

**PANTEION UNIVERSITY OF POLITICAL  
AND SOCIAL SCIENCES**

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**Department of Economic and Regional Development  
Master's Degree Programme in Applied Economics and  
Administration**

**How much does guilt cost? Exploring Greek's consumers'  
Willingness to Pay (WTP) for enhanced welfare animal products.  
Does the WTP differ between omnivores and lacto-vegetarians? (with  
the use of questionnaire)**

**Master Thesis**

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## **Abstract**

People make countless numbers of decisions every single day. One of the decisions that people are called to make daily are food choices. Despite the economic determinates, guilt is also a factor that can affect consumer's choices. This determinant may lead consumer's choices through enhanced welfare animal products. This thesis will try to investigate if guilt affects consumer's willingness to pay for enhanced animal welfare products through different categories of the participants (male-female, omnivores-vegans-vegetarians-lacto vegetarians) and if the willingness to pay differ among omnivores and lactovegetarians.

Key words: Guilt, Enhanced Welfare Animal Products (EWAP), Animal Welfare, Willingness to Pay, Dietary Pattern.

## **Περίληψη**

Οι άνθρωποι καλούνται να πάρουν αμέτρητες αποφάσεις κάθε μέρα. Μία από τις αποφάσεις που καλούνται να πάρουν σε καθημερινή βάση είναι οι διατροφικές επιλογές. Παρά τους οικονομικούς παράγοντες, οι τύψεις είναι επίσης ένας παράγοντας που μπορεί να επηρεάσει τις επιλογές του καταναλωτή. Αυτός ο καθοριστικός παράγοντας μπορεί να επηρεάσει τις επιλογές των καταναλωτών οι οποίοι μπορεί να στραφούν στα ζωικά προϊόντα αυξημένης ευημερίας. Μέσω της διπλωματικής αυτής διατριβής θα προσπαθήσουμε να διερευνήσουμε εάν οι τύψεις επηρεάζουν την προθυμία πληρωμής του καταναλωτή (WTP) για ζωικά προϊόντα αυξημένης ευημερίας στις διάφορες κατηγορίες των συμμετεχόντων (άνδρες-γυναίκες, παμφάγοι-χορτοφάγοι-vegetarian) και αν η προθυμία πληρωμής διαφέρει μεταξύ των παμφάγων και των λακτο-χορτοφάγων

Λέξεις κλειδιά: Τύψεις, Ζωικά προϊόντα αυξημένης ευημερίας (EWAP), Καλές συνθήκες διαβίωσης για τα ζώα, Προθυμία πληρωμής (WTP), Διατροφικές Συνήθειες

## Introduction

In today's marketplace, exploring Greek consumers' willingness to pay for enhanced welfare animal products may be an interesting case of study. The welfare of animals bred for production of animal products (meat, dairy, eggs, fur, leather, feathers, wool, etc) has seen rising interest within academic literature across developed countries during the last three decades<sup>1</sup> but it has never been studied before in Greece. Academic interest has been growing hand by hand with interest in policy circles, which is shown by the increasing amount of legislations related to animal welfare<sup>2</sup>. The European Union provides the legal framework that regulates animal treatment during production and disseminates relevant knowledge among consumers<sup>3</sup>.

The appeal of higher welfare products to the public seems to be based on various ethical positions about the animals (which in this thesis we summarized as “guilt”) <sup>4</sup> but also on the nutritional advantages and the benefits for human health conferred by the consumption of these products viv-à-vis similar products and the health of the ecosystems<sup>5</sup>. These rationales can be seen to suggest duality in the roles of individuals. Individuals can be both (potential) consumers of animal products and citizens who hold particular values and moral stances over issues such as animal welfare and sustainability<sup>6</sup>.

Given the above, it would be interesting to investigate why consumers prefer or reject the enhanced welfare animal products and which are the characteristics (variables) that affect their choice in a country that to date no previous research exists.

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<sup>1</sup> Bennett, R.M., Anderson, J. and Blaney, R.J.P. (2002). Moral Intensity and Willingness to Pay Concerning Farm Animal Welfare Issues and the Implications for Agricultural Policy. *Journal of Agricultural and Environmental Ethics*. pp 187-202.

<sup>2</sup> Bennett, R.M. and Blaney, R.J.P. (2003). Estimating the Benefits of Farm Animal Welfare Legislation Using the Contingent Valuation Method. *Agricultural Economics* 29(1): 85-98.

<sup>3</sup> European Commission. Animal Welfare. Retrieved from: [https://ec.europa.eu/food/animals/welfare\\_en](https://ec.europa.eu/food/animals/welfare_en)

<sup>4</sup> Broom, D. (2017). *Animal Welfare in the European Union*. Directorate General For Internal Policies Policy Department C: Citizens' Rights and Constitutional Affairs. European Union.

