

Preferences for Ethical Product
Components: The Example of Jointly
Produced Israeli-Palestinian Peace
Products

Dissertation

zur Erlangung des Doktorgrades
der Fakultät für Agrarwissenschaften
der Georg-August Universität Göttingen

vorgelegt von

Cordula Hundeshagen, geb. Wendler
geboren in Dessau

Göttingen, Mai 2014

D 7

- | | |
|-----------------|---------------------------------------|
| 1. Referent: | Prof. Dr. Stephan von Cramon-Taubadel |
| 2. Korreferent: | Prof. Dr. Ulf Liebe |

Tag der mündlichen Prüfung: 22. Mai 2014

Acknowledgments

It is time to express my profound gratitude to all persons who accompanied me through the last years during the work on my thesis.

First of all I would like to express my sincere gratitude to my advisor, Professor Stephan von Cramon- Taubadel, for the opportunity to achieve my Ph.D study with his research chair and for his guidance throughout the time of my research. I want to thank him for his appreciation and support when research and administration were confusing. I am also thankful for the opportunity to become acquainted with the Middle East, especially with the Arabic and the Israeli world. I see those cultures with different eyes now and I will not forget all the experiences in that region.

I extend a big thank you to the members of my doctoral thesis committee. Professor Ulf Liebe, for the discussions, talks and guidance throughout my research. I am grateful for his support to overcome the administrative barriers of the University during the data collection process. I especially thank Professor Till Dannewald for his guidance, help and all the time of gainful discussions. I strongly appreciate his unconditional support at all times.

Thank you to Professor Achim Spiller and his research chair for metaphorically adopting me for professional and methodological discussions in the field of agricultural marketing during chair meetings, chair weekends, and specialized groups.

Thank you to the colleagues of the trilateral project ‘The economic Integration of Agriculture in Israel and Palestine’ for the international cooperation and the efficient workshops, which have enriched my experiences. A special thanks goes to Ziv Bar-Nahum for the support on the Israeli survey and for answering all my questions concerning Israel and the Israeli society.

Thank you to the Deutsche Forschungsgemeinschaft (DFG), without whose financial support this project would not have been possible.

Thank you to all my friends and colleagues in Göttingen, the time in the blue tower and Göttingen would not have been the same without meeting you. Thanks to Astrid and Carolin, for making the long office hours much more endurable and for always being willing to motivate me. Thanks to Antje and the student assistance for their support in a variety of tasks. A special thanks to Karla, Thelma, Nadine, Talin, Barbara, Friederike, Stephanie, Carsten and Karol for their kindness, the nice conversations, motivations and the wonderful life outside of the blue tower.

Last but not least, a special thanks to my mother Irma and my dad Lothar who accompanied and supported me through my entire studies. Danke für alles, ohne Eure Unterstützung wäre ich nicht da, wo ich heute bin.

Finally, the biggest thanks go to my fiancé Gabriel for his unconditional emotional support throughout my thesis. I know, sometimes it was really tight to handle my temper, but you were always there and believed in me, many thanks for everything!

Summary

Over the last decades ethical product attributes have become more and more important in everyday food shopping. Different types of ethical product attributes exist, such as fairly traded, organically produced, environmentally friendly production, and animal friendly production. To date, the main focus in research has been on these ethical product attributes. However, new ethical product components are in need of consideration, like products produced between actors engaged in political conflicts to support their peaceful coexistence. This attribute is called ‘conflict resolution’.

This thesis is part of the German Research Foundation (Deutsche-Forschungsgemeinschaft, DFG) funded trilateral project “The Economic Integration of Agriculture in Israel and Palestine”. Amongst others, the project analyzes the potential for economic integration of Agricultural Markets in Israel and the West Bank. The Israeli-Palestinian conflict is one of the longest ongoing conflicts in the Middle-East. Due to this conflict, waves of violence and resulting security measures, Israelis and Palestinians are separated from each other. Therefore, this thesis relates the Israeli-Palestinian conflict to the ethical product attribute ‘conflict resolution’ through analyzing consumers’ preferences for products produced between Israelis and Palestinians, called ‘Peace Products’. The objective of this thesis is to analyze European consumer preferences for jointly produced Israeli-Palestinian Peace Products and to identify factors that influence those preferences.

In order to analyze these matters, consumer preferences were studied using choice experiments. Respondents were shown choice cards with three different products for extra virgin olive oil or cherry tomatoes. A no-buy option was included to re-create the situation in a supermarket as closely as possible. Respondents were asked to indicate which of the products they would buy. Each product description was defined as a combination of the attributes: production method (organic/ conventional), four price levels, and origin. The origins were described as Europe (Italy for olive oil, and the Netherlands for cherry tomatoes), Israel, the Palestinian Territories, and Peace Products, (origin of jointly produced in Israel and Palestinian Territories). The Peace Product was introduced to the respondents by the means of the following text: “The examples of food products that you will see below vary in price, production methods and country of origin. A special characteristic is that some of these examples are of so-called *Peace Products*, which are the result of joint projects that are designed to foster cooperation between farmers from Israel and from the Palestinian Territories. The Palestinian and the Israeli partners in these

projects benefit equally from the sales of these *Peace Products*. The income generated from the sale of these products is used to promote joint Israeli-Palestinian social projects.”

The choice experiment was part of an online questionnaire; the data were collected by means of an online panel provider in different European countries during different conflict phases in the Middle East in 2012. In addition to the choice experiment questions concerning socio-demographics and attitudes towards the Israeli-Palestinian conflict (anti-Semitism, anti-Arabism, hostility against the Palestinian Territories, anti-Zionism and the Middle East conflict) were included in the questionnaire, to study their influences on Peace Product preferences.

Two scientific paper make up the core of this dissertation. The first paper investigates general preferences for different product attributes (organic or conventional production and origin), with a special focus on the ethical product attribute ‘conflict resolution’. We use random parameter logit and bootstrap random parameter logit models to estimate willingness to pay in four European countries (Germany, Great Britain, France and Poland). The bootstrap method is used to correct our online sample by generating representative results by gender and age for the surveyed countries. The results of both models are similar, although the bootstrap models generate more significant estimates of socio-demographic effects. Results show that European consumers prefer European products most. However, consumers are willing to pay a significant premium for the Israeli-Palestinian Peace Products compared with products only from Israel or the Palestinian Territories. Furthermore, the influences of the socio-demographic variables age, gender, education, and income on Peace Products are investigated, and influences differ by survey country. Generally speaking in our choice experiment young, well-educated males with high incomes display higher willingness to pay for Peace Products, but these results do vary across the survey countries.

The second paper analyzes the influence of question order (validity) on stated Peace Product preferences in Germany. We manipulate the question context by presenting the anti-Semitic and anti-Arabic attitude questions before or after the actual choice experiment. Additionally, the temporal stability of stated Peace Product preferences is investigated by presenting the same questionnaires, ten months after the first sample was collected, shortly after an Israeli Defense Force operation in the Gaza Strip was under-way as a response to Palestinian Rocket attacks (‘Operation Pillar of Cloud’). Data are analyzed by means of an error component logit model. The results show a positive effect on the

Peace Product preference if anti-Semitic and anti-Arabic attitudes are surveyed before the choice experiment. A negative effect from the violent dispute is found on stated preferences for products from Israel or the Palestinian Territories if attitudes are surveyed after the choice experiment. Overall preferences for Peace Products are found to be fairly stable over time.

In summary, the results presented in this thesis show that respondents in Europe are willing to pay for the ethical product attribute of ‘conflict resolution’. The willingness to pay for Peace Products is influenced by socio-demographic variables, and by whether anti-Semitic and anti-Arabic attitudes are surveyed before or after the choice experiment. The results can be used by politicians and marketers to support and implement Peace Product production. Additionally, researchers should be aware about the context effect when implementing stated preference studies.

Contents

1 INTRODUCTION	1
References	8
2 EUROPEAN CONSUMERS' WILLINGNESS TO PAY FOR ISRAELI - PALESTINIAN PEACE PRODUCTS	11
2.1 Introduction	12
2.2 Methods	14
2.2.1 The Data Collection Process.....	14
2.2.2 Modelling Approach.....	16
2.3 Results.....	17
2.3.1 Composition of the Sample	17
2.3.2 Estimation Results of the (Bootstrap) Random Parameter Logit Model	18
2.3.3 Estimates of Marginal Willingness to Pay for Olive Oil and Cherry Tomato Attributes.	21
2.3.4 The Influence of Socio-Demographic Factors on the Willingness to Pay for Israeli- Palestinian Peace Products	23
2.4 Conclusion.....	25
References.....	28
Appendix.....	31
3 CONTEXT EFFECTS AND THE TEMPORAL STABILITY OF STATED PREFERENCES	32
3.1 Introduction	33
3.2 Context Effects, Temporal Stability and Stated Preferences	35
3.2.1 Context Effects and Stated Preference Studies.....	35
3.2.2 Temporal Stability of Stated Preferences	37

3.3	Methods	38
3.3.1	Experimental Design	38
3.3.2	Random Utility Models	40
3.4	Data and Variables	41
3.5	Results.....	43
3.5.1	Temporal Stability of Anti-Semitic and Anti-Arabic Attitudes.....	43
3.5.2	Temporal Stability of Stated Preferences	45
3.5.3	Directional Context Effects and their Stability over Time	48
3.5.4	Correlational Context Effects and their Stability over Time	50
3.6	Discussion and Conclusion.....	51
	References.....	53
4	CONCLUSION	57
4.1	Main Findings	57
4.2	Research Findings in a Comprehensive Perspective	57
4.3	Research Limitations and Strengths and Further Research Implications	59
4.3.1	Strengths of Online Surveys	59
4.3.2	Limitations of Online Surveys.....	60
4.3.3	Differences between Hypothetically and Real Purchase Situations	61
4.3.4	Running Additional Analyses for Peace Product Preference Influences.....	61
4.3.5	Implementation of Israeli-Palestinian Peace Products.....	64
	References.....	66
	Curriculum Vitae	XII

List of Figures

Figure 2-1: Example of a choice card	15
Figure 2-2: Marginal WTP for the olive oil Peace Product in different gender, age, education and income segments, by survey country	24
Figure 3-1: Example of a choice set used in the study	40

List of Tables

Table 1-1: Levels of attributes in the choice experiment	4
Table 2-1: Levels of attributes in the choice experiment	15
Table 2-2: Sample and population descriptive statistics	18
Table 2-3: Estimates of the random parameter logit model and the bootstrap random parameter logit model for olive oil	19
Table 2-4: Estimates of the bootstrap random parameter logit model for cherry tomatoes	20
Table 2-5: Marginal WTP for olive oil attributes in Euros/500ml	22
Table 2-6: Marginal WTP for cherry tomato attributes in Euros/250g package	22
Table 3-1: Attributes included in the stated choice experiment	39
Table 3-2: Mean values of socio-demographic characteristics in the sample	42
Table 3-3: Statements used to measure anti-Semitism and anti-Arabism	43
Table 3-4: Agreement with anti-Semitic and anti-Arabic statements (% of respondents who agree or strongly agree)	44
Table 3-5: Stability of anti-Semitic and anti-Arabic attitudes (additive index)	45
Table 3-6: Error component logit models for temporal stability	47
Table 3-7: Error component logit models for directional context effects	49
Table 3-8: Error component logit models for directional context effects	50

List of Abbreviations

ASC	Alternative Specific Constant
BRPL	Bootstrap Random Parameter Logit
CE	Choice Experiment
CL	Conditional Logit
CI	Confidence Interval
ECL	Error Component Logit
EU	European Union
mWTP	marginal Willingness to Pay
NIS	New Israeli Sheqel
RPL	Random Parameter Logit
WTP	Willingness to Pay
€	Euro
£	British Pound
zł	Polish Złoty

1 Introduction

According to Abraham Maslow, human needs are arranged in a hierarchical progression (Maslow, 1943). Once basic needs, like hunger or the need for shelter, are fulfilled, humans endeavor to fulfill higher needs. Nowadays, basic needs are mostly easily satisfied in the western world. Thus, with everyday grocery shopping consumers try to satisfy higher needs than merely satiation. Besides satiation, price, taste, and the quality of a given product, other attributes of food products have become more important.

Consumers want to be active and shape their environment by shopping for food. This concept of active consumers has developed over a long time. In the 16th century only the nobility were able to participate as consumers in the market. Due to socio-economical upheavals in the 18th century, market participation was further extended to people of the lower middle class (McCracken, 1987). At that time shopping opportunities were restricted to a single day per week. Later on, the possibility to purchase grocery products was expanded to the whole working week or even the whole week (ibid.). Therefore, more time for product selection and shopping in general was generated, resulting in a reevaluation of the process itself.

Further along in the 20th century, consumers started to organize themselves into non-governmental organizations, such as *Greenpeace* or *Amnesty International*, to gain more power and to influence market circumstances (Cowe and Williams, 2000). However, on the other hand, the influence of the social class on product choice lost importance (McCracken, 1987).

More and more, products had to fulfill one's own moral expectation, or would otherwise be rejected. This phenomenon can be seen culminating in the concept of ethical consumerism, in which consumers not only try to express a belief or value through their purchase decision, but to actively influence ongoing political or ethical practices by supporting or denying certain products or producers (Stolle, Micheletti and Berlin, 2010). On the one hand, denial can be expressed in terms of boycott, such as the boycott of South African fruits in Germany in the 1970s and 1980s, to protest against apartheid in South Africa (Bacia and Leidig, 2008) or the current boycott of products which were produced in the occupied Palestinian Territories and labeled as Israeli products, to express condemnation of illegal settlement politics (Ashrawi, 2014; Black and Sherwood, 2014;

Levy, 2013; Luyken, 2012). On the other hand, support of ethical practices can be expressed through the purchase of products with desired ethical product attributes, such as: fair trade for fair production, organic for sustainable production, animal welfare for animal friendly production, or locally produced products to support local agriculture.

Over decades ethical consumerism has become established in the mainstream society (Carrigan, Szmigin and Wright, 2004), thus including all Maslowian levels of needs into a grocery purchase decision.

A great deal of research concerning ethical product consumption has been carried out. Preferences and willingness to pay for ethical product attributes are studied widely (e.g. De Pelsmacker, Driesen and Rayp, 2005; Tarkiainen and Sundqvist 2005) and it is known that consumers are willing to pay a surplus for ethical product attributes (e.g. Krystallis and Chrysosoidis, 2005; Loureiro and Lotade, 2005; Rousu and Corrigan, 2008). To understand consumers ethical product preferences in more detail, different influences on ethical consumption have been emphasized, such as socio- demographics (Bernard and Bernard, 2010; Loureiro and Lotade, 2005), and different influences have been found. Ethical consumers are generally found to be young, higher-educated (Anderson and Cunningham, 1972; Loureiro and Lotade, 2005), and female (Loureiro and Lotade, 2005; Stolle, Hogghe, and Micheletti, 2005). Nevertheless, some studies find no or no clear influences of socio-demographics on ethical consumption (Batte et al., 2007; Doran, 2009; Gracia and De Magistris, 2007).

In order to gain deeper insight into ethical buying behavior, different behavior theories and their extensions were implemented into research, Ajzen and Fishbein's (1980) Theory of Reasoned Action, Ajzen's (1991) Theory of Planned Behavior or Schwartz' (1994) value survey (Doran, 2010; Ozcaglar-Toulouse, Shiu and Shaw, 2006; Shaw, Shiu, and Clarke, 2000). Amongst others, attitudes towards the ethical component, norms, and values were analyzed and how those influence ethical consumption behavior (e.g. Onozaka, Nurse and McFadden, 2010; Shaw and Shiu 2003; Tarkiainen and Sundqvist 2005).

The amount of studies comparing ethical preferences between more than two countries is low. Nevertheless, cross country differences concerning ethical preferences can be found (Basu and Hicks, 2008; Stolle, Hogghe and Micheletti, 2005).

The most commonly studied ethical food product attributes are 'fairly traded', 'animal or environmentally friendly production' and 'organically produced'. However, other

ethical product attributes are possible. It is possible to imagine products which are produced in economic cooperation between actors engaged in a political conflict to foster their peaceful co-existence and to establish social contacts across borders erected by conflicts. In the following these products are called ‘Peace Products’ and are correspondingly associated with the ethical attribute ‘conflict resolution’.

The thesis was developed in the context of the trilateral project “*The Economic Integration of Agriculture in Israel and Palestine*”, funded by the German Research Foundation (Deutsche-Forschungsgemeinschaft, DFG). This project analyzes the consequences of political tension on agricultural economics and the potential for economic integration of agricultural markets in Israel and the West Bank. Israelis and Palestinians are engaged in one of the oldest ongoing political conflicts. With ongoing tension, a vicious circle of violence, retaliation, increased safety measures, and repression has formed negative and continuously worsens relations between Israelis and Palestinians while increasing alienation. The separation of both parties has grown geographically and economically. Existing social and economic contact between Israelis and Palestinians is impeded as a consequence of the conflict. As a result, a political environment exists in which rapprochement and reconciliation is complicated. Before the two parties were driven apart, there was incentive and regular contact in the production of agricultural products. Thus, a revival of joint production of agriculture products by Israelis and Palestinians could foster communication and acceptance between the two groups. Against to this background, this thesis relates the Israeli-Palestinian conflict to the ethical product attribute ‘conflict resolution’ by analyzing consumers’ preferences for products produced between Israelis and Palestinians. Subsequently, the main objective of this thesis is:

To analyze European consumer preferences for the ethical product attribute ‘conflict resolution’ on the jointly produced Israeli- Palestinian Peace Products and to investigate the factors that influence those preferences.

In order to evaluate these matters, consumer preferences were analyzed using discrete choice experiments. Discrete choice experiments originated from conjoint analyses. One of the economic theory foundations is the *Characteristic Theory of Value* (Lancaster, 1966), in which the utility of a product is determined by its characteristics. Discrete choice experiments enable researchers to measure preferences for single product attributes and to estimate compensating amounts of other goods or in monetary values (willingness to pay (WTP)) (Adamowicz et al. 1998). Besides the analyses of existing alternatives, it is also

possible to investigate proposed or generic choice alternatives (Louviere, Hensher and Swait, 2000).

In our choice experiment, respondents were shown choice cards with three different generic olive oil (0.5 liter) bottles and cherry tomato (250 gram) packages. To re-create the situation in the supermarket as closely as possible a no-buy option was included. Respondents were asked to indicate which of the products they would buy. The product description was defined as a combination of the attributes: production method, origin, and price (see Table 1-1).

Table 1-1: Levels of attributes in the choice experiment

Attributes	Attribute levels for olive oil	Attribute levels for cherry tomatoes
Organic	Yes; No	Yes; No
Country of origin	Israel; Italy; Palestinian Territories; Peace Product	Israel; Netherlands; Palestinian Territories; Peace Product
Prices in Germany (€)	3.00; 6.00; 10.00; 15.00	1.00; 1.75; 2.50; 3.25
Prices in Great Britain (£)	2.00; 4.00; 8.00; 12.00	0.80; 1.40; 2.00; 2.70
Prices in France (€)	3.00; 6.00; 10.00; 15.00	0.90; 1.60; 2.30; 3.00
Prices in Poland (zł)	10.00; 21.00; 34.00; 51.00	2.50; 4.30; 6.00; 8.00

The production method was either organic or conventional production. As origins we included two well-known European producer countries for olive oil and cherry tomatoes production (Italy for olive oil, and the Netherlands for cherry tomatoes), as well as Israel, the Palestinian Territories and Peace Products, as having an origin of jointly produced in Israel and the Palestinian Territories. The price attribute varied between four levels. The Peace Product was introduced to the respondents by the means of the following text: “The examples of food products that you will see below vary in price, production methods and country of origin. A special characteristic is that some of these examples are of so-called *Peace Products*, which are the result of joint projects that are designed to foster cooperation between farmers from Israel and from the Palestinian Territories. The Palestinian and the Israeli partners in these projects benefit equally from the sales of these *Peace Products*. The income generated from the sale of these products is used to promote joint Israeli-Palestinian social projects.”

