Business data analysis

Teaching: Prof. Giorgia Rivieccio

giorgia.rivieccio@uniparthenope.it

What is business data analysis?

Business data analysis includes all the activities to gain information from the data which can improve decision-making processes.

Executives and managers, in coping with strategic decisions, in achieving goals and in solving complex problems, have to collect, analyze and report the most relevant information.

Information could be about the causes of the current situation, the most likely trends to occur, and what should be done as a result.

Objectives

The aim of the course is to provide a specific set of techniques, competencies and procedures to perform exploration, iteration, and investigation of business data, for the purposes of obtaining better insights about a business that can lead to improved decision-making.

6 Blocks of lectures

I block (6 hours)

Planning a market Research: how to collect data, eventually how to conduct a survey, how to analyze, interpret and report results.

II block (12 hours)

Analysis of market potential and customer behaviour: multiple linear regression and logistic regression.

III block (8 hours)

Market segmentation techniques: Cluster analysis.

IV block (8 hours)

Positioning Techniques: MultiDimensional Scaling (MDS)

V block (6 hours)

Text mining

VI block (8 hours)

Project work.

Marketing & Market Research

TO MEET CUSTOMER NEEDS
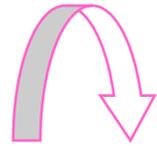
MARKETING RESEARCH

But what is it?

What kind of decision? For example, managers in designing a marketing strategy raises the following questions (Netherlands, 2009)

- Market to bet?
- How segmenting?
- What needs to meet?
- Who are the competitors?
- Choose which segment?
- What characteristics should the product have to be accepted by the chosen segment?
- What price?
- What is the more effective sale promotion?
- What is the most efficient distribution strategy?

Market research for a company that wants to launch a new anti-wrinkle cream…

1. What is our market?

2. How can we segment it?

3. What are our competitors and how they respond to the needs of consumers?

4. What is our target?

5. What characteristics should the product have to be sold to the target?

6. What is the selling price of the product?

7. What is the most effective promotional initiative?

8. What is the most efficient distribution strategy?

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1. The target market consists of anti-aging products.

2. Pharmacies, beauty centers and specialist perfumeries, distinguishing customers over the age of 30 years, careful, especially, to the care of their physical appearance.

3. Identify the main competitors on the market and see what they offer.

4. Female clients of facial products sold in pharmacies and specialized beauty centers. Basically a target that shows a need only partially satisfied.

5. Define the needs of the consumer segment.

6. The sale price can be judged on product costs, prices charged by competitors.

7. Initiative promotional differentiated according to segments, highlighting the new features of the product.

8. Use only the retail channel.

Marketing problems and hypotheses of marketing research

Problem	Hypothesis of research
What is the potential size of the market?	Measure the number of families willing to purchase a product and describe their characteristics.
Can you locate a specific segment of consumers?	Identify the variables grouped into uniform segment consumers with reference to several characteristics: the buying behavior, to socio-demographic variables, patterns of consumption ...
Are customers satisfied with the tourism product?	Identify the characteristics of the product evaluated by consumers and measure the satisfaction
How is our product perceived with respect to competitors?	Detect associations between brands and the differences attributed to the product
Has had advertising impact on sales?	Measure the level of memory and knowledge of the brand and the product
Is the launch of the new product effective?	Determine the perception of the value of the new proposal

Aim of marketing research

•**Identification of problems / opportunities** (forecasts of market share, sales and trends, strengths / weaknesses image)

•**Support in solving problems** (development and evaluation alternative strategies aimed at achieving its objectives; knowledge, segmentation and market positioning; definition of the mix of the 4 levers of operational marketing)

•**Monitoring strategies / marketing initiatives launched** (verification effectiveness promotional strategies, measure the product on the market penetration target, evaluation effectiveness distribution line)

•**Insight marketing** (identification products higher profitability, optimize rates of return investment in advertising, classification market phenomena)

