

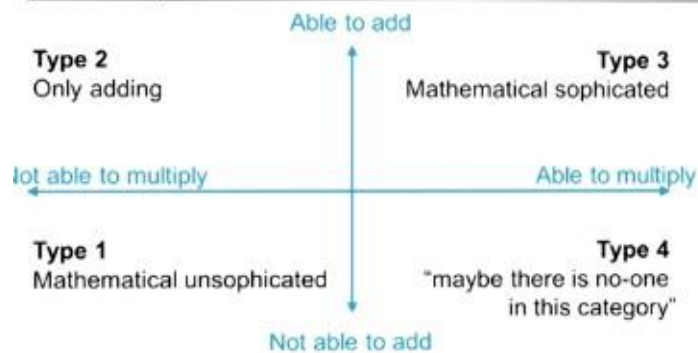
Three ways to combining indicators

- **Index:** creating ordinal variable, by using two or more variables  
Example: number of correct answers by adding up.
- **Typology:** creating a nominal variable, by using the intersection of two or more variables  
Example: using correct answers to 'adding' 10 items and using correct answers to multiplication 10 items.
- **Scale:** creating an ordinal variable by combining answers (as an index). Only doing that after checking the empirical relationships between the answers and sometimes by taking into account of these relations.  
Example: if we would expect and see that all items are correlated positively (to be explained later) with each other, then it is a scale.

## TPOLOGY



## (GUTTMAN) SCALE



## Unit 6 Surveys and questionnaires

**Only if you sample, conceptualize, operationalize and measure you will get data.**

**Data collection methods:** survey, dairy methods, (depth) interviews, coding documents, physical measures, focus group recordings, observing behaviour...

Focus on: survey, open interviews, observations, focus group analysis, document analysis

### Classifying data collection methods

- Primary (you collect) and secondary data (others already collect)
- From obtrusive (if the process of measurement affects the units you're interested in) to unobtrusive methods (units you are not interested in)
- Verbal (dealing with language, spoken, written etc.) and non-verbal methods (not language, like observing)

### Theoretical concepts:

Observables: easily seen: gender, age,

Constructs: complex, various dimensions or aspects: bachelor, democracy, IQ

**Indicator:** operationalization of constructs consists a set of indicators.

Example: sub-test of the IQ scale is finding similarities between words.

**Content validity** = if all aspects of a construct are included in the operationalization

**Triangulation (DEF)** following a specified procedure in order to get observations, --> data -

Using at least two different operationalizations to measure the same theoretical concept -

To be sure what we measure is exactly what we want to.

## SURVEY

**When:** with a clear RQ, a large number of units of observation, known and well-defined variables.

Steps in survey design:

1. Selecting (the type of) survey
2. Designing and selecting survey questions
3. Designing the questionnaire (item order, lay out)
4. Questionnaire testing
5. Interviewer training
6. Survey administration, checking responses
7. Data cleaning and storage

### STEP 1: Four types of surveys

- Self-completion (less obtrusive): Web-based and paper
- Interviewer based (more obtrusive): telephone, personal, face to face

Criteria, method should be ...	Web	Paper	Phone	Personal
Cheap	++	+	±	- (↓)
Quick	++	±	+	-
High overall response rate	-	-	± (↓)	±
High item response rate	+	-	+	+
Sensitive questions can be asked	+	+	±	-
Difficult questions can be asked	-	-	±	+
Large # of questions can be asked	±	±	-	+
Open questions, long answers allowed	-	-	±	+
Limited (interviewer) reactivity	+	+	±	-
Possibility to check: correct respondent	-	-	±	+
Checks available, prompting and probing	-	-	±	+
Computer guided (error reduction)	+	-	+	±

### STEP 2: design of the survey and survey questions

- A large range of questionnaire items types
- Simple question
- Agreement with statements
- To be complemented
- Position between extremes
- Ordering options
- Checklists
- Vignette options

#### Questions

- Closed: starts with a verb...
- Open-ended: starts with: what, which, why, how long, where etc.
- To be complemented: Closed: giving different answers to complement the statement  
Open: completing the sentence self
- Agreement with statement
- Positioning between 2 extremes
- Ordering options, example, from important to not important
- Checklist which materials do you use: pick as many as you use.  
! A filter question is a contingency question

#### Designing the questionnaire

First items that are...	Followed by items that are
Simple	Complex
About behaviour	About opinions and feelings
About the present	The past
Non-confidential	Confidential
Relevant (for study/respondent)	Less relevant

- Keep items about the same subject together
- Use standard (lay out) formats throughout the questionnaire



### Seven criteria for creating good items.

1. Relevance for the research question. You have to think about what you want to know and which theories you want to include.
2. Relevant variation in the answers
3. Simple clear and understandable
4. Not double barrelled: only one subject
5. Neutral wording: in an item: don't frame someone in a direction
6. Mutually exclusive & balanced answering categories
7. No context effect: questions that are asked in the beginning affect the further answers.

### STEP 3: Design of the questionnaire

First items that are ...	Followed by items that are
simple	complex
about behavior	about opinions and feelings
about the present	the past
non-confidential	confidential
relevant (for study/respondent)	less relevant

#### Open interview:

Non-standardized questions

To say something about a population of units of analysis

#### Observation:

Data are mainly by watching

#### Focus group:

Sample discuss a topic.

How is the topic is dealt in a larger group

#### Document analyses

Sample of documents is coded

## Unit 7 Collecting data: observation and content analysis

### Example: coding a parliamentary debate

#### Content analysis:

A data collection method, in which variables are constructed by coding a set of primary documents.

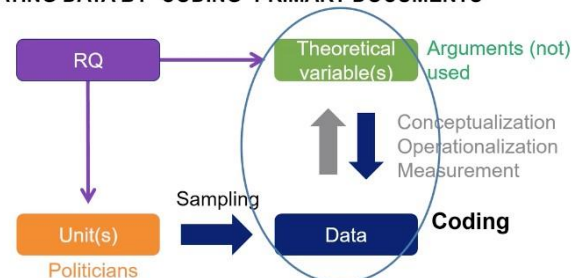
To say something about unit(s) of analysis.

- Unobtrusive: not affecting the units of analysis.

#### Example of primary documents (aka codex)

- Answers to open question in a survey
- Transcripts of unstructured and semi-structured interviews
- Party platforms, annual business reports
- Email, tweets
- Newspaper articles
- Policy documents
- Movies or pictures

#### CREATING DATA BY 'CODING' PRIMARY DOCUMENTS



### Three approaches to coding



1. Deductive coding: creating variables using theoretical constructs
2. Inductive coding: creating theoretical constructs using primary documents
3. Combining coding: combining deductive and inductive

### Steps in content analysis

1. Formulate research question with variables and units of analysis
2. Select primary documents (minutes, newspapers clippings)
3. Develop an operationalization, a 'coding scheme'
4. Code the text (maybe update the coding scheme)
5. Draw conclusions
6. Report your methods and findings

**Construction of the investigation:** content analyses starts with a research question with units and variables so sample, conceptualization, operationalization, measurement and use primary documents to construct data.

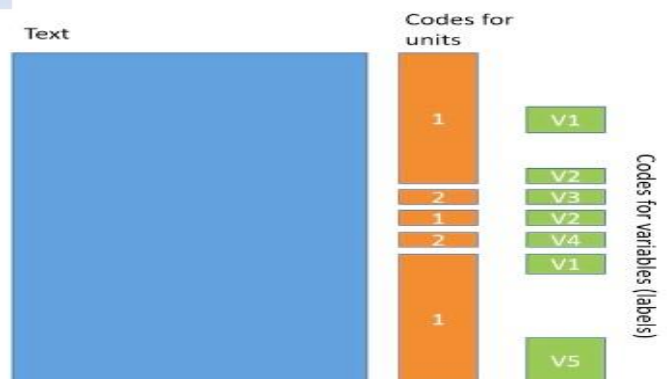
**Non-comparative content analyses:** there is one unit and we want to describe the types of arguments used in that particular debate. However, most studies using content analyses want to compare political parties, politicians, meetings and committees.

### Coding scheme:

	Variable	Values
V1	Positive for refugees (safety, safe haven)	(Yes, no; number)
V2	Positive for receiving countries (growth and development)	(Yes, no; number)
V3	Negative for refugees (homeless, feelings of loss, bad future here)	(Yes, no; number)
V4	Negative for home country (brain drain)	(Yes, no; number)
V5	Negative for receiving countries (economic)	(Yes, no; number)
V6	Negative for receiving countries (safety and security, terrorism)	(Yes, no; number)
V7	Etc...	

### Coding text

Text = the debate  
Codes for units = the two who are debating  
Codes for variables



### Coding the content

Know what you are searching for. Like what loneliness is:

- Types of missing relations MISR
- Coping mechanisms COP
- Duration (DUR)

Plus: expressing loneliness (LON)

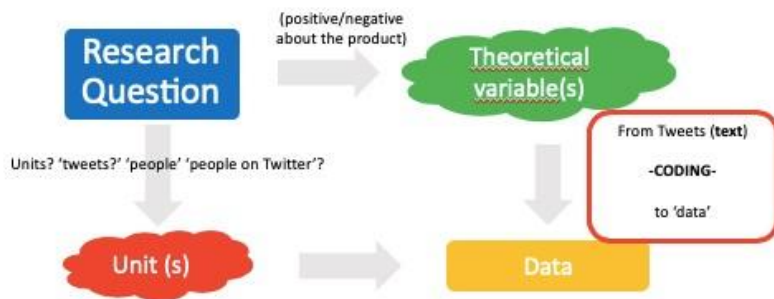
--> you can code an interview with a lonely feeling person with these codes.

**Code 'saturation':** means that the whole text is coded with useful information.

--> outcome gives a description of loneliness in different dimensions.

## USING TEXTS TO ANSWER DESCRIPTIVE/COMPARATIVE RESEARCH QUESTIONS

Example: 'are **people** **positive or negative** about my products on Twitter?'



### Various distinctions in coding / content analysis

1. What is 'coded'? Whole text, paragraphs, sentences, words?
2. Coded by who/what? Human coders or computers
3. How is this coded?  
Based on interpretation (latent coding, holistic scoring) or on  
Strict rules/rubrics (manifest coding, analytic coding)

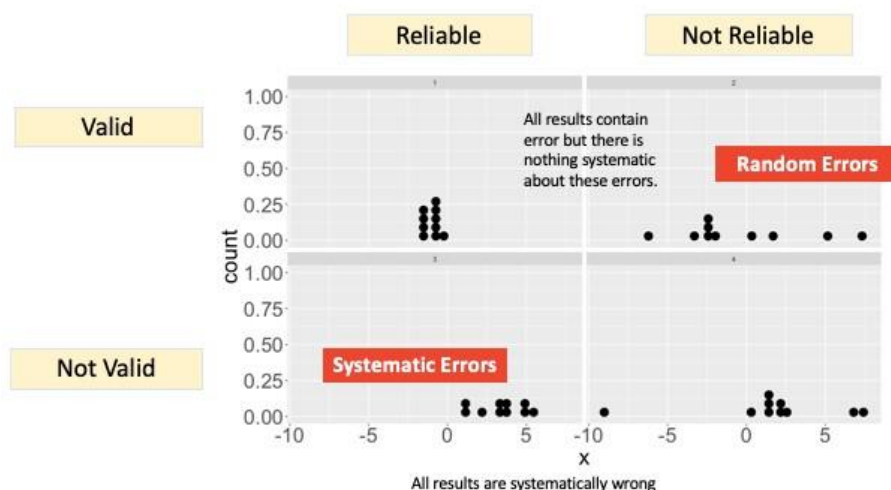
### Unit 8 two aspects of data quality

#### Two types of mistakes observations:

- Random errors
- Systematic errors (systematic bias or measuring the wrong construct)

**Measurement reliability:** the absence of random error, if you repeat the research it should give the same results every time.