To generate our choice card we used the optimal orthogonal in the differenced design (OOD) (Burgess and Street, 2005), a fractional factorial design, since the full factorial design for all attribute-level combinations would be too large. The resulting 20 choice

cards per product were blocked into four groups. Accordingly, each respondent had to randomly answer five choice cards per product. Respondents were asked to imagine that they are standing in front of a supermarket shelf and are selecting the product they would buy.

The choice experiment was part of an online questionnaire; the data were collected by means of a single online panel provider who was able to provide the required number of respondents in the selected European countries. We collected two different data sets. A European sample was drawn between mid-March and early April 2012 in Germany and Great Britain, and in July 2012 in France and Poland. This set includes new and old EU members as well as countries with different historical backgrounds towards Israel and the Palestinian Territories. A second sample was carried out in Germany during different intensive phases of violence in the Middle East in January 2012, a relatively quiet period in the Israeli-Palestinian relation, and in November 2012, after an eight-day Israeli Defense Force operation in the Gaza Strip ('Operation Pillar of Cloud'), when Israel responded to Palestinian rocket attacks.

We used positive and negative wording of the questions to identify inconsistent. Respondents with inconsistent answers were excluded from the sample. Additionally, we also eliminated survey responses that were obtained in under one- third of the average processing time of all other respondents. In total 2,565 respondents aged between 18-65 years were used from the first survey and 882 respondents aged between 18-81 years from the second survey.

Besides the choice experiment, questions concerning socio-demographics and attitudes towards the Israeli-Palestinian background (such as anti-Semitism, anti-Arabism, hostility against the Palestinian Territories, anti-Zionism and the Middle East conflict) were included in the questionnaire. In the context of this thesis, anti-Semitic and anti-Arabic attitudes are interesting and were measured by four items each. Respondents had to indicate their opinions concerning the attitudes on a five- point Likert scale, reaching from strongly disagree to strongly agree.

The research objective is dealt with in two different papers, which are combined here in chapters two and three. Each of these papers has been submitted to an international peer-reviewed scientific journal and can be read separately.

In the first research article (chapter 2) **“European Consumers’ Willingness to Pay for Israeli-Palestinian Peace Products”** the following two research questions are addressed:

Q1. What are the preferences of European consumers for olive oil and cherry tomato attributes in general?

Q2. What is the socio- demographic profile of European Peace Product consumers?

The research questions are analyzed by investigating general preferences for different product attributes, with special focus on the ethical product attribute ‘conflict resolution’, by means of the choice experiment described above. The products that we consider are olive oil and cherry tomatoes. We use random parameter logit and bootstrap random parameter logit models to estimate consumer WTP in four European countries (France, Germany, Great Britain and Poland (first described sample above)). For a lack of representativeness we use the bootstrap method to correct our sample by gender and age according the population distribution of each country. With special focus on the ethical attribute of ‘conflict resolution’, the influence of socio- demographic characteristics on the WTP for Peace Products is investigated.

The results of both models and for both products (olive oil and cherry tomatoes) are similar, whereas the bootstrap models generate more significant effects of socio-demographic influences. Results show that respondents in all four European countries display a preference for the European products over Palestinian, Israeli or Peace Products. However, consumers are willing to pay a significant surplus for Peace Products against Israeli or Palestinian products.

In all four survey countries the organic production method is preferred against the conventional.

According to research question two, our results show significant influences from the socio-demographic variables of gender, age, education, and income. Generally speaking, peace product consumers are male, young, and well-educated with high income. However, those results do not perfectly portray all four surveyed countries. In France for example, gender and education do not have significant effects on peace product preferences, whereas British Peace Product consumers do not significantly differ by education.

The stated preference analyses are assumed to perceive individuals’ true preferences, which are stable over time. In contrast to this, different effects on question responses are found in literature, e.g. question context (Dillman, Smyth and Christian, 2009; Schuhman, Presser and Ludwig, 1981; Tourangeau, Rips and Rasinski, 2000). To analyze the stability

of preferences for the ‘conflict resolution’ attribute the second scientific article, “**Context Effects and Temporal Stability of Stated Preferences**”, described in chapter 3, addresses the following research questions:

Q3. How are stated product preferences affected by the question order in the questionnaire? (Validity)

Q4. How stable are stated preferences over time? (Reliability)

The stability of the stated preferences for Peace Products is analyzed over time and through question order in Germany. The selected product for the choice experiment is olive oil. The validity is measured by manipulating the question context through presenting groups of respondents’ anti-Semitic and anti-Arabic attitudes before or after the choice experiment. Reliability is investigated by repeating the same study, with the manipulated question context, ten months after the first survey, after an intensive phase of violence between Israelis and Palestinians (sample two, see sample description above). Attitudes are included in the estimation by building an additive index of the four items of anti-Semitic and anti-Arabic statements. Estimations are done by means of error component logit models.

The results show a significant positive effect on Peace Product preferences in the first and second study if anti-Semitic and anti-Arabic attitudes are surveyed before the choice experiment. Respondents value Italian and Peace olive oil equally if attitudes are surveyed before the choice experiment. If attitudes are surveyed after the choice task, respondents value Peace Products slightly less than the Italian reference product.

A negative effect from the violent dispute is found on stated preferences for products from Israel and the Palestinian Territories, if attitudes are surveyed after the choice task. Furthermore Peace Product preferences are fairly stable over time.

Chapter four concludes the thesis. Major findings of all three articles are presented and implications for policy-makers and marketers are given. Furthermore, strengths and weaknesses of the research studies are presented and further research implications are given.

References

- Adamowicz, W., Boxall, P., Williams, M. and Louviere, J. J. (1998). Stated preference approaches for measuring passive use values: Choice experiments and contingent valuation. *American Journal of Agricultural Economics* 80: 64-75.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes* 50: 179-211.
- Ajzen, I. and Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*. Engelwood Cliffs, NJ: Prentice-Hall.
- Anderson, W. T. and Cunningham, W. H. (1972). The socially conscious consumer. *Journal of Marketing* 36: 23-31.
- Ashrawi, H. (2014). The boycott is our Palestinian non-violent resistance. *Haaretz*: 10.02.2014.
- Bacia, J. and Leidig, D. (2008). *“Kauft keine Früchte aus Südafrika” Geschichte der Anti-Apartheid-Bewegung* (1th ed). Frankfurt am Main: Brandes & Apsel.
- Basu, A. K. and Hicks, R. L. (2008). Label performance and the willingness to pay for fair trade coffee: A cross-national perspective. *International Journal of Consumer Studies* 32: 470-478.
- Batte, M. T., Hooker, N. H., Haab, T. C. and Beaverson, J. (2007). Putting their money where their mouths are: Consumer willingness to pay for multi-ingredient, processed organic food products. *Food Policy* 32: 145-159.
- Bernard, J. C. and Bernard, D. J. (2010). Comparing parts with the whole : Willingness to pay for pesticide-free , non-GM , and organic potatoes and sweet corn. *Journal of Agricultural and Resource Economics* 35: 457-475.
- Black, I. and Sherwood, H. (2014). Scarlett Johansson row has boosted Israeli settlement boycott, say activists. *The Guardian*: 06.02.2014.
- Burgess, L. and Street, D. J. (2005). Optimal designs for choice experiments with asymmetric attributes. *Journal of Statistical Planning and Inference* 134: 288-301.
- Carrigan, M., Szmigin, I. and Wright, J. (2004). Shopping for a better world? An interpretive study of the potential for ethical consumption within the older market. *Journal of Consumer Marketing* 21: 401-417.
- Cowe, R. and Williams, S. (2000). *Ethical consumerism report 2000. Who are the ethical consumers?* Booklet for the Co-operative Bank. Manchester.
- De Pelsmacker, P., Driesen, L. and Rayp, G. (2005). Do consumers care about ethics? Willingness to pay for fair trade coffee. *Journal of Consumer Affairs* 39: 363-385.
- Dillman, D. A., Smyth, J. D. and Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys: The tailored design methode*. (3rd ed.). New Jersey: Wiley & Sons.

- Doran, C. J. (2009). The role of personal values in fair trade consumption. *Journal of Business Ethics* 84: 549-563.
- Doran, C. J. (2010). Fair trade consumption: In support of the out-group. *Journal of Business Ethics* 95: 527-541.
- Gracia, A. and De Magistris, T. (2007). Organic food product purchase behaviour : A pilot study for urban consumers in the south of Italy. *Spanish Journal of Agricultural Research* 5: 439-451.
- Krystallis, A. and Chrysosoidis, G. (2005). Consumers' willingness to pay for organic food: Factors that affect it and variation per organic product type. *British Food Journal* 107: 320-343.
- Lancaster, K. J. (1966). A new approach to consumer theory. *Journal of Political Economy* 74: 132-157.
- Levy, G. (2013). The Israeli patriot's final refuge: Boycott. *Haaretz*: 14.07.2013.
- Loureiro, M. L. and Lotade, J. (2005). Do fair trade and eco-labels in coffee wake up the consumer conscience? *Ecological Economics* 53: 129-138.
- Louviere, J. J., Hensher, D. A. and Swait, J. D. (2000). *Stated choice methods-Analysis and application*. Cambridge, UK: Cambridge University Press.
- Luyken, R. (2012). Ein Supermarkt macht Politik. *Zeit Online*: 09.05.2012.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review* 50: 370-396.
- McCracken, G. (1987). The history of consumption : A literature review and consumer guide. *Journal of Consumer Policy* 10: 139-166.
- Onozaka, Y., Nurse, G. and McFadden, D. T. (2010). Defining sustainable food market segments: Do motivations and values vary by shopping locale? *American Journal of Agricultural Economics* 93: 583-589.
- Ozcaglar-Toulouse, N., Shiu, E. and Shaw, D. (2006). In search of fair trade : Ethical consumer decision making in France. *International Journal of Consumer Studies* 30: 502-514.
- Rousu, M. C. and Corrigan, J. R. (2008). Estimating the welfare loss to consumers when food labels do not adequately inform: An application to fair trade certification. *Journal of Agricultural & Food Industrial Organization* 6: Article 3.
- Schuhman, H., Presser, S. and Ludwig, J. (1981). Context effects on survey responses to questions about abortion. *Public Opinion Quarterly* 45: 216-223.
- Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues* 50: 19-45.

- Shaw, D. S., Shiu, E. and Clarke, I. (2000). The contribution of ethical obligation and self-identity to the theory of planned behaviour : An exploration of ethical consumers. *Journal of Marketing Management* 16: 879–894.
- Shaw, D. and Shiu, E. (2003). Ethics in consumer choice: A multivariate modelling approach. *European Journal of Marketing* 37: 1485–1498.
- Stolle, D., Hogghe, M. and Micheletti, M. (2005). Politics in the supermarket: Political consumerism as a form of political participation. *International Political Science Review* 26: 245–269.
- Stolle, D., Micheletti, M. and Berlin, D. (2010). Young people and political consumerism. This paper is published in Swedish as “Politik, konsumtion och delaktighet”. Swedish National Board for Youth Affairs (eds.), *Fokus 10: En analys av ungas inflytande*. Stockholm: Elanders Sverige AB, 316-341.
- Tarkiainen, A. and Sundqvist, S. (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *British Food Journal* 107: 808–822.
- Tourangeau, R., Rips, L. J. and Rasinski, K. A. (2000). *The Psychology of Survey Response*. Cambridge: Cambridge University Press.

2 European Consumers' Willingness to Pay for Israeli - Palestinian Peace Products

Authors: Cordula Wendler, Till Dannewald, Ulf Liebe, Stephan von Cramon-Taubadel

Abstract

Using choice experiments in four European countries, we analyse preferences for ethical product attributes. Specifically, we consider olive oil and cherry tomatoes and focus on the ethical attribute conflict resolution based on the example of so-called Peace Products that are jointly produced and marketed by Israelis and Palestinians. We use random parameter logit models to estimate willingness to pay, and a bootstrap correction for lack of representativeness in our online sample. Respondents in all four European countries display a willingness to pay for Peace Products compared with either Israeli or Palestinian products. Respondents' preferences for Peace Products depend on their socio-demographic characteristics.

Keywords: ethical consumption, Middle East conflict, willingness to pay, bootstrap, random parameter logit

This article has been submitted to the European Review of Agricultural Economics.

2.1 Introduction

The Israeli-Palestinian conflict shows no sign of abating. Alienation between Palestinians and Israelis has increased over the last decades due to mutually reinforcing waves of violence and security measures. As a result, social and economic links between Israelis and Palestinians have atrophied. Agriculture was once characterised by intensive economic contacts between Israel and the Palestinian Territories. Israel has considerable expertise in the production and global marketing of high-value horticultural products such as fruits, vegetables and flowers (Fedler, 2002). However, due to restrictions on the movement of Palestinians, Israeli agriculture currently relies on seasonal migrant workers, for example from Thailand, for harvesting and fieldwork, despite rampant unemployment in the neighbouring Palestinian Territories. The Palestinian Territories are also capable of producing surpluses of horticultural products, but Palestinian exports have to pass through Israeli controls (Samara, 2000). This can lead to stoppages or delays which are especially critical for perishable horticultural products. As a result, Palestinian exports of horticultural products have declined in recent decades.

Cooperation between Palestinians and Israelis in the production and marketing of horticultural products could reduce transaction and production costs and thus increase competitiveness to the benefit of both parties. An additional benefit would arise if consumers in importing countries, such as the EU and the US, were willing to pay a premium for joint Israeli-Palestinian 'Peace Products'. In recent years, ethical consumerism has become increasingly wide-spread in the US and Europe. Ethical consumerism refers to attempts by consumers to influence political decisions or market outcomes by buying or boycotting certain commodities or producers (Stolle, Micheletti and Berlin, 2010; Solomon et al., 2006). If consumers for example in Europe wished to encourage cooperation and demonstrate their desire for peaceful coexistence between Palestinians and Israelis, this might be reflected in an additional willingness to pay (WTP) for Israeli-Palestinian Peace Products. The aim of this paper is to investigate whether consumers in four European countries display such a WTP.

Most studies of WTP for ethical product attributes have concentrated on the attributes 'fairly traded' (Auger et al., 2003; De Pelsmacker, Driesen and Rayp, 2005; Loureiro and Lotade, 2005; Rousu and Corrigan, 2008) or 'organically produced' (Bazoche et al., 2014; Bernard and Bernard, 2010; Loureiro and Hine, 2002; Griffith and Nesheim, 2008; Krystallis and Chryssohoidis, 2005; Tranter et al., 2009; Wier et al., 2008). While most

studies find that the WTP for these attributes is positive, the few studies that compare WTP for different ethical product attributes (Galarraga and Markandya, 2004; Didier and Lucie, 2008; Batte et al., 2007) find evidence of significant differences. Only few studies compare WTP for ethical product attributes across countries. Stolle, Hogghe and Micheletti (2005) find that ethical consumerism is more prevalent among Swedish than among Belgian or Canadian students. Basu and Hicks (2008) find that students in Germany display a higher WTP for fair trade coffee than their counterparts in the US.

Consumers' WTP for ethical product attributes will likely be influenced by their socio-demographic characteristics. According to literature reviews by Papaoikonomou, Ryan and Valverde (2011) and Aertsens et al. (2009), the typical ethical or organic shopper is female and has a higher education. However, these reviews also point out that consumer profiles and the influence of socio-demographic factors can vary. Batte et al. (2007), for example, find no significant impact of gender, education, income and age on the WTP for different types of organic products. Bernard and Bernard (2010) find that older, low-income and less educated US males express a significant WTP for sweet corn produced without pesticides, while younger consumers and females prefer fully organic sweet corn (i.e. produced without pesticides but also without synthetic fertilisers).

Against this background, we use hypothetical choice experiments to make four contributions to the literature. First, we estimate and compare European consumers' WTP for two ethical product attributes; organic production, and contribution to conflict resolution by means of collaborative production and marketing of Israeli-Palestinian Peace Products. Contribution to conflict resolution is an ethical product attribute that has not been studied in the WTP literature to date. Second, we compare the WTP for product attributes across four European countries; France, Germany, Great Britain and Poland. This set includes old and new EU member states and countries with differing historical relations to Israel and the Palestinian Territories. Third, we investigate the influence of socio-demographic variables on the WTP for Peace Products in the four countries to identify the profiles of European consumers who might pay price premiums for these products. Finally, we explore the use of bootstrapping methods to correct for the influence of non-representative samples on our WTP estimates.

To make these contributions we carry out two choice experiments, one for olive oil and one for cherry tomatoes. In each case, respondents must choose between different production methods (organic or conventional), prices, and origins (produced in Europe,

Israel, the Palestinian Territories or as a cooperative Israeli-Palestinian Peace Product). We use an online panel survey to carry out our choice experiments, and the random parameter logit model to estimate WTP while accounting for the respondents' socio-demographic characteristics.

The rest of this paper is structured as follows. We describe the specific design of our choice experiment and the modelling approach in the following section 2. Our empirical results are presented and discussed in section 3. Section 4 concludes.

2.2 Methods

2.2.1 The Data Collection Process

Our online survey was carried out by a single panel provider between mid-March and early April 2012 in Germany and Great Britain, and in July 2012 in France and Poland. Altogether, 2,565 registered panel participants between 18 and 65 years of age provided complete responses.

The core of the survey was a discrete choice experiment in which respondents were shown choice cards each with three different product descriptions of either extra virgin olive oil (0.5 litre bottles) or cherry tomatoes (250 gram packages). Respondents were asked to indicate which of the products they would buy. Each choice card included an opt-out or no-buy alternative to replicate the actual purchase situation in a supermarket as closely as possible. Each product description was defined as a combination of the attributes organic/conventional production, origin, and price (Table 2-1). To ensure comparability we chose the price ranges based on purchasing power parities (EuroStat, 2010). As possible origins we included Europe (Italy for olive oil, and the Netherlands for cherry tomatoes), Israel, the Palestinian Territories, and Israel and the Palestinian Territories jointly as the origin of Peace Products. We chose Italy and the Netherlands as well-known EU producers of olive oil and cherry tomatoes, respectively. We explained the Peace Products to respondents by means of the following text: “The examples of food products that you will see below vary in price, production methods and country of origin. A special characteristic is that some of these examples are of so-called *Peace Products*, which are the result of joint projects that are designed to foster cooperation between farmers from Israel and from the Palestinian Territories. The Palestinian and the Israeli partners in these projects benefit equally from the sales of these *Peace Products*. The income generated from the sale of these products is used to promote joint Israeli-Palestinian social projects.”

Table 2-1: Levels of attributes in the choice experiment

Attributes	Attribute levels for olive oil	Attribute levels for cherry tomatoes
Organic	Yes; No	Yes; No
Country of origin	Israel; Italy; Palestinian Territories; Peace Product	Israel; Netherlands; Palestinian Territories; Peace Product
Prices in Germany (€)	3.00; 6.00; 10.00; 15.00	1.00; 1.75; 2.50; 3.25
Prices in Great Britain (£)	2.00; 4.00; 8.00; 12.00	0.80; 1.40; 2.00; 2.70
Prices in France (€)	3.00; 6.00; 10.00; 15.00	0.90; 1.60; 2.30; 3.00
Prices in Poland (zł)	10.00; 21.00; 34.00; 51.00	2.50; 4.30; 6.00; 8.00

Since a full factorial design for all attribute/level combinations would be too large, we worked with a fractional factorial design. More specifically we employed an optimal orthogonal in the differenced design (OOD) (Burgess and Street, 2005). Orthogonality ensures that the influence of a single attribute can be determined independently from the other attributes on a choice card. Besides orthogonality, we employed a design that minimizes the overlap between attribute levels across the alternatives on a choice card, thus forcing respondents to weigh these attributes against one another. The resulting 20 choice cards per product were blocked into four groups, and each respondent was presented with two randomly selected blocks of five choice cards; a first block for olive oil and a second block for cherry tomatoes. Hence, each respondent was presented with ten choice cards altogether. Figure 2-1 presents an example of a choice card. Respondents were asked to imagine that they are standing in front of a supermarket shelf and to select the product that they would buy.

