

IS DOMESTIC FISH SUPERIOR? AN EXPERIMENT OF THE EFFECTS OF VARIED QUESTION WORDING ON CONSUMER SURVEY RESULTS

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ABSTRACT

A common way to collect quantitative data on consumer's opinions is to conduct a survey. One basic qualification in a survey research is that the contents of the questions should have the same meaning to all the respondents. However, respondents different interpretations of the same questions influence survey answers and many context effects have been identified in surveys in recent decades. The paper describes a double split sample test on different types of statements concerning fish product attributes. Three attributes were examined in the domestic–foreign dimension in this experimental testing of questionnaire variants. The aim of the split sample test was to assess the effects of changing statement types on the responses. Responses to every attribute in a statement were measured so that one domestic or foreign attribute was either superior or inferior to another domestic or foreign attribute. Thus the comparison was composed of four different statement profiles of each attribute. The attributes were: taste, health value and price. The randomized sample data were collected with a telephone survey of 1,519 persons. The sample was divided independently into four equal segments, so that every statement type was evaluated by at least 368 persons. The theoretical and practical implications of these findings are summarized in the paper.

Keywords: survey, validity, split sample test, wording

INTRODUCTION

This presentation describes a double split sample test (ballot test) on different types of statements concerning fish product attributes. Three attributes were examined in the domestic–foreign dimension in this experimental testing of questionnaire variants. The aim of the split sample test was to assess the effects of changing statement types on the consumers' responses.

A general goal in a survey study is that the contents of the questions should have the same meaning to all the respondents. This makes their answers comparable and adds to the value of the survey study. However, respondents' different interpretations of the same questions influence survey answers and many context effects have been identified in surveys in recent decades (Sudman et al. 1996, Tourangeau et al. 2000, Olsen 2002). In these studies variations caused by context effects have not been seen as arising from the wordings of questions only, but also from the mental processes provoked by the questionnaire attributes, such as the order of the questions, responding scales, etc., but not from larger social or cultural aspects.

Context effects and judgemental biases have been viewed as problematic by survey practitioners. Schwarz (1995) sees this as a problem of the survey community and its understanding of question comprehension, rather than of the survey respondents who communicate with the rules of everyday conversation. He stresses that question understanding is not about words only, but about the speaker's meanings. To infer

what is meant, respondents also refer to the wider context of the utterance. Additionally, when respondents form a judgement, they do not normally recall all information that might be potentially relevant. They base judgements on the information that comes to the mind most easily. By juxtapositioning highly valued concepts we wanted to clarify the effects of the measurements of different attributes and to also test how different types of statements react to those attributes.

The experimental design was part of a wider project for establishing regular follow-up data collections concerning attitudes to fishery products and production (Ahvonen & Honkanen 2003, Honkanen & Ahvonen 2003). The work was conducted by the Finnish Game and Fisheries Institute in co-operation with Statistics Finland. During the pilot study of this project different types of statements were tested within one geographic area of Finland (Godenhjelm et al. 2000). Different statement types resulted in considerable differences in distributions in the pilot study. The results of this study were an incentive to replicate the study with a population sample in first round of the main data collection.

Here we summarize the results. The full paper will be published by Godenhjelm et al. (2004) with a more close interpretation of the results in the light of the social identity theory and discussion of the implications to the understanding of the question-answering process, questionnaire design and validity. In the full paper, the results will cover meat and vegetable products too (see Godenhjelm et. al. 2004).

MATERIAL AND METHODS

The survey population consisted of Finns, aged 15 to 74 and listed in the Central Population Register. The randomised sample was stratified by gender, age and area. The total sample size was 2,200. The telephone survey yielded 1,519 interviews (69%). The sample was divided independently into four equal segments (see Fig. 1.), so that every statement type was evaluated by at least 368 persons.