**Measurement validity:** no systematic error, (on average) measure what you intend to measure



You never know the true valid. You can never observe validity, you can with reliability

### Assessing measurement validity

Validity of an operationalization cannot be not observed directly, because the 'true' value is unknow..

### Three approaches to measurement validity

- **Content validity:** does it covers all the aspects of the concept?  
Example:
  - Obesities as measured by BMI --> forgot length x
  - Measuring the concept mathematical ability --> only asking + x
- **Criterion validity:** is it correctly related to conceptually related indicators? (comparing with a true value)  
Example:
  - Did you vote in the last general election?  
Checked by using actual voting records
  - **Predictive validity:** is a management assessment test valid if the scores do not correlate with management qualities afterwards?
  - **Concurrent validity:** using a survey and physiological measures
  - **Postdictive validity:** meten van de opkomst, maar komt niet overeen met de antwoorden
- Construct validity: is it correctly related to other theoretically related variables?  
Example: assessing different operationalizations of Obesities
  - BMI, Body adiposity index, waist- to- hip ratio etc. --> how are they related to health problems (obesity = health problem)
- → **three together = also construct validity**
- **Face validity:** quality of an indicator makes it seem a reasonable measure of some variable.  
Are you measuring the right construct.

**Bias:** another word for validity.

### Is it an accurate observation?

(sampling problems)

Many sources of mistakes at the level of units:

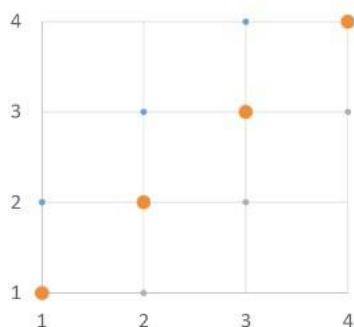
- Errors in the operationalization: wrong question
  - Errors made by the interviewer
  - Errors made by the interviewed person.
- > not independent, these are overlapping

**Two ways to assess reliability:** --> only two ways to assess reliability

One basis of one observation or one question: assessment of reliability impossible.

- Stability: use the same operationalization several times
  - Test-retest reliability: asking the same question in the beginning and the end of a survey.
  - Inter-rater reliability: asking several students to rate/ characterize/ observe the same object.
- Consistency: use and compare similar operationalizations

If the items measure more or less the same thing. We expect the answers to be related.



## Unit 9 Displaying univariate data

Syntax for frequency's command: `frequencies VARIABLES = Q7.`

**Pie chart and bar graph:** Categorical data which is nominal or ordinal.

**Both types have (dis)advantages**

- Pie chart: could immediately see percentages
- Bar graph: easily retrieve exact number

**When a prefer a bare graph**

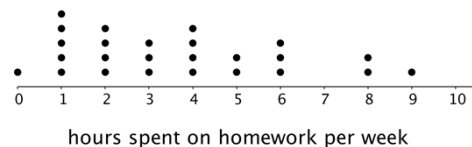
- High number of categories

**Quotative data:**

Ratio or interval

Example height of football players

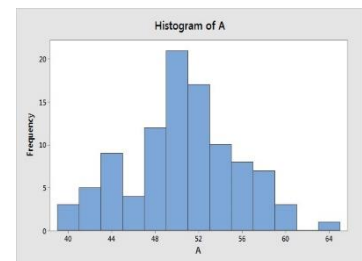
**Dot plot:** useful with a small sample



**Histogram:** for many observations

Difference: bars to portray the frequencies of the possible of a variable.

There is a underlying continues scale . Always look at the shape of a histogram. It could affect you statistical method.



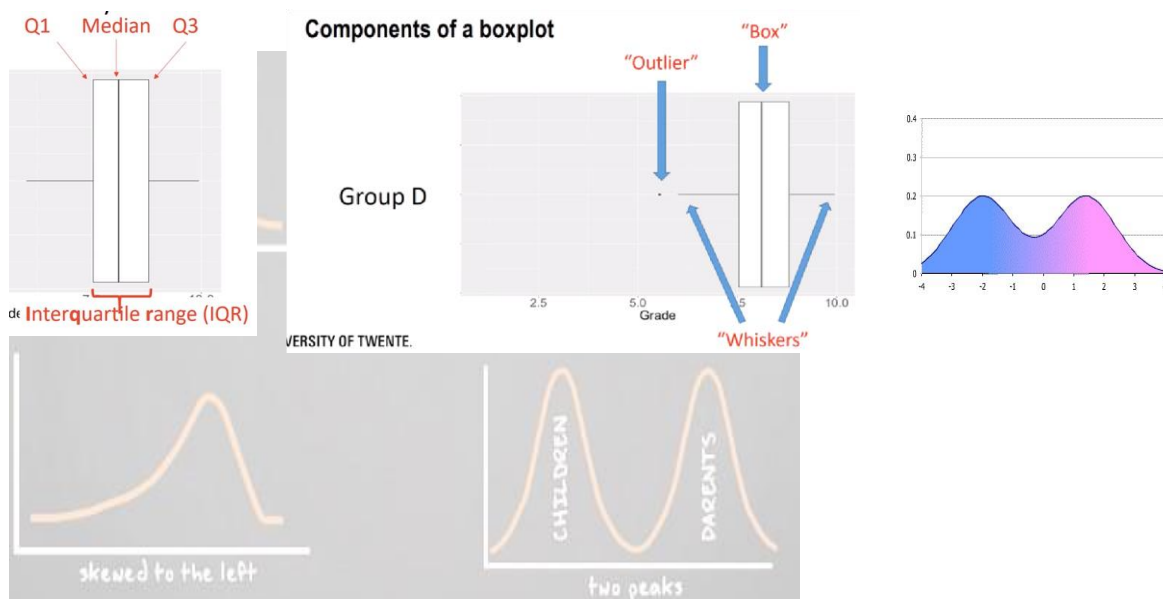
## Unit 10 Summarizing ratio variables

Mode = answer given most frequently

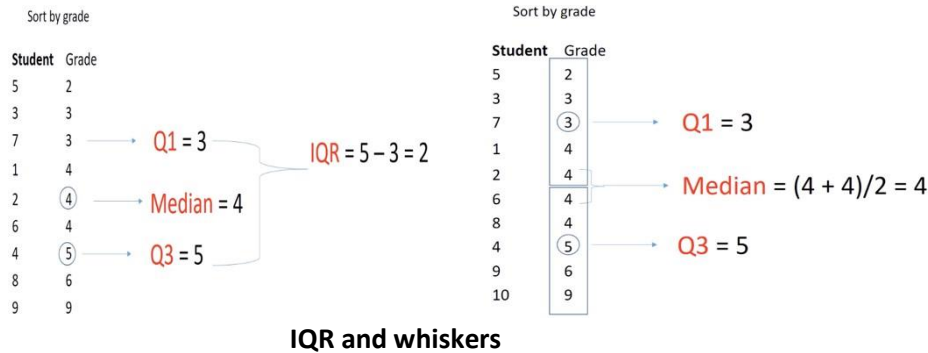
- Nominal and ordinal
- It's possible to have more modes → bi-model distribution

Median = the middle value of your observations when arranged from the smallest to the largest

Mean = sum of all values divided by the number of observations → the average



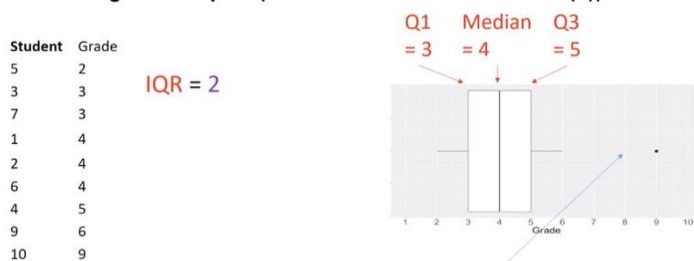
## Calculating Q1, the median, Q3 and the IQR, when n(= sample) is odd.



Whiskers are max 1.5 IQR long.

If there are no observations at 1,5 IQR, the whiskers end at the largest observation within that range.

## Drawing the boxplot (the whiskers and the outlier(s))

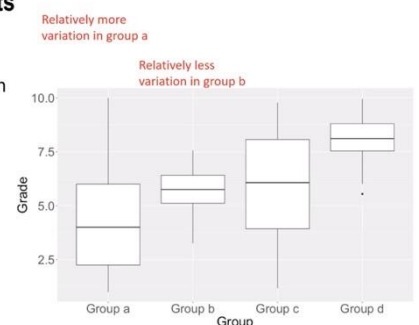


IVERSITY OF TWENTE.

Right whisker starts at =  $1.5 * 2 = 3$  above 5 = 8

## Interpreting boxplots

Bigger box indicates more variation between cases



Player	$x$	$x - \bar{x}$	$(x - \bar{x})^2$
Player 1	0	-15	225
Player 2	24.1	9.1	82.81
Player 3	5.6	-9.4	88.36
Player 4	14.1	-0.9	0.81
Player 5	17.2	2.2	4.84
Player 6	8.7	-6.3	39.69
Player 7	14.2	4.2	17.64
Player 8	14.1	-0.9	0.81
Player 9	27.7	12.7	161.29
Player 10	15	0	0
Player 11	14.3	4.3	18.49
			<b>639.74</b>

$\bar{x} = 15$   
 $n - 1 = 10$   
 $s^2 = \frac{639.74}{10} = 63.97$

## Sample Variance ( $s^2$ )

$$s^2 = \frac{\sum (x_i - \bar{x})^2}{n - 1}$$

$s^2$  = variance

$x_i$  = term in data set

$\bar{x}$  = Sample mean

$\Sigma$  = Sum

$n$  = Sample size

Larger variance --> larger variability --> the more values are spread around the mean

**disadvantage of variance:** the metric of the variance is the metric of the variable under analysis SQUARED --> to get rid of that --> standard deviation

**Standard deviation:** the average distance of an observation from the mean.

$$\sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$$

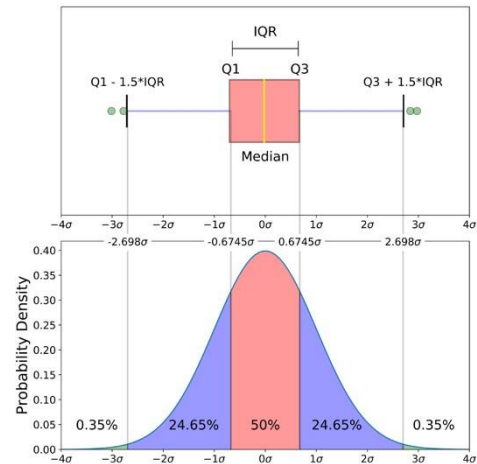
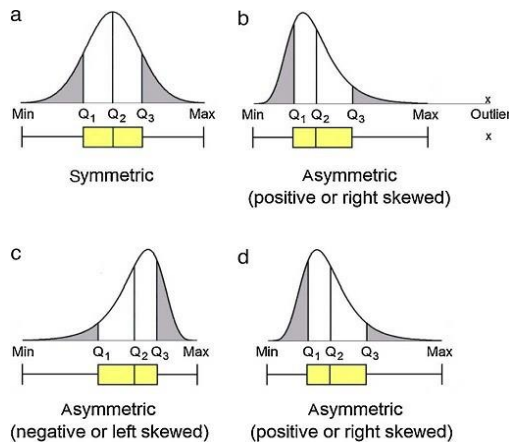
standard deviation

There is space between a bar chart:

Histograms are used for continuous variables while

**Bar charts** are used for **presenting categorical or ordinal data**. The bars in the bar chart has gaps in between while those in a histogram do not.