Figure 2-1: Example of a choice card

Characteristics	Olive Oil A (500ml)	Olive Oil B (500ml)	Olive Oil C (500ml)	None of these options
Organic	Yes	Yes	No	
Origin	Peace Product	Palestinian Territories	Italy	
Price	10 Euro	3 Euro	6 Euro	
I choose... (please click on)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Our initial German survey instrument (the choice experiment described above plus a battery of socio-demographic questions) was pretested on a small number of individuals and then translated into English, French and Polish by native speakers. A back translation process was used to ensure that the survey instrument are connectional, comprehensible

and similarly interpretable in all four survey countries (Harkness, 2003). The questionnaire is available from the authors.

2.2.2 Modelling Approach

Our model is based on the characteristics theory of value (Lancaster, 1966) and random utility theory (McFadden, 1974). Based on Lancaster (1966), the utility that a consumer derives from a product is determined by its characteristics. Random utility theory assumes that utility is a latent construct which exists in the mind of the consumer, and that it is never possible to observe all of a product's utility components due, for example, to unobserved attributes (McFadden, 1974). Formally, the i -th consumer's utility U_{ij} for the j -th product can be decomposed into an observable or systematic component V_{ij} and an unobservable or random component ε_{ij} .

$$U_{ij} = V_{ij} + \varepsilon_{ij} \quad (1)$$

The systematic component V_{ij} can be expressed as:

$$V_{ij} = \beta_{ASCij} + \beta_{organic_i} * Organic_j + \beta_{COO_i} * COO_j + \beta_{Pi} * PRICE_j \quad (2)$$

where β_{ASC} is a alternative specific constant for i 's preference for alternative j . $\beta_{organic}$ and β_{COO} capture the preferences of i for the specific product characteristics organic and product country of origin, and β_{Pi} is the price response coefficient that measures the impact of variation in price on i 's utility. Furthermore, as suggested by for example Nevo (2000) and Nevo (2001), we employ the following random parameter specification for β_{Pi} in equation (2):

$$\beta_{Pi} = \bar{\beta} + \gamma_{DEMO} * DEMO_i + \sigma_{\beta} * v_{\beta} \quad v_{\beta} \sim N(0,1) \quad (3)$$

In equation (3) $DEMO_i$ is a vector of socio-demographic variables such as the respondent's gender, age, education, income that might influence his/her sensitivity to changes in the price of product j , and γ_{DEMO} is a corresponding vector of coefficients. This specification allows us to model each individual's price response coefficient β_{Pi} as a function of observed socio-demographic characteristics as well as unobserved preference heterogeneity (v_{β}). σ_{β} is a scaling factor that measures the impact of unobserved preference variations on each individual's price response. In our application we assume that v_{β} follows a normal distribution, whereas the variance of the components of v_{β} can differ and correlations between those characteristics are allowed (Nevo, 2000). Besides allowing for preference heterogeneity, the advantages of this random parameter logit (RPL)

approach compared with common alternatives such as conditional logit are that the independence of irrelevant alternatives (IIA) axiom is not required (Hensher and Greene, 2003), and that RPL accounts for the fact that each respondent had to make five choices per product in the course of the choice experiment, and that these choices might not be independent of one another (Revelt and Train, 1998).¹

Our online survey samples are not representative of the populations in the countries that we surveyed (details below). To account for this and to make our results less vulnerable to possible outliers and measurement errors, we implement the RPL model within a sample bootstrap procedure. Specifically, we use information from Eurostat (2012) to construct a two-dimensional population distribution function for gender and age (18-65 years) in each survey country. Each of these distributions includes 20 categories; 2 categories for gender (female, male), and 10 categories for age². Using these distribution functions we draw 500 independent bootstrap samples of size $n=300$ individuals for each of the four surveyed countries. We employ simulated maximum likelihood using replications of 200 random Halton draws to generate both the RPL and bootstrap RPL (BRPL) estimates.

Finally, we use an extension of Hensher, Rose and Green (2005) and Ryan and Watson (2009) to calculate marginal WTP (mWTP) as the quotient of the estimated attribute coefficients $\beta_{attribute}$ from equation (2) (e.g. $\beta_{organic}$ or β_{COO}) and the estimated price coefficient β_{Pi} from equation (3).

$$mWTP_i = -\frac{\beta_{attribute}}{\beta_{Pi}} \quad (4)$$

The corresponding 95% confidence intervals are calculated using the percentile-t method (Cameron and Trivedi, 2005). Unlike the Krinsky and Robb (1986, 1990) method, this approach does not require that coefficients be normally distributed (Hole, 2007).

2.3 Results

2.3.1 Composition of the Sample

Of the 2,565 respondents who completed the questionnaire, 1,371 are female and 1,194 are male. In total there are 752 German, 641 English, 663 French and 509 Polish respondents. Sample descriptive statistics as well as the representative population distribution according

¹ We also estimated a conditional logit specification. The results, which are available from the authors, are similar to the RPL results presented here.

² The ten age categories are: 18-20; 21-25; 26-30; ...61-65 years.

Eurostat 2012 are presented in Table 2-2. We are only able to compare our sample with the representative population by gender and age due to a lack of homogeneous and comparable data for other socio-demographic variables such as education and income. This is why we only correct gender and age distributions when estimating the BRPL described above. In our total sample females are overrepresented (53% compared with 50% in the representative population). The ages of the respondents range from 18 to 65. The mean age over all four countries is 40.7 years, compared with 41.5 years in the representative population between 18 and 65 years of age. 68% of all respondents have an upper secondary degree or higher. Respondents were also asked to indicate their household net income on a scale that we prepared using deciles from EU-SILC data.³ 63% of the respondents' indicated incomes that are in the five lowest deciles (see Appendix). Hence, as is typical on online survey samples, our respondents tend to have above average education and below average incomes compared with the population. Since we are unable to correct for education and income distributions when estimating the BRPL, our results must be interpreted with caution.

Table 2-2: Sample and population⁽¹⁾ descriptive statistics

Demographic variables	Germany		G. Britain		France		Poland		Total	
	Sam-ple	Popul-ation ⁽¹⁾	Sam-ple	Popul-ation ⁽¹⁾	Sam-ple	Popul-ation ⁽¹⁾	Sam-ple	Popul-ation ⁽¹⁾	Sam-ple	Popul-ation ⁽¹⁾
Gender:										
Female (%)	52.3	49.4	60.2	50.0	49.9	50.72	51.3	50.3	53.4	50.1
Male (%)	47.7	50.6	39.8	50.0	50.1	49.28	48.7	49.7	46.6	49.9
Age :										
Mean	42.6	42.2	40.8	41.1	40.6	41.75	39.0	40.9	40.7	41.5
Standard deviation (SD)	12.2	13.2	11.8	13.6	12.0	13.62	12.7	13.7	12.2	13.5
Education:										
Higher education ⁽²⁾ Mean	0.39		0.61		0.75		0.94		0.65	
Higher education SD	0.49		0.49		0.43		0.23		0.48	

Source: Own calculations with survey data and Eurostat (2012).

⁽¹⁾ Population of all individuals aged 18 to 65 on January 1, 2012 according to Eurostat (2012).

⁽²⁾ Higher education = 1 if upper secondary or university degree; otherwise 0.

2.3.2 Estimation Results of the (Bootstrap) Random Parameter Logit Model

The estimates of the RPL and BRPL models for olive oil and cherry tomatoes are presented in Table 2-3 and 2-4, respectively. We have coded Italy as the reference origin for olive oil, and the Netherlands for cherry tomatoes; 50 years and older is the reference category for age; and for each product/country combination we have taken the lowest price

³ The deciles were calculated by the Leibniz Institute for the Social Sciences Social Indicators Research Center using EU-SILC (European Union Statistics on Income and Living Conditions) data from 2009. "EU-SILC provides cross-sectional and longitudinal microdata on income, poverty, social exclusion and living conditions" (Gesis, 2012)

as the reference price (e.g. 3 Euros for olive oil in Germany, and 0.9 Euros for cherry tomatoes in France - see Table 2-1).

In the great majority of cases the RPL and BRPL coefficients are very similar. This suggests that the bootstrap correction does not have a major impact on the results. However, there are two notable differences between the RPL and the BRPL results. First, the estimated standard deviations of the random price coefficient distributions differ (see Tables 2-3 and 2-4). In the BRPL models, these standard deviations are significant at the 1% level in Great Britain for both olive oil and cherry tomatoes, and at the 10% level in Poland for cherry tomatoes. This indicates that in these cases the respondents' price sensitivities are influenced by unobserved heterogeneity. For all other country/product combinations these standard deviations are not significant, which indicates that the socio-demographic variables in the model are able to capture heterogeneity among the respondents. In the RPL models the estimates of these standard deviations are also significant in Germany for olive oil, and they considerably larger than the BRPL estimates in Great Britain.

Table 2-3: Estimates of the random parameter logit model and the bootstrap random parameter logit model for olive oil

	Germany		Great Britain		France		Poland	
	RPL Coef.	BRPL Coef.	RPL Coef.	BRPL Coef.	RPL Coef.	BRPL Coef.	RPL Coef.	BRPL Coef.
Fixed parameter								
ASC 1 ⁽¹⁾	2.29***	2.24***	3.33***	3.26***	1.74***	1.77***	2.61***	2.68***
ASC 2	2.49***	2.48***	3.79***	3.69***	1.97***	2.00***	2.86***	2.94***
ASC 3	2.33***	2.30***	3.43***	3.31***	1.82***	1.82***	2.60***	2.70***
Organic	0.68***	0.69***	0.45***	0.44***	0.59***	0.60***	0.79***	0.79***
Peace Product	-0.29***	-0.26***	-0.30***	-0.30***	-0.29***	-0.30***	-0.36***	-0.39***
Israel	-1.01***	-0.99***	-1.11***	-1.13***	-1.01***	-1.02***	-0.82***	-0.92***
Palestinian Territories	-0.96***	-0.96***	-1.09***	-1.00***	-1.03***	-1.04***	-0.69***	-0.80***
Random parameter								
Price mean	-0.39***	-0.37***	-0.48***	-0.45***	-0.33***	-0.33***	-0.30***	-0.33***
Price SD of parameter distribution	0.091***	0.0026	0.174***	0.028***	0.0357	0.0015	0.0001	-0.0000
Socio-demographic effects								
Price x Female	-0.03***	-0.02***	-0.01	-0.02***	0.01	0.01***	-0.02	-0.04***
Price x Age 18-29	0.03*	0.04***	0.06***	0.08***	0.03*	0.02***	-0.02	-0.02***
Price x Age 30-49	0.04***	0.03***	0.00	-0.01***	0.02*	0.02***	0.02	0.02***
Price x Higher education	0.03***	0.03***	0.01	-0.02***	0.02*	0.02***	0.07***	0.09***
Price x (Income x 10 ⁴)	0.67***	0.56***	0.47**	0.60***	0.51***	0.47***	0.51	0.37***
Price x (Income x 10 ⁴) ²	-0.66**	-0.56***	-0.33	-0.53***	-0.48**	-0.38***	0.07	0.86***
Simulated Log-likelihood	-4058		-2927		-3781		-2666	
AIC	8146		5884		7591		5362	
BIC	8239		5976		7683		5450	

Notes: ***, **, and * indicate significance at the 1%, 5% and 10% levels, respectively.

(1) ASC is the alternative-specific constant.

The second major difference between the RPL and BRPL results concerns the influence of socio-demographic variables. While the signs and magnitudes of the estimated socio-demographic effects are similar in the RPL and BRPL models, the prevalence of significant effects is much higher when the bootstrap correction is applied (see Tables 2-3 and 2-4). In the following discussion we focus on the BRPL results. Despite the differences we have just highlighted, most of the conclusions that we draw from these results can also be derived from the RPL results.

The positive alternative specific constants (ASC 1 through ASC 3) show that respondents have in general a preference for one of the products over the no-buy alternative. In all four countries a positive preference for the organic attribute is revealed, as is a preference for lower prices. The negative estimated coefficients for Israeli, Palestinian and Peace Product origins indicate that the reference European origins (Italy for olive oil and the Netherlands for cherry tomatoes) are preferred.

Table 2-4: Estimates of the bootstrap random parameter logit model for cherry tomatoes

	Germany		Great Britain		France		Poland	
	RPL Coef.	BRPL Coef.	RPL Coef.	BRPL Coef.	RPL Coef.	BRPL Coef.	RPL Coef.	BRPL Coef.
Fixed parameter								
ASC 1 ⁽¹⁾	2,61***	2.62***	4,02***	4.01***	2,12***	2.14***	2,95***	3.06***
ASC 2	2,83***	2.88***	4,43***	4.39***	2,36***	2.38***	3,21***	3.33***
ASC 3	2,65***	2.68***	4,05***	3.99***	2,19***	2.19***	2,93***	3.06***
Organic	0,67***	0.68***	0,46***	0.46***	0,58***	0.60***	0,79***	0.79***
Peace Product	-0,27***	-0.24***	-0,25***	-0.25***	-0,26***	-0.27***	-0,31***	-0.34***
Israel	-0,98***	-0.96***	-1,07***	-1.09***	-0,99***	-0.99***	-0,78***	-0.88***
Palestinian Territories	-0,96***	-0.97***	-1,13***	-1.05***	-1,04***	-1.05***	-0,68***	-0.80***
Random parameter								
Price mean	-1.61***	-1.59***	-1.94***	-1.84***	-1.62***	-1.61***	-2.39***	-2.34***
Price SD of parameter distribution	0.0108	-0.0083	0.348***	0.044***	0.0054	0.0012	0.0006	-0.0002*
Socio-demographic effects								
Price x Female	-0,12***	-0.09***	-0,03	-0.11***	0,04	0.05***	-0,14*	-0.24***
Price x Age 18-29	0,13**	0.20***	0,20***	0.3***	0,14**	0.11***	-0,11	-0.09***
Price x Age 30-49	0,15***	0.14***	0,03	-0.00	0,11**	0.10***	0,09	0.10***
Price x Higher education	0,14***	0.12***	0,04	-0.06***	0,11**	0.11***	0,49***	0.59***
Price x (Income x 10 ⁴)	2,25***	1.98***	1,22*	1.36***	2,15***	1.94***	11,74***	6.13***
Price x (Income x 10 ⁴) ²	-2,10**	-1.98***	-0,46	-0.45***	-1,95**	-1.57***	-38,49**	-9.92***
Simulated Log-likelihood	-4070		-2950		-3791		-2690	
AIC	8170		5930		7613		5410	
BIC	8264		6021		7704		5498	

Notes: ***, **, and * indicate significance at the 1%, 5% and 10% levels, respectively.

(1) ASC is the alternative-specific constant.

In the BRPL model all socio-demographic influences are significant. In some cases the direction of a socio-demographic influence differs between countries. For example, the (Price x Female) interaction is negative for all countries except France, for which it is

positive. Similarly, the (Price x Higher education) interaction is positive in all countries except Great Britain. These differences between countries follow the same patterns for both olive oil and cherry tomatoes. In all four countries the (Price x Income) interaction has a positive coefficient, indicating that the preference for lower prices is weaker in higher income deciles than it is in lower income deciles, and with the exception of Poland for olive oil the (Price x Income²) interaction has a negative coefficient.

Overall, these results confirm that it is important to account for socio-demographic factors when modelling preferences for ethical product attributes. In the following we present WTP estimates derived from these results, and discuss how these estimates are affected by socio-demographic factors.

2.3.3 Estimates of Marginal Willingness to Pay for Olive Oil and Cherry Tomato Attributes

Estimates of mWTP for olive oil and cherry tomato attributes are presented in Tables 2-5 and 2-6, respectively. For each product we compare estimates of WTP based on the RPL and BRPL results presented above. For ease of interpretation we choose the Israeli conventional product origin, for which we find the lowest WTP, as the reference. Hence, Tables 2-5 and 2-6 present estimates of how much more the mean respondent would be willing to pay for specific product origins compared with the Israeli origin, and for organic compared with conventional production.

In general the RPL- and BRPL-based estimates of mWTP are similar, although the RPL-based estimates tend to be somewhat lower. This confirms our finding that the bootstrap correction does not have a major qualitative impact on our results. Hence, the fact that our sample's are not representative as regards gender and age does not appear to influence our results. In the following we concentrate on the mWTP estimates that are derived from the BRPL results.

Overall, the origin that elicits the highest WTP for olive oil is Italy, with a premium that ranges from 3.11 Euros in Great Britain to 5.55 Euros in France. In all four survey countries respondents reveal a significant positive WTP for the Peace Product compared with the Israeli and Palestinian alternatives. This premium ranges from 2.29 Euros in Great Britain to 3.91 Euros in France when Israeli olive oil is taken as the reference, and from 1.94 Euros in Great Britain to 4.04 Euros in France when Palestinian olive is taken (Table 2-5). Hence, while the Peace Product olive oil does not elicit as much mWTP as the Italian olive oil, respondents would be willing to pay significantly more for it than for either

Israeli or Palestinian olive oil. The average mWTP for organic compared with conventional olive oil ranges from 1.21 Euros in Great Britain to 4.74 Euros in Poland.

Table 2-5: Marginal WTP for olive oil attributes in Euros/500ml

	Germany		Great Britain		France		Poland	
	RPL Mean (CI)	BRPL Mean (CI)	RPL Mean (CI)	BRPL Mean (CI)	RPL Mean (CI)	BRPL Mean (CI)	RPL Mean (CI)	BRPL Mean (CI)
Peace Product	2.88 (2.84/2.93)	3.13 (3.06/3.21)	2.09 (2.07/2.11)	2.29 (2.07/2.51)	3.80 (3.75/3.86)	3.91 (3.78/4.04)	2.42 (2.38/2.47)	3.17 (2.93/3.41)
Italy	4.05 (3.99/4.12)	4.27 (4.18/4.36)	2.91 (2.88/2.94)	3.11 (2.79/3.44)	5.25 (5.17/5.33)	5.55 (5.38/5.71)	4.34 (4.26/4.42)	5.54 (5.12/5.96)
Palestinian Territories	0.21 (0.2/0.21)	0.12 (0.09/0.16)	0.02 (0.02/0.02)	0.35 (0.31/0.39)	-0.11 (-0.12/-0.11)	-0.13 (-0.18/-0.07)	0.71 (0.70/0.72)	0.73 (0.65/0.81)
Organic	2.80 (2.75/2.84)	2.99 (2.93/3.03)	1.19 (1.18/1.20)	1.21 (1.08/1.34)	3.08 (3.04/3.12)	3.33 (3.21/3.40)	4.21 (4.12/4.29)	4.74 (4.38/5.11)

Notes: The numbers in brackets are 95% confidence intervals (CI). Wald and Post Hoc LSD tests indicate that in all four survey countries the estimated RPL and BRPL coefficients for the different origins (reported in Table 3 above) differ significantly from one another ($p < 0.1$).

Table 2-6: Marginal WTP for cherry tomato attributes in Euros/250g package

	Germany		Great Britain		France		Poland	
	RPL Mean (CI)	BRPL Mean (CI)	RPL Mean (CI)	BRPL Mean (CI)	RPL Mean (CI)	BRPL Mean (CI)	RPL Mean (CI)	BRPL Mean (CI)
Peace Product	0.63 (0.62/0.64)	0.66 (0.65/0.66)	0.50 (0.50/0.50)	0.55 (0.54/0.56)	0.72 (0.71/0.73)	0.71 (0.70/0.72)	0.36 (0.36/0.37)	0.41 (0.40/0.41)
Netherlands	0.87 (0.85/0.88)	0.87 (0.86/0.88)	0.67 (0.66/0.67)	0.72 (0.71/0.72)	0.95 (0.94/0.97)	0.98 (0.97/0.99)	0.61 (0.60/0.62)	0.67 (0.66/0.68)
Palestinian	0.02 (0.02/0.02)	0.00 (-0.01/0.00)	-0.04 (-0.04/-0.04)	0.03 (0.02/0.03)	-0.05 (-0.05/-0.05)	-0.05 (-0.06/-0.04)	0.08 (0.08/0.08)	0.06 (0.06/0.07)
Organic	0.60 (0.59/0.61)	0.62 (0.61/0.63)	0.29 (0.29/0.30)	0.30 (0.30/0.31)	0.56 (0.55/0.57)	0.59 (0.58/0.59)	0.62 (0.60/0.63)	0.60 (0.59/0.60)

Notes: The numbers in brackets are 95% confidence intervals (CI). Wald and Post Hoc LSD tests indicate that in all four survey countries the estimated coefficients for the different origins in the BRPL model (reported in Table 4 above) differ significantly from one another ($p < 0.05$). The one exception is Germany, where Israeli and Palestinian origins do not differ significantly from one another. Furthermore, in the RPL model the coefficients in Table 4 corresponding to Israeli and Palestinian origins do not differ significantly from one another in all four survey countries.

