

Assessing consumer needs and developing new products

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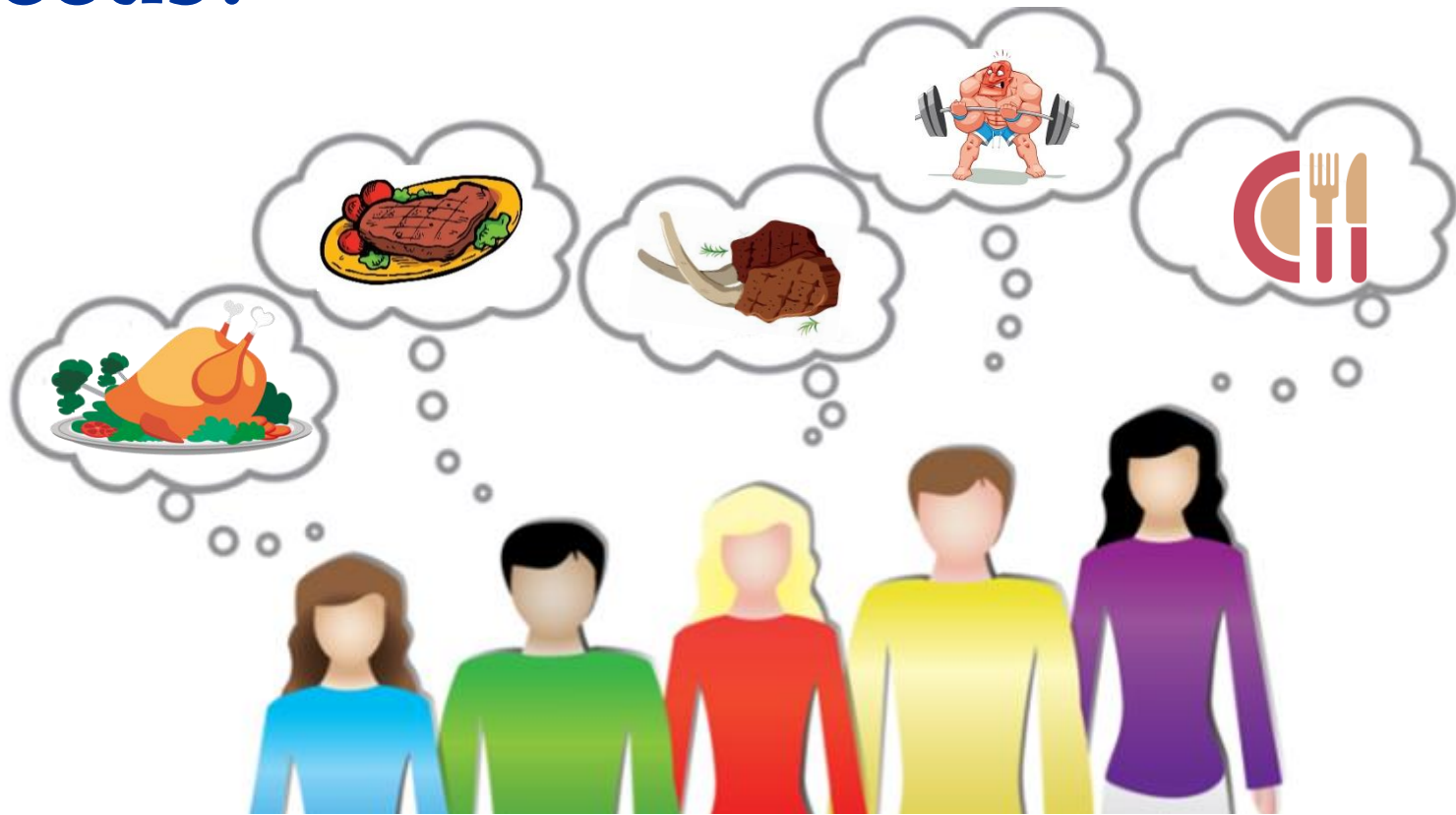
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Innovation for Sustainable
Sheep and Goat
Production in Europe



How do we know what a customer needs?



Marketing Research!

Marketing research process

Step 1: Formulating the problem



Step 2: Developing an Approach to the Problem



Step 3: Formulating a Research Design



Step 4: Data Collection (Field Work)