		Dichotomous / Nominal	Ordinal	Interval / Ratio
Most frequent	Mode	✓	✓	✓
Middle	Median	✗	✓	✓
Average	Mean	✗	✗	✓



### Normal distribution

- 1 sd: 68 percent (34 and 34)
- 2 sd: 95 percent (13,5 and 13,5)
- 3 sd: 99,7 percent (2,35 and 2,35)

--> Empirical rule!

### Creating boxplots

1. Calculating the MEDIAN
2. Calculating Q1 and Q3
3. Determining end of whiskers (and the observations outside the whiskers)

Two ways to determine Q1 and Q3

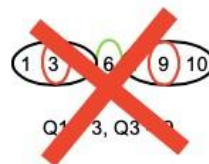
- Include the median (if that is an observation and not a mean)
- Not include the median (= we do not do that here)

We will include the median (SPSS also does this!)

### CREATING BOXPLOTS (not like this)

Determining Q1 and Q3:

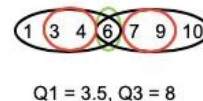
NOT including the median



### CREATING BOXPLOTS: like this!

Determining Q1 and Q3

Include the median



### CREATING BOXPLOTS

Determining Q1 and Q3: include the median, but only when it is an observation ....



Median = 6 .... But now Q1 = 3, Q3 = 9

The higher the median the higher the score

### Outliers:

**Low outlier:**  $Q1 - (1,5 \times \text{interquartile range})$

**High outlier:**  $Q3 + (1,5 \times \text{IQR})$

## Unit 11 Distributions and Z-scores

### Is a specific observation:

- Common
- Expectational

= number of standard deviations removed from the mean

= z-score: how extreme an observation is

--> how to compute and why useful

### Formula Z-score

$$Z = \frac{x - \bar{x}}{s}$$

X = value your interested in

X- = the mean

S= standard deviation.

**You can do that for all the values in your distribution.**

**You will get negative and positive z-scores.**

- Negative means: it scores below the mean
- Positive means: it scores above the mean

--> because the mean is a balance point you can sum all the z-scores up and the answer should be 0.0

**How do you know your z-score is low or high:** depends on the distribution and context.

**Skewed to the right:** will gives more extreme values. --> large positive z-scores

**Skewed to the left:** will give more extreme negative values --> so larger negative z-scores

### Any distribution, regardless shape

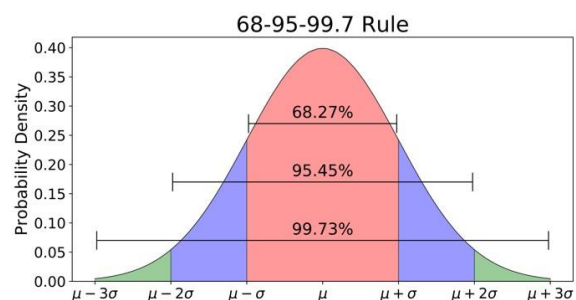
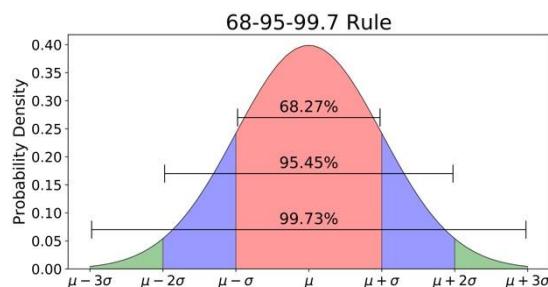
- must have a distribution of 75% between mean -2s and mean +2s.
- and 89% of the distribution must be between mean -3s and mean +3s

**Can the means, the variance and the standard deviations of the four variables be compared?**

**What do they 'mean'?**

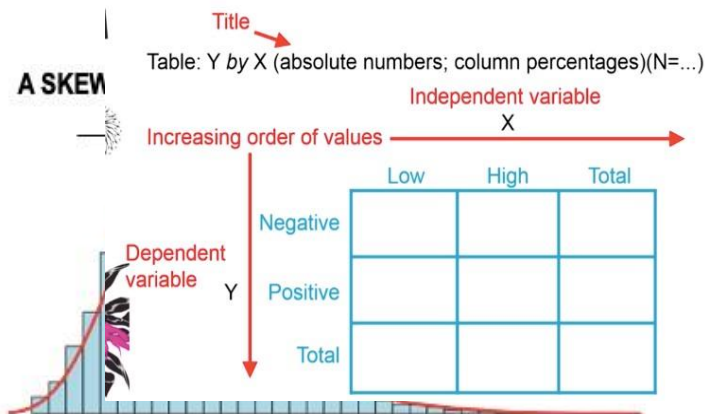
No, not really. The variance and the sd have to be interpreted with the mean. But variances or standard deviations of different variables (with different ranges of values, for example) cannot be compared. The standard deviation is a kind of 'average distance from its mean', but that's it.

Empirical rule normal distribution: 68-95-99,7 rule





## Unit 13 visualizing and analyzing bivariate relationship using SPSS

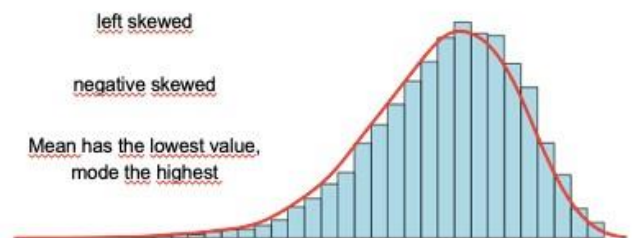


Correlation between the two variables:

This table provides more about the correlation when it is in percentages.

Column percentages = variable / total x 100

--> can also be given in proportions = like 0,33



**Contingency table/ cross table:** Difference with frequency table: frequency is always only one variable

**Contingency table** --> nominal & ordinal variables  
Columns: independent

Rows: dependent

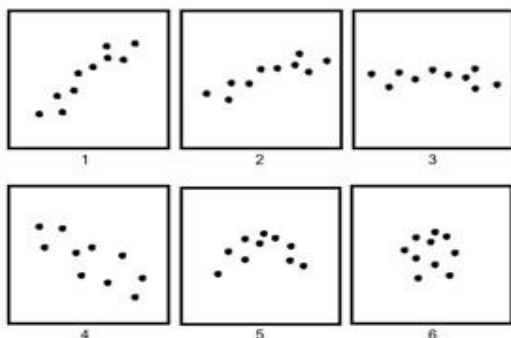
**Scatterplot** --> quantitative variables  
Horizontal: independent  
Vertical: dependent

**Multiple boxplots** --> quantitative x ordinal/nominal  
Dependent = scale  
Independent = nominal or ordinal

### Why studying associations / relationships?

- Differences and inequalities (descriptive research)
- Predictive research (associations help to predict things)
- Causal research (causality implies association (and more))

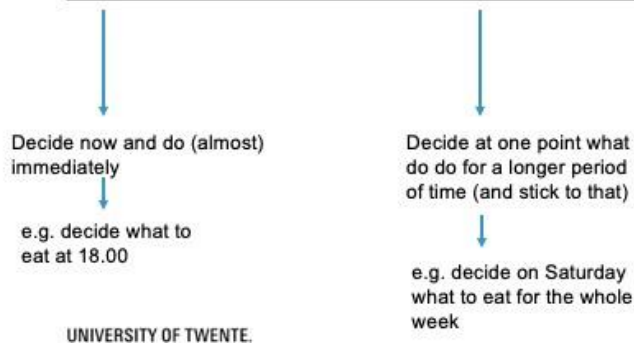
### Scatterplot:



1. Strong positive linear relation
2. Moderate positive linear relation
3. No relation
4. Moderate negative linear relation
5. Non-linear relation (curvilinear)
6. No relation



## SEQUENTIAL VERSUS SIMULTANEOUS CHOICE



## Strenght of bivariated relationships

	Nominal	Ordinal	Interval and ratio
Nominal	<i>Cramér's V</i>		
Ordinal		<i>Kendall's tau-b</i> <i>Kendall's tau-c</i> <i>Spearman's rho</i>	<i>Spearman's rho</i>
Interval and ratio (dependent)		<i>Spearman's rho</i>	<i>Spearman's rho</i> <i>Pearson's R</i>

## Unit 23 Normal distribution

### How strong or weak is the correlation

**Pearsons's R:** how strong or weak is the correlation?

#### Direction

+ = positive

= negative

#### Strength (= pearsons R number)

-1 = perfect negative correlation

+1 = perfect positive correlation

0 = no correlation at all

**Important note!** Check scatterplot before you calculate person's R. if the scatterplot isn't linear related --> don't calculate the pearsons R, it won't tell you something.

### Kendall's T

- Ordinal x ordinal
- Number of categories is small
- If you want to know the relationship with 3 variables
- -1 = more disagree and 1 = more agree
  - Kendall's tau-B: squared tables
  - Kendall's tau-C: rectangular tables

Measure of association	Nom + Nom	Ord + Ord	Ord + Scale	Scale + Scale	4) Minimal and maximum value	5) Additional information
Cramér's V	x				0 and 1	
Kendall's tau-b		x			-1 and 1	For squared tables only. Only use this when the number of categories is relatively small
Kendall's tau-c		x			-1 and 1	For rectangular tables. Only use this when the number of categories is relatively small
Spearman's rho		x	x	x	-1 and 1	Only for a ratio variable when the relationship is not linear. Less sensitive to outliers than Pearson's R
Pearson's r				x	-1 and +1	Only use for scale variables when the relationship can be assumed to be linear.

## Summary 3: Research Methodology and Descriptive Statistics test two

### Unit 12 Causality and bivariate analysis

#### Three aspects of causality / testing a bivariate hypothesis

1. **Correct time order:** the independent variable precedes the dependent variable.  
Example: The effect of alcohol acceptance during childhood and drinking behavior.
2. **Association or correlation:** if there is no association: no causality  
Example: If alcoholic acceptance during childhood is equal among alcoholics and non-alcoholics
3. **Non spuriousness:** a third variable which influences the outcome.  
Example: not testing family circumstances and alcoholic, but not testing the genes.