<sup>5</sup> Compassion in World Farming. *Nutritional Benefits of Higher Welfare Animal Products*. Retrieved from: <https://www.ciwf.org.uk/media/5234769/Nutritional-benefits-of-higher-welfare-animal-products-June-2012.pdf>

<sup>6</sup> Verbeke, W. (2009). Stakeholder, citizen and consumer interests in farm animal welfare. Universities Federation for Animal Welfare. Retrieved from: [https://www.researchgate.net/publication/233680902\\_Stakeholder\\_citizen\\_and\\_consumer\\_interests\\_in\\_farm\\_animal\\_welfare](https://www.researchgate.net/publication/233680902_Stakeholder_citizen_and_consumer_interests_in_farm_animal_welfare)



To do this, we will use the measure of willingness to pay (WTP), which is used in many similar studies. In economics consumers try to maximize their total utility in a given period of time, given their budget constraint<sup>7</sup>.

However, consumers make their choices due to some factors, e.g. income, own price, prices of substitutes, climatic conditions, inventories, and other factors. It is widely accepted lately that other factors may include behavioral variables, such as psychological, cognitive, emotional, cultural and social factors<sup>8</sup>. These factors are explained by behavioral economics. We would like to focus on such behavioral factors in our thesis<sup>9</sup>.

Given the above our research hypothesis may be expressed as: Are Greek consumers willing to pay more if this premium helps to reduce the suffering of animals used for food, clothing, or other purposes?<sup>10</sup> And is there a difference between lacto-vegetarians and omnivores?

The confirmation or rejection of the research hypothesis will be conducted through the use of a questionnaire.

## **Research Methodology**

The research that was conducted includes a variety of research tools. To gain an understanding of consumer's in Greece willingness to pay for enhanced welfare animal products and if they feel guilt, it was important to tackle it from an academic research perspective. The theoretical part of this thesis, was conducted through literature review, that allows us to set the basis and explain later on the results of the questionnaire, and was based by studying a number of documents such as books, articles, laws and similar researches in other countries.

We chose to examine the hypothesis of this research through questionnaire. This technique allows the researchers to collect data from participants all over the

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<sup>7</sup> Greenlaw, S., Shapiro, D., Taylor, T. (2017). *Principles of Economics 2<sup>nd</sup> Edition*. Pp 144. Rice University: Huston Texas

<sup>8</sup> Goodwin, N., Harris, J., Nelson, J., Roach, B., Torras, M. (2014). *Principles of Economics in Context*. 178-Pp 177. New York

<sup>9</sup> Kahneman, D. (2003). Maps of Bounded Rationality: Psychology for Behavioral Economics. *The American Economic Review*,. Vol. 93, No. 5, pp. 1449-1475.

<sup>10</sup> Leslie, J., Sunstein, C. (2007). Animal Rights without Controversy. *Law and Contemporary Problems*. Volume 70, No1, pp117-138.

world twenty four hours a day and seven days per week. Surveys can be delivered quickly to anyone connected to the Web and data can be saved automatically in electronic form, reducing costs in lab space, dedicated equipment, paper, mailing costs, and labor. If the survey is properly programmed, data can be stored in a form ready for analysis, saving costs of data coding and entry that used to be an expensive and time-consuming part of the research process<sup>11</sup>. Moreover, Questionnaires are suitable for collecting knowledge from representative population-based samples and thus suited, when information regarding knowledge, attitude and behaviour is desired<sup>12</sup>.

## **PART A: CONCEPTUAL FRAMEWORK**

### **Chapter 1: Human Decisions and Guilt**

#### **1.1. Human Decision Making According to Economics**

Economics is a social science—it is about people and about how they organize themselves to meet their needs and enhance their well-being<sup>13</sup>. Through centuries economic theory has explored views of human nature and decision-making and many different views have occurred<sup>14</sup>. From the one hand, there are the economic analysts interested in rational economic behavior and the utility function and to the other hand since Enlightenment, Western societies have considered emotions and emotionality as the antithesis of reason and rationality<sup>15</sup>. Recently, however, considerations of emotions and emotionality have returned to the analyses of economic processes<sup>16</sup>.

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<sup>11</sup> Birnbaum, M. (2004). Human Research and Data Collection via the Internet. *Annu. Rev. Psychol.* Volume 55 pp 803–32.