Step 5: Analyzing Data



Step 6: Reporting the Research

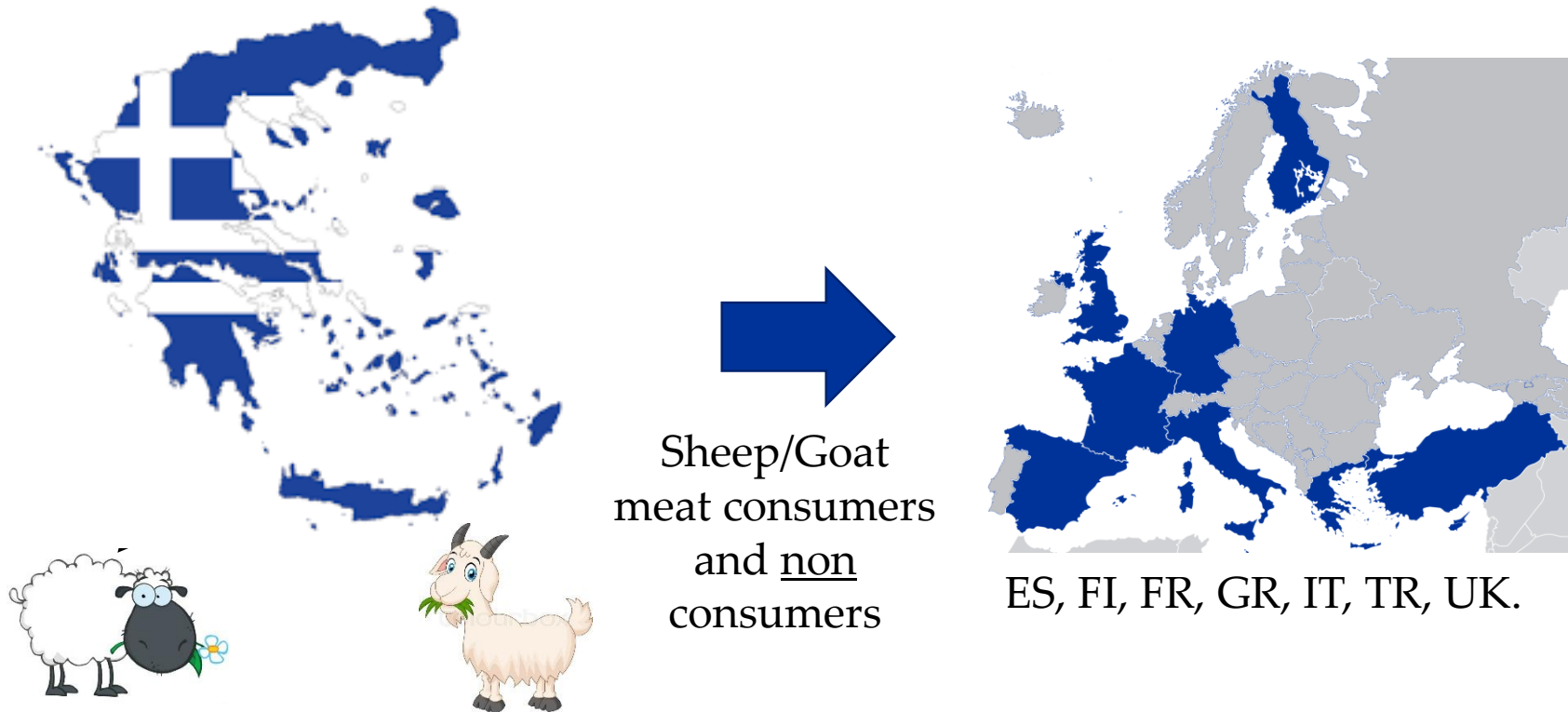
Marketing research process

Step 1: Formulating the problem

Formulating a research problem in cross-cultural settings

- Comparability → similarities and differences
 - Define the marketing research problem in terms of domestic and foreign environmental and cultural factors. Then, compare.
- Equivalence
 - The problem must have the same meaning and role across cultures.
 - Must be measured using the same methods and measures.

Example of formulating the problem in cross cultural research



Management problem:

How to promote consumption of small ruminants' meat?
How to develop successful new products ?



Example of formulating the problem in cross cultural research

Comparability:

- Familiar with Lamb consumption → special occasion (Christmas, Easter).
- Different levels of interest in health

Equivalence:

- Popular cuts vary between countries
- Preference → local, except Finland

What are consumer preferences and barriers regarding their consumption of lamb meat?

What product characteristics (attributes) make products preferred?

Marketing research process

Step 1: Formulating the problem



Step 2: Developing an Approach to the Problem

Step 2: Developing an Approach to the Problem

- Marketing research → cognitive approach
- Two main views:
 - Etic → Universal view
 - Investigating many cultures, an absolute or universal criteria applies.
 - Emic → Culturally specific
 - Examines the phenomenon from within the system (only one culture).

Marketing research process

Step 1: Formulating the problem



Step 2: Developing an Approach to the Problem



Step 3: Formulating a Research Design

Step 3: Formulating a Research Design

- A **research design** is a framework or blueprint for conducting the marketing research project.
- Affected by the nature of the research problem
 - Quantitative: What? How much?
 - Qualitative: How? Why?
 - Mixed: Enhance the scope and comprehensiveness.



Qualitative vs. quantitative research

	Qualitative Research	Quantitative Research
Objective	To gain a deeper understanding, contextualize a phenomenon, the why and how of things	To quantify the data and generalize the results from the sample to the population
Process	Inductive, subjective, recurrent	Deductive, objective, sequential
Sample	Small number of <u>non-representative</u> cases	Large number of <u>representative</u> cases
Data Analysis	Non-statistical	Statistical
Outcome	Develop an initial understanding, theory development	Recommend a course of action
Examples	In-depth interviews, focus groups, case studies	Surveys, Experiments



Marketing research process

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Qualitative research

What we did?

Literature review: 143 papers on lamb/sheep consumption

Results:

- Gender differences
- Different consumer groups by use, taste
- Origin, cut, nutritional information → really important

Qualitative research

Focus groups

- 7 countries, regular & occasional consumers
- Responsible for food purchasing
- Between 25-65 years old

In-depth interviews (laddering)

- 7 countries, including non-consumers
- Responsible for food purchasing
- Between 25-65 years old

Qualitative results

How to Conduct a Focus Group

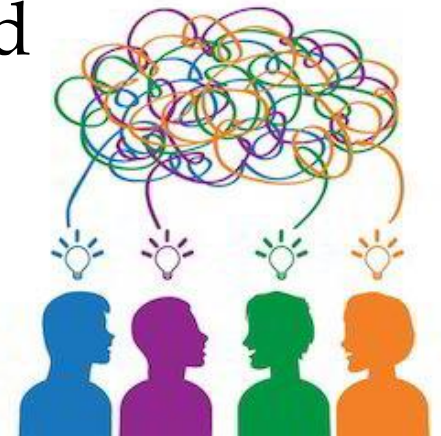


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Qualitative research: focus groups

- Pre-screened, homogeneous group (per country)
- Requires a moderator, assistant, video/voice recorder, comfortable place and refreshments
- Participants are encouraged to talk openly about their opinions and respond to other members
- Audiovisual assistance might be used
- Everybody gets a chance to talk
- Focus on a specific topic



How are focus groups different from regular “groups”?

- They are focused on a specific topic
- They have a trained facilitator
- Members of the group are encouraged to talk openly about their opinions and respond to other members

The Focus Group Moderator

The person in charge of “moderating” the group discussions.

- Moderator’s Toolkit → What you need to do before the FG
- Moderator’s do’s and don’ts → What you need to do/don’t during the FG

Moderator's Toolkit

Recruitment and Scheduling

- Focus groups can be run at best with 8-10 members.
 - In any case don't run a FG with less than 8 participants or more than 12.
- Attempt to select members who don't know each other.
- Plan meetings to be run for about 2 hours long.
 - During evening seems to be a very good time for most consumers to find time to attend.