Research for marketing decisions

STRATEGIC

Evolution and potential markets
Launch of new products
Segmentation
Positioning

OPERATIONAL

- Analysis of the market performance of the product and the brand
- Definition and control prices
- Distribution
- Definition of communication plans
- Detection and control sale promotions

Main quantitative analysis techniques
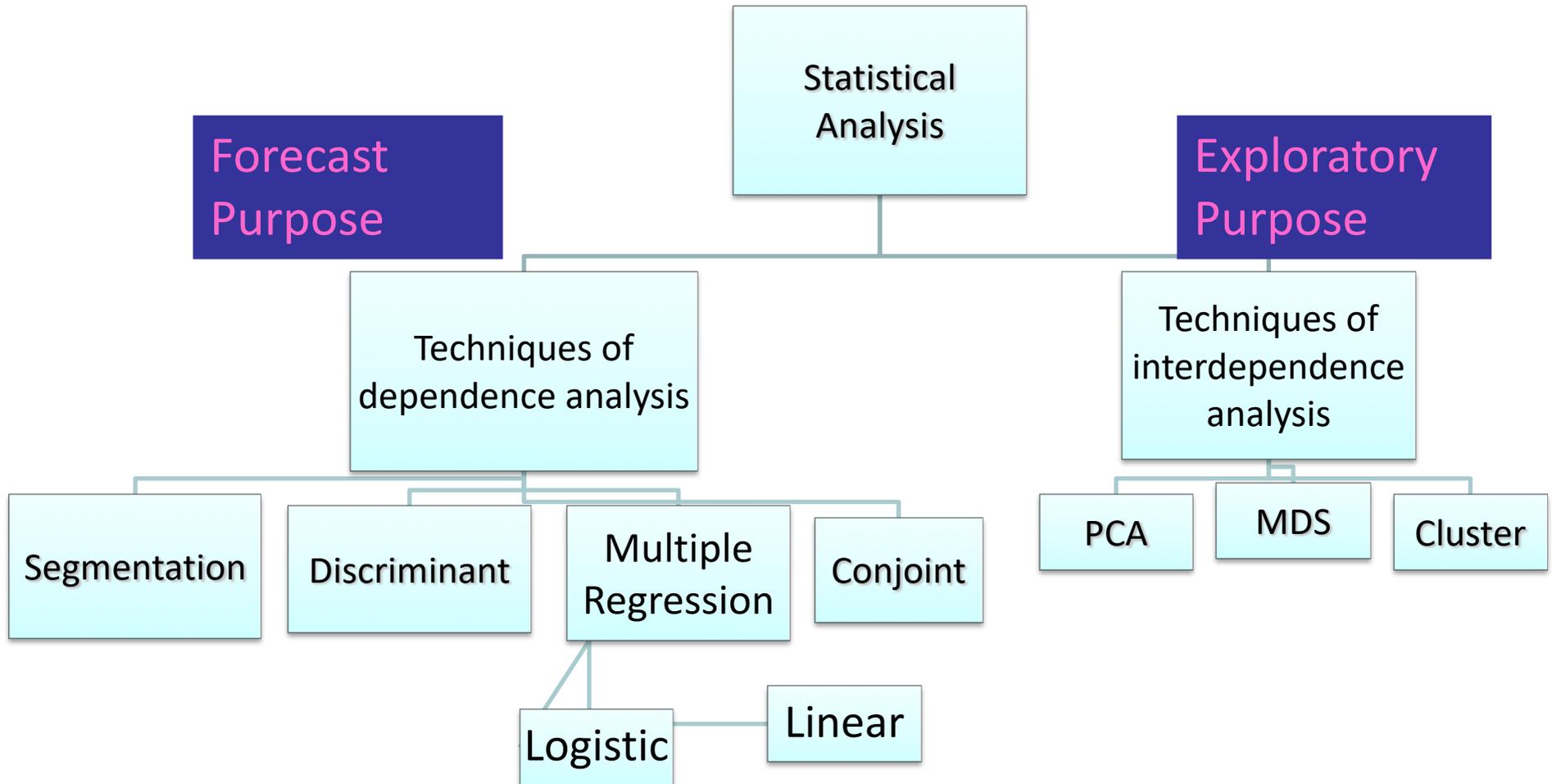
QUANTITATIVE TOOLS