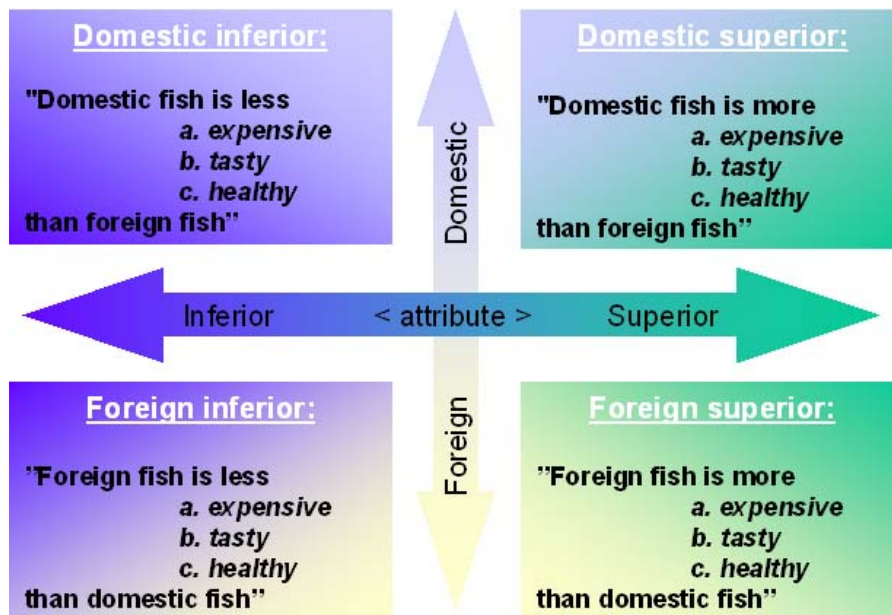


Figure 1. The two-dimensional juxtaposition design of the split sample. The survey population consisted of Finns of age 15-74. The total sample size was 2200, and the corresponding response rate was 69%. The sample was divided independently into four equal segments, so that every statement type was evaluated by at least 368 persons.

The responses to every attribute of each statement were measured so that one domestic or foreign attribute was either superior or inferior to another domestic or foreign attribute of fish. Thus, the comparison was composed of four different statement profiles of each attribute. The attributes were: price (expense) health value and taste (Fig. 1). The response alternatives were: strongly agree, slightly agree, slightly disagree, strongly disagree and don't know. Statements were attitude questions, which means that interviewers were not allowed to interpret the statements to the respondents. The wording of the statements was grammatically as in Figure 1. For example, "foreign fish is less tasty than domestic fish", "domestic fish is tastier than foreign fish", "foreign fish is tastier than domestic fish" and "domestic fish is less tasty than foreign fish".

A between-subjects factorial analysis of variance (ANOVA) was conducted to test differences between the statement types. The between-subjects factor was the type of statement (domestic superior, foreign inferior, domestic inferior, foreign superior) concerning each attribute. A multiple pair-wise comparison across the statement types was done using the Tamhanes test with the SPSS software. Before the analysis, the response scales of the statements "domestic inferior" and "foreign superior" were reversed in respect of all the attributes.

RESULTS AND DISCUSSION

The results indicated clear differences between the varied statement types and quite a systematic pattern in the distributions (Fig. 2). This was also verified by statistical tests. The statement types differed significantly from each other (p=0.000, see Table 1). Basically, the phenomenon concerned all the attributes. Statements in which either the domestic attribute was inferior to the foreign one, or the foreign attribute was superior to the domestic one, were almost exclusively disagreed to (Fig. 2). The only statement types that did not differ statistically from each other were "domestic inferior" versus "foreign superior". This result concerned the attributes of price and taste (Table 2).