Moderator's Toolkit

Room Setting

- Check if the setting is comfortable (e.g. room temperature, adequate lighting).
- Provide adequate refreshments (some sweet, snacks, water and juices).
 - The facilitator should personally welcome each participant when he/she arrives. The assistant facilitator checks if everyone has arrived and eventually call them on their mobile.



Eating together encourage group interaction (Krueger, 2002).

Moderator's Toolkit

Provide for equity, ID necessity:

- Free circle seating (Stewart et al, 2007), but fix the moderator and assistant's seats
 - Configure chairs so that all members can see each other
- Let participants prepare their own name cards (first name only) and put them in front (Krueger and Casey, 2009).
- Start on-time. Those late should be welcomed by an assistant and sent back home

Tips on Moderation

When the group meets:

- Thank people for coming
 - make them feel comfortable - > small talk about issue of minor importance
- Review the group's purpose and goals
- Explain *how the meeting will proceed* and how members can contribute
 - establish **ground rules** since the beginning
- Set the tone by asking an opening question and making sure all opinions on that questions are heard

Tips on Moderation

Establish ground rules since the beginning:

- There are no right or wrong answers, only different point of view.
- Talk to each other and create a conversation.
- Everyone can talk, but not at the same time
 - Avoid dialogs in small groups
- Interact with respects: everyone must listen respectfully.
- Participants should turn off all devices (mobile ..), not make noises (e.g. pen ticking).

Focus Group Do's and Don'ts

Moderator's approach

- DO'S
 - Invite the participants to be confidential
 - Thanks them for their contribution
 - Laugh with the participants
- DON'TS
 - Don't tell the people they are wrong
 - there are no wrong answer.
 - Try not to shut people off
 - listen them for a little before pushing them into the topic you want.
 - (see later how to deal with disrupting participants)

Focus Group Do's and Don'ts

Moderator's role

- DO'S
 - Guide the discussion
 - Be a neutral listener or observer
 - Look as if you didn't know things, even if you do
- DON'TS
 - Don't be a participant.
 - Do not participate and share views or personal opinions -> this may limit the range of views expressed.
 - Do not show what you know (you are there to find out).

Tips on Moderation

Enhance group dynamics

- DO'S
 - Try as much as possible to make everybody speak.
 - It's important that all members participate as much as possible.
 - The moderator must truly believe that the participants have wisdom
 - Show positive regards
 - Be flexible
 - Allow conversations to occur in a natural sequence.
- DON'TS
 - Avoid lack of respect → it shuts down the communications
 - Avoid simply obliging everyone to speak by following strict rules
 - like “one-at-a-time-from-left-to-right”.
 - If possible do not fix a precise order of discussion topics.

Focus Group Do's and Don'ts

Your questions

• DO'S

- Follow closely the questions and probes in the guidelines
 - **BE CAREFUL:** additional questions & probes in the guidelines are compulsory if the topic has not spontaneously emerged
- Use a funnel approach:
 - From general to specific;

• DON'TS

- Avoid “why” and yes/no questions
- No “*double – direct question*”
 - *participants cannot answer two questions at once*
- Do not ask leading questions
 - might suggest you are looking for a specific answer.

Focus Group Do's and Don'ts

Probing

- DO'S
 - Use phrases/probes for
 - Encouraging participation for additional information
 - Manage vague answer
 - Re- orient irrelevant conversation
 - Check with other participants whether they share the view
 - Clarify something you do not understand(see probing questions)
- DON'TS
 - Do not forget to look up your guidelines & check for completeness/direction
 - Don't probe into small talk/out of focus

Further probing questions

- Can you give me an example?
- Can you elaborate?
- Does anyone else share the same opinion about that?
- Does anyone else have a different opinion or experience?
- Tell me more about that idea.

Focus Group Do's and Don'ts

Dealing with difficult participants: *dominator, disruptive, ramblers*

- DO'S

- *use sentences like:*
 - “Are there others who wish to comment ..”; Does anyone feel differently...?
- Look away, don't take notes, interrupt when necessary
- Walk right up to the disruptive participant and speak quietly and purposefully to him/her.

- DON'TS

- Avoid getting angry and loose control

Tips on Moderation

Dealing with difficult participant: *introverts, shy*

- *DO'S*
 - *Use the body language*
 - *maximize eye contact*
 - *Invite specifically by name*
 - *Eg. Bob, would you like to add something?*
- *DON'TS*
 - *Avoid forcing anyone to speak*