**Time order problems:** independent variable should precedes) the dependent variable.

1. Problem may occur when **measured at the same time**.
2. Measuring both variables at the same time **may produce reverse causation**

**How to check time order:** Collect data at different points in time.

**No spurious relationship:** no third variable affecting the relationship

**Two effects:**

- Explanation/ **confounding:** when the test variable is introduced, the relationship between the two becomes less or disappears. The test variable explains the independent and dependent variable.  
Example: storks, babies, urbanization

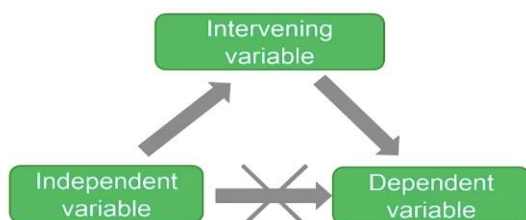
No relationship between the variables, but the third makes it looks like that.

If the original independent variable precedes the third variable in time. (First independent, then third)

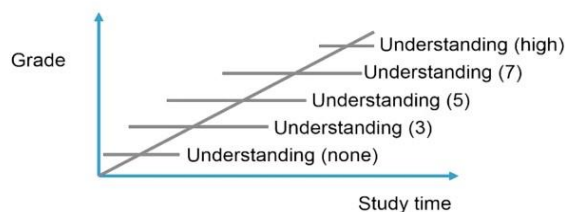
- Specification/ **interaction** / modification: when the test variable is introduced, the relationship diminishes or disappears for 1 of the variables, but it becomes stronger or remains for the other variable. The test variable strengthens the relationship

Example: income, holiday spend, willingness

#### INTERPRETATION IN A MODEL



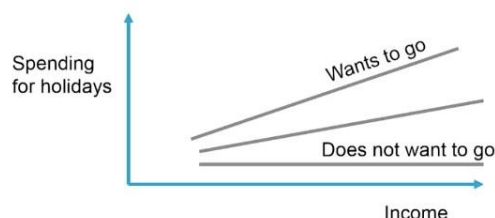
#### INTERPRETATION IN A GRAPH



#### INTERACTION IN A MODEL



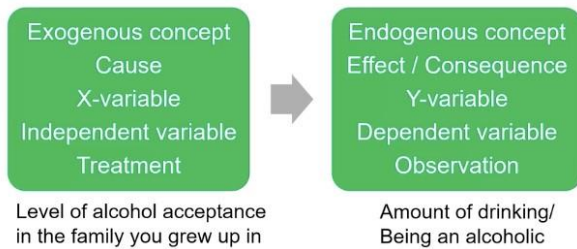
#### INTERACTION IN A GRAPH



**Association or correlation:** if there is no association: no causality

Bivariate associations between variables with various levels of measurement.

- Units for comparison (comparative research)
- A basis for comparison (variables)



### Deterministic and probabilistic

- Deterministic: if... then 'always (not possible in empirical research)
- Probabilistic: if... then "relatively more/less often"
  - Only because of measurement error: impossible to perfect measure
  - Parsimonious models: simple models, omitted variables → leaving weird variables out because we want the world to be simple.

Never use the word PROVE with empirical research

### Testing hypotheses

- ONLY if the expected relationship is deterministic, we can reject this expectation with a single observation.
- In the social sciences, all expected relationships NEVER deterministic, they are ALWAYS probabilistic.
- This is partly because of our theories: there are always other variables affecting the dependent variable too.

### Variation

The ONLY way to test/study a causal relationship is by finding 'variation' (in some way). You cannot test a causal relationship without variation.

There must be a difference in independent and dependent = variation to be causal.

## Unit 15 Research designs for testing causal hypotheses

### Research design

The way of answering an explanatory (causal) research question in a convincing way. The logic, not the logistics of answering such a question. More about thinking than organizing **Distinguish between:**

- **Research design** (example: experiment, cross sectional study etc.)
- A data collection method (example: a survey, observation)
- The aim or context of research (example: ex-post evaluation)
- The type of data you try to arrive (qualitative or quantitative)

### Cross sectional research O

- All variables of a set of units are measured at the same time
- None of the variables is manipulated differently for a sub-set of units
- You only can check the association
- You can't check reverse causation and the third variable

### Interrupted time series O

(X= random assignment)

O O O O X O O O O

- Studying the same units and variables over time.
- A type of longitudinal research.
- You can check the association and time order.



### The classic experiment

- Classic is the same as interrupted time series but also had a control group.
- Excludes the affect of third variables

**! Placebo-effect:** control group can occur a placebo effect à **Double-blind experiment:** Both don't know if they are control or experimental.

### True experimental design

Experimental Group	R	O	X	O
Control Group	R	O	O	

R= random assignment to a group

### Quasi-experimental designs

Experimental Group	N	O	X	O
Control Group	N	O	O	

### TESTING A CAUSAL RELATIONSHIP

	Cross sectional	Interrupted time series	Experiment
Association	✓	✓	✓
Time order		✓	✓
No third variable			✓

## Unit 14 Causality and the effect of third variables

### 4 types of validity in causal inference

- **Statistical conclusion validity**
  - When is the change 'big enough' to argue 'the treatment worked'?
  - Correct processing of data
  - About the relationship
- **Internal validity**
  - The effect of third variables.
  - Reversed causation: the treatment was introduced, because of an observed or predicted change in the trend

➔ both about correct concluding in the study
- **Measurement and sampling validity**
  - 'is the actual treatment reflecting the theoretical construct?
- **External validity (most important)**
  - It may work now, in this set of units and setting. But does it work always?

➔ both about generalization & inference to theory/ population/ other cases

**Warning:** Only helps to find problems in causal research. Not a classification.

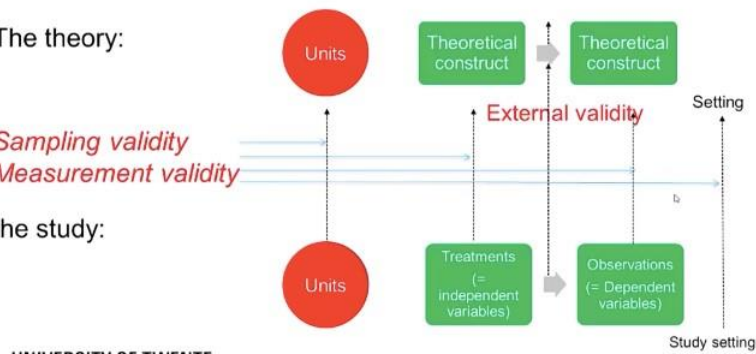
### Measurement & sampling validity: about theoretical constructs

Measuring the variables and units appropriately. Referring to the theoretical constructs intended.

The theory:

*Sampling validity*  
*Measurement validity*

The study:



What happens with the biv relationship?	Does not change	Disappears	Weakens	Varies	Does not change	Disappears
The third variable is called:	-	Confounding / Confounder variable	Confounding / Confounder variable	Interaction variable / Modifier / Moderator variable	Another (extra) independent variable	Intervening variable
The model is called:	Replication	<b>Confounding</b> / Full Explanation	Confounding / Partial Explanation	<b>Specification</b> / <b>Interaction</b> / <b>Modification</b>	Addition	<b>Interpretation</b>

### Example: Storks – babies

Step 1: Hypothesize and theorize about a bivariate relationship

Step 2: Study time order and test association using a bivariate table

(if NOT rejected)

Step 3: Hypothesize and theorize about a third variable

Step 4: Study time order and test association using a trivariate table

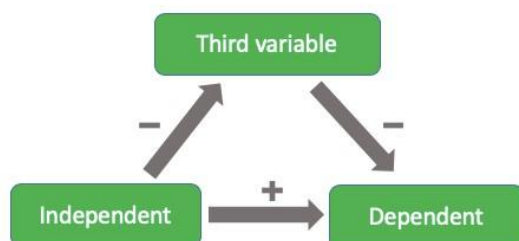
If the DATA are in line with the hypothesized model: do not reject the H1 (trivariate)

hypothesis If the data are NOT in line with the hypothesized model: reject the H1 (trivariate) hypothesis

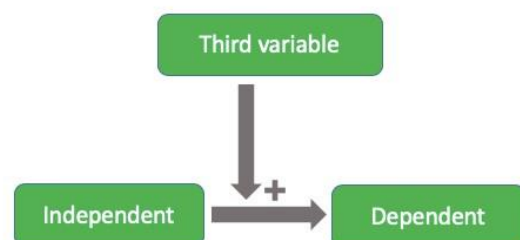
### Unit 16, 17, 18 multivariate relationships

#### Trivariate models:

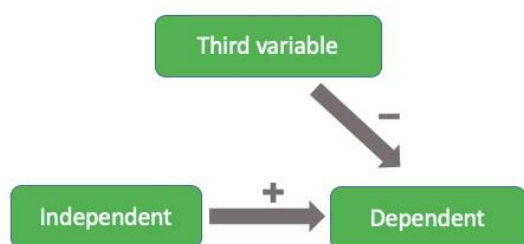
Trivariate models: (full) interpretation



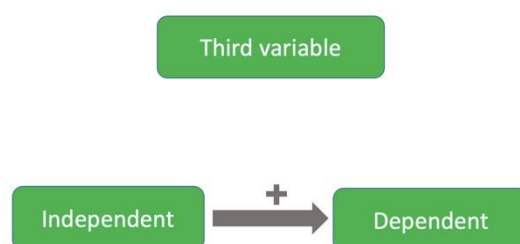
Trivariate models: specification



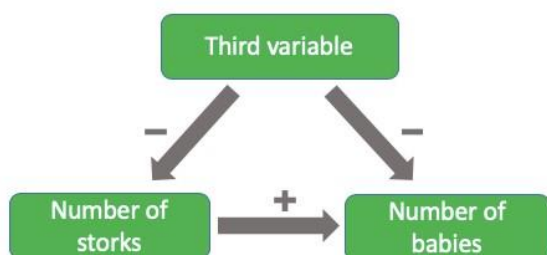
### Trivariate models: addition



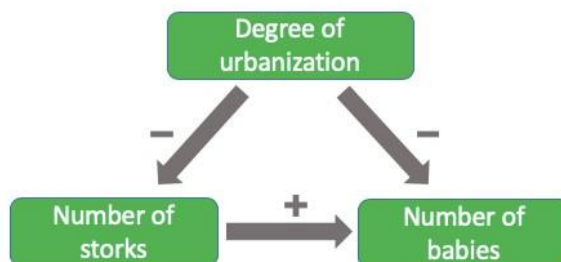
### Trivariate models: replication



### TRIVARIATE MODELS: CONFOUNDING

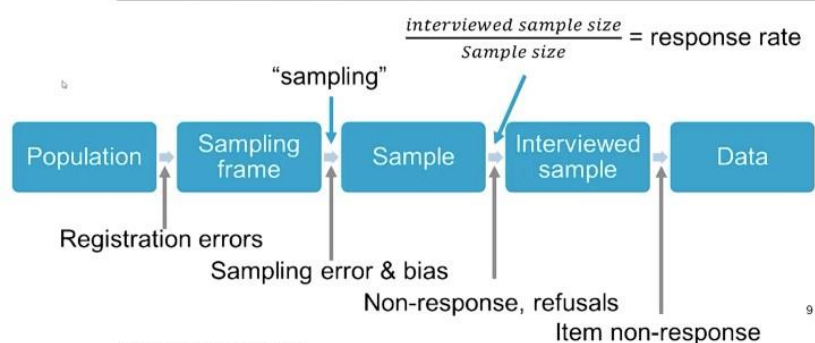


### Trivariate models: confounding / (full) explanation



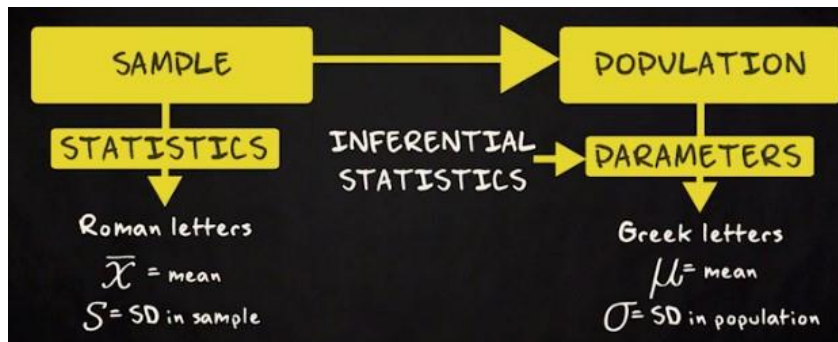
## Unit 19 sampling

### DISTORTIONS IN THE PROCESS



Sampling procedures	
Is the chance that a specific unit from the sampling frame is included in the study, known? Do we know the chance that an individual is included in our sample?	
No	Yes
non-probability sampling	probability sampling
- Convenience: interview a few people	- Simple
- Purposive	- stratified
- Snowball sampling	- multi stage cluster sampling
- Quota	
Assessing sampling	
Sampling bias (invalidity)	Sampling unreliability
Studying wrong people	Sample size error
Systematic bias	