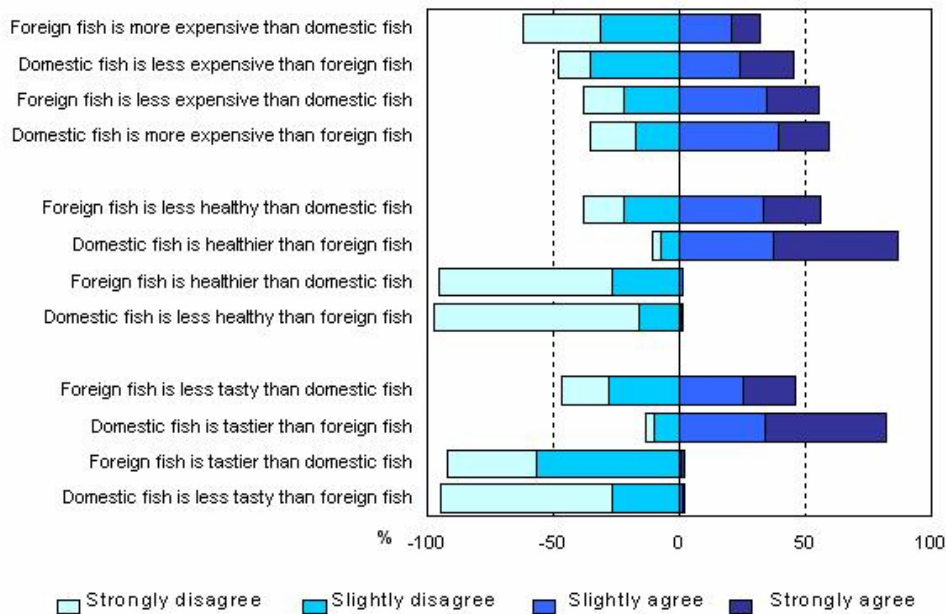


Figure 2. Responses (%) to different fish statements in a consumer survey sampled of the Finnish population of age between 15-74 in 2001. The share of the 'Don't know' answers varied between 0.8 – 7.3 %.

Table 1. Results of ANOVA of statement comparisons in a consumer survey sampled of the Finnish population of age between 15-74 in 2001. The statements are combinations of different fish product related attributes.

Attributes	Degrees of freedom Treatments	Degrees of freedom Corrected total	F	p
Price	3	1422	12.106	.000
Taste	3	1450	184.289	.000
Health value	3	1469	180.671	.000

Table 2. Statement comparison results of the Tamhanes pair-wise test for the different attributes of fish products in a consumer survey sampled of the Finnish population of age between 15-74 in 2001. p = Significance of Tamhanes multiple comparison test; N.S. = no significance.

Statement comparison	Attributes		
	Price	Health value	Taste
Domestic superior vs. Domestic inferior	p<0.05	p≤0.000	p≤0.000
Domestic superior vs. Foreign superior	p<0.05	p≤0.000	p≤0.000
Domestic superior vs. Foreign inferior	0.000	p≤0.000	p≤0.000
Domestic inferior vs. Foreign superior	N.S.	p<0.05	N.S
Domestic inferior vs. Foreign inferior	p<0.05	p≤0.000	p≤0.000
Foreign superior vs. Foreign inferior	p<0.05	p≤0.000	p≤0.000

Different types of statements arose different kind of facets of the statements, which can be interpreted also as a group behaviour in line of social identity theory (Tajfel, 1981, Abrams & Hogg 1990). In the social identity literature subjects is seen to maximize the difference between ingroup and outgroup members and this is viewed as a means of acquiring a distinct and positive social identity for the ingroup. Two types of statements, domestic inferior and foreign superior can be interpreted as identity threat statements which has its consequent implications for the self.

It has been pointed out that while threats are typically thought of as being individual level, they quite often involve group membership (Breakwell 1986). So any devaluation of the ingroup will constitute a threat to that person’s identity. The results of this study indicated that there emerged three different statement types: 1) identity threat statements (domestic inferior and foreign superior, 2) ingroup favour – by straight comparison (domestic superior) and 3) ingroup favour –by negation (foreign inferior) comparison. These three types of statements measured nearly the same, but emphasis were in three different facets or you can say also that these three statement types measured not the same thing at all. In the both argumentation this means that one can not use these three kind of statements as substitutes of each others without severe validity problems.

Price was the only attribute that differed from the others both in respect of the results and in qualitative terms. The statements concerning price deviated from the others in the sense that consumers could have had comparable information on it. This information can be based on consumers’ own observations, not only on information in the media. Here it could be seen that people may not hold as clear opinions about taste and health value as they do about price, which is not an abstract issue either.

Understanding these phenomena should be part of valid interpretation. Question types and wordings, particularly value-laden utterances, are also consequential in survey measurement. How to ask and what to ask are crucial factors behind the figures a survey produces. Different measures might react differently

depending on the subject in hand. Above all, there are social and cultural factors behind question answering that make the world of the survey practitioners challenging.

The results of the study are discussed more extensively by Godenhjelm et. al. (2004)

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