Video



Qualitative research: Laddering and means-end chain analysis



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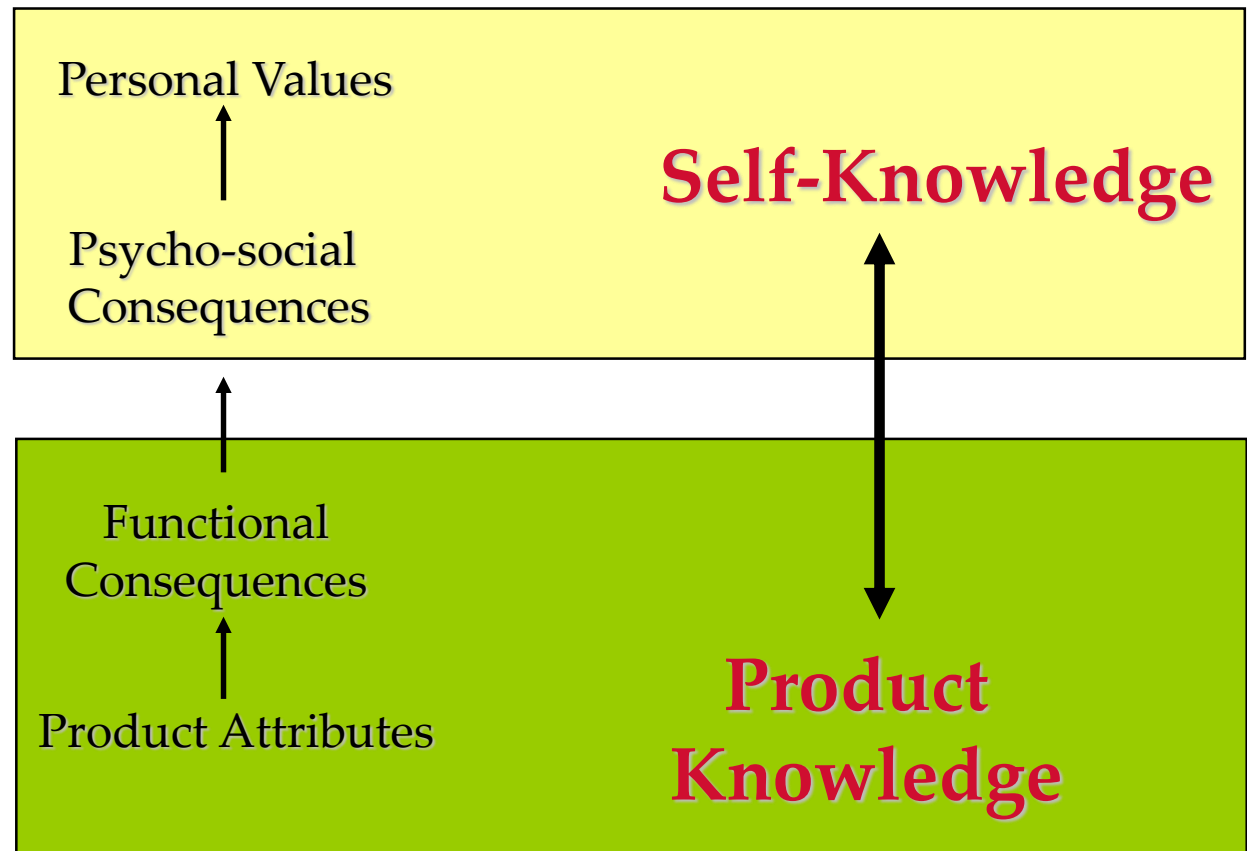


Methodology

- **Means-end chain model** to explain consumer decision making process with a cognitive approach to consumer behaviour: it is a knowledge structure that connects consumers' meanings about product attributes, consequences, and values.
- **Laddering method** to measure and to understand consumers cognitive structures with the instrument of an in-depth face to face interview (soft) or questionnaire (hard)

The Means-End Chain Model

M
E
T
H
O
D
O
L
O
G
Y



*‘Product attributes are **means** to consumers to obtain desired **end** values through the consequences or benefits yielded by those attributes’.*

(Gutman & Reynolds, 1979; Gutman, 1982)

iSAGE Training

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Measuring Means-End chains

Data collection

Phase 1: Elicitation of attributes

Key questions (using one or more of available techniques)



Phase 2: Laddering

"Why do you think this a-c-v is important to you?"

In depth probes to reveal what product attributes mean to the consumer in term of consequences and values



Phase 3: Analysis of results

Content analysis, coding of data and data processing through software



**Construction of
Hierarchical Value Map (HVM)**

Attributes

Characteristics that distinguish one type of product/service from another

description of a product (service etc.)

characteristics of something; how is it ...?

“the product should have, should be ...”

Concrete: material, physic, tangible characteristics
clearly perceivable e.g. milk with 0.5% fat

Abstract: abstract and subjective meaning, not clearly
perceivable through senses or not measurable e.g.
natural milk

Consequences

Desirable (benefits) or undesirable (risks)
outcomes deriving from use/purchase of
goods/services

Functional:

Tangible positive outcomes associated to product use
(how it works? what is the physical effect?)

Psycho-social:

Refers to psychological states (e.g. feelings) or social
outcomes of the function of the attribute
(how does that make you feel?, how other people
would consider you?)