Research for marketing decisions

STRATEGIC

- Evolution and potential markets: MULTIPLE REGRESSION AND LOGISTIC REGRESSION

How to explain the sales performance of a company in the construction sector as a function of time, the population and n. of employees in the sector ...

QUANTITATIVE TOOLS

Research for marketing decisions

STRATEGIC

Launch of new products: CONJOINT ANALYSIS, MULTIDIMENSIONAL SCALING (MDS):
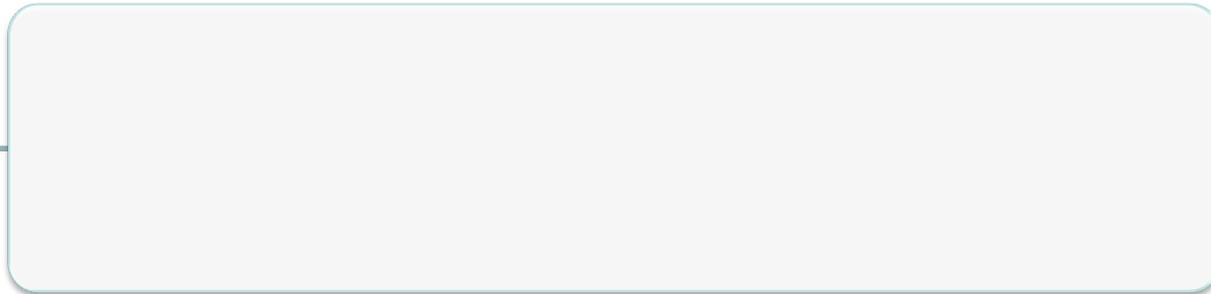
QUANTITATIVE TOOLS

Research for marketing decisions

STRATEGIC

- Market segmentation: Segmentation techniques as AID, CHAID, CART, QUEST, CLUSTER ANALYSIS and PRINCIPAL COMPONENT ANALYSIS (PCA); CONJOINT ANALYSIS; DISCRIMINANT ANALYSIS and LOGIT MODEL; NEURAL NETWORKS

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How to divide the target market of a company that operates in the field of household products according to consumer habits (frequency, motivation ...) and according to the needs and preference for certain brands

QUANTITATIVE TOOLS

Research for marketing decisions

STRATEGIC

Positioning: DISCRIMINANT ANALYSIS(attribute based), ANALYSIS OF CORRESPONDENCES (attribute based), MULTIDIMENSIONAL SCALING (MDS)

How to evaluate the perception of the brand MAX MARA over its main competitors in the industry of high fashion based on the attributes of the product (style, fit, assortment, innovation)

QUANTITATIVE TOOLS

Research for marketing decisions

OPERATIONAL

- Definition and control prices: DISCRIMINANT ANALYSIS, REGRESSION; CONJOINT ANALYSIS; CLUSTER ANALYSIS; MDS.

QUANTITATIVE TOOLS

Research for marketing decisions

OPERATIONAL

- Distribution: REGRESSION; CONJOINT ANALYSIS; CLUSTER ANALYSIS

QUANTITATIVE TOOLS

Research for marketing decisions

OPERATIONAL

- Definition and control of communication and of sale promotions: REGRESSION and CONJOINT ANALYSIS

QUALITATIVE TOOLS

Text mining:
an Artificial Intelligence (AI) technique that uses natural language processing (NLP) to transform the free, unstructured text of documents / databases (such as web pages, newspaper articles, e-mails, news agencies , social media posts / comments etc.) in structured and normalized data.