Sampling: **The goal is to make statements about the entire population**



**Sample = a subset of a population = micro population**

**2 quantitative variables** → **Linear relation** → **quantitative variable**: dependent and independent.

Regression: the basis for a lot of advanced statistical techniques

- **Correlation**
- **The regression equation**
- **Intercept**
- **Slope of the regression line**

Unit 20 and 21: first steps towards inference

**Central limit theorem:**

- The sampling distribution of the sample mean  $\bar{x}$  is approximately normal distribution (provided that  $n$  is sufficient large)
- Even if the variable of interest is not normally distributed in the population

So: no matter how a variable is distributed in the population the sampling distribution of the sample mean is always approximately normal distributed

- As long as the sample size is large enough

!!! The sampling distribution of the sample mean is only perfectly distributed when you take an **infinity number of samples**

**If the distribution is normal:**

You can describe its shape with just two parameters:

- Mean
- Standard deviation

**The mean of the sampling distribution = population mean**

$$\mu_{\bar{x}} = \mu$$

**Example: beard length Norwegian men**

- Population: all Norwegian man
  - $\mu = 1.22 \text{ mm}$
- Mean of the sampling distribution of the sample mean
  - $\mu_{\bar{x}} = 1.22 \text{ mm}$
  - $\bar{x}$  is added to make clear that it is based on sample means



Know what standard distribution looks like → easily compute sd of the sampling distribution.

**$\sigma_{\bar{x}}$  = standard deviation of the sampling distribution**

$\sigma_{\bar{x}}$  is affected by two characteristics

- Standard deviation in the population
  - If  $\sigma$  increases → so does  $\sigma_{\bar{x}}$
  - In other words: the larger the variability of the population the larger the variability of the sample means.
- Sample size
  - The closer the sample means will lie to the population mean
  - The larger  $n$ , the lower the  $\sigma_{\bar{x}}$

$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}}$$

$$n = 30 \quad \sigma = 1$$

$$\sigma_{\bar{x}} = 1 / \sqrt{30} = 0,18$$

$$\sigma_{\bar{x}} = 2 / \sqrt{30} = 0,37$$

$$\sigma_{\bar{x}} = 3 / \sqrt{30} = 0,55$$

$$\sigma_{\bar{x}} = 2 / \sqrt{100} = 0,2$$

$$\sigma_{\bar{x}} = 2 / \sqrt{500} = 0,09$$

The bigger  $n$  (sample size) the closer to a normal distribution the sampling distribution of the sample mean is.

**Why regression analysis:**

**Correlation:** that expresses how tightly the data fit around an imaginary straight line through the scatterplot

*coefficient is a number between -1 and +1*

- **Pearson's r:** positive or negative relation? (<0 is negative). The closer to zero, the stronger the relation

**The correlation can not specifically predict, linear regression can.**

**Linear regression:** describes the relation mathematically through a regression equation

$$\hat{y}_i = a + bx_i$$

- Test if the equation is an accurate description of the relation in the population
- How good are our predictions?

Y= Dependent variable = outcome = response variable: the variable we want to predict X=

Independent variable = explanatory variable = predictor: can be used to predict the response variable.

## Unit 22 Research ethics

**Research ethics:** systematizing, defending, and recommending concepts of right and wrong conduct in social science research.

- Normative area: about right and wrong
- Statements of right and wrong are based on empirical studies of (un)ethical research behavior.

**What you have to take into account with research:**

### 1. Units of observation

No Harm to research objects:

- *Anonymity* (researcher does not know who the units are.
- *Confidentiality*: the identify of people is known, but is hidden by the researcher

Informed consent: people have to be informed what the research is about

Using informed consent forms: explaining the goal and asking objects to sign a form that they know where the research is about.

(fully) informed consent often impossible (behavioral experiments): deception, **debriefing** (= inform afterwards)

## 2. Principal

Quality research and not overstretching claims

Sponsor non-disclosure

Confidentiality or results: can you reveal the results of the study

## 3. Other researchers

Plagiarism: → referencing

Data fabrication: not allowed to fabricate your own data Transparency and replicability:

Data storage, storage of all files. Giving access to all these files

Peer review: researches anonymous check what other researchers are doing

- Research proposals
- Concepts of papers/ journals

## 4. Society at large

Relevance of research

No harm to the society: but what is harmful.

→ ethical conflicts and dilemmas are when the four conflict

### Conflicts:

- Unit vs other researchers: no harm to units vs. transparency of research
- Principal vs society: interest of principals vs relevance vs society at large
- Units vs society: harm to units vs. relevance for society at large
- Principals vs other researchers: transparency of research vs interest of principal

### Simple random sampling:

5. **make clear who the population is**

6. **sampling frame:** list of all subjects

7. **sample:** pick randomly 200 subjects

8. **Respondents:** how to approach? F2F, phone etc.

*Nonresponse bias:* some won't answer

*Response bias:* response are biased, not the true

Result: systematic misrepresentation of responses

→ estimation will be biased due to systematic under- or overrepresentation of certain groups.

### Multistage cluster sample

1. **Identify** a large number of **clusters** within your population

2. Put **all** in a **cluster bucket**

3. **Random select buckets**

4. **All pieces in picked buckets = SAMPLE** → good if you don't have a good sampling frame or if random sampling is expensive

### Stratified random sample:

1. **Instrata:** dividing population in separated groups (uni)

2. Put in their own **strata** (their uni)

3. **Select Random papers from all boxes**

4. → **SAMPLE**

+ samples from all instratas

- You need a sampling frame

SAMPLE: BIGGER IS BETTER

A big sample can NEVER make up for a bad sampling procedure

### Theory construction:

Cases seem to be different for various units, why?

**Extreme cases**   **normal cases**   **extreme cases**

A set including both normal and extreme cases: **diverse cases**

Outcome would be **hypotheses** suggesting why cases are different.

**Typical cases** behave according to the hypothesis, **deviant cases** do not.

Outcome would be **additional hypotheses** suggesting why cases are different, especially by comparing typical and deviant cases. (deviant = extreme)

### Sampling distribution of the sample mean:

- infinity number of samples
- Bell-shaped distribution
- Distribution of sample means is bell-shaped with a mean equal to the population mean

**Sample distribution/ data distribution** = just the distribution of scores in the one sample that was actually drawn and for which data were actually collected

### Central limit theorem:

- The sampling distribution of the sample mean is approximately normal distribution (provided that n is sufficient large)
- Even if the variables of interest are not normally distributed in the population  
So: no matter how a variable is distributed in the population the sampling distribution of the sample mean is always approximately normal distributed
- As long as the sample size is large enough: >30

### If the distribution is normal:

You can describe its shape with just two parameters:

- Mean
- Standard deviation

**The mean of the sampling distribution = population mean**

$$\mu_{\bar{x}} = \mu$$

### $\sigma_{\bar{x}}$ = standard deviation of the sampling distribution

$\sigma_{\bar{x}}$  is affected by two characteristics

- Standard deviation in the population
  - In other words: the larger the variability of the population the larger the variability of the sample means.
- Sample size
  - The larger n, the lower the  $\sigma_{\bar{x}}$

$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}}$$

## Part two

! Disclaimer: always check what you need to study corresponds with the content of the summaries, courses can be changed which could cause changes in study material for your exams

All courses will consist of training in research methods and techniques and academic skills. Where possible, the topics are related to Business Administration fields. The courses for the second quartile can be found in the list below.

### Courses

-	Inferential Statistics	202001403	5 EC
-	Researching Strategy & Marketing	202000262	5 EC
-	Global Entrepreneurship & Business	202000261	5 EC

### Summary 1

**Course:** Global Entrepreneurship & Business

**Book:** Nielsen, S. L., K. Klyver, M. R. Evald and T. Bader (2021). *Entrepreneurship in Theory and Practice; Paradoxes at Play*. Edward Elgar publishing.

**Chapters:** 1, 2, 3, 4, 5, 8,

**Year the summary was received:** 2021

Unfortunately, we have not yet received summaries for the other two courses mentioned above. If you made a summary for a course this module you can send them to [education@stress.utwente.nl](mailto:education@stress.utwente.nl) and since we do not own any yet you will receive €15 for your hard work.

Good luck with your courses and if you have any questions feel free to drop by the Stress room, where the board will gladly answer all of them!

## Summary 1: Global Entrepreneurship & Business

### Lecture 1: Entrepreneurship, perspectives and types (Ch. 1-2)

#### Ch. 1: What is entrepreneurship?

- „pursuit of opportunity beyond resources controlled” (Stevenson as cited in Eisenmann, 2013)
- “consists of eight factors: the entrepreneur, innovation, organization creation, creating value, profit/non-profit, growth, uniqueness, the owner manager” (Gartner, 1990)

#### Different perspectives on entrepreneurship

##### 1. Economic perspective (1700s-1900s)

- first definitions going back to the 18<sup>th</sup> century
- Knight (1900s): concept of dealing with uncertainty and therefore risk ((1)different outcomes exists and are known, (2) outcome exists but is not known, (3) outcome does not exist and is not known)
- Schumpeter (1934): concept of creative destruction: “the entrepreneur is an innovator who, by combining existing things, generates new opportunities and organizations in the economy” (could lead to destruction of established businesses)
  - Definition includes creating new products, production methods, new markets, utilizing new supply sources and the reorganization of an industry
  - Objections against Schumpeterism : Is the new always better than the old? Why is uncertainty not related to the entrepreneur’s actions?