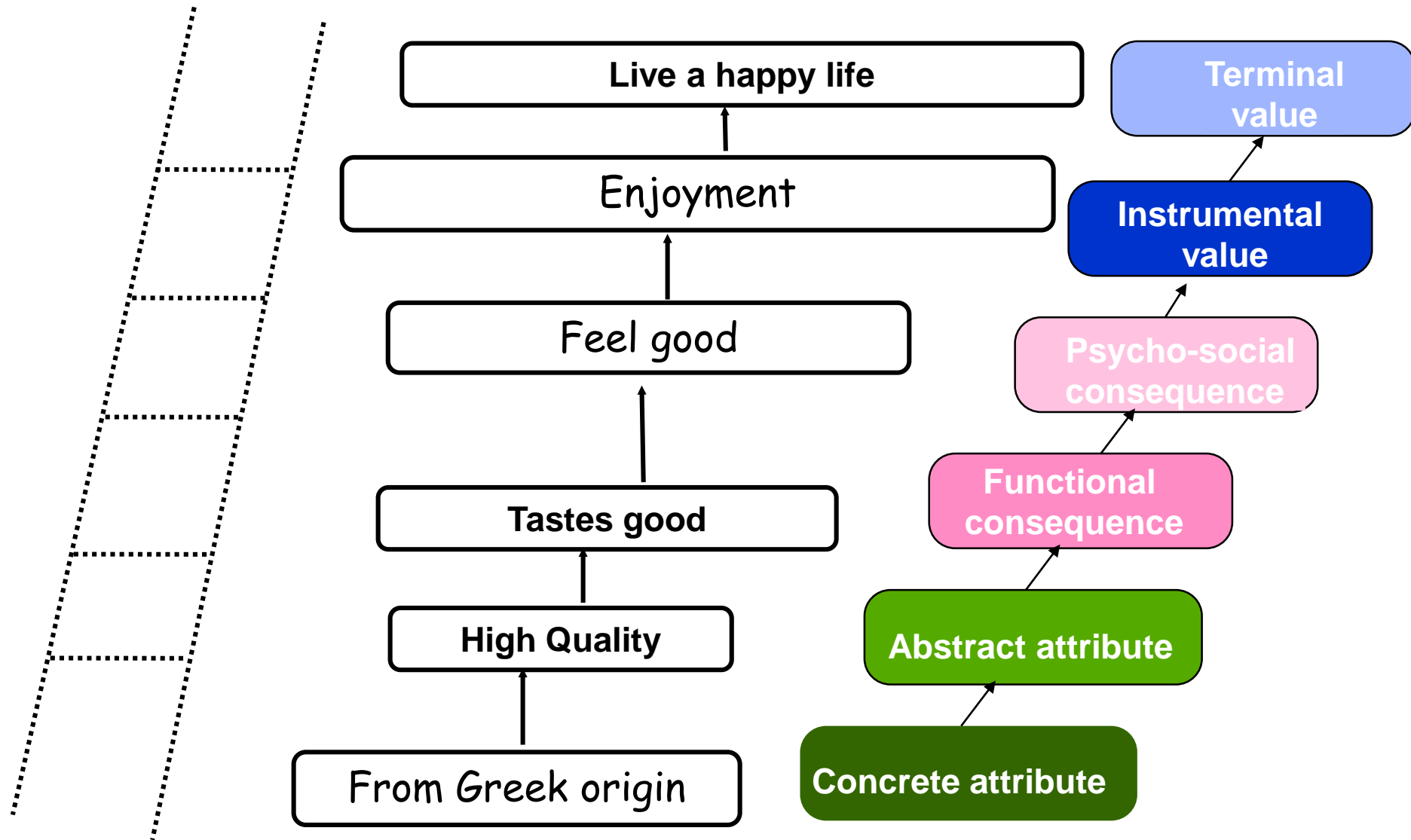
Values

Are concepts or beliefs about desirable end states (terminal values) or behaviours (instrumental values).

Instrumental values: preferred modes of conduct or ways of behaving (ex.: independence, enjoyment, loving kindness)

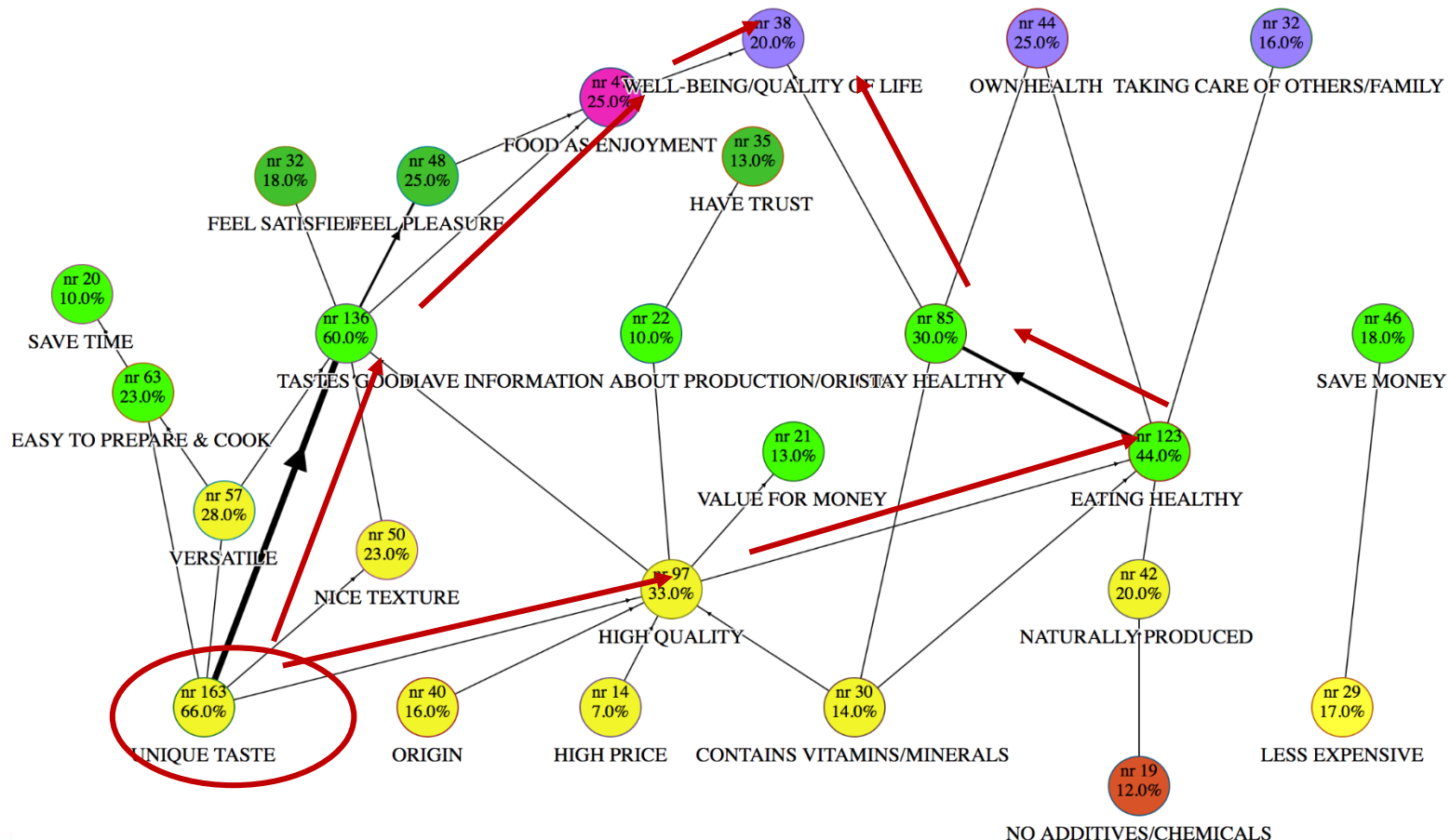
Terminal values: Preferred states of being or broad psychological states (ex.: freedom, happy & healthy life, joyous family)