Overall the results for cherry tomatoes are similar (Table 2-6). Respondents reveal the highest mWTP for the European origin, which is the Netherlands for cherry tomatoes. As is the case for olive oil, the mWTP for the Peace Product compared with the Israeli or Palestinian cherry tomatoes is positive and ranges from 0.41 Euros in Poland to 0.71 Euros in France (0.35 Euros in Poland to 0.76 Euros in France if Palestinian cherry tomatoes are taken as the reference category). Hence, for both olive oil and cherry tomatoes we find a significant mWTP for the ethical attribute conflict resolution compared with Israeli or Palestinian origins, although this mWTP is not as large as the mWTP for a familiar European origin.

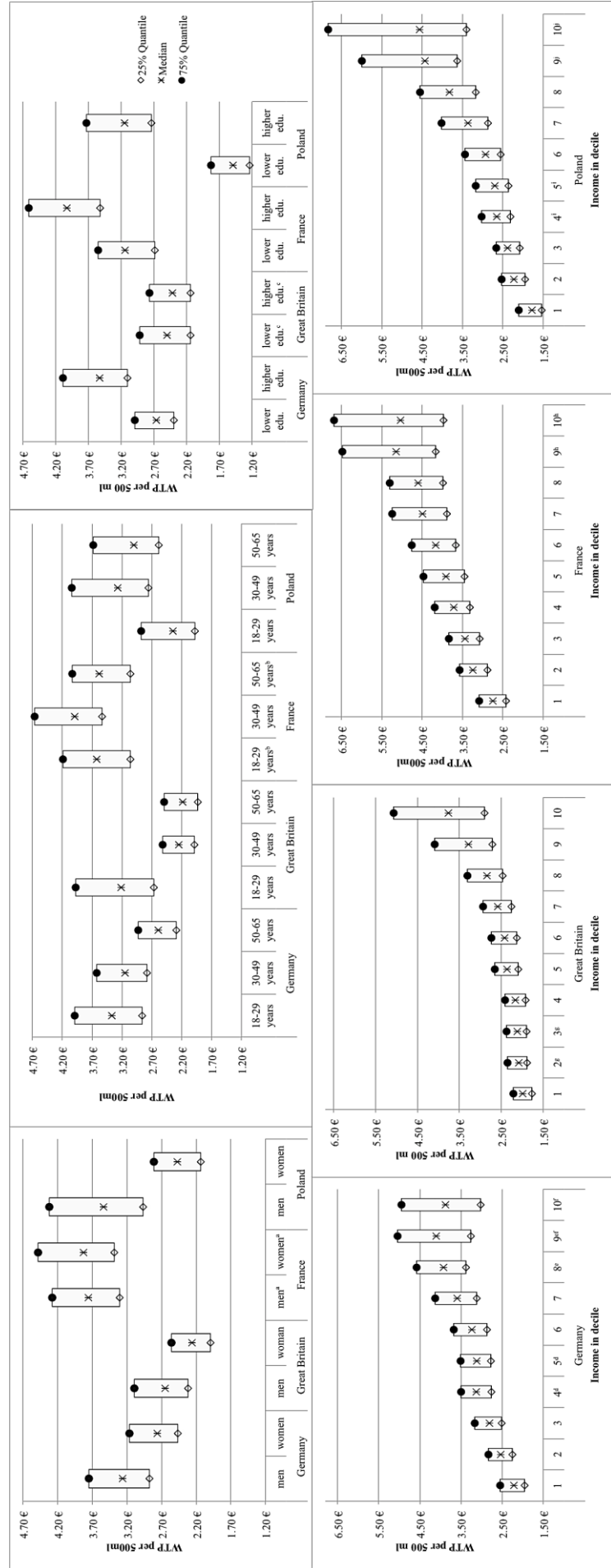
The estimates for cherry tomatoes also confirm the preference for organic compared with conventional products. Respondents are willing to pay 0.30 Euros for organic production in Great Britain and 0.62 Euros in Germany.

2.3.4 The Influence of Socio-Demographic Factors on the Willingness to Pay for Israeli-Palestinian Peace Products

The mWTP estimates presented above provide an overview of relative preferences for different olive oil and cherry tomato attributes. However, these mean estimates hide variation among respondents that can be partly explained by socio-demographic covariates. Information on the influence of socio-demographic factors on mWTP for Peace Products could be used to design targeted pricing and marketing strategies (Lusk and Hudson, 2004). In Figure 2-2 we show how mWTP varies with gender, age, educational status and income decile for the olive oil Peace Product. For each socio-demographic segment and sample country Figure 2-2 shows the median mWTP as well as estimated 25% and 75% quantiles. In the interest of brevity we do not present analogous results for cherry tomatoes, but these are similar in most important respects, and available from the authors.

While some socio-demographic influences are shared across the four survey countries, we do not find evidence of a single typical Peace Product consumer profile that is common to all. For each socio-demographic characteristic one segment reveals a stronger preference for the Peace Product olive oil than the other segments. For example the consumer with the highest mWTP for Peace Products in Germany is male, 18-29 years of age, has a higher education and income in the 9th decile. On average, males are willing to pay significantly more than females for Peace Products in Germany; respondents in the youngest age category (18-29 years) are willing to pay significantly more than respondents in the age of 30 and older; and respondents with higher education are willing to pay significantly more than those with lower education (Figure 2-2). Marginal WTP for Peace Products in Germany increases significantly with income, but these increases level off somewhat in the highest income deciles (Figure 2-2). A similar pattern is observed in the results for Great Britain. In Great Britain the consumer with the highest mWTP for Peace Products is also a young male, but unlike Germany there is no significant difference between those with higher and those with lower education in Great Britain (Figure 2-2). Furthermore, the positive effect of income on the mWTP for Peace Products does not level off in Great Britain but rather strengthens in higher income deciles. In France the differences in mWTP between socio-demographic segments are less pronounced. Males and females display very similar mWTP for Peace Products in France; the middle age category (30-49 years)

Figure 2-2: Marginal WTP for the olive oil Peace Product in different gender, age, education and



Note: Socio-demographic categories that share a common superscript (a, b, etc.) do not differ significantly from one another at the 5% level according to the results of the Post Hoc LSD or Dunnett-T3 test.

displays the highest mWTP; and as in Germany higher education is associated with significantly higher mWTP (Figure 2-2). The effect of income on the mWTP for Peace Products follows a similar pattern in France as in Germany. Finally, in Poland the positive influence of male gender and higher education on the mWTP for Peace Products is especially pronounced, as is the influence of income. Finally, in Poland the positive influence of male gender and higher education on the mWTP for Peace Products is especially pronounced, as is the influence of income. A result that is unique to Poland is the fact that respondents in the lowest age category reveal the lowest mWTP for Peace Products. In summary, we can broadly conclude that young, well-educated, high-income males display the highest mWTP for the ethical attribute conflict resolution over the four survey countries. However, gender and education do not play significant roles in France and Great Britain, respectively, and young respondents display the lowest WTP in Poland.

2.4 Conclusion

We have used a choice experiment to measure preferences for products from different origins, with special focus on the ethical product attribute conflict resolution. In particular, we estimate willingness to pay in four European countries (France, Germany, Great Britain and Poland) for products from Europe, Israel, and the Palestinian Territories, and for so-called Peace Products that are jointly produced and marketed by Israelis and Palestinians with a view to fostering conflict resolution. The products that we consider are olive oil and cherry tomatoes. To the best of our knowledge, this is the first study that presents estimates of willingness to pay for conflict resolution, and that considers more than one ethical product attribute (we also include organic versus conventional products in our choice experiment) in more than one country. To generate our results we employ a random parameter logit estimator that accounts for the effects of product attributes and respondents' socio-demographic characteristics on willingness to pay. Since our online panel surveys of choice experiment participants are not representative of the populations of the European countries that we consider, we also apply a bootstrap procedure to the random parameter logit estimator.

We find that respondents in all four European countries display a preference for European products (Italy for olive oil and the Netherlands for cherry tomatoes) over Israeli, Palestinian or Peace Products. However, respondents in all countries are willing to pay significantly more for joint Israeli-Palestinian Peace Products than for either Israeli or Palestinian products. This key result emerges from both the random parameter logit model

and the bootstrap version of this model. Our finding of similar preference patterns across European countries echoes Bazoche et al. (2014) who find that respondents in different EU member states display willingness to pay for pesticide-free food production. Our results also confirm Bazoche et al. (2014), Loureiro and Hine (2002), and Tranter et al. (2009), who all find that consumers are willing to pay more for organic than for conventional products.

Finally, our results indicate that socio-demographic factors such as age, gender, education and income have a significant impact on a respondent's willingness to pay for Peace Products. While generally speaking young, well-educated and high-income males display higher willingness to pay for Peace Products in our choice experiments, this result is not perfectly uniform across the four countries that we study. For example, we find that gender and education do not have significant effects on a respondent's willingness to pay in France and Great Britain, respectively. These results are in line with the existing literature (e.g. Papaoikonomou, Ryan and Valverde, 2011; Aertsens et al., 2009), which indicates that the influence of socio-demographic variables on preferences for ethical consumption varies across countries.

The marginal willingness to pay for joint Israeli-Palestinian Peace Products that we measure is statistically significant, but is it economically meaningful? Taking Israeli olive oil as the benchmark, and assuming that a 5% share of the import market could be attained in the four European countries considered, the marginal willingness to pay that we estimate for the Peace Product olive oil would amount to 10.7 million Euros annually.⁴ The share of Israeli and Palestinian olive oils on the European market is currently considerably less than 5%, but an estimated marginal willingness to pay that ranges between roughly 2 and 4 Euros per 500 ml bottle would represent a notable increase in revenues for the Peace Product. Of course, this would have to be weighed against the additional costs of producing this product and establishing credible certification and marketing schemes for Peace Products.

One possible limitation of this study is that our samples are not representative of the populations in the four survey countries. As is common in on-line surveys, younger and higher educated respondents are over-represented in our samples. We attempt to correct this source of bias by using a bootstrap procedure. However, we are not able to correct lack of representativeness in income and education, and there are no respondents over the age

⁴ Own calculations, based on World Integrated Trade Solution (2012) Import data.

of 65 in our samples. Online surveys are inexpensive and convenient, but it would be interesting to attempt to replicate our results with data from other types of survey.

References

- Aertsens, J., Verbeke, K., Mondelaers, K. and Van Huylenbroeck, G. (2009). Personal determinants of organic food consumption: A review. *British Food Journal* 111: 1140-1167.
- Auger, P., Burke, P., Devinney, T. M. and Louviere, J. (2003). What will consumers pay for social product features? *Journal of Business Ethics* 42: 281-304.
- Basu, A.K. and Hicks, R.L., (2008). Label performance and the willingness to pay for fair trade coffee: A cross-national perspective. *International Journal of Consumer Studies* 32: 470-478.
- Batte, M.T., Hooker, N. H., Haab, T. C. and Beaverson, J. (2007). Putting their money where their mouths are: Consumer willingness to pay for multi-ingredient, processed organic food products. *Food Policy* 32: 145-159.
- Bazoche, P., Combris, P., Giraud-Herand, E., Pinto, A. S., Bunte, F. and Tsakiridou, E. (2014). Willingness to pay for pesticide reduction in the EU : Nothing but organic ? *European Review of Agricultural Economics* 41: 87-109.
- Bernard, J. C. and Bernard, D. J. (2010). Comparing parts with the whole : Willingness to pay for pesticide-free , non-GM , and organic potatoes and sweet corn. *Journal of Agricultural and Resource Economics* 35: 457-475.
- Burgess, L. and Street, D. J. (2005). Optimal designs for choice experiments with asymmetric attributes. *Journal of Statistical Planning and Inference* 134: 288-301.
- Cameron, A. C. and Trivedi, P. K. (2005). *Microeconometrics: Methods and applications*, Cambridge, UK: Cambridge University Press.
- De Pelsmacker, P., Driesen, L. and Rayp, G. (2005). Do consumers care about ethics? Willingness to pay for fair-trade coffee. *Journal of Consumer Affairs* 39: 363-385.
- Didier, T. and Lucie, S. (2008). Measuring consumer's willingness to pay for organic and fair trade products. *International Journal of Consumer Studies* 32: 479-490.
- Eurostat (2012). Population on 1. January by age and sex. Available at: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjan&lang=de [Accessed June 17, 2013].
- Eurostat (2010). Purchasing Power Parities (PPPs), price level indices and real expenditures for ESA95 aggregates. Available at: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_ppp_ind&lang=en [Accessed February 27, 2012].
- Fedler, J., (2002). Israel's agriculture in the 21st century. Israel Ministry of Foreign Affairs. Jerusalem: Israel Ministry of Foreign Affairs.
- Galarraga, I. and Markandya, A. (2004). Economic techniques to estimate the demand for sustainable products : A case study for fair trade and organic coffee in the United Kingdom. *Economica Agraria y Recursos Naturales* 4: 109-134.

- Gesis (2012). About the EU-SILC. Leibniz-Institut für Sozialwissenschaften. Available at: <http://www.gesis.org/unser-angebot/daten-analysieren/amtliche-mikrodaten/european-microdata/eu-silc/about-the-eu-silc/> [Accessed June 22, 2012].
- Griffith, R. and Nesheim, L., (2008). Household willingness to pay for organic products. Cemmap working paper, Institute for Fiscal Studies, Department of Economics. London:Cemmap.
- Harkness, J. A., (2003). Questionnaire translation. In Harkness, J. A., Van De Vijver, F. J. R. and Mohler, P. P. (eds.), *Cross-Cultural Survey Methods*. New Jersey, US: John Wiley & Sons, 35-56.
- Hensher, D. A. and Greene, W. H. (2003). The mixed logit model : The state of practice. *Transportation* 30: 133-176.
- Hensher, D. A., Rose, J. M. and Greene, W. H. (2005). *Applied choice analysis- A primer*. Cambridge, UK: Cambridge University Press.
- Hole, A. R. (2007). A comparison of approaches to estimating confidence intervals for willingness to pay measures. *Health Economics* 16: 827-840.
- Krinsky, I. and Robb, A. L. (1986). On approximating the statistical properties of elasticities. *The Review of Economics and Statistics* 68: 715-719.
- Krinsky, I. and Robb, A. L. (1990). On approximating the statistical properties of elasticities : A correction. *The Review of Economics and Statistics* 72: 189-190.
- Krystallis, A. and Chrysohoidis, G. (2005). Consumers' willingness to pay for organic food: Factors that affect it and variation per organic product type. *British Food Journal* 107: 320-343.
- Lancaster, K. J. (1966). A new approach to consumer theory. *Journal of Political Economy* 74: 132-157.
- Loureiro, M. L. and Hine, S. (2002). Discovering niche markets : A comparison of consumer willingness to pay for local (Colorado Grown), organic , and GMO-free products. *Journal of Agricultural and Applied Economics* 34: 477-487.
- Loureiro, M. L. and Lotade, J. (2005). Do fair trade and Eco-labels in coffee wake up the consumer conscience? *Ecological Economics* 53: 129-138.
- Lusk, J. L. and Hudson, D. (2004). Willingness-to-pay estimates and their relevance to agribusiness decision making. *Review of Agricultural Economics* 26:152-169.
- McFadden, D. (1974). The measurement of urban travel demand. *Journal of Public Economics* 3: 303-328.
- Nevo, A. (2000). A practitioner's guide to estimation of random-coefficients logit models of demand. *Journal of Economics & Management Strategy* 9: 513-548.

- Nevo, A. (2001). Measuring market power in the ready-to-eat cereal industry. *Econometrica* 69: 307-342.
- Papaoikonomou, E., Ryan, G. and Valverde, M. (2011). Mapping ethical consumer behavior: Integrating the empirical research and identifying future directions. *Ethics & Behavior* 21: 197-221.
- Revelt, D. and Train, K. (1998). Mixed logit with repeated choices: Households' choices of appliance efficiency level. *Review of Economics and Statistics* 80: 647-657.
- Rousu, M. C. and Corrigan, J. R. (2008). Estimating the welfare loss to consumers when food labels do not adequately inform: An application to fair trade certification. *Journal of Agricultural & Food Industrial Organization*, 6: 1-26.
- Ryan, M. and Watson, V. (2009). Comparing welfare estimates from payment card contingent valuation and discrete choice experiments. *Health Economics* 401: 389-401.
- Samara, A. (2000). Globalisation, the Palestinian economy, and the "Peace Process". *Journal of Palestine Studies* 29: 20-34.
- Solomon, M., Bamossy, G., Askegaard, S. and Hogg, M. K. (2006). *Consumer behaviour- A European perspective*. Madrid: Prentice Hall Europe.
- Stolle, D., Hogghe, M. and Micheletti, M. (2005). Politics in the supermarket: Political consumerism as a form of political participation. *International Political Science Review* 26: 245-269.
- Stolle, D., Micheletti, M. and Berlin, D. (2010). Young people and political consumerism. This paper is published in Swedish as "Politik, konsumtion och delaktighet". Swedish National Board for Youth Affairs (eds), *Fokus 10: En analys av ungas inflytande*. Stockholm: Elanders Sverige AB, 316-341.
- Tranter, R. B., Bennett, R. M., Costa, L., Cowan, C., Holt, G. C., Jones, P. J., Miele, M., Sottomayor, M. and Vestergaard, J. (2009). Consumers' willingness-to-pay for organic conversion-grade food: Evidence from five EU countries. *Food Policy* 34: 287-294.
- Wier, M., O'Doherty Jensen, K., Mørch Anderson, L. and Millock, K. (2008). The character of demand in mature organic food markets: Great Britain and Denmark compared. *Food Policy* 33: 406-421.
- World Integrated Trade Solution (2012). UN COMTRADE by products. Available at: <http://wits.worldbank.org/WITS/WITS//QuickQuery/ComtradeByProduct/ComtradeByProduct.aspx?Page=COMTRADEByProduct> [Accessed October 22, 2013].

Appendix

Net income deciles in percentage

Deciles Germany in Euros	Deciles Great Britain in British Pound	Deciles France in Euros	Deciles Poland in Zloty	Country				
				Germany	Great Britain	France	Poland	Total
<1040	<830	<1400	<1500	14.76	13.46	20.24	9.07	14.38
1041-1500	831-1180	1401-1830	1501-2130	15.43	14.71	12.39	13.81	14.09
1501-1900	1181-1480	1831-2260	2131-2660	12.37	13.93	12.54	9.07	11.98
1901-2280	1481-1790	2261-2620	2661-3190	13.16	10.64	10.42	13.81	12.01
2281-2680	1791-2120	2621-2970	3191-3730	13.03	11.27	8.16	10.45	10.73
2681-3130	2121-2480	2971-3390	3731-4340	12.63	9.55	11.78	10.06	11.01
3131-3640	2481-2920	3391-3870	4341-5060	7.31	6.73	7.55	11.83	8.36
3641-4250	2921-3500	3871-4560	5061-6030	4.65	7.20	7.70	8.68	7.06
4251-5280	3501-4490	4561-5880	6031-7600	3.06	5.95	4.53	7.10	5.16
> 5280	> 4490	> 5880	> 7600	3.59	6.57	4.68	6.11	5.24
			Number	752	639	662	507	2,560
			%	100	100	100	100	100

Note: Five cases are missing values.