##### 2. Social-psychological tradition (1960s-1980s)

- starting in the 60s, researchers tried to identify the socio-psychological factors of entrepreneurs
- examples: “energetic participation in endeavour”, “confidence”, “desire to be your own boss” and “need to accomplish”
- studies failed to identify “entrepreneur” out of the mass (if this was successful, we would have a valid “entrepreneur” test, instead we use proxies like entrepreneurial intuition)
- environment also has a big impact, phenomenon is too big to find an easy answer

##### 3. Emergence tradition (since 1980s)

- entrepreneurship is equivalent with forming an organization, namely creating a new venture
- research focus on the process of venture formation including topics like formal policy, administrative structure and goals
- behavioural patterns are an important aspect

##### 4. Opportunity tradition

- entrepreneurship consists of „discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organizing, markets processes and raw materials” (Shane 2003:4)
- discovering or creating opportunities is the core of this theory
- opportunities are “situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends or means-ends relationship” (Eckhardt & Shane 2003:336)

Dominant today? → emergence and opportunity tradition

## Ch. 2: Who is an entrepreneur?

- individual entrepreneur plays a crucial role in establishing a new business
- venture capital investors often consider the role of the entrepreneur as more important than the business idea

### Types of entrepreneurs

- **Novice:** no entrepreneurial experience
- **Habitual:** having entrepreneurial experience
- **Serial:** creating new ventures on a regular basis
- **Portfolio:** owning several organizations simultaneously
- **Hybrid:** employed and business owner at the same time
- **Nascent entrepreneur:** in the process of becoming an entrepreneur
- **Intrapreneur:** acting as an entrepreneur within an organization

### Are entrepreneurs born or made?

	Born	Made
Who is the entrepreneur?	Special super-individuals	All are potential entrepreneurs
Perception of the entrepreneur	Stable over time – once an entrepreneur, always an entrepreneur	The entrepreneur is created through a process
Stimulation	Internal character features	External factors
Research focus	Character features attached to the entrepreneurial personality	The interacting individual and contextual factors that create individuals, cognitive processes and identity
Objectives	To be able to predict and point out the entrepreneur in the crowd	To understand the entrepreneur and how an entrepreneur is created

#### 1. “Born” perspective

- entrepreneurs are “special” individuals
- have character traits like being independent, goal oriented, innovative, intelligent and creative and more
- Q: Are traits stable throughout your life or do they change?

The influences of genes in entrepreneurship (p. 29)

- entrepreneurs often have parents who are also involved in entrepreneurial activities → idea of influence of genes
- genes combined with environmental might lead to a certain degree influence behaviors (e.g. autism)
- Bönke et al (2016): showed positive influence of prenatal testosterone exposure on entrepreneurship intention
- Results should be taken very cautiously: replication crisis in social sciences (Open Science Collaboration 2015)

#### 2. “Made” perspective

- Social demographic environment is crucial for becoming an entrepreneur including e.g. age, work experience, education
- Global Entrepreneurship Monitor 2010 highlighted the role of age (25-34 years) as important factor
- Education including e.g. entrepreneurship courses seem to have a positive impact (Lee 2005)

## Lecture 2: Opportunities and business models (Ch. 3-5)

### Ch. 3: Emergence of Opportunities

→ an **entrepreneurial opportunity** consists of a set of ideas, beliefs and actions that enable the creation of future goods and services in the absence of current markets for them (Venkataraman, 1997)

#### Criteria for a valid opportunity (p. 51)

1. **Anchored:** bound to a product, a service, or an experience that creates value for others
2. **Attractive:** others are willing to pay for the value that represents the idea
3. **At the right time and place:** the environment is mature enough to receive the entrepreneur and his or her idea
4. **Capable of being done:** the opportunity is practically feasible

#### Types of Opportunities: Schumpeterian vs Kirznerian (pp. 56/57)

- Schumpeterian: creative destruction (ex. Netflix, Blockbuster)
- Kirznerian: market equilibrium (ex. Aldi)

More examples:

- rather Schumpeterian: Airbnb, Uber
- rather Kirznerian: TikTok
- Both: Thuisbezorgd.nl

→ more about argumentation rather than right answers

### Two ways to view opportunities: Discovered or created?

	Discovered	Created
Opportunity character	Objectively given unit in the environment	Dependent on the interactions of the individual
Opportunity emergence	Involves discovery	Involves creation
Opportunity source	The individual who is attentive towards existing market information	The individual who creates by means of his or her creativity
Opportunity status	The opportunity is stable	The opportunity is dynamic
Opportunity type	Kirznerian hole in the market	Schumpeterian market ruption

**Discovery view:** Opportunities are out there. The entrepreneurs can identify them by e.g. being more alert to it, out of a set of opportunities he or she collects one

**Creation view:** the entrepreneur creates the opportunity him or herself, it is his or her creation

#### Opportunities created by Covid-19:

1. great success of online conferencing tools
2. high investments in vaccines, medications, medial tools and apps to deal with Covid-19
3. further rise of delivery services
4. digitalization of sports, including new devices like Peloton

## Ch. 4: Evaluation of opportunities

	Instrumental	Legitimate
Evaluation perception	Tool to achieve a certain objective	Legitimacy creation
Evaluation objective	To state the direction for action	To convince the actors of the market of the idea
Evaluation criteria	They should be formulated before the process	They emerge during the entrepreneurial process
Evaluation process	Rational, systematic and analytic	Social, interactive, experimental and exploring
Evaluation character	Evaluation and entrepreneurial action are two separate activities	Evaluation and entrepreneurial action are two inseparable activities

### Instrumental perspective (p. 78 and 59)

Evaluation of:

- Product
- Market
- Industry
- People
- Money

### Venture Capital decision criteria (Macmillan et al., 1985)

- the entrepreneur's personality
- the entrepreneur's experience
- characteristics of the product or service
- characteristics of the market
- financial considerations

Characteristics of the product or service

- product is proprietary or can otherwise be protected
- product enjoys demonstrated market acceptance
- product has been developed to the point of a functioning prototype
- product may be described as "high tech"

Khanin, 2008: Venture Capital decision criteria

- top management team
- market and market growth
- product
- risk
- returns
- exit
- deal
- strategy
- customer
- competition

Opportunities – creating trust (p. 82)

- establishing a website
- setting up social media accounts and regularly create updates
- founding an official company
- establishing an advisory board with known people
- getting testimonials
- filing for trademarks and patents
- investing own money
- creating a prototype



## Ch. 5: Organisation of opportunities (Planning vs. improvising)

	Planning	Improvising
Starting point	The target is given	The means are given
Crucial question	"What can I do in order to achieve the desired effect?"	"What can I do with these means?"
The role of the entrepreneur	A rational architect	An improvising creator and social agent
Crucial activities	Analysis, planning	Small steps, interaction
Predictability of output	High	Low

**Planning (/Causation) approach-** based on the traditional theory of planned behaviour



### Pro

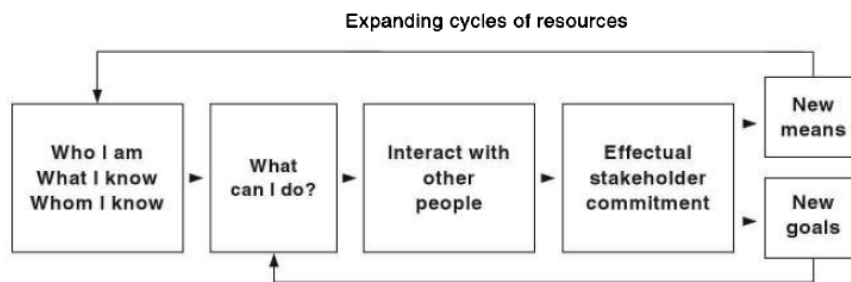
- Basis for discussing with stakeholders
- Common direction
- Estimation of time and resources

### Con

- Plans never stick
- Inflexible to changes
- Maybe wrong resources will be acquired

## Improvising approach

Effectuation: what effects can I achieve with the resources I have? (Read & Sarasvathy, 2005)



Source: Sarasvathy (2008: 101).

Example from the book: Claus Meyer (Meyer Group)

- culinary entrepreneur, food activist, cookbook author, professor and TV host
- often accredited as the founder of the New Nordic Cuisine (local, natural and seasonal products) philosophy
- <https://www.youtube.com/watch?v=9vKFSPesjV4>

## Business models as a way to structure opportunities

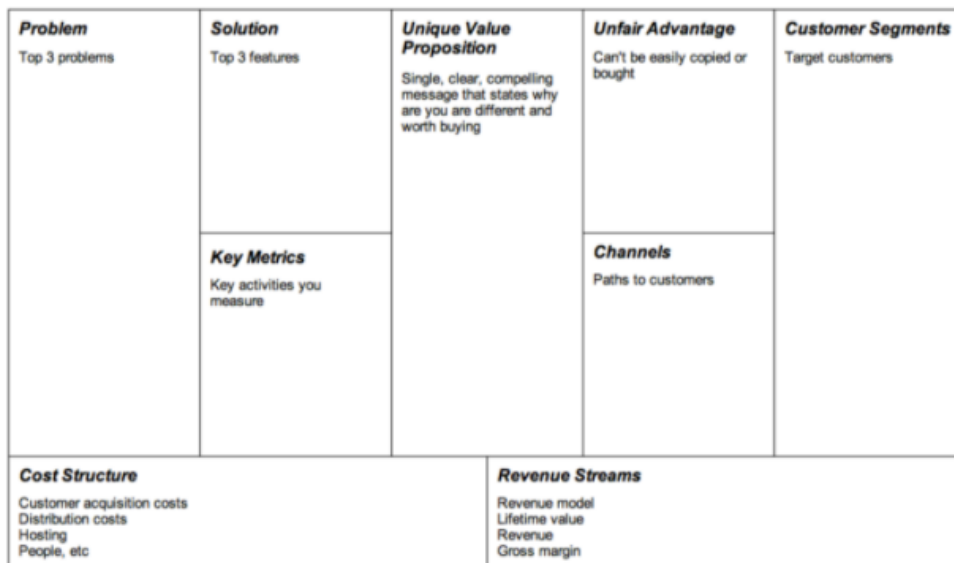
Osterwalder (2004, p. 15): "A business model is a conceptual tool that contains a set of elements and their relationships and allows expressing a company's logic of earning money. It is a description of the value a company offers to one or several segments of customers and the architecture of the firm and its network of partners for creating, marketing and delivering this value and relationship capital, in order to generate profitable and sustainable revenue streams."

A business model describes from a meta perspective what a company does and how it creates value.

## Business Models Canvas



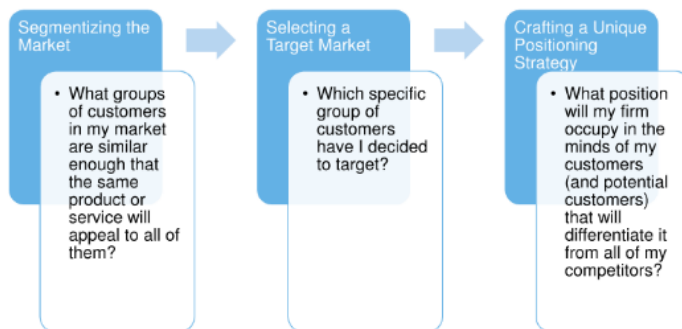
## Lean Models Canvas



## Business Model: Mapping opportunities

- help to structure a potential opportunity quickly
- looking at the cost and revenue structure helps to evaluate the feasibility of the opportunity
- business model as a tool to focus on the customer side (left side of the business model)
- as business modelling is state of the art it can assist in stakeholder communication

## Lecture 3: Market segmentation, positioning, estimation & networks (Ch. 7-8)



### Market segmenting

- process of defining and subdividing a large homogenous market into clearly identifiable segments having similar needs, wants or demand characteristics
- no single marketing mix can satisfy everyone
- therefore, separate marketing mixes should be used for different market segments

### Effective segmenting

→ market segmentation cannot be used in all cases. To be effective, it must meet the following basic requirements:

1. The market segments must be measurable in terms of both purchasing power and size.
2. Marketers must be able to effectively promote to and serve a market segment.
3. Market segments must be sufficiently large to be potentially profitable.
4. The number of segments must match the firm's capabilities.