Means-End chain: an example



Example: Results for cheese

HVM of motivations to purchase



Quantitative research

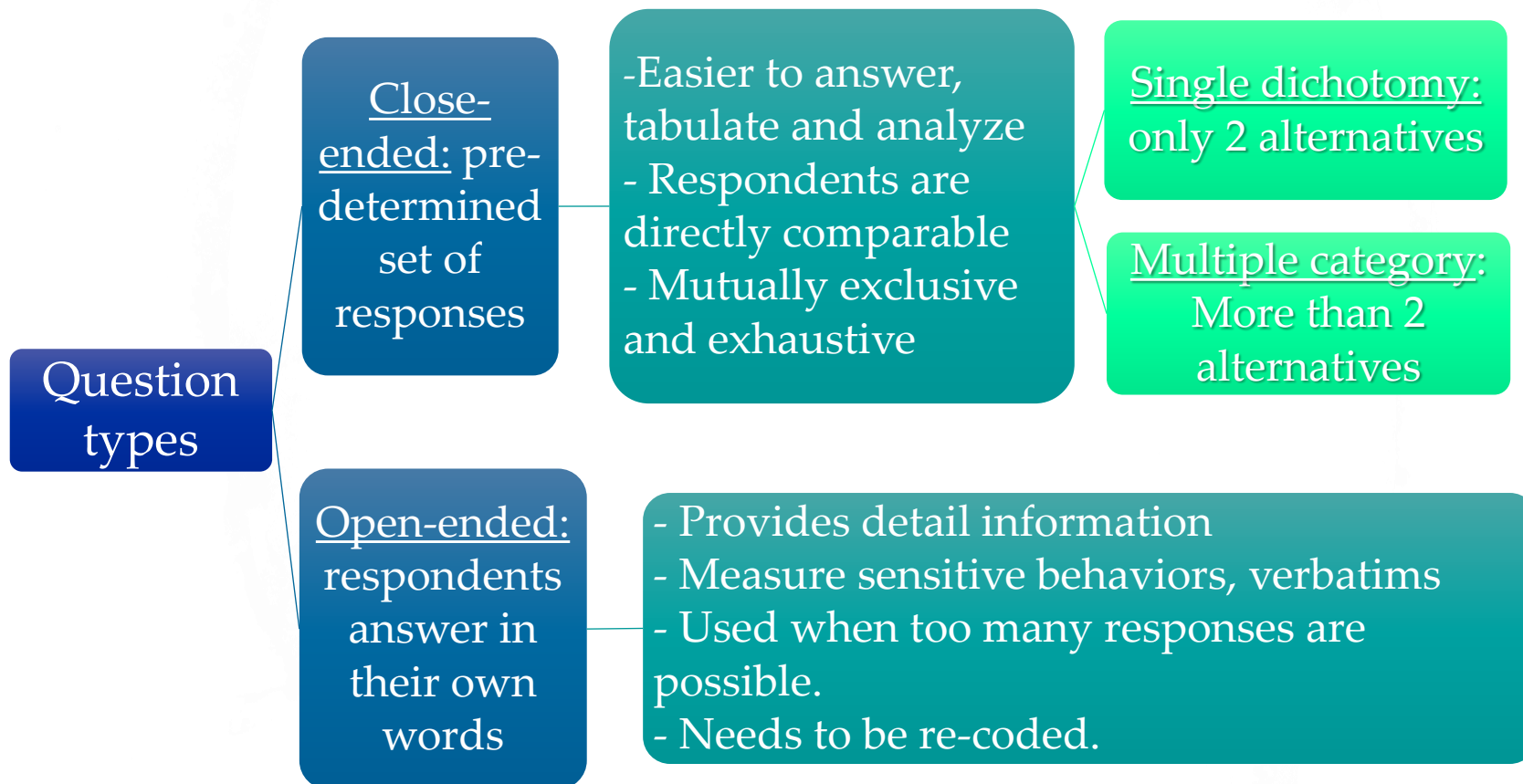


Steps to develop a good cross-cultural questionnaire

- Check previous studies and literature
- Decide on the order and wording of questions and the layout of the questionnaire
 - Use specific questions related to the concept of interest
 - Keep it simple → avoid “and”, “/”, “or”, double negations
 - Avoid biased questions → desirability, leading
- Work with an international team (advisable)
 - Translate and back-translate
- Select the sample
- Pilot test for omissions and ambiguity
 - Correct the problems and pretest again, if necessary



Question formats



Examples

- Open questions

Will you please describe your thoughts about a person who shoplifts items from a grocery store to keep from going hungry?

- Dichotomous Questions

Have you ever eaten lamb meat?

☐ Yes

☐ No

- Multiple choice

Which of the following lamb cuts is your preferred one?

☐ Lamb chops ☐ Lamb cutlets ☐ Lamb leg ☐ Other: _____

Likert scales

- Frequency

How frequently do you eat lamb meat in restaurants?

☐ Never ☐ Seldom ☐ Sometimes ☐ Often ☐ Almost always

- Agreement

I choose products for their taste rather than for their nutritional value

☐ Strongly disagree ☐ Disagree ☐ Neither agree nor disagree ☐ Agree ☐ Strongly agree

Who do you want to interview?

1) Who is your population?

- All people who might provide you with key information → consumers



2) Sampling



Convenience
sample



Random
sample



Stratified
sample

Our stratified sample

- Based on Eurostat 2016/2017
- 7 countries
 - Finland, France, Greece, Italy, Spain, Turkey and UK
- Gender/occupation
 - Female, Male
 - Employed, Unemployed, Retired/Student (inactive population)
- Age
 - 18-24, 25-34, 35-44, 45-54, 55-64 years old

Additional filters

- Responsible or partially responsible for household grocery shopping
- Not related to the food industry
- Specific filters:
 - For meat → Lamb/goat meat consumers
 - For cheese → Ewe/Goat milk/dairy consumers



Choice experiment



Discrete Choice method

- Based on Lancaster's theory of demand

"The total utility gained from a product is the sum of the individual utilities provided by the attributes of that good"
(Lancaster, 1966).
- Fundamental Choice Problem:
 - Consumers maximize the utility of their demand $U(x_1, x_2, \dots)$ subject to prices and budget constraints, where x_i are different goods

Multinomial Choice Among J Alternatives

- **Random Utility Model**

$$U_{itj} = \alpha_{ij} + \beta_i' x_{itj} + \gamma_{ij} z_{it} + \varepsilon_{ijt}$$

$i = 1, \dots, N; j = 1, \dots, J(i, t); t = 1, \dots, T(i)$

N individuals studied, $J(i, t)$ alternatives in the choice set, $T(i)$ [usually 1] choice situations examined.

- **Maximum Utility Assumption**

Individual i will Choose alternative j in choice setting t iff
 $U_{itj} > U_{itk}$ for all $k \neq j$.