3 Context Effects and the Temporal Stability of Stated Preferences

Authors: Ulf Liebe, Cordula Wendler, Heiko Beyer, Stephan von Cramon Taubadel

Abstract:

In stated preference studies it is assumed that individuals' answers reflect true preferences and are stable over time. We test these two assumptions of validity and reliability using as an example a choice experiment study on ethical consumption that measures preferences for a Peace Product jointly produced by Israeli and Palestinian producers. In a web survey conducted in Germany, we investigate the validity assumption by manipulating the question context and presenting one group of respondents questions on anti-Semitic and anti-Arabic attitudes before the choice tasks and another group after the choice tasks. In order to test the assumption of temporal stability, the same experimental set-up was repeated in a second survey ten month after the first. However, prior to the second survey an external event, a major violent dispute between Israelis and the Palestinians occurred. Overall, we find some evidence for the violation of the two assumptions. In both surveys, the placement of the attitudinal questions before the choice tasks has a statistically significant and positive effect on the likelihood of choosing the Peace Product (i.e. a directional context effect). The correlation between attitudes and the likelihood of choosing an Israeli, Palestinian or Peace Product is not affected by question order (i.e. no correlational context effect). Furthermore, stated preferences are very stable over time. Yet we find some evidence that the violent dispute had a significant negative effect on the temporal stability of stated preferences for Israeli and Palestinian products if attitudes are surveyed after the choice tasks.

Keywords: Attitudes; Choice experiment; Context effect; Ethical consumption; Temporal Stability

This article has been submitted to Social Science Research.

3.1 Introduction

Over the past decades, the use of (discrete) choice experiments has increased in economics and other social sciences. The method was originally developed in marketing and transportation economics (e.g. Louviere and Hensher, 1982; Louviere and Woodworth, 1983); today it is also employed, for instance, to measure preferences and estimate the willingness to pay (WTP) for environmental amenities (Bennett and Blamey, 2001), health measures (Ryan et al., 2008), and food product attributes (Alfens and Rickertsen, 2011). Choice experiments are also starting to be used in sociology (see Auspurg and Liebe, 2011) and political science (see Hainmueller, Hopkins and Yamamoto, 2014). Applications of the method include preferences regarding the admission of immigrants (Hainmueller and Hopkins, 2012), climate agreements (Bechtel and Scheve, 2013), social embeddedness in trust situations (Buskens and Weesie, 2000), and ethical consumption (Andorfer and Liebe, 2013).

The basic idea of a choice experiment (CE) is that products differ in their characteristics; each combination of characteristics yields a different product. Respondents are asked to choose from an array of products the one they favor most. Such a design allows researchers to estimate the effect or value of each product characteristic on respondents' stated choices. CEs have become popular in economics because they provide a means of measuring preferences for product attributes even if the good in question is hypothetical. Moreover, CEs provide more information than other stated preference methods such as contingent valuation, which can only measure WTP for bundles of attributes (e.g., a whole product). Yet CEs are also a helpful tool for other social scientists because they allow estimating the influence of various attributes on decisions while representing those decisions more realistically (i.e. choosing among different alternatives) than other common methods such as simple survey items and factorial surveys (Wallander, 2009). The results of CE studies are often used to inform public and private decision makers. It is therefore important that these results be valid and reliable. Otherwise, decision-making will be based on misleading estimates of stated preferences and WTP estimates, leading to poor policy choices.

Several methodological problems associated with CEs are discussed in the literature. These include the divergence between hypothetical and actual WTP (hypothetical bias, e.g. Hensher, 2010; Grebitus, Lusk and Nayga, 2013), choice task complexity (e.g. DeShazo and Fermo, 2002; Boxall, Adamowicz and Moon, 2009), and non-attendance to choice

attributes (e.g. Hensher, Rose and Green, 2005; Campbell, Hutchinson and Scarpa, 2008). These problems affect the validity of stated preference studies; that is, the relation between what is actually measured and the underlying construct that is to be measured.

In this paper, we investigate another source of invalidity and test to what extent stated preferences are prone to context effects (Tourangeau, Rips and Rasinski, 2000). Typically, a CE study includes relevant questions such as attitudinal measures in addition to the choice tasks. Including attitudinal measures is recommended in order to validate stated preferences (see, e.g., Bateman et al., 2002). However, this inclusion also alters the question context within which test subjects consider their CE responses, and this might affect their stated preferences. We test whether stated preferences and the correlations between stated preferences and relevant attitudes differ when attitudes are surveyed before rather than after the choice tasks. We also contribute to the literature on the reliability of stated preferences (e.g. McConnell, Strand and Valdes, 1998; Liebe, Meyerhoff and Hartje, 2012). To date only few studies (all from economics) have investigated to what extent CE results are reliable, that is, stable over time. To cast light on this issue we repeat a CE, including the above-mentioned test of context effects, ten month after it was first carried out.

We test the validity and reliability of stated preferences in a CE study of ethical consumption. The aim of this study is to measure the WTP for so-called ‘Peace Products’ that are jointly produced by Israeli and Palestinian producers. Ethical consumption refers to consumer behavior that takes not only a product’s quality and price into account, but also the political, social, and environmental effects of its production and marketing. Friedman (1996) distinguishes between ‘boycotts’, or negative buying behavior, and ‘buycott’, or positive buying behavior. Boycotting is refusal to buy products and services that are associated with negative political, social, and environmental (i.e. external) effects. Buycotting is the deliberate purchase of products that are perceived to reduce negative or generate positive external effects. Organic food is a common example; organic crops are grown without pesticides and herbicides and are therefore associated with environmental and human health benefits compared with conventionally produced crops.

In our study respondents value olive oil that varies by production method (organic, conventional), origin (Italy, Israel, Palestinian Territories, and joint ‘Peace Product’ production by Israeli and Palestinian producers) and price. Thus, in our study respondents state preferences for two ethical product attributes, organic production and joint production

to foster peaceful coexistence between Israelis and Palestinians. The individual motivation to purchase products with ethical attributes can be explained by several theoretical approaches including pure altruism, impure altruism or warm glow giving, social and personal norms, attitudes and values (Liebe, Preisendörfer and Meyerhoff, 2011; Liebe, 2014). In this study we include the general attitudes of anti-Semitism and anti-Arabism that can be expected to affect stated preferences and WTP for Israeli, Palestinian and Peace Products.

Our CE is part of two web surveys carried out in Germany in 2012. The surveys included four attitudinal questions on anti-Semitism and four questions on anti-Arabism. In order to test for context effects, one group of respondents was asked these attitudinal questions before the choice tasks, and another group was asked these questions after the choice tasks. The first survey was conducted in January 2012 during a period of relative quiet in Israeli-Palestinian relations, and the second, based on the same design, in November 2012 during a period of heightened violent dispute between Israelis and Palestinians. Our repeated CE is therefore nested within a natural experiment in which the context of the CE varies with the changing political situation. This enables us to study whether the temporal stability of stated preferences is affected by this external event. Overall, we find some evidence of context effects and observe a high degree of preference stability despite considerable changes in Palestinian-Israeli relations and media coverage of conflict in the region.

The rest of this paper is structured as follows. In the next section, we discuss previous research on context effects in surveys and the temporal stability of stated preferences. We then describe our experimental design, data, variables and results. We finish the paper with a discussion of our empirical findings and conclusions.

3.2 Context Effects, Temporal Stability and Stated Preferences

In this section we review the literature on context effects in survey research and on the temporal stability of survey results, with a focus on stated preference studies.

3.2.1 Context Effects and Stated Preference Studies

It is well established in the literature on survey methodology that responses to survey questions can be affected by question context (Schuman, Presser and Ludwig, 1981; Tourangeau, Rips and Rasinski, 2000; Moore, 2002; Dillman, Smyth and Christian, 2009). Two types of context effects can be distinguished (Tourangeau, Rips and Rasinski, 2000,

pp. 198). First, a *directional context effect* is present if answers to a target question depend on whether context questions are placed before or after the target question. Second, a *correlational context effect* occurs if the correlation between responses to the target and the context questions is affected by the question order. In our study both effects are of relevance. Posing questions on anti-Semitism and anti-Arabism before rather than after confronting respondents with choice tasks on the purchase of Palestinian, Israeli and Peace Products might alter their response to these tasks. In addition, the correlation between anti-Semitic as well as anti-Arabic attitudes and the WTP for Palestinian, Israeli and Peace Products might differ depending on whether the questions designed to elicit these attitudes are asked before or after the choice tasks.

Question context is likely to affect stated preferences because surveying relevant attitudes prior to choice tasks might provide an “interpretive framework” (Tourangeau and Rasinski, 1988) with regard to the choice questions, leading to possible judgment effects (Tourangeau and Rasinski, 1988, pp. 306). A judgment effect would entail that the influence of anti-Semitic and/or anti-Arabic attitudes on the response to choice tasks is stronger if these attitudes are surveyed before the choice tasks. This can result, for example, in a devaluation of Israeli and Palestinian products or stronger correlations between attitudes and preferences for Israeli, Palestinian and Peace Products. Furthermore, posing questions on anti-Semitism and anti-Arabism might activate norms that influence the comparison of different options in the ensuing CE. This is likely in our study because discriminatory attitudes and behavior are socially undesirable. Following this line of argument *we expect a lower degree of stated discriminatory preferences or, equivalently, stronger preferences for the Israeli, Palestinian and Peace Products, if anti-Semitic and anti-Arabic attitudes are surveyed and corresponding anti-discrimination norms are activated prior to the CE.*

We are not aware of any study that tests the effects of question order with regard to *attitudes* and stated CEs. However, some studies that employ contingent valuation methods do consider this issue. For example, Ajzen, Brown and Rosenthal (1996) carry out a laboratory study on students’ WTP for a campus movie theater and a personal noise filter. The authors manipulated the relevance of the good to the respondent and the argument quality (weak and strong information about the good). Further, they used a priming procedure to activate an altruistic or individual motivation. They find that if the good is relevant, motivational cues do not matter for students’ WTP, but the quality of the

argument does. Yet, if the good is not or less relevant, argument quality has no effect and motivational cues show significant effects on WTP. Pouta (2004) shows in a contingent valuation study that the inclusion of relevant belief and attitudinal questions prior to the valuation question increases the likelihood that an environmentally friendly alternative is chosen and increases the respondents' WTP for environment forest regeneration practices in Finland.

We test whether such an order effect occurs in CEs, which differ from contingent valuation studies in several important respects. In contingent valuation studies respondents value a single product or management program. In CEs respondents typically make repeated decisions between alternative products that have different attribute (including price) levels. CEs thus make it possible to examine how individual product or program attributes affect respondents' choice behavior. While context effects are normally studied with regard to single target questions, such as a contingent valuation question, it is interesting to study whether they are also present if the target question is replaced by repeated choice tasks. For example, context effects might weaken in the course of a series of repeated tasks.

3.2.2 Temporal Stability of Stated Preferences

Several studies examine the temporal reliability of stated preferences, especially as measured using contingent valuation methods. In most studies the same survey is carried out at two or more points in time using independent samples. Other studies employ the test-retest method and survey the same respondents repeatedly. McConnell, Strand and Valdes (1998) review temporal reliability studies in general and test-retest reliability studies in particular. They cite studies that find evidence of temporal reliability; these include studies of private as well as public goods, and studies with different intervals between test and retest (from two weeks to four years). Some studies, such as Brouwer and Bateman (2005) on flood control and wetland conservation, demonstrate that WTP estimates can significantly change over time. Jorgensen et al. (2004, p. 43) extend McConnell, Strand and Valdes (1998) and review eight test-retest studies with each study comprising one to five test-retests. The reported reliability coefficients range from 0.30 to 0.95. The investigated studies value quasi-private goods such as hunting permits as well as public goods such as air quality. They apply different question formats such as open-ended or dichotomous questions to elicit respondents' WTP, and the time interval between test and retest ranges from two weeks to three years. Overall, Jorgensen et al.'s (2004) review

indicates no clear pattern with respect to the correlation between study characteristics and test–retest reliability when contingent valuation is employed.

Few studies have been conducted on the temporal stability of stated CEs. Bliem et al. (2012) investigate the temporal stability of individual preferences for river restoration using two independent, identical web-based CEs that were carried out in 2007 and one year later in 2008. The authors do not find notable differences in the significance of the choice attributes or WTP estimates between these surveys. Four additional studies analyze the temporal stability of CEs using the test-retest method (Bryan et al., 2000; Ryan et al., 2006; Skjoldborg, Lauridsen and Junker, 2009; Liebe, Meyerhoff and Hartje, 2012). These studies were conducted in the fields of health economics (treatment options for patients with knee injuries, social services for elderly people, arthritis medication) and environmental economics (landscape externalities of onshore wind power). The time between test and retest in these studies varies from zero (the retest was conducted immediately following the test) to eleven months. Two of the four studies carried out two retests following the test. Reported reliability coefficients vary between 0.38 and 0.71 and are generally higher in the health economics studies. In all three health economic studies there are no noteworthy differences between test and retest regarding estimated coefficients for choice attributes and WTP estimates. In the environmental economic study, test and retest results differ slightly, and WTP is significantly different for one of the four non-monetary attributes in the CE.

Taken together the studies conducted so far have shown a high temporal stability of preferences measured using stated CEs. Yet, given the low number of studies, it is not clear how generalizable these results are and to what extent temporal stability depends on study characteristics such as type of good and payment vehicle. We add a study on temporal stability of stated CEs that focuses on ethical products rather than health products and environmental amenities.

3.3 Methods

3.3.1 Experimental Design

We implemented a stated CE in a web survey in which respondents were shown three different extra virgin olive oils, and were asked to choose which one of these olive oils they would buy. Each choice set comprised three alternative olive oils and one “no-buy” alternative. The latter was included to reproduce the shopping situation in a supermarket as

closely as possible. Each olive oil was characterized by a combination of the attribute levels described in Table 3-1.

Table 3-1: Attributes included in the stated choice experiment

Attributes	Attribute Levels
Organic	Yes, No
Country of origin	Israel, Palestinian Territories, Peace Product, Italy
Price in Euro	3, 6,10,15

Respondents were told that all of the olive oils are extra virgin (the highest quality) and packaged in ½-litre bottles. The Peace Products were explained in the survey by means of the following text: “The examples of food products that you will see below vary in price, production methods and country of origin. A special characteristic is that some of these examples are of so-called *Peace Products*, which are the result of joint projects that are designed to foster cooperation between farmers from Israel and from the Palestinian Territories. The Palestinian and the Israeli partners in these projects benefit equally from the sales of these *Peace Products*. The income generated from the sale of these products is used to promote joint Israeli-Palestinian social projects.”

Since the full factorial of all attribute-level combinations (three alternatives with three attributes of two, four, and four levels, respectively) is too large, we worked with a fractional factorial design. Specifically, using the software Ngene, we employed an optimal orthogonal in the differenced (OOD) design (see Burgess and Street, 2005). Orthogonality ensures that the influence of a single attribute can be determined independently from the others. Besides orthogonality, the choice design was constructed to minimize the overlap between attribute levels across alternatives in a choice set, thus forcing respondents to make trade-offs between the single attributes. We obtained 20 choice sets that were blocked into four groups of five sets each, and each respondent answered one such group. Figure 3-1 gives an example of the choice sets employed in the survey. Respondents were asked to imagine that they are in front of a supermarket shelf and were asked to select the product that they would choose.

In order to test context effects, respondents were randomly assigned to one of two groups in the web survey. In the first group attitudinal questions on anti-Semitism and anti-Arabism were asked before the choice experiment. In the second group these questions were posed after the choice experiment. With the exception of this ordering, all other aspects of the CE were identical in both groups.

Figure 3-1: Example of a choice set used in the study

Characteristics	Olive Oil A (500ml)	Olive Oil B (500ml)	Olive Oil C (500ml)	None of them
Organic	Yes	Yes	No	
Origin	Peace Product	Palestinian Territories	Italy	
Price	10 Euro	3 Euro	6 Euro	
I choose... (please click on)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

We repeated exactly the same survey including the test for context effects in an independent sample ten months after the first survey. While the first survey was carried out in January 2012, which was a period of relative quiet in Israeli-Palestinian relations, the second began on November 22, 2012, one day after the end of ‘Operation Pillar of Cloud’ (November 14-21, 2012) with which Israel responded to Palestinian rocket attacks. This heightened conflict was headline news in the German media, which might have affected respondents’ attitudes as well as preferences for Israeli, Palestinian, and Peace Products. Thus, we tested the temporal stability of stated preferences in a context where an external event occurred.

3.3.2 Random Utility Models

Random Utility Theory assumes that utility is a latent construct that exists (if at all) in the individual’s mind but cannot directly be observed by researchers (Louviere, Hensher and Swait, 2000). However, appropriate methods such as stated CEs make it possible to explain a (systematic) part of utility while a random part remains unexplained. The explainable part consists of attributes that describe (behavioral) choice alternatives, and of individual characteristics that affect behavioral choices. The unexplainable (random) part of utility comprises unobserved heterogeneity of individuals, situational attributes and measurement errors. Individuals are assumed to make utility-maximizing discrete choices.

The conditional logit model (CL), the baseline model in choice modeling, does not allow for unlimited substitution patterns, for random taste variation, and for correlation over time in unobserved factors (Train, 2003). We therefore use an extension of the CL, the error component logit model (ECL), a type of mixed logit model that is based on less restrictive assumptions, to analyze the stated choice data in our study. The ECL model includes parameter estimates for latent error component effects which measure additional alternative-specific unobserved variation which do not underlie to the constant variance condition (Hensher, Stewart and Green, 2007; Greene, 2007). The utility function is

$$U_{in} = V_{in} + E_{in} + \varepsilon_{in} \quad (1)$$

with V_{in} as systematic or observable utility component, E_{in} as error components, and ε_{in} as the same random parameter term as in the CL. The error components are assumed to be drawn from a normal distribution with zero mean and standard deviation one. The resulting utility functions for the designed alternatives combined with the additional error terms (e.g., Campbell, Hutchinson and Scarpa, 2008) are as follows:

$$U_A = ASC_A + V_{in} + E_{ABC} + \varepsilon_{in} \quad (2)$$

$$U_B = ASC_B + V_{in} + E_{ABC} + \varepsilon_{in} \quad (3)$$

$$U_C = ASC_C + V_{in} + E_{ABC} + \varepsilon_{in} \quad (4)$$

$$U_{NB} = V_{in} + \varepsilon_{in} \quad (5)$$

where the designed alternatives of the choice experiment are displayed by the subscripts A , B and C , ASC is the alternative specific constant, and the subscript NB (no- buy) indicates the opt-out alternative. Due to the additional error component E_{ABC} , the independence of irrelevant alternatives cannot be assumed. The ECL also considers the panel character of choice data; respondents make repeated choices that might not be independent of each other.

Marginal WTP values (mWTP) for the non-monetary attributes can be estimated using the results of the error component logit model. In a linear model, they are given by

$$mWTP = -\frac{\beta_{Attribute}}{\beta_{price}} \quad (6)$$

where, as part of the systematic component of utility V , $\beta_{Attribute}$ represents the coefficient of the non-monetary attribute of interest, and β_{price} the coefficient of the monetary attribute.

3.4 Data and Variables

The data were collected by means of an online-survey in Germany, carried out by a survey organization. All respondents were members of the organization's access panel.

Table 3-2 gives an overview of the sample characteristics for each survey and experimental treatment. The four sub-samples do not differ with respect to gender and the share of respondents with a higher education. Yet in the second survey respondents' mean age is significantly higher than in the first.

Table 3-2: Mean values of socio-demographic characteristics in the sample

	Survey 1 (January 2012)			Survey 2 (November 2012)		
	a) Attitudes before CE	b) Attitudes after CE	Total	c) Attitudes before CE	d) Attitudes after CE	Total
Gender (1=women)	0.54	0.51	0.53	0.54	0.48	0.52
Age in years (SD)	42 (13.45)	42 (13.04)	42* (13.26)	45 (15.51)	46 (16.02)	46* (15.72)
Age range	18 - 77	18 - 67	18 - 77	18 - 81	18 - 79	18 - 81
Education (1= upper secondary +)	0.42	0.43	0.43	0.46	0.45	0.45
N	256	184	440	248	194	442

Notes: SD=Standard deviation; CE = choice experiment; * denotes that the differences in mean are statistically significant at the 1% level based on a t-Test and Mann-Whitney U test. Due to missing values, the number of cases for some variables is somewhat below the maximum values presented in the last row (N).