### Different approaches

1. Geographic segmentations: country, region, city...
2. Demographic segmentation: age, gender, income,...
3. Psychographic segmentation: lifestyle, social status, activities, opinions, interests,...
4. Product-related segmentation : smartwatch owner, driver license for motor cycle, registered general practitioner,...

Energy drinks	Agegroup	Income	Awareness	Marketing
Red bull	20+	Middle-high	Sports	Heavy
Monster	20+	Middle	E-Sports	Heavy
Store brands	16+	Low-middle	General	Low to medium
Budget brands	16+	Low	Students	Low

### Example energy drinks segmentation

Coca cola energy: middle-high income, 20+,



How would Coca Cola Energy fit?



## Market positioning

→ Marketing strategy that emphasizes serving a specific market segment by achieving a certain position in buyer's minds → Excellent way to show one's positioning (positioning matrix)

### Market differentiation

- It is important that a business clearly articulate the points that differentiate its product or service from competitors.
- A company's basis of differentiation is what causes consumers to pick one company's products over another's.
- It is what solves a problem or satisfies a customer need.
- It is best to limit a company's basis of differentiation to two or three key points.
- Make sure that your points of differentiation refer to benefits rather than features.

### Porter's three generic strategies (1989)



Another framework: **Red Ocean vs Blue ocean** (Kim and Mauborgne, 2005)

Red Ocean Strategy	Blue Ocean Strategy
Compete in existing market space	Create uncontested market space
Beat the competition	Make the competition irrelevant
Exploit existing demand	Create and capture new demand
Make the value-cost trade-off	Break the value-cost trade-off
Align the whole system of a firm's activities with its strategic choice of differentiation or low cost	Align the whole system of a firm's activities in pursuit of differentiation and low cost
Example: Corona vaccine	Example: space travel

Examples blue ocean → Nintendo Wii, Cirque du Soleil, Netflix, Canon, Apple iTunes, Alexa

## Market estimation (Waheeduzzaman, 2008)

### 1. Method of analogy

- You look for similar markets and derive with the numbers of one market the number for the other markets
- Example: you want to sell your washing machines to South Africa
- You look at different markets and find out that Thailand has similar characteristics in population and in water and energy per household

- In Thailand, 25% of the households have a washing machine. You assume you can reach the same market size in South Africa.

## 2. Method of chain-ratio

- You reduce the size of the market by different ratios.
- Example: You want to see how big the market for a premium iPhone application in the Netherlands is
- Your first calculate the percent of iPhone users (we assume 10%), then calculate the percent of high income (above 250.000€) which might afford a premium application (we assume 10%)  
→ The market size is then 17,000,000 (inhabitants of the NL)  $*0.1*0.1= 170,000$ .

Market evaluations (Macmillan et al., 1985)- Venture capital decision criteria - Characteristics of the market

- significant growth rate
- venture will stimulate an existing market
- venture is an industry with which I am familiar
- there is little threat of competition during the first three years (Blue Ocean)
- venture will create a new market (Blue Ocean)

**3. Prediction based on historical data** (usually skipped because you do not always have historical data in start-ups, can look at data from earlier version)

## Ch. 8: Networks

	Rational	Embedded
View of the entrepreneur	Goal-oriented, rational player	A socially embedded player
View of the networks	A rational tool	Ungovernable condition
View of the relation	Concrete, emotionally neutral, contract like and short-termed	Diffuse, emotional, trusting, reciprocally binding and long-termed
Focus	Effective networks	The facilitating and restricting qualities of the network
The importance of social contexts	Low	High

### Networks as a type of resource

1. provide people with important information
2. influence other people in the network
3. create legitimacy within the network and therefore might enable to acquire resources
4. develop and enhance social identities

### Different ties (Granovetter, 1973, pp. 166): Strong vs. weak ties

1. frequency of interaction
2. emotional closeness
3. duration on contact

What network type is better for entrepreneurs?

→ **Strong ties:** acquiring resources like emotional support, sensitive market information and access to financial resources

→ **Weak ties:** getting new information to get an advantage including market opportunities (as opposed to the same information shared in the existing network)

## Lecture 4: Venture financing and risk management (Rest Ch. 7)

### Venture financing: How to attract financing?

#### Why do ventures need funding?

- *cash flow challenges*: inventory must be purchased, employees must be trained and paid, advertising must be paid before cash is generated from sales
- *capital investments*: the cost of buying real estate, building facilities, purchasing equipment typically exceed a firm's ability to provide funds for these needs on its own
- *lengthy product development cycles*: some products are under development for years before they generate earnings. The up-front costs often exceed firm's abilities to fund these activities on its own

#### Different sources for venture financing

Type of financing	Usual investment sum	Type of financing
Family, friends and fools	up to 100,000 €	Equity
Business angels	50,000 to 250,000 €	Equity
Crowdfunding/Crowdinvesting	up to 1,000,000 €	Equity
Initial coin offerings (ICO)	?	Similar to equity
Venture Capital, Corporate Financing	500,000 to 25,000,000 €	Equity
Public funds and scholarships	100,000 to 200,000 €	Equity
Outside financing	Any sum	Debt capital
Stock exchange	Any sum, usually several mil. €	Equity

Some investors are very successful

- Sequoia Capital invested in Whatsapp shares (Feb 2011) for 8mil dollar
- sold investment for 3.5 billion
- return on investment of more than 40.000%

#### 1. Family, fools and friends

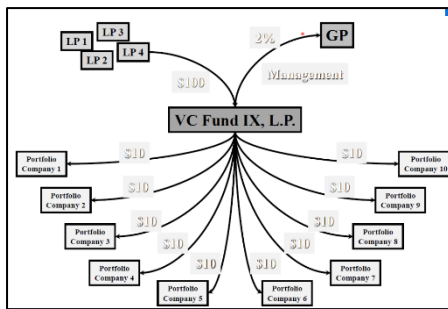
Advantages	Disadvantages
F's have more information on you	Relative small amounts of money
Relatively easy to acquire	Bankruptcy could mean end of relationship
They put little pressure on you	Often no business / investment experience
They mostly don't require control on the company	Could be a downside in latter stages of investment

#### 2. Crowdfunding and crowd-investment are two related but not equal terms

	Crowdfunding	Crowdinvesting	Advantages	Disadvantages
<b>Target group</b>	Mainly artistic, creative and social projects and founders	Mainly commercial projects	Financing of projects, which are not attractive for other investors and need relatively small amounts of money	Disclosure of information for an unknown crowd
<b>Financing volume (average)</b>	Ø 500-10.000 Euro	Ø 50.000-500.000 Euro	Fast mobilization of the crowd	Cost-intensive and time-consuming process to build a community
<b>Character</b>	Sponsoring and Donation	Equity holding	No legal duties (only crowdfunding)	Potential influence of the crowd on management decisions (only crowdinvestment)
<b>Incentives</b>	Thank-you gifts, non-monetary	Payments on interest (but full risk!)	Signaling and networking	Money must be paid back after some years (EXIT) (only crowdinvestment)
<b>Costs</b>	5%-20%	5%-20%	First market feedback	
<b>Potential investors</b>	Consumers, private customers	Business Angels, private Investors	High flexibility and variety of platforms and forms of financing	

→Kickstarter: crowdfunding platform

### 3. Venture capital funding



#### Characteristics & main elements

- venture capital is given to small, innovative companies with high growth potential
- stays 3 to 7 years in the company
- don't care for monthly revenues
- they make their revenue at the end of the investment. Therefore, the exit strategy is very important
- venture capitalists actively support the companies
- equity financing
- limited in time
- minority holding
- right of control
- management function

#### Risks

- high volatility of the returns
- risk of failure of the company

The decision making of a venture capital company is a long process

1. selection of the start-up company and first negotiation
2. due diligence – internal through an investment manager
3. due diligence – external through an institution or an university
4. creation of a decision paper
5. decision of investing is made by the investment committee
6. the investment contract will be negotiated

- high competition
- lack of information
- difficulty to sell to the capital market
- limited control function

#### Positive impact

- closing the capital gap
- pushing new innovative companies
- foster the creation of products and technologies
- small companies attribute most of the jobs
- leveraging new technology-based companies

#### Who is investing?

- umbrella funds
- insurance companies
- pension funds
- companies
- private investors
- governmental institutions
- banks

#### Ways for an exit of an investment

- trade sales
- buy back
- secondary purchase
- going public
- liquidation

### 4. Business angels vs venture capital

Business Angels	Venture Capital
Personal motivation as well	Growth primary target
Invest own money	Invest others peoples money
Little due diligence	Extensive due diligence
Difficult to identify	Easy to identify
Less pressure on fast returns	Higher pressure on the firm
Up to 500K	Start at +/- 1.000K

Venture capital as the investment sum of business angels is too low

#### The characteristics of business angels

- expect a financial return, hard to identify
- believe in giving back to their communities
- invest locally and regionally
- participate in the investment process
- show interest in personal relationships
- offer wisdom and guidance to entrepreneurs

## 5. Bootstrapping can also be an option

- minimization of costs and maximization of revenues
- the usage of a tight budget: the price is the main decision criteria for choosing needed products and services
- the focus is to finish developing the product or service development as fast as possible and start selling
- the financial resources are acquired from family, fools and friends, small bank loans, scholarships and trade credits

*Advantage:* founders keep their shares, founders are independent

*Disadvantages:* growth at the beginning stage can be slower, company may fail because of financial limitations

## Risk management (risk assessment and risk mitigation) (Proksch, 2018)

### Risk assessment in venture capital

- |                                   |   |
|-----------------------------------|---|
| 1. financial risk                 | - not getting patent                      |
| - negative revenue development    | - failure of technological milestones     |
| - incorrect financial planning    |   |
| - no further financing option     | 5. production risk                        |
| - liquidity/ solvency             | - too less production capacity            |
| - bankruptcy                      | - delays in production                    |
|                                   | - issues with suppliers                   |
| 2. market risk                    | - quality issues                          |
| - unsuccessful market entry       |   |
| - no market acceptance            | 6. human capital risk                     |
| - too small market potential      | - founder leaving the company             |
| - issues in marketing             | - missing competencies in management team |
| - unsuccessful sales              | - incompleteness of workforce             |
|                                   | - issues in hiring                        |
| 3. strategy risk                  |   |
| - new competitors entering        | 7. legal risk                             |
| - market entry barriers           | - patent infringements                    |
| - market positioning weak         | - governmental regulations                |
|                                   | - certifications of products              |
| 4. technology risk                | - contract risk                           |
| - too less know-how on technology |   |
| - failure of prototypes and tests |   |

### Risk mitigation in venture capital

- |   |   |
|---|---|
| 1. risk evaluation (e.g. professional due diligence)                      | 3. risk controlling (e.g. milestones)                       |
| 2. contract design (e.g. drag-along, liquidation preference, vesting,...) | 4. risk monitoring (e.g. monthly reporting)                 |
|   | 5. direct intervention (e.g. firing/ replacing one founder) |

### Dealing with occurring risks

- |  |                           |
|--|---------------------------|
| 1. saving the company e.g. by providing bridge financing     | 3. replacing founders     |
| 2. selling the shares (back to founders or to somebody else) | 4. liquidation of company |
|  | 5. creating a lawsuit     |

Who is usually the first founder/ manager who is fired/replaced in a start-up company? → Marketing/Sales manager



## Lecture 5: Internationalization

### Definition of Internationalization

- Kibucková et al. (2014) stated that the internationalization of a company stands for their involvement in the international environment
- A comparable definition was provided by Calof and Beamish (1995). They said that internationalization can be defined as the path of expanding and adapting firm's operations, e.g. strategy, marketing and production, to international environments.
- The internationalization process is a holistic process in which interrelated and integrated decisions and processes combine to a firm's individual path of internationalization (Jones, 1999).