- **Generic vs. alternative specific components**

- Attributes of choices, x_{itj} and characteristics of the chooser, z_{it} .
- Alternative specific constants α_{ij} may vary by individual
- Preference weights, β_i may vary by individual
- Individual components, γ_j typically vary by choice, not by individual

The Multinomial Logit (MNL) Model

- Independent extreme value (Gumbel):
 - $F(\varepsilon_{itj}) = 1 - \text{Exp}(-\text{Exp}(\varepsilon_{itj}))$ (random part of each utility)
 - Independence across utility functions
 - Identical variances (means absorbed in constants)
 - Same parameters for all individuals (temporary)
- Implied probabilities for observed outcomes

$$P[\text{choice} = j \mid \mathbf{x}_{itj}, \mathbf{z}_{it}, i, t] = \text{Prob}[U_{i,t,j} > U_{i,t,k}], k = 1, \dots, J(i, t)$$
$$= \frac{\exp(\alpha_j + \beta' \mathbf{x}_{itj} + \gamma_j' \mathbf{z}_{it})}{\sum_{j=1}^{J(i,t)} \exp(\alpha_j + \beta' \mathbf{x}_{itj} + \gamma_j' \mathbf{z}_{it})}$$

Discrete Choice method

- Respondents (Decision makers) are asked to choose their favorite alternative among several hypothetical alternatives (characterized from a certain numbers of attributes k_j) in a sequence of experimentally designed choice tasks.
- The **Purpose** is to obtain estimates of the taste parameter vector β_j which contains **marginal utilities** of attributes.
- **Willingess-to-pay** is measured by the ration of the marginal utility of attributes and that of cost (price)

$$\text{WTP} = - \beta (\text{attribute}) / \beta (\text{price})$$

Discrete Choice Model Extensions

Heteroscedasticity and other forms of heterogeneity

- Across individuals

Panel data (Repeated measures)

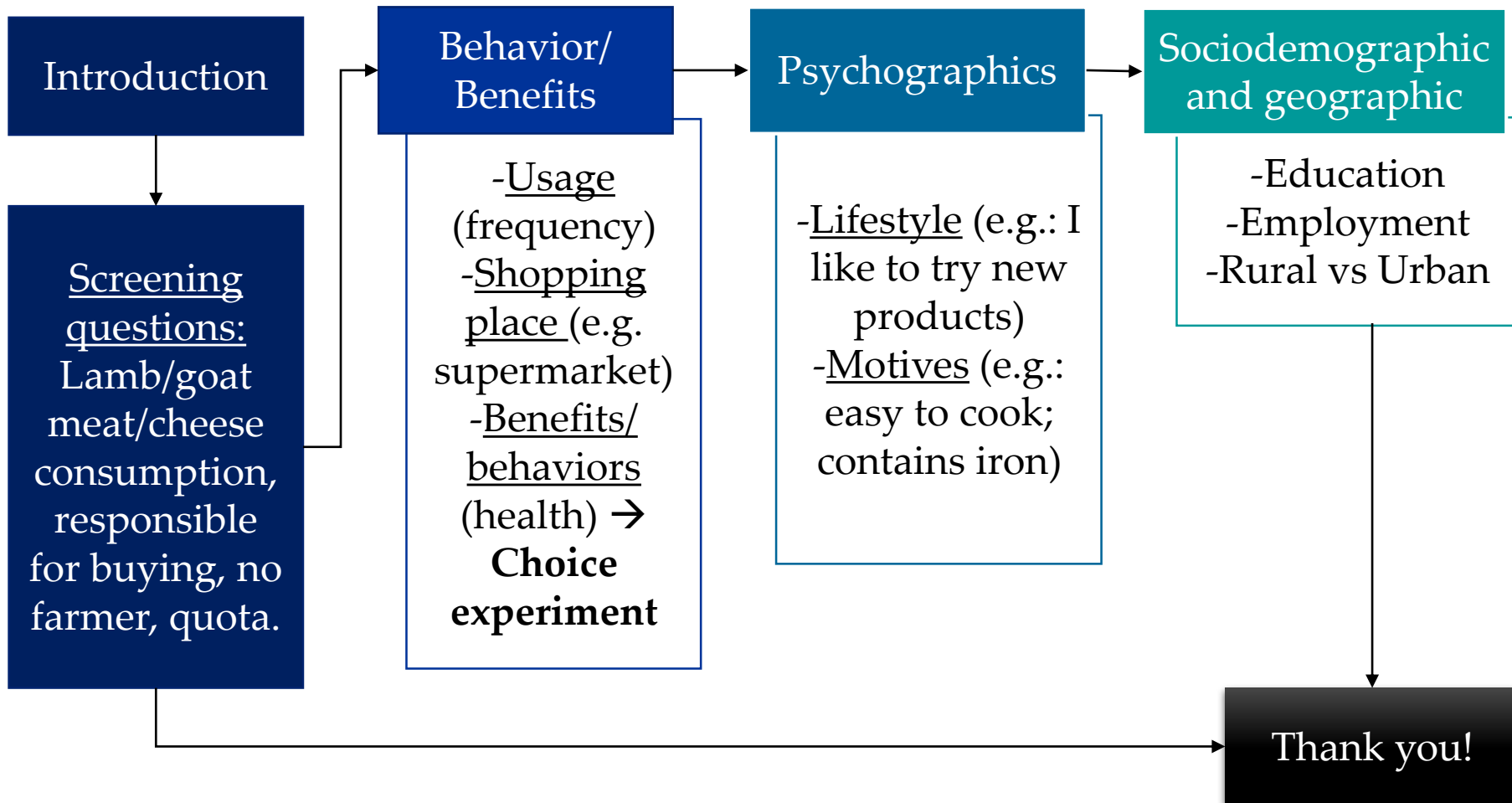
- Building into a multinomial logit model

Latent class model: finite mixture

Mixed logit & error components models: continuous mixing distributions

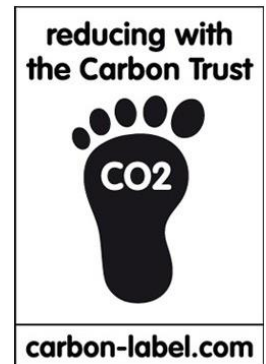
Generalized Mixed Logit Model and WTP-space models: estimating directly WTPs instead than utilities