The questionnaire contained several statements, which were answered on a five-point response scale, to measure anti-Semitism, anti-Arabism and attitudes towards the Israeli-Palestinian conflict. In the following we focus on ‘classical’ anti-Semitism and anti-Arabism. Note, however, that we obtain the same results if attitudes towards the Israeli-Palestinian conflict are used instead (results are available from the authors upon request). The consideration of ‘classical’ anti-Semitism is advantageous for the following reason: Since anti-Semitism has become one of the most normatively charged attitudes in western countries and especially in Germany (see Krumpal 2012), new seemingly more legitimate forms of anti-Semitism have evolved, Israel-related anti-Semitism being one of them (see Heyder, Iser and Schmidt, 2005). The debate on these new manifestations is very controversial and so far the nature of the hypothesized link between ‘classical’ anti-Semitism and rhetoric and actions directed against Israel is theoretically and empirically unclear (see Rabinovici, Speck and Sznajder, 2004; Klug, 2005; Hirsh, 2007). In the absence of a consensus on this issue, we have chosen to investigate whether there are correlations between ‘classical’ anti-Semitic attitudes and stated preferences for Israeli goods.

More specifically, our concept of ‘classical anti-Semitism’ is based on Eagly and Chaiken’s (1993, pp. 1) attitudes approach and describes a psychological tendency that is expressed by devaluating persons perceived as ‘Jewish’. Anti-Arabism is defined in a similar way. It denotes ethnical and racist devaluations of what is perceived to be a homogenous group of ‘Arabs’.

Table 3-3 presents the wording of the statements that we used to measure anti-Semitism and anti-Arabism. In order to control for acquiescence effects (Lentz, 1938; Peabody, 1966), that is, the tendency to agree with survey statements in situations of uncertainty,

each construct was operationalized using two positively and two negatively connoted items. For anti-Semitism the two negative statements refer to classical stereotypes, namely deceitfulness (item 2) and anti-Semitic conspiracy theories (item 3). In contrast, items 1 and 4 address anti-discriminatory attitudes with regard to Jews, the rejection of which is assumed to indicate prejudiced beliefs. The validity of this assumption is supported by the results of factorial and reliability analyses presented below. Analogous to anti-Semitism, attitudes towards the group of ‘Arabs’ are measured using two items with negative connotations (items 1 and 3) and two items with positive connotations (items 2 and 4).

Table 3-3: Statements used to measure anti-Semitism and anti-Arabism

Anti-Semitism	Anti-Arabism
1. “The Jewish culture must be protected against its enemies.” (see Beyer & Liebe, 2010)	1. “I can understand that for some people Arabs are unpleasant.” (see Decker et al., 2010)
2. “Jews are more likely than others to use shady practices to get what they want.” (see Decker & Brähler, 2006)	2. “In my opinion most Arabs are peaceful people.” (see Cohrs et al., 2002)
3. “Jews have too much influence in the world.” (see Bergmann & Erb, 1991)	3. “I am mistrustful of Arabs.”
4. “I do not make a distinction between Jews and other people.” (see Bergmann & Erb, 1991)	4. “I would not have any problems living in a neighborhood with many Arabs.” (see Leibold & Kühnel, 2006)

Note: All items were measured on a five-point response scale (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree).

3.5 Results

In this section we first present results on the temporal stability of anti-Semitic and anti-Arabic attitudes. This is followed by results on the temporal stability of preferences and, finally, on directional and correlational context effects as well as their temporal stability.

3.5.1 Temporal Stability of Anti-Semitic and Anti-Arabic Attitudes

Table 3-4 reports the agreement figures for each attitudinal statement in each survey and treatment. Overall there is no clear pattern of differences between the four sub-samples. Only the fourth sub-sample (labeled ‘*d*’ in Table 3-4; second survey, attitude questions posed after the CE) deviates strongly from the others. In this sub-sample 23 % of the respondents agree with the statement that “Jews have too much influence in the world”, 34 % agree that they “can understand that for some people Arabs are unpleasant”, and 26 % agree that they are “mistrustful of Arabs.” These shares are higher than in the other sub-samples, especially compared with the other treatment in the second survey (sub-sample *c*). In addition, in the first treatment of the first survey (sub-sample *a* in Table 3-4) 25 %

disagree that the “Jewish culture must be protected against its enemies”, which is a larger share than in the other sub-samples.

Table 3-4: Agreement with anti-Semitic and anti-Arabic statements (% of respondents who agree or strongly agree)

Items	Survey 1 (January 2012)			Survey 2 (November 2012)		
	a) Attitudes before CE	b) Attitudes after CE	Total	c) Attitudes before CE	d) Attitudes after CE	Total
<i>anti-Semitism</i>						
The Jewish culture must be protected against its enemies. ^f	25	17	22	17	14	16
Jews are more likely than others to use shady practices to get what they want.	12	13	12	10	12	11
Jews have too much influence in the world.	17	16	17	12	23	17
I do not make a distinction between Jews and other people. ^f	9	9	9	6	4	5
<i>anti-Arabism</i>						
I can understand that for some people Arabs are unpleasant.	30	31	31	26	34	30
In my opinion most Arabs are peaceful people. ^f	9	11	10	12	12	12
I am mistrustful of Arabs.	19	18	19	19	26	22
I would not have any problems living in a neighborhood with many Arabs. ^f	31	31	31	31	33	32
N	256	184	440	248	194	442

Notes:^f Recoded to show the percentage of respondents who disagree or strongly disagree.

The variables shown in Table 3-4 were used to construct an additive index that represents anti-Semitic and anti-Arabic attitudes. Mean values for the indices and the results of factor and reliability analyses are reported in Table 3-5. A one-dimensional solution is given by a factor analysis with subsequent varimax rotation for both attitudes in all samples. The reliability of the index is well above 0.70 (Cronbach’s alpha). In the first survey we do not find statistically significant differences in the attitudes between treatments (comparison of sub-samples *a* and *b*). Hence, attitudes are not affected by their placement in the questionnaire in the first survey. In the second survey, however, respondents express higher average levels of anti-Semitism and anti-Arabism when the attitudinal questions are asked after the choice tasks (sub-sample *d*). The differences between sub-samples *c* and *d* in the second survey, based on mean comparison tests, are statistically significant for anti-Semitism at the 5% level and for anti-Arabism at the 10% level.

Table 3-5: Stability of anti-Semitic and anti-Arabic attitudes (additive index)

Anti-Semitic attitudes						
	Survey 1 (January 2012)			Survey 2 (November 2012)		
	a) Attitudes before CE	b) Attitudes after CE	Pooled	c) Attitudes before CE	d) Attitudes after CE	Pooled
Mean	9.27*	9.27	9.29	8.68*	9.29*	8.95
SD	3.41	3.34	3.38	3.12	3.14	3.15
Eigenvalue	2.20	2.25	2.22	2.17	2.26	2.20
Alpha	0.72	0.74	0.73	0.70	0.74	0.72
N	256	184	440	248	194	442

Anti-Arabic attitudes						
	Survey 1 (January 2012)			Survey 2(November 2012)		
	a) Attitudes before CE	b) Attitudes after CE	Pooled	c) Attitudes before CE	d) Attitudes after CE	Pooled
Mean	10.86	11.19	11.00	10.81 ⁺	11.35 ⁺	11.05
SD	3.45	3.32	3.39	3.33	3.50	3.42
Eigenvalue	2.54	2.40	2.48	2.43	2.55	2.49
Alpha	0.81	0.77	0.79	0.78	0.81	0.79
Total	256	184	440	248	194	442

Note: CE=choice experiment. Reported are mean values for the additive index of the four items with a minimum value of 4 and a maximum value of 20, results of a factor analysis with varimax rotation (Eigenvalue) and Cronbach's alpha. In all four samples a factor analysis shows that the four items load on one factor. * and ⁺ denote statistical significance at the 5% and 10% levels, respectively, based on a t-test and Mann-Whitney U-test.

Comparing identical treatments across surveys we only find one significant difference: respondents in the first survey who answered the attitudinal questions before the CE have statistically significant higher values on the anti-Semitism index than their counterparts in the second survey (comparison of sub-samples *a* and *c*). All other differences between the two surveys are statistically insignificant. This indicates that attitudes were stable over time.

3.5.2 Temporal Stability of Stated Preferences

Table 3-6 provides the results of ECL models for each treatment group, that is, with sub-samples pooled according to whether attitudes were surveyed before or after the CE. The models were estimated using NLOGIT and choice probabilities were approximated by simulations based on 500 Halton draws. Preference stability is captured by interaction terms between a binary variable representing the time point of the survey (survey = 0 took place in January 2012; survey = 1 took place in November 2012) and the attributes in the CE. The results in Table 3-6 show that all three ASCs are positive and statistically significant, indicating that the respondents prefer the no-buy alternative least of all. It can further be seen that respondents significantly prefer organic to conventionally- produced olive oil.

Regarding geographic origin, respondents disfavor products from both Israel and the Palestinian Territories compared with the reference category, which is Italy. These effects are statistically significant. However, if anti-Semitic and anti-Arabic attitudes are surveyed before the CE, respondents value Italian olive oil and the joint Israeli-Palestinian Peace Product equally. If attitudes are surveyed after the choice experiment, we find that respondents value the Peace Product slightly less than the Italian reference product (but still considerably higher than the uniquely Israeli and the Palestinian products). The effect is only weakly statistically significant, and it is not present in the sample as a whole. The coefficient for the price attribute is negative and highly statistically significant in all models. This is expected and shows that the likelihood of choosing a product decreases with increasing price.

The estimated interaction terms at the bottom of Table 3-6 provide little evidence of temporal instability. This is remarkable given the violent dispute between Israel and Palestinians that erupted shortly before we conducted the second survey in November 2012. When we compare the sub-samples in which attitudes are surveyed before the CEs, the price attribute is valued slightly less negatively in the second survey (November 2012) than in the first (January 2012). This effect is also apparent in the sample as a whole. Furthermore, in the sub-samples in which attitudes are surveyed after the CEs, Israeli and Palestinian products are valued more negatively in the second survey (November 2012) than in the first (January 2012). For Israel, however, this effect is only weakly significant.

Taken together, the results in Table 3-6 indicate high preference stability over time. Especially noteworthy is that preferences for the two ethical attributes (organic and Peace Product) do not differ between the first and second surveys, and, hence, are stable over a period of ten months.

WTP estimates based on the results in Table 3-6 (available from the authors) support these findings. The 95% confidence intervals for the WTP values are calculated using the Krinsky and Robb (1986) bootstrapping procedure. In the sub-samples in which anti-Semitic and anti-Arabic attitudes were surveyed before the CEs, the WTP estimates do not show remarkable differences over time, as reflected in the fact that the corresponding 95% confidence intervals (CI) largely overlap. For example, on average respondents obtain a disutility of -3.84 Euros (CI: -4.66 Euros ↔ -3.01 Euros) in the first survey if they buy an olive oil from Israel instead of Italy. In the second survey, the corresponding value is -3.50

Euros (CI: -4.55 Euros ↔ -2.54 Euros). The estimated disutilities for Palestinian products are generally lower, but also similar across surveys.

Table 3-6: Error component logit models for temporal stability

	Sub-samples with attitude questions before CE	Sub-samples with attitude questions after CE	All sub-samples
ASC _A	3.83** (13.87)	4.01** (11.83)	3.91** (18.42)
ASC _B	4.04** (14.68)	4.15** (12.61)	4.09** (19.48)
ASC _C	3.76** (13.22)	4.09** (11.97)	3.90** (18.01)
<i>Reference: Non-Organic</i>			
Organic	0.30** (3.97)	0.78** (9.33)	0.51** (9.48)
<i>Reference: Italy</i>			
Israel	-0.93** (-7.77)	-0.79* (-6.32)	-0.86** (-9.97)
Palestinian Territories	-0.57** (-5.01)	-0.83* (-7.04)	-0.69** (-8.78)
Peace Product	0.08 (0.79)	-0.22 ⁺ (-1.86)	-0.05 (-0.71)
Price	-0.24** (-29.47)	-0.22* (-23.57)	-0.23** (-38.14)
<i>Temporal stability</i>			
Survey x Organic	0.12 (1.12)	-0.09 (-0.74)	0.03 (0.43)
Survey x Israel	0.16 (1.03)	-0.31 ⁺ (-1.85)	-0.06 (-0.55)
Survey x Palestinian Terr.	0.05 (0.30)	-0.43** (-2.62)	-0.17 (-1.55)
Survey x Peace Product	0.06 (0.50)	0.001 (0.01)	0.03 (0.29)
Survey x Price	0.02* (2.10)	0.01 (0.98)	0.02** (2.56)
Error Component (ASC _A , ASC _B , ASC _C)	3.09** (12.34)	2.97** (10.82)	3.05** (16.54)
Simulated LL	-2,465.747	-1,861.340	-4357.091
Obs. (N)	2,520 (504)	1,890 (378)	4,410 (882)

Note: z-values in brackets; ** p<0.01, * p<0.05, ⁺ p<0.10. The variable survey indicates whether the survey was conducted in January 2012 (survey=0) or November 2012 (survey=1).

In the sub-samples in which attitudes were surveyed after the CEs, the results differ. Here, we find significant differences. On average respondents obtain a disutility of -3.50 Euros (CI: -4.50 Euros ↔ -2.51 Euros) in the first survey if they buy an olive oil from Israel instead of Italy. In the second survey, the corresponding value is -5.17 Euros (CI: -6.15 Euros ↔ -4.20 Euros), which is significantly larger in magnitude. For Palestinian products the difference is yet more pronounced: -3.70 Euros (CI: -4.67 Euros ↔ -2.74 Euros) in the first survey, and -5.91 Euros (CI: -6.87 Euros ↔ -4.95 Euros) in the second. Disutility for the Peace Product olive oil and WTP for organic olive oil did not significantly change over time. For the peace product the value is -1.00 Euros (CI: -2.00 Euros ↔ 0.01 Euros) in the first survey and -1.04 Euros (CI: -2.06 Euros ↔ -0.03 Euros) in the second. WTP for organic olive oil is 3.46 Euros (CI: 2.78 Euros ↔ 4.13 Euros) in the first survey and 3.24 Euros (CI: 2.47 Euros ↔ 4.01 Euros) in the second. This suggests that in the samples in which attitudes were surveyed after the CEs, the violent dispute that flared up prior to the second survey in November 2012 might have lead to a lower valuation of Israeli and Palestinian olive oils compared with the first survey in January

2012. However, the valuation of the Peace Product does not appear to have changed as a consequence of the conflict escalation prior to the second survey.

Notwithstanding high overall preference stability over time, we find greater temporal stability in the sub-samples in which attitudes are surveyed before the CEs. This suggests that the activation of relevant attitudes prior to the CEs increases temporal stability and reduces the influence of external events that might otherwise alter preferences. Perhaps activated attitudes guide or anchor individual choice behavior by providing an interpretive framework.

3.5.3 Directional Context Effects and their Stability over Time

The ECL models in Table 3-7 show whether stated preferences for Israeli, Palestinian and Peace Products depend on question order and, if so, whether order effects are stable over time. The context effect is captured in interaction effects between the binary variable “treatment” (treatment = 0 if the questions on anti-Semitic and anti-Arabic attitude questions were posed before the CEs; treatment = 1 if the attitude questions were posed after the CEs) and the product origin variables. Temporal stability is tested based on data from the second survey. The model results indicate some evidence of directional context effects. In the first survey, if attitudes are measured prior to the CE, respondents derive disutility from Israeli and Palestinian olive oil compared with Italian olive oil. Yet there is no difference in preferences for Italian and Peace Product oils. If anti-Semitic and anti-Arabic attitudes are measured after the CE, respondents also derive disutility from the Israeli and Palestinian olive oils, but also from the Peace Product. In other words, activating respondents' anti-Semitic and anti-Arabic attitudes before confronting them with CEs leads to stronger preferences for the Peace Product. This context effect is statistically significant at the 10% level in the first survey; in the second survey ten months later the same directional context effect in favor of the Peace Product is statistically significant at the 5% level. The Israeli and Palestinian olive oils are also valued higher if attitudes are surveyed before the CE. These results suggest that activating discriminatory attitudes triggers socially desirable response behavior, inducing respondents to act in line with an anti-discrimination norm.

The WTP estimates based on the models in Table 3-7 (available from the authors) support these conclusions regarding the directional context effects. In the first survey (January 2012), if attitude questions are asked before the CE, respondents obtain a disutility of -4.00 Euros (CI: -4.86 Euros ↔ -3.15 Euros) from an olive oil from Israel; this

value is lower (-3.08 Euros, CI: -4.06 Euros ↔ -2.11 Euros) if attitudes are surveyed after the CE, but the confidence intervals largely overlap. We also find the same pattern of overlapping confidence intervals for Palestinian olive oil: -2.74 Euros (CI: -3.59 Euros ↔ -1.89 Euros) for the treatment with attitude questions before the CE versus -3.15 Euros (CI: -4.07 Euros ↔ -2.22 Euros) for the treatment with attitude questions after the CE. These differences in WTP for Israeli and Palestinian products also obtain in the second survey (November 2012), but are more pronounced: -3.73 Euros (CI: -4.25 Euros ↔ -3.22 Euros) for Israeli olive oil if attitudes are surveyed before the CE and -4.94 Euros (CI: -5.92 Euros ↔ -3.96 Euros) if they are surveyed after the experiment. For Palestinian olive oil the confidence intervals do not overlap, indicating a statistically significant difference: -2.73 Euros (CI: -3.59 Euros ↔ -1.86 Euros) if anti-Semitic and anti-Arabic attitudes are surveyed prior to the CE versus -5.48 Euros (CI: -6.39 Euros ↔ -4.58 Euros) otherwise.

Table 3-7: Error component logit models for directional context effects

	Survey 1 (January 2012)	Survey 2 (November 2012)
ASC _A	3.67** (12.54)	4.21** (13.18)
ASC _B	3.89** (13.51)	4.34** (13.76)
ASC _C	3.69** (12.39)	4.17** (12.87)
<i>Reference: Non-Organic</i>		
Organic	0.51** (9.43)	0.53** (9.06)
<i>Reference: Italy</i>		
Israel	-0.92** (-8.03)	-0.82** (-7.42)
Palestinian Territories	-0.63** (-6.03)	-0.60** (-5.43)
Peace Product	0.08 (0.77)	0.11 (1.23)
Price	-0.23** (-35.60)	-0.22** (-36.20)
<i>Directional Context Effects</i>		
Treatment x Israel	0.21 (1.45)	-0.26 ⁺ (-1.84)
Treatment x Palestinian Territories	-0.09 (-0.66)	-0.60** (-4.27)
Treatment x Peace Product	-0.28 ⁺ (-1.90)	-0.34* (-2.50)
Error Component (ASC _A , ASC _B , ASC _C)	2.98** (12.23)	3.16** (10.93)
Simulated LL	-2,170.10	-2,176.69
N	2,200 (440)	2,215 (443)

Note: z-values in brackets; ** p<0.01, * p<0.05, ⁺ p<0.10. The variable Treatment indicates whether questions on anti-Semitic and anti-Arabic attitudes were asked before the choice experiment (treatment=0) or after (treatment=1).

For the Peace Product, differences in WTP are striking, as reflected in the fact that the sign of the estimate changes. If anti-Semitic and anti-Arabic attitudes are measured before the CEs there is a tendency that the respondents are willing to pay more for a Peace Product olive oil than for an Italian olive oil, 0.35 Euros (CI: -0.52 Euros ↔ 1.22 Euros) in the first survey and 0.51 Euros (CI: -0.43 Euros ↔ 1.45 Euros) in the second survey. Yet, if attitudes are measured after the CEs, respondents obtain disutility from the Peace olive oil relative to the Italian olive oil: -0.86 Euros (CI: -1.84 Euros ↔ 0.13 Euros) in the first

survey and -1.02 Euros (CI: -1.94 Euros ↔ 0.11 Euros) in the second survey. Nevertheless, the confidence intervals clearly overlap, especially in the first survey.

3.5.4 Correlational Context Effects and their Stability over Time

Correlational context effects are tested by extending the models in Table 3-7 to include interaction terms between attitudinal and product origin variables as well as between the variable “treatment”, attitudinal and product origin variables. Table 3-8 presents the results. In both studies we see negative interaction effects between attitudes and preferences for a product origin. Stronger anti-Semitic attitudes are associated with lower likelihoods to choose an olive oil from Israel, the Palestinian Territories or a Peace Product; stronger anti-Arabic attitudes lower the likelihood to choose an olive oil from the Palestinian Territories or a Peace product.