### What do we consider international?

→ No consensus on what market is really a foreign market in scientific literature, many homogenous markets due to trade agreements, up to interpretation

### How do we measure internationalization of a company?

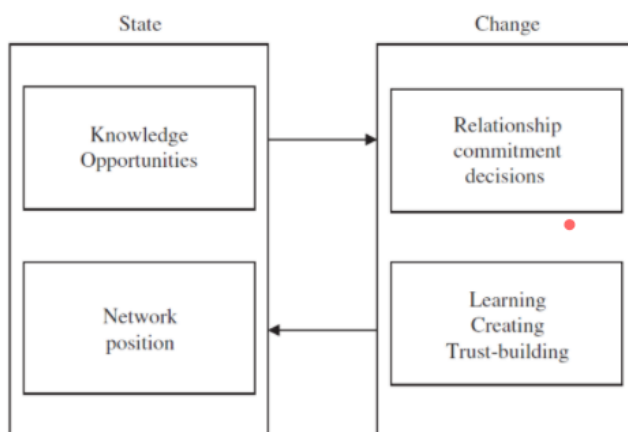
→ no clear consensus: many ways, most companies take revenue generated in other countries

- X% sales/ revenue/ profit in a foreign country
- A location in a foreign country
- X% of the employees from a foreign country
- A multilingual website

DHL 2020 country ranking: Why is NL Top 1 in the ranking? → main harbour of Europe (Rotterdam and Amsterdam), strong dominance of English in Education, High research productivity (especially in health care)

### Models of Internationalization (EXAM)

#### 1. The Uppsala model of internationalization (Traditional pathway)



→ A step-by-step process to minimize risks by using strategies proven to be successful on the domestic market (Johanson and Vahlne, 2005). Entering "close" market first.

→ might not be the best suited for new entrepreneurs

#### 2. The born-global model

	Low degree of internationalization of the market	High degree of internationalization of the market
Low degree of internationalization of the firm	The Early Starter	The Late Starter
High degree of internationalization of the firm	The Lonely International	The International Among Others

→ Going international right or shortly after founding without following a structured process (Madsen and Servais, 1997).

## Central ideas

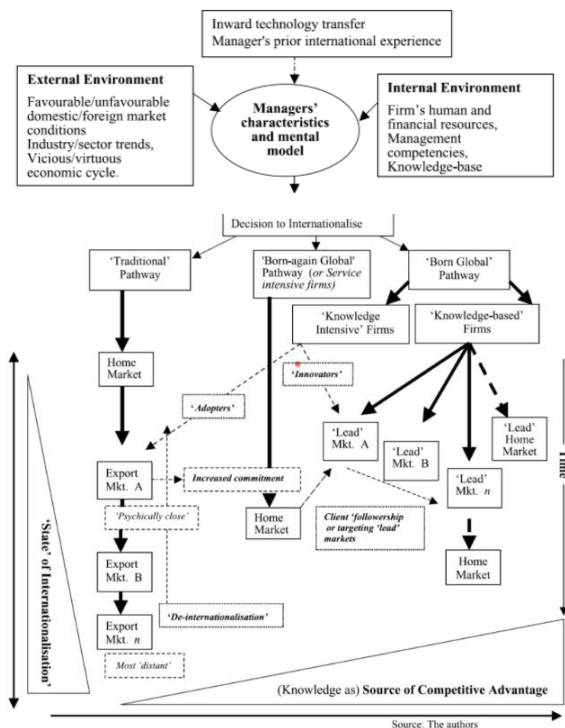
P1. The antecedent of a Born Global is one or several strong entrepreneur(s) with strong international experience, and perhaps in addition a strong product.  
P2. The extension of the phenomenon Born Globals is positively associated with the degree of internationalization of the market.  
P3. In comparison with other exporting firms, Born Globals are more specialized and niche oriented with products that are either more custom-made or more standardized.

P4. The geographical location of activities in Born Globals is determined by the past experience of founders and partners as well as economic and capability or customer-related factors--directly or in interaction.

P5. In comparison with other exporting firms, Born Globals more often rely on supplementary competences sourced from other firms; in their distribution channels they more often rely on hybrid structures (close relationships, network partners, joint ventures, etc.).

P6. The growth of a Born Global is positively associated with high innovative skills, including an ability to access effective R&D as well as distributions channels, often in partnerships with close collaboration in international relationships that involve frequent, intense, and integrated efforts across nations.

## 3. The born-again global model



→ Going international quickly and in an unstructured process following a certain event (e.g. changes in ownership or management) (Bell et al., 2003).

**What about Spotify? What model did they use?**

→ between born-global and born-again global, more born-global

## Barriers to internationalization– Shaw and Darroch, 2014

### Financial barriers

- financial barriers in general (e.g., Burpitt and Rondinelli, 2000; Campbell, 1996; Ward, 1993)
- resource availability (e.g., Ali and Camp, 1993; Karagozoglu and Lindell, 1998)
- cost of operating overseas (e.g., Rhee, 2002)
- limited access to capital and credit (e.g., Ward, 1993)

### Managerial barriers

- managerial attitudes (e.g., Andersson, 2000; Burpitt and Rondinelli, 2000; Manolova et al., 2002; Zahra et al., 2000)
- lack of international experience and skills (e.g., Chandler and Janson, 1992; Karagozoglu and Lindell, 1998; Manolova et al., 2002; Rhee, 2002)
- commitment (e.g., Lamb and Liesch, 2002)
- partnership difficulties (e.g., Karagozoglu and Lindell, 1998)

### Market-based barriers

- liability of foreignness (e.g., Chen and Martin, 2001; Lu and Beamish, 2001; Rhee, 2002)
- environmental perception (e.g., Andersson, 2000; Manolova et al., 2002)
- government regulations including tariff and non-tariff barriers (e.g., Campbell, 1996; Karagozoglu and Lindell, 1998; McDougall, 1989)
- economic conditions (e.g., Burpitt and Rondinelli, 2000)
- lack of market knowledge (e.g., Karagozoglu and Lindell, 1998; Lamb and Liesch, 2002)
- cultural differences/psychic distance (e.g., Bell, 1995; Karagozoglu and Lindell, 1998)
- access to distribution (Karagozoglu and Lindell, 1998)
- strong domestic market position (e.g., Autio et al., 2000)

### Industry-specific barriers

- competition (e.g., Karagozoglu and Lindell, 1998)
- technology (e.g., Chetty and Hamilton, 1996; Fontes and Coombs, 1997; Karagozoglu and Lindell, 1998)

## Firm-specific barriers

- liability of newness (e.g., Lu and Beamish, 2001; Rhee, 2002)
- limited resources (e.g., Fillis, 2001)
- size (Ali and Camp, 1993; Calof, 1993; Campbell, 1996; Chetty and Hamilton, 1996)

Barriers for the internationalization of Spotify:

"In April 2016, Ek and Lorentzon wrote an open letter to Swedish politicians demanding action in three areas that they claimed hindered the company's ability to recruit top talent as Spotify grows, including access to flexible housing, better education in the programming and development fields, and stock options. Ek and Lorentzon wrote that to continue competing in a global economy, politicians needed to respond with new policies, or else thousands of Spotify jobs would be moved from Sweden to the United States."

Source: <https://en.wikipedia.org/wiki/Spotify>

## Role of international culture

### Models of culture – the Hofstede model (Hofstede, 2020)

**Power distance:** "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally." (high value = high inequality)

**Individualism:** "the degree of interdependence a society maintains among its members" (high value = individual)

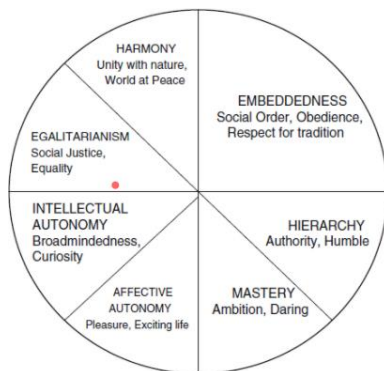
**Masculinity:** "The fundamental issue here is what motivates people, wanting to be the best (Masculine) or liking what you do (Feminine)." (high value = masculine)

**Uncertainty avoidance:** "The extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these" (high value = high avoidance)

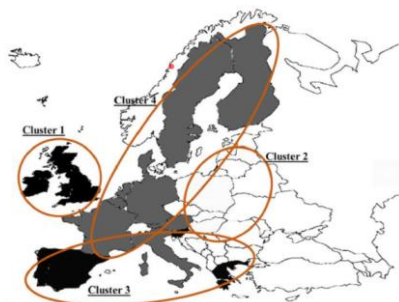
**Long term orientation:** "how every society has to maintain some links with its own past while dealing with the challenges of the present and future" (high value = high long term orientation)

**Indulgence:** "the extent to which people try to control their desires and impulses" (high value = lower control of desires)

### Role of culture in entrepreneurship: Culture dimensions by Schwartz (2004)



Source: Linan and Fernandez-Serrano, 2013



*Cluster 1: English-speaking countries:* high GDP. Predominance of autonomy, egalitarianism and mastery. High level of TEA and opportunity-led entrepreneurship, average level of necessity-driven entrepreneurship

*Cluster 2: Eastern European countries:* Low GDP, lower levels of autonomy and egalitarianism, harmony predominate, high-level of necessity entrepreneurship but also on opportunity entrepreneurship

*Cluster 3: Mediterranean Countries:* similar to Cluster 1 in egalitarianism and harmony, lower autonomy. Lower income level. Opportunity-driven entrepreneurship lower than 1

*Cluster 4: North and Central European Countries:* High level of autonomy, egalitarianism and harmony is strongest. Lowest level of TEA, opportunity-driven and necessity entrepreneurship

## Some results of the Global Entrepreneurship Report: Is entrepreneurship a global trend? (Report of 2020)

- For the United States, Netherlands, United Kingdom and Brazil early-stage entrepreneurial activity has trended upwards (19 year perspective)
- Colombia and Greece have a decline level of Established Business Ownership over the last decade
- For Mexico and Italy total early-stage entrepreneurial activity substantially decreased in the last 9 years
- In total, slight increase but maybe not as significant as people communicate



**Go rock your studies**

**GOOD LUCK!**