Questionnaire structure



Methods: choice experiment structure - MEAT

- 4 types of labels tested
 - Halal, Organic, Carbon footprint, PGI/PDO
- Choice experiment
 - 12 choice sets, 9 attributes
 - Labeled: 4 alternatives
 - Lamb leg, lamb chops, goat chops, Beef T-bone
 - A no-choice alternative



Choice experiment attributes

Price
(+/- average)

Origin
(National, EU, out EU)

Presence or not of:



HIGH PROTEIN CONTENT



Fat

Ready to cook
















Choice experiment design for meat

Attributes	Lamb leg	Lamb chops	Goat chops	Beef T-bone
Price	<ul style="list-style-type: none"> •Average price •-30% •+30% 	<ul style="list-style-type: none"> •Average price •-30% •+30% 	<ul style="list-style-type: none"> •Average price •-30% •+30% 	<ul style="list-style-type: none"> •Average price •-30% •+30%
Slaughter	<ul style="list-style-type: none"> •Halal •None 	<ul style="list-style-type: none"> •Halal •None 	<ul style="list-style-type: none"> •Halal •None 	<ul style="list-style-type: none"> •Halal •None
Origin	<ul style="list-style-type: none"> •National •EU •Out of EU 	<ul style="list-style-type: none"> •National •EU •Out of EU 	<ul style="list-style-type: none"> •National •EU •Out of EU 	<ul style="list-style-type: none"> •National •EU •Out of EU
PDO/PGI	<ul style="list-style-type: none"> •PDO/PGI •None 	<ul style="list-style-type: none"> •PDO/PGI •None 	<ul style="list-style-type: none"> •PDO/PGI •None 	<ul style="list-style-type: none"> •PDO/PGI •None
Organic	<ul style="list-style-type: none"> •Organic •None 	<ul style="list-style-type: none"> •Organic •None 	<ul style="list-style-type: none"> •Organic •None 	<ul style="list-style-type: none"> •Organic •None
Low carbon footprint	<ul style="list-style-type: none"> •Low carbon footprint •None 	<ul style="list-style-type: none"> •Low carbon footprint •None 	<ul style="list-style-type: none"> •Low carbon footprint •None 	<ul style="list-style-type: none"> •Low carbon footprint •None
Fat content	<ul style="list-style-type: none"> •Low fat •Fatty 	<ul style="list-style-type: none"> •Low fat •Fatty 	-	<ul style="list-style-type: none"> •Low fat •Fatty
Protein content	<ul style="list-style-type: none"> •High protein content •None 	<ul style="list-style-type: none"> •High protein content •None 	<ul style="list-style-type: none"> •High protein content •None 	<ul style="list-style-type: none"> •High protein content •None
Format	<ul style="list-style-type: none"> •Ready to cook •Normal 	<ul style="list-style-type: none"> •Ready to cook •Normal 	<ul style="list-style-type: none"> •Ready to cook •Normal 	<ul style="list-style-type: none"> •Ready to cook •Normal

Choice experiment attributes



Labels per country

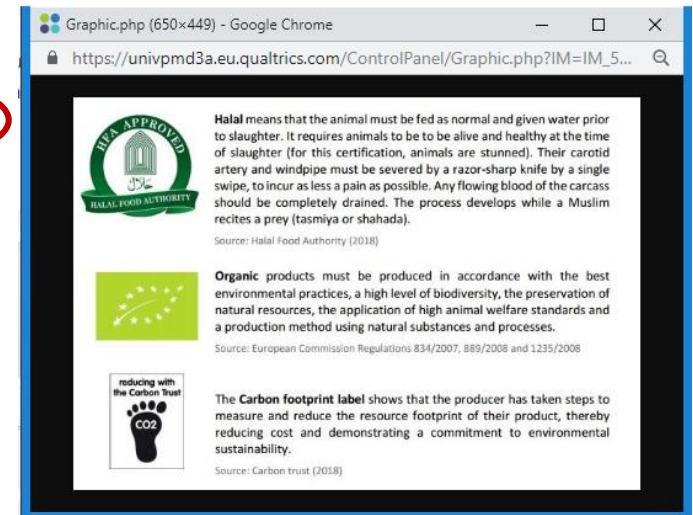
Labels/ Country	Spain	Finland	France	Greece	Italy	UK	Turkey
Halal							
PDO/PGI		-					-
Organic							
Carbon footprint							

Choice experiment instructions

Imagine that it is a regular weekday and you decided that you want to eat a dish based on some sort of meat for the next meal with your family. You go to the usual place in which you buy meat and the following alternatives are presented to you. If you want to see the image in more detail, you can zoom on it by clicking on top of it.

Please click "BUY" on the image with the meat that you would like to buy the most. Then write below how many **trays of 500gr** you would like to buy. If you think you would not buy any of the options, then you can select the option "None".

If you need to refresh the meaning of the labels [click here](#)



Choice experiment for meat

Choice experiment for meat

The choice set consists of four meat products and a 'NONE' option:

- LAMB LEG**
Origin: New Zealand
Price: £ 4.28 (€ 8.56/kg)
BUY
- GOAT CHOPS**
Origin: UK
Price: £ 7.80 (€ 15.60/kg)
BUY
- NONE**
- LAMB CHOPS**
Origin: UK
Price: £ 8.39 (€ 16.78/kg)
BUY
- BEEF T-BONE**
Origin: EU
Price: £ 8.32 (€ 16.64/kg)
BUY

A hand cursor is pointing at the **GOAT CHOPS** option.

Choice set

Choice experiment for meat



Data collection for the meat survey

- Data collected from Mid-March to mid-May, 2019

Country	Respondents by May 14 th , 2019	Valid responses
Finland	417	413
France	416	414
Greece	403	400
Italy	419	417
Spain	420	417
Turkey	405	391
UK	420	414

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Step 5: Analyzing Data

- Coding, data entry and consistency checks
 - Check control questions, time spent, answering patterns.
 - Check for typos when coding data
 - Check for “strange” outliers
- Descriptive and inferential statistics



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