Table 3-8: Error component logit models for directional context effects

	Survey 1 (January 2012)	Survey 2 (November 2012)
ASC _A	3.63** (4.67)	4.19** (12.93)
ASC _B	3.86** (4.97)	4.34** (13.50)
ASC _C	3.65** (4.69)	4.16** (12.61)
<i>Reference: Non-Organic</i>		
Organic	0.53** (8.63)	0.55** (9.12)
<i>Reference: Italy</i>		
Israel	-0.94** (-7.99)	-0.86** (-7.60)
Palestinian Territories	-0.68** (-6.04)	-0.64** (-5.65)
Peace Product	0.04 (0.41)	0.04 (0.38)
Price	-0.23** (-26.50)	-0.22** (-35.61)
<i>Directional context effects</i>		
Treatment x Israel	0.23 (1.40)	-0.20 (-1.34)
Treatment x Palestinian Terr.	-0.06 (-0.39)	-0.53** (-3.58)
Treatment x Peace Product	-0.23 (-1.42)	-0.23 (-1.63)
Anti-Semitism * Israel	-0.97** (-3.10)	-1.17** (-4.11)
Anti-Semitism * Palestinian Territories	-0.60* (-2.00)	-0.74* (-2.22)
Anti-Semitism * Peace Product	-1.04** (-3.56)	-0.97** (-3.53)
Anti-Arabism * Israel	-0.02 (-0.72)	-0.03 (-1.08)
Anti-Arabism * Palestinian Territories	-0.13** (-3.89)	-0.08* (-2.31)
Anti-Arabism * Peace Product	-0.09** (-2.89)	-0.13** (-3.99)
<i>Correlational context effects</i>		
Treatment x AS x Israel	-0.10 (-0.20)	0.16 (0.40)
Treatment x AS x Palestinian Territories	0.76 (1.57)	0.78 ⁺ (1.79)
Treatment x AS x Peace Product	0.41 (0.87)	0.65 (1.48)
Treatment x AA x Israel	0.08 (1.38)	-0.01 (-0.14)
Treatment x AA x Palestinian Territories	0.05 (0.91)	-0.05 (-0.99)
Treatment x AA x Peace Product	0.07 (1.37)	0.04 (0.81)
Error Component (ASC _A , ASC _B , ASC _C)	2.87** (13.42)	3.14** (10.79)
Simulated LL	-2,138.29	-2,139.91
Obs. (N)	2,200 (440)	2,200 (442)

Note: z-values in brackets; ** p<0.01, * p<0.05, ⁺ p<0.10. Treatment indicates whether questions on anti-Semitic (AS) and anti-Arabic (AA) attitudes were asked before the choice experiment (treatment=0) or after (treatment=1).

Hence, Anti-Semites derive disutility from all olive oil that comes from the region whereas anti-Arabists derive disutility from all except the Israeli olive oil. This strong correlation between attitudes and preferences is in line with the country-of-origin research that demonstrates the importance of cognitive, affective and normative aspects for consumer decisions (Verlegh and Steenkamp, 1999). Our attitudinal effects are especially noteworthy because in research on anti-Semitism it is doubted that anti-Semitism is directly correlated with discriminatory behavior towards Israel (see Klug, 2005).

We do not find evidence for correlational context effects. Only one interaction effect in Table 3-8 is statistically significant, indicating that in the second survey the correlation between anti-Semitic attitudes and Palestinian products is less negative if the anti-Semitic attitudes are surveyed after the CEs.

3.6 Discussion and Conclusion

The aim of this paper was twofold. First, we wanted to investigate whether stated preferences depend on the question context in a survey. Second, it was our aim to test the temporal stability of stated preferences. We find some evidence for a directional context effect and no evidence for a correlational context effect. In our CE study, preferences for Israeli-Palestinian Peace Products depend on whether relevant attitudes regarding anti-Semitism and anti-Arabism are surveyed before or after the choice tasks. The Peace Product is valued less positively if attitudes are surveyed after the choice tasks. We can replicate this effect in a second study carried out ten month after the first study and applying the same experimental design. The directional context effect is in line with the argument that an anti-discrimination norm is activated. At least anti-Semitism is a very sensitive topic in Germany and an anti-anti-Semitism norm is present in society. Asking relevant questions might activate this norm which leads to stronger preferences for the Peace Product, a socially desirable response behavior.

The second study shows high temporal stability of stated preferences with regard to organic products and Peace Products. Only the price attribute is valued differently over time if attitudes are surveyed before the choice tasks and in the pooled data. Yet we also find that in the sub-samples in which attitudes were surveyed after the choice tasks, the violent dispute that occurred prior to the second study in November 2012 might have lead to a lower valuation of Israeli and Palestinian products compared to the first study in January 2012. This effect does not occur in the sub-samples in which attitudes were

surveyed before the choice tasks. It might be that the activation of attitudes guides and anchors stated preferences as an interpretative framework that reduces the influence of external events on responses to choice tasks.

The overall high degree of preference stability is somewhat unexpected, especially with respect to the ethical product attribute “Peace Product”. The violent dispute between Israelis and Palestinians that flared up prior to the second study in November 2012 was present in the German media and effects in both sub-samples (attitudes before and after choice tasks) might have been expected. On the other hand, we cannot know whether respondents perceived the media reports and, if so, whether these reports directly affected their preferences. We also find a high stability of anti-Semitic and anti-Arabic attitudes over time, despite the dispute. Finally, the correlation between attitudes and preferences does not change over time. This indication of preference stability in our study is in line with the few other studies on the temporal stability of stated CEs. The fact that we find evidence of stable preferences despite the occurrence of a severe external event supports the use of CEs for product development and informing decision makers.

Our study is limited by several factors. Our analyses are not based on a representative sample for the German population. We have shown that our four samples are comparable. This is an important prerequisite for our methodological study. But we cannot rule out that preferences would differ in a representative sample. The comparison of results over time would be even more meaningful if the same respondents are surveyed twice (test-retest study). We could not apply this approach and future research might avoid this limitation.

So far, context effects and temporal stability have hardly been addressed in research on stated choice experiments. Our study demonstrates that question context with respect to attitudes can affect stated preferences. Hence, this should be taken into account when designing stated preference studies. Furthermore, we add positive evidence on the reliability of stated preference studies. Clearly, more studies are needed on both issues, context effects and temporal stability, and this is not an empty phrase. Stated choice experiment studies from economics (e.g., marketing, environmental, health, agricultural and transportation economics), sociology, and political science differ remarkably, for example, with respect to the good/alternatives to be valued (e.g., private versus public goods or institutional designs). Only a significant number of studies can reveal to what extent choice experiments are valid and reliable, and whether specific study characteristics affect the degree of validity and reliability.

References

- Ajzen, I., Brown, T.C., and Rosenthal, L.H. (1996). Information bias in contingent valuation: effects of personal relevance, quality of information, and motivational orientation. *Journal of Environmental Economics and Management* 30: 43-57.
- Alfens, F. and Rickertsen, K. (2011). Nonmarket valuation: Experimental methods. In: Lusk, J.L., Roosen, J. and Shogren, J.F. (eds.), *The (Oxford) handbook of the economics of food consumption and policy*: Oxford University Press, 215-242.
- Andorfer, V.A. and Liebe, U. (2013). Consumer behavior in moral markets. On the relevance of identity, justice beliefs, social norms, status, and trust in ethical consumption. *European Sociological Review* 29:1251-1265.
- Auspurg, K., and Liebe, U. (2011). Choice-Experimente und die Messung von Handlungsentscheidungen in der Soziologie. *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 63: 301-314.
- Bateman, I.J., Carson, R.T., Day, B., Hanemann, M., Hanley, N., Hett, T., Jones-Lee, M., Loomes, G., Mourato, S., Özdemiroglu, E., Pearce OBE, D.W., Sugden, R. and Swanson, J. (2002). Economic valuation with stated preference techniques. A manual. Cheltenham: Edward Elgar.
- Bechtel, M. and Scheve, K.F. (2013). Mass support for global climate agreements depends on institutional design. *Proceedings of the National Academy of Sciences* 110: 13763-13768.
- Bennett, J. and Blamey, R.K. (2001). *The choice modelling approach to environmental valuation*. Cheltenham Northampton: Edward Elgar.
- Bergmann, W. and Erb, R. (1991). *Antisemitismus in der Bundesrepublik Deutschland. Ergebnisse der empirischen Forschung von 1946- 1989*. Opladen: Leske + Budrich.
- Beyer, H. and Liebe, U. (2010). Antiamerikanismus und Antisemitismus: Zum Verhältnis zweier Ressentiments. *Zeitschrift für Soziologie* 39: 215-232.
- Bliem M., Getzner, M. and Rodiga-Laßnig, P. (2012). Temporal stability of individual preferences for river restoration in Austria using a choice experiment. *Journal of Environmental Management* 103: 65-73.
- Boxall P., Adamowicz, W.L. and Moon, A. (2009) Complexity in choice experiments: choice of the status quo alternative and implications for welfare measurement. *Australian Journal of Agriculture and Resource Economics* 53: 503-519.
- Bryan, S., Gold, L., Sheldon, R. and Buxton, M. (2000). Preference measurement using conjoint methods: an empirical investigation of reliability. *Health Economics* 9: 385-395.
- Brouwer, R. and Bateman I.J. (2005). Temporal stability and transferability of willingness to pay for flood control, and wetland conservation. *Water Resources Research* 41: 1-6.

- Burges, L. and Street, D.J. (2005). Optimal designs for choice experiments with asymmetric attributes. *Journal of Statistical Planning and Inference* 134: 288-301.
- Buskens, V. and Weesie, J. (2000). An experiment on the effects of embeddedness in trust situations: Buying a used car. *Rationality and Society* 12: 227-253.
- Campbell, D., Hutchinson, W.G. and Scarpa, R. (2008). Incorporating discontinuous preferences into the analysis of discrete choice experiments. *Environmental and Resource Economics* 41: 401-17.
- Cohrs, J. C., Kielmann, S., Moschner, B. and Maes, J. (2002). *Befragung zum 11. September 2001 und den Folgen: Grundideen, Operationalisierungen und deskriptive Ergebnisse der ersten Erhebungsphase. Forschungsbericht*. Universität Bielefeld: Abteilung für Psychologie der Universität Bielefeld.
- Decker, O. and Brähler, E. (2006). *Vom Rand zur Mitte. Rechtsextreme Einstellung und ihre Einflussfaktoren in Deutschland*. Berlin: Friedrich-Ebert-Stiftung.
- Decker, O., Weißmann, M., Kiess, J. and Brähler E. (2010). *Die Mitte in der Krise. Rechtsextreme Einstellungen in Deutschland 2010*. Berlin: Friedrich-Ebert-Stiftung.
- DeShazo, J.R. and Fermo, G. (2002). Designing choice sets for stated preference methods: The effect of complexity on choice consistency. *Journal of Environmental Economics and Management* 44: 123-143.
- Dillman, D.A., Smyth, J.D., & Christian, L.M. (2009). *Internet, mail, and mixed-mode surveys. The tailored design method. Third Edition*. Hoboken, New Jersey: Wiley & Sons.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Harcourt Brace Jovanovich College Publishers, Orlando.
- Friedman, M. (1996). A positive approach to organized consumer action: The “boycott” as an alternative to the boycott. *Journal of Consumer Policy* 19: 439-451.
- Grebitus, C., Lusk, J.L. and Nayga Jr., R.M. (2013). Explaining differences in real and hypothetical experimental auctions and choice experiments with personality. *Journal of Economic Psychology* 36: 11-26.
- Greene, W.H. (2007). *NLOGIT version 4.0. Reference guide*. New York: Econometric Software, Inc.
- Hainmueller, J. and Hopkins, D. J. (2012). The hidden American immigration consensus: A conjoint analysis of attitudes toward immigrants. SSRN Working Paper, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2106116.
- Hainmueller, J., Hopkins, D. J. and Yamamoto, K. (2014). Causal inference in conjoint analysis: Understanding multi-dimensional choices via stated preference experiments. *Political Analysis* 22: 1-30.
- Hensher, D.A. (2010). Hypothetical bias, choice experiments and willingness to pay. *Transportation Research Part* 44: 735-752.

- Hensher, D.A. and Greene, W.H. (2003). The mixed logit model: The state of practice. *Transportation* 30: 133-76.
- Hensher, D.A., Rose, J.M. and Greene, W.H. (2005). The implications of willingness to pay of respondents ignoring specific attributes. *Transportation* 32: 203-222.
- Hensher, D. A., Stewart J. and Greene, W. H. (2007). An error component logit analysis of corporate bankruptcy and insolvency risk in Australia. *The Economic Record* 83: 86-103.
- Heyder, A., Iser, J. and Schmidt, P. (2005). Israelkritik oder Antisemitismus? In: Heitmeyer, W. (ed.), *Deutsche Zustände. Folge 3*. Suhrkamp: Frankfurt/M, 144-163.
- Hirsh, D. (2007). *Anti-Zionism and Antisemitism: Cosmopolitan reflections*. Working paper of the Institute for the Study of Global Antisemitism and Policy (ISGAP). New York: ISGAP.
- Jorgensen B.S., Syme G.J., Smith K.M. and Bishop, B.J. (2004). Random error in willingness to pay measurement: A multiple indicators, latent variable approach to the reliability of contingent values. *Journal of Economic Psychology* 25: 41-59.
- Klug, B. (2005). Is Europe a lost cause? The European debate on antisemitism and the Middle East Conflict. *Patterns of Prejudice* 39: 46-59.
- Krinsky, I. and Robb, L. (1986). On approximating the statistical properties of elasticities. *The Review of Economics and Statistics* 68: 715-719.
- Krumpal, I. (2012). Estimating the prevalence of xenophobia and anti-Semitism in Germany: A comparison of randomized response and direct questioning. *Social Science Research* 41: 1387-1403.
- Lancaster, K.J. (1966). A new approach to consumer theory. *The Journal of Political Economy* 74: 132-157.
- Leibold, J. and Kühnel, S. (2006). Islamophobie. Differenzierung tut not. In: Heitmeyer, W. (ed.), *Deutsche Zustände. Folge 4*. Suhrkamp: Frankfurt/M, 135–155.
- Lentz, T. F. (1938). Acquiescence as a factor in the measurement of personality. *Psychological Bulletin* 35: 659.
- Liebe, U. (2014, forthcoming). Willingness to pay for private environmental goods. In: A.C. Michalos (ed.), *Encyclopedia of Quality of Life Research*. New York: Springer.
- Liebe, U., Preisendörfer, P. and Meyerhoff, J. (2011). To pay or not to pay: Competing theories to explain individuals' willingness to pay for public environmental goods. *Environment and Behavior* 43: 106-130.
- Liebe, U., Meyerhoff, J. and Hartje, V. (2012). Test–retest reliability of choice experiments in environmental valuation. *Environmental and Resource* 53: 389-407.
- Louviere, J. J. and Hensher D. A. (1982). On the design and analysis of simulated or allocation experiments in travel choice modelling. *Transportation Research Record* 890: 11-17.

- Louviere, J. J. and Woodworth, G. G. (1983). Design and analysis of simulated choice or allocation experiments: an approach based on aggregate data. *Journal of Marketing Research* 20: 350-367.
- Louviere, J. J., Hensher, D. A. and Swait, J. D. (2000). *Stated choice methods: analysis and application*. Cambridge, UK: Cambridge University Press.
- McConnell, K.E., Strand, I.E. and Valdes, S. (1998). Testing temporal reliability and carry-over effect: the role of correlated responses in test-retest reliability studies. *Environmental and Resource Economics* 12: 357-374.
- McFadden, D. (1974). Conditional logit analysis of qualitative choice behavior. In Zarembka, P. (ed.), *Frontiers in Econometrics*. New York: Academic Press, 105-142.
- Moore, D.W. (2002). Measuring new types of question-order effects: Additive and subtractive. *Public Opinion Quarterly* 66: 80-91.
- Peabody, D. (1966). Authoritarianism scales and response bias. *Psychological Bulletin* 69: 65-73.
- Pouta, E. (2004). Attitude and belief questions as a source of context effect in a contingent valuation survey. *Journal of Economic Psychology* 25: 229-242.
- Rabinovici, D., Speck, U. and Sznajder, N. (eds.) (2004). *Neuer Antisemitismus? Eine globale Debatte*. Suhrkamp: Frankfurt/M.
- Ryan, M., Netten A., Skatun D. and Smith, P. (2006). Using discrete choice experiments to estimate a preference-based measure of outcome- an application to social care for older people. *Journal of Health Economics* 25: 927-944.
- Schuman, H., Presser, S. and Ludwig, J. (1981). Context effects on survey responses to questions about abortion. *Public Opinion Quarterly* 45: 216-223.
- Skjoldborg, U.S., Lauridsen, J. and Junker, P. (2009). Reliability of the discrete choice experiment at the input and output level in patients with rheumatoid arthritis. *Value in Health* 12:153-158.
- Tourangeau, R. and Rasinski, K.A. (1988). Cognitive processes underlying context effects in attitude measurement. *Psychological Bulletin* 103: 299-314.
- Tourangeau, R., Rips, L.J. and Rasinski, K. (2000). *The psychology of survey response*. New York: Cambridge University Press.
- Train, K.E. (2003). *Discrete choice methods with simulation*. Cambridge: Cambridge University Press.
- Verlegh, P.W.J. and Steenkamp, J.B.E.M. (1999). A review and meta-analysis of country-of-origin research. *Journal of Economic Psychology* 20: 521-546.
- Wallander, L. (2009). 25 years of factorial surveys in sociology: A review. *Social Science Research* 38: 505-520.

4 Conclusion

As the two research articles have already been discussed in detail in their corresponding chapters, this chapter will only include a general conclusion of the research papers. Major findings will be presented, implications for policy-makers and marketers will be given and the strengths and weaknesses of the conducted studies will be discussed.

4.1 Main Findings

We used discrete choice experiments to analyze European consumer preferences for the ethical product attribute ‘conflict resolution’ on the jointly produced Israeli-Palestinian Peace Products and to investigate the factors that influence those preferences. The objective was analyzed in two scientific articles.

The analysis “**European Consumers’ Willingness to Pay for Israeli-Palestinian Peace Products**” is, to the best of our knowledge, the first study that presents WTP estimates for the ethical attribute of conflict resolution. Besides that, the study is one of the few cross-cultural studies on ethical product attributes that considers more than one ethical product attribute (conflict resolution and organic production). For both ethical attributes a significant positive WTP is found. In addition the WTP for the ethical product attribute ‘conflict resolution’ is influenced by socio-demographic variables. However those influences are not uniform and differ by surveyed country.

In the literature concerning survey methodology, the effect of question order in surveys on respondents response behavior is a well-known fact (Dillman, 2008; Lensvelt-Mulders, 2008). Nevertheless, it is assumed that stated preferences are stable over time and that they are not influenced by question context. The second study “**Context Effects and the Temporal Stability of Stated Preferences**” is, as far as we know, the first study in which context effects regarding stated choice experiments and attitudes were analyzed. A significant positive effect on preferences for Peace Products is found if anti-Semitic and anti-Arabic attitudes are surveyed before the choice task. Concerning temporal stability for the conflict resolution attribute, the findings add to prior research studies that found stated preference stability over time.

4.2 Research Findings in a Comprehensive Perspective

The initial ambition of this research was to analyze consumer preference for the new ethical product attribute ‘conflict resolution’ against the background of the Israeli-

Palestinian conflict. In accordance with the main findings of the thesis, further implications are presented for policy-makers in Europe and the Middle East as well as for potential producers and marketers of Israeli-Palestinian Peace Products.

First of all Israeli-Palestinian Peace Products are hypothetical products for which no real market exists; however preferences for these products are found. It can be assumed, that initially, Peace Products would be considered niche products, just like fair trade and organic products at the time of their launch, before growing into markets of mass consumption today (Nicholls and Opal, 2005; Reynolds, 2000; Sahota, 2009). However, ethical consumers tend to shop ethically for all different types of products; therefore it is imaginable that the market for Peace Products is quite similar to the one for organic, animal welfare, or fair trade products. Accordingly, Peace Products should initially be sold over specialized or niche channels, such as delicatessen, fair trade, or organic stores as well as over websites to generate a market and minimize risk.

The main focus of the studies performed within this dissertation lies on the preference analyses for the high involvement good extra virgin olive oil. For high involvement products, consumers search more intensely for information regarding the product (Solomon et al, 2006). Therefore, some recommendations on the initiation of Peace Product production as high involvement products, like the olive oil, wine, or cosmetic products from natural resources like olive oil or herbs, are given in the following. With respect to the increased demand of the highly involved consumer, marketers should provide a sufficient amount of supplemental information concerning origin and intention of the product on websites and in flyers.

Additionally, the development of brand strategies and certification labels for Israeli-Palestinian Peace Products may aid in lowering the purchasing threshold for less involved consumers. As consumers are more confident about government labels (Roosen, Lusk and Fox, 2003), labels can be implemented by the governments of the European countries, like the German organic label (Bio-Siegel) (for detailed information see: BMELV 2013). Thereby, it is possible to reach consumers that do not invest a great deal of time or research for their grocery shopping and to briefly inform consumers about the profound sustainable production between Israelis and Palestinians. Those interventions can also activate consumer awareness for Peace Products.

Concerning the results, a higher WTP for Peace Products is recognized if attitudes are surveyed before the choice task. As concluded before consumers likely gave socially

desirable answers. However, it is also possible that the attitudes items might sensitize the consumer consciousness, which could also possibly be achieved providing information or labels. The same phenomenon was analyzed by Bennett and Blaney (2002). They found that additional questions concerning animal welfare leads to a higher WTP for animal welfare policy. Further experimental investigations in real market circumstances could explore possible connections.

The results show some evidence for a negative effect of the Israeli military operation in November 2012 on single country products from Israel or the Palestinian Territories. Therefore, especially in times of military disputes marketing campaigns for Peace Products should be launched to increase the awareness for peace generating products.

To date, joint ventures between Israelis and Palestinians are impeded by many restrictive regulations. Palestinians, for example, need work permits to enter Israel from the West Bank and they need to cross the security barrier via checkpoints. Frequently this is time consuming and minimizes working hours. The Israeli government and the Palestinian National Authority could support the Peace Product production with efficient political regulations for factor distribution like workforce and materials.

4.3 Research Limitations and Strengths and Further Research Implications

All research contains inherent strengths as well as limitations that can be handled in different ways. Therefore, this section's aim is to re-evaluate and draw a critical résumé on the studies performed here and to lend implications to further research efforts.

4.3.1 Strengths of Online Surveys

To study consumer preferences for Israeli-Palestinian Peace Products we used different online surveys provided to the consumers by the means of an online panel provider. In the following, the strength of online surveys will be represented.

One strength of the online panel methodology is the low price compared to paper and pencil or mail surveys (Wright, 2005). Concerning the reliability, results of online collected data are comparable to those of traditional survey methods, such as paper and pencil (Gosling et al. 2004). Furthermore, it is possible to collect data from survey populations that are difficult or almost impossible to reach within a short period of time (Wright, 2005). In a few weeks we collected our data in four different European countries that would never have been possible by paper and pencil or mail surveys. Additionally,

online surveys are a suitable measurement tool for attitudes and opinions. There are no interviewers involved who may inhibit socially undesirable answers and respondents attain the feeling of more anonymity (De Leeuw, 2008). Concerning our survey, it can be supposed that respondents gave more truthful answers concerning attitudes like anti-Semitic, anti-Arabic, anti-Israel attitudes or hostility against the Palestinian territories than they would have in face-to-face data collection. Furthermore, influences of interviewers are eliminated with online interviews; each respondent received identical questions, no gesture or facial expression influenced the respondent, resulting in high levels of standardization. Results produced using data collected by an online panel provider are closer to reality than results produced using convenience samples, e.g. samples collected from university students and staff.

4.3.2 Limitations of Online Surveys

In contrast to the advantages of online surveys some limitations against traditional methods exist. Subsequently they will be illustrated.

The researcher cannot be sure that each respondent will read the entire question or is simply thwarting the questionnaire. As described in chapter one, we used different methods to control this phenomenon, such as positive and negative question wording or eliminating survey responses that were obtained in under one-third of the average processing time of all respondents.

Another problem of online surveys is sampling. The selected respondents are not randomly selected and sampling errors can occur. First of all only people with internet access possibility and the skills to answer web surveys are eligible for the study. Those with the possibility to answer online surveys and those without can differ systematically from one another (Dillman, Smyth and Christian 2009). Second, only those subjects who are registered by the selected online panel provider are eligible to participate in the survey. The online panel provider in turn will be selected by different criteria, e.g. surveyed country, costs, or sample size. In our application, one provider was able to provide the required number of respondents in all of the selected countries. Third, only some of those who receive the recruitment e-mail from the panel provider will answer the survey. Therefore statistical estimates can differ depending on the volunteers participating in the survey (Dillman, Smyth and Christian, 2009) and non-response-bias can occur. Non-response-bias is characterized by differences concerning attitudes and demographics between respondents who are participating in a survey compared to respondents who do not (Umbach, 2004).

For example our sample distribution differs from the population distribution concerning socio-demographics. Younger people are over-represented, whereas older people above 65 years of age were difficult to reach. It was not possible to generate a representative sample by all different socio-demographic characteristics. Accordingly, the generated results cannot be generalized for the whole population of each surveyed country. In chapter 2 we tried to correct this phenomenon with the bootstrap method, but the results could only be generalized by gender and age for people between 18 to 65 years.

The limitations mentioned above should be kept in mind when evaluating the results.

4.3.3 Differences between Hypothetically and Real Purchase Situations

In our project consumers were asked to indicate which products they would hypothetically purchase. Thus, the experiment had no real purchase situation or component. It is known that stated preferences in hypothetical situations often differ from real preferences. Previous studies show evidence that hypothetical WTP is higher than real WTP (hypothetical bias) (Lusk, 2003; Neill, Cummings et al., 1994; Voelckner, 2006). Therefore, it is possible that the estimated results of WTP for Peace Products differ from real choice situations. To further investigate this issue, real purchase experiments should be carried out in future research.

As real experiments are fairly costly, the inclusion of cheap talk treatments into the questionnaire for further research is possible. Cheap talk treatments try to sensitize respondents to state the amount of money that they would actually be willing to pay by discussing the problem of hypothetical bias. The objective is to remind respondents that they are answering hypothetical questions and do not need to pay the money, but people often bid more money than they are actually willing to pay and they are made be aware of stating real WTP. In recent studies WTP estimates are lower if cheap talk treatments were included, it is supposed that these results are closer to reality (e.g. Bulte et al. 2005; Carlsson, Frykblom and Lagerkvist, 2005; Cummings and Taylor 1999; Silva et al. 2011).

4.3.4 Running Additional Analyses for Peace Product Preference Influences

Our questionnaires contain a large amount of different elements, such as attitudes towards different topics and issues (Middle East conflict, Israel, Palestinian Territories, Anti-Semitism, Anti- Arabism), religious and political orientation, etc. Many of these influences on peace product preferences have already been studied in the provided research paper above or have been included in additional analyses that are still in progress. To show

additional influences on the Peace Product preference two of those papers and their preliminary results are shortly presented here.

One ongoing analysis investigates the influence of attitudes regarding the Israeli-Palestinian context (anti-Zionism, hostility against the Palestinian Territories, and attitudes towards products from the Middle East) and socio-demographic variables on Peace Product preferences. According to the attitude-object relation, described by Fishbein and Ajzen (1975), it is assumed that negative attitudes towards Israel, the Palestinian Territories, or products from the Middle East will have a negative impact on Peace Product preferences. Therefore research questions addressed here are:

Do negative attitudes towards the Israeli-Palestinian context influence peace product preferences negative?

How is the influence of socio-demographic variables on Peace Product preferences?

Three items each measure the attitudes of anti-Zionism and hostility against the Palestinian Territories, whereas attitudes towards products from the Middle East are measured by four items. Data of German respondents are analyzed by using an integrated choice and latent variable model for the olive oil product. Preliminary results confirm the attitude-object relation; the negative attitudes have a negative impact on the Peace Product preference, whereby only the influence of hostility against the Palestinian Territories has a significant effect.

An additional research aim along this line is the investigation of the influences of the other three European countries (France, Great Britain and Poland), which we are still working on.

An additional ongoing analysis investigates consumer preferences for Peace Products in Israel. Academic consumer behavior studies concerning food products are rare in Israel. The Israeli-Palestinian conflict is almost present daily to the consumers and ethical product components are marginally spread in that society. Considering the context, it is interesting to investigate consumer preference studies towards ethical Peace Products there. The research questions addressed here are:

What are the Peace Product preferences of Israeli consumers?

How is the Peace Product preference influenced by different attitudes?

Data were collected by means of an online survey in January 2013. In total 340 respondents delivered complete responses, which were used for the analyses. The questionnaire is similar to the ones used above. The choice experiment differs by the

product attributes and the package size. The packages size contains 750 milliliter bottles of extra virgin olive oil and 500 gram boxes of cherry tomatoes. Product attributes are product origin (Peace Brand, Israel, Italy), organic or conventional production method, and four different prices for each product (olive oil: 30, 40, 50 and 65 NIS; cherry tomatoes: 5, 8, 11 and 15 NIS). Respondents had to choose 6 times between three different products and one no-buy option.

Additionally, the questionnaire contains socio-demographic variables, attitude statements towards the Israeli and Palestinian position in the Middle East conflict (attitudes that indicate who suffers most from the conflict), and the country of origin for food products. Two items each measure the pro Israel or pro Palestinian attitude in the Middle East conflict. The positive attitudes towards Palestinian and foreign products are measured by four items.

Attitudes are included in the estimation by building an additive index of the corresponding items. To estimate our results we used conditional logit and random parameter logit models.

Preliminary results for olive oil show that respondents in Israel display a preference for the Israeli product over the Peace Product and the Italian one. However, the Peace Product is preferred instead of the Italian product. The results indicate that Peace Product preference is significantly positively influenced by positive attitudes towards food products from the Palestinian Territories and foreign countries as well as pro Palestinian attitudes.

Those additional studies will extend the understanding of consumer Peace Product preferences.

We already studied a number of Peace Product influences and still continue to do so. Nevertheless, in retrospect I would include consumers' values as an additional element. Values are systems of consistent attitudes with normative obligation. They apply as standard settings and are invoked in various situations (Solomon et al., 2006).

In different studies concerning ethical product selection, the Schwartz Value Survey (Schwartz, 1994) was implemented and it could be shown that values significantly influence ethical product consumption (e.g. Doran 2010; Ruize de Maya, Lopez-Lopez and Munuera, 2011). I expect that values will also influence peace product consumption. It would be interesting to go deeper into the characteristics of peace product consumers.

Additionally, segmentation of consumers based on their food preferences could be of interest to add to this research. One possible segmentation would be the food related

lifestyle segmentation of Grunert et al. (2001). This segmentation approach is used as a cross-national valid measure instrument for food related lifestyle. It analyses how consumer values are related to food products by using five different cognitive constructs (Grunert et al., 2001). These five constructs are ways of shopping, cooking methods, quality aspects, consumption situations, and purchasing motives, which are subdivided into 23 dimensions. Three to four items measure each segment. Common segments between Denmark, France, Germany, and the United Kingdom are found (Grunert et al. (2001). The additional information could be implemented into the analyses of Peace Product consumers.

Adding the influence of values and food related lifestyle to Peace Product preferences will extend the scope of this research towards classical behavioral theories. Additional, this information could be of practical use for marketers to obtain more information about homogeneous consumer segments and preferences across countries.

4.3.5 Implementation of Israeli-Palestinian Peace Products

Within our study we focused on agricultural products, more specifically on olive oil and cherry tomatoes. The analyses of agricultural products are reasonable because Israelis and Palestinians have worked intensively with each other in the past, particularly in this field (Barak, 2013), and agriculture is important for the geographical region.

The 2012 GDP generated in the agriculture sector in Israel was 2.4% (6.07 billion \$US) (Central Intelligence Agency, 2013) and 1.5% of employees were employed in agricultural industry (CBS, 2013). Accordingly, GDP generated by agriculture in the Palestinian Territories accounts for 4.2% (0.3 billion \$US) in 2012 and 16.1% of workers were employed in the agricultural sector in 2010 (Central Intelligence Agency, 2013). Additionally in 2012, 5.3 % of Israeli exports to the European Union were agricultural products (Wajnryt, 2013). Beyond the importance of the agricultural sector, the implementation of Peace Products in that field is possible as the following example shows:

In the north of Israel (Galilee) there already exists an association, called Sindyanna of Galilee, which produces agricultural products, soup and handcrafts, with Arabs and Jews working together (Sindyanna of Galilee, 2013). The main focus of the association is on the cooperation between Arab women living in Israel and Jewish women. When I visited this association in winter 2012 it came to my mind that it would be a logical step to include Arab workers from the Palestinian territories into the project as well. Since then, this cooperation has become reality; today there is a European Union financed project “Fair

Trade, Fair Peace” between female workers from the West Bank and from Israel (ENPI, 2013). This example suggests that Peace Product production is possible and should be pursued and extended.

It would be of interest if preferences for non-agricultural products also exist. Those can be analyzed in further research. Additionally, extension of the Peace Product principle to other regions affected by conflicts is imaginable for practical implementation as well as for research purposes.

References

- Barak, N. (2013, September 15). Israeli, Palestinian farmers to resume Cooperation. *The Times of Israel*:September 15, 2013.
- Bennett, R. and Blaney, R. (2002). Social consensus, moral intensity and willingness to pay to address a farm animal welfare issue. *Journal of Economic Psychology* 23: 501-520.
- BMELV. (2013). *Auf einen Blick: Informationen zum Bio-Siegel*. Booklet of Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz (ed.). Bonn:LV Druck im Landwirtschaftsverlag GmbH.
- Bulte, E., Gerking, S., List, J. and De Zeeuw, A. (2005). The effect of varying the causes of environmental problems on stated WTP values: Evidence from a field study. *Journal of Environmental Economics and Management* 49: 330-342.
- Carlsson, F., Frykblom, P. and Lagerkvist, J.C. (2005). Using cheap talk as a test of validity in choice experiments. *Economics Letters* 89: 147-152.
- CBS. (2013). Employed persons, percentage of employees and percentage of part-time employed persons, by industry. In Central Bureau of Statistics (ed.), *Statistical Abstract of Israel 2013* (64th ed.).
- Central Intelligence Agency (2013). The world factbook. Retrieved December 20, 2013, from <https://www.cia.gov/library/publications/the-world-factbook/geos/is.html>
- Cummings, R. G. and Taylor, L. O. (1999). Unbiased value estimates for environmental goods: A cheap talk design for the contingent valuation method. *The American Economic Review* 89: 649-665.
- De Leeuw, E. D. (2008). Choosing the method of data collection. In De Leeuw, E. D., Hox, J. J. and Dillman, D. A. (eds.), *International handbook of survey methodology*. New York: Psychology Press, 113-135
- Dillman, D. A. (2008). The logic and psychology of constructing questionnaires. In De Leeuw, E. D., Hox, J. J. and Dillman, D. A. (eds.), *International handbook of survey Methodology*. New York: Psychology Press, 161-175.
- Dillman, D. A., Smyth, J. D. and Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys: The tailored design method*. (3rd ed.). New Jersey: Wiley & Sons.
- Doran, C. J. (2010). Fair trade consumption: In support of the out-group. *Journal of Business Ethics* 95: 527-541.
- ENPI (2013). Launch of fair trade products line for more economic opportunities between Israelis and Palestinians. *EU Neighbourhood Info Centre*., http://www.enpi-info.eu/mainmed.php?lang_id=450&searchtype=simple&id=33062&id_type=1, Retrieved October 15, 2013.

- Fishbein, M. and Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, Massachusetts: Addison-Wesley.
- Gosling, S. D., Vazire, S., Srivastava, S. and John, O. P. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about internet questionnaires. *The American Psychologist* 59: 93-104.
- Grunert, K. G., Brunsø, K., Bredahl, L. and Bech, A. C. (2001). Food-related lifestyle: A segmentation approach to European food consumers. In Frewer, L., Risvik, E. and Schifferstein, H. (eds.), *Food, people and society- A European perspective of consumers' food choices*. Berlin: Springer Verlag, 211-230.
- Lensvelt-Mulders, G. (2008). Surveying sensitive topics. In De Leeuw, E. D., Hox, J. J. and Dillman, D. A. (eds.), *International handbook of survey methodology*. New York: Psychology Press, 461-478.
- Lusk, J. L. (2003). Effects of cheap talk on consumer willingness-to-pay for golden rice. *American Journal of Agricultural Economics* 85: 840-856.
- Neill, H. R., Cummings, R. G., Ganderton, P. T., Harrison, G. W. and McGuckin, T. (1994). Hypothetical surveys and real economic commitments. *Land Economic* 70: 145-154.
- Nicholls, A. and Opal, C. (2005). The fair trade market. In Nicholls, A. and Opal, C. (eds.), *Fair trade. Market-driven ethical consumption*. London : SAGE, 181-200.
- Raynolds, L. T. (2000). Re-embedding global agriculture : The international organic and fair trade movements. *Agriculture and Human Values* 17: 297-309.
- Roosen, J., Lusk, J. L. and Fox, J. A. (2003). Consumer demand for and attitudes toward alternative beef labeling strategies in France, Germany and the UK. *Agribusiness* 19: 77-90.
- Ruize de Maya, S., Lopez-Lopez, I. and Munuera, J. L. (2011). Organic food consumption in Europe: International segmentation based on value system differences. *Ecological Economics* 70: 1767-1775.
- Sahota, A. (2009). The global market for organic food & drink. In Willer, H. and Kilcher, L. (eds.), *The world of organic agriculture. Statistics and emerging trends 2009. FIBL-IFOAM Report*. Bonn:FiBL and IFOAM, 59-64
- Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues* 50: 19-45.
- Silva, A., Nayga, R. M., Campbell, B. L. and Park, J. L. (2011). Revisiting cheap talk with new evidence from a field experiment. *Journal of Agricultural and Resource Economics* 36: 280-291.
- Sindyanna of Galilee. (2013). About us. http://sindyanna.com/sindyanna_of_galilee/, Retrieved October 06, 2013,

- Solomon, M., Bamossy, G., Askegaard, S. and Hogg, M. K. (2006). *Consumer behaviour- A European perspective*. (3rd ed.). Madrid: Prentice Hall Europe.
- Umbach, P. D. (2004). Web surveys: Best practices. *New Directions for Institutional Research* 121: 23-38.
- Voelckner, F. (2006). An empirical comparison of methods for measuring consumers' willingness to pay. *Marketing Letters* 17: 137-149.
- Wajnryt, D. (2013). *Exports of commodities by country and industry, 2012*. Central Bureau of Statistics (eds), Jerusalem: Central Bureau of Statistics.
- Wright, K. B. (2005). Researching internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication* 10.

Curriculum Vitae

- 06.02.1985 Born in Dessau, Germany
- 01.04.2004 Abitur at Fürst-Franz-Gymnasium, Dessau, Germany
- 10/2004-08/2007 Christian- Albrechts- Universität zu Kiel, Germany
BSc student in Nutritional Science and Economics
- 09/2007-02/2008 Wageningen University, Netherlands
Exchange student of Management and Consumer Behaviour
- 04/2008-03/2010 Christian- Albrechts- Universität zu Kiel, Germany
MSc student in Nutritional Science and Economics
- Since 05/2010 Georg- August University Göttingen, Germany
PhD student in Agriculture sciences (PAG)
- 12/2011-03/2012 The Hebrew University of Jerusalem, Israel
Research visit at Department of Agricultural Economics
- Since 2010 Research assistant at Department of Agricultural Economics and Rural
Development, Georg-August Universität Göttingen, Chair of Agricultural
Policy (Prof. Dr. Stephan von Cramon-Taubadel)