<sup>12</sup> Edwards, P.J., et al., (2009). Methods to increase response to postal and electronic questionnaires. *Cochrane.Database.Syst.Rev.*

<sup>13</sup> Sen, A. (2002). Rationality and Freedom. *The Belknap Press of Harvard University Press.*

<sup>14</sup> Buchanan, L. & O'Connell A. (2006). A Brief History of Decision Making. Harvard Business Review. Retrieved from: <https://hbr.org/2006/01/a-brief-history-of-decision-making>

<sup>15</sup> Harding, J., & Pribram, E. D. (2004). Losing our cool? following Williams and Grossberg on emotions. *Cultural Studies*, 18(6), pp 863–993.

<sup>16</sup> Bandelj, N. (2009). Emotions in economic action and interaction. *Theory and Society*. Volume 38, Issue 4, pp 347–366

Although there are different points of views, ultimately, no one can deny that all economic behavior is human behavior<sup>17</sup>.

### **1.1.1. Classical Economic Views**

Adam Smith in his book “The Theory of Moral Sentiments”, examined with care how people are motivated. His emphasis there is on the desire of people to have self-respect and the respect of others. He assumes that such respect depends on people acting honorably, justly, and with concern and empathy for others in their community. Smith recognizes that selfish desires play a large role but believes that they will be held in check both by the “moral sentiments” (the universal desire for self-respect and the respect of others) and also by the fortunate accident by which “in many cases” (not all) selfish acts can “promote the public interest”<sup>18</sup>. Thus Smith’s vision of human nature and human motivation was one in which individual self-interest was mixed with more social motives. Rather than starting with Robinson Crusoe, who lived alone on an island, he perceived that the behavior of any one person always had to be understood within that person’s social context<sup>19</sup>.

Smith was followed by other economists, such as the trade theorist David Ricardo and the philosopher/economist John Stuart Mill. They held similarly complex views of human nature and motivations<sup>20</sup>. In 1890 Alfred Marshall tried to codify these ideas in a very influential text called *Principles of Economics* in which he viewed the motives of human actors in an optimistic light—including those of economists, whom he assumed were motivated by a desire to improve the human condition<sup>21</sup>. He specifically focused on the reduction of poverty so as to allow people to develop their higher moral and intellectual faculties, rather than being condemned to lives of desperate effort for simple survival<sup>22</sup>.

### **1.1.2. The Neoclassical Model**

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<sup>17</sup> Vriend, N. (1996). Rational behavior and economic theory. *Journal of Economic Behavior and Organization*. Vol. 29, pp 263-285.

<sup>18</sup> Tully, K. (2014). Adam Smith: Providing Morality in a Free Market Economy. Bridgewater State University.

<sup>19</sup> Goodwin, N., Harris, J., Nelson, J., Roach, B., Torras, M. (2014). Principles of Economics in .178-Context. New York. Pp 177

<sup>20</sup> Alvey, J. (1999). A Short History of Economics As a Moral Science. *Journal of Markets & Morality* 2, No 1, pp 53-73.

<sup>21</sup> Goodwin, N., (Harris, J., Nelson, J., Roach, B., Torras, M. (2014

<sup>22</sup> Goodwin, N., Harris, J., Nelson, J., Roach, B., Torras, M

In the twentieth century, the approach that came to dominate economics was known as the neoclassical model<sup>23</sup>. The neoclassical approach took a narrower view of human motivations and by adopting a system known as the “Theory of rational choice”, described the decision as a rational process conducted by a single cognitive process<sup>24</sup>. Rational choice theories represent preferences with a utility function which is a mathematical function that assigns a numerical value to each possible alternative facing the decision maker<sup>25</sup>. In such a process it is assumed that each individual has stable and consistent preferences and make decisions based on the principle of maximization of the subjective expected utility<sup>26</sup>. Utility is basically the ability of a good to satisfy a want<sup>27</sup>. So given a set of options and beliefs expressed in probabilistic terms, it is assumed that the individual maximizes the expected value of a utility function  $U(x)$ <sup>28</sup>. Utility Function:  $U(x_1, x_2, \dots, x_n)$ ,

where  $x_1, x_2, \dots, x_n$  are the quantities of each of  $n$  goods that might be consumed in a period<sup>29</sup>.

While holding constant the other things that affect behavior, *ceteris paribus* (other things being equal) assumption is invoked in all economic analyses of utility-maximizing choices so as to make the analysis of choices manageable within a simplified setting<sup>30</sup>.

Although the consumers are trying to satisfy their wants, they have to face constraints and limitations<sup>31</sup>. In economics jargon, consumers face a budget constraint due to their limited income and the given prices of goods. By assuming that a consumer spends all of their income on good  $X$  and on good  $Y$ , we can express the budget constraint as  $P_X Q_X + P_Y Q_Y = I$

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<sup>23</sup> Persky, J. (2000). The Neoclassical Advent: American Economics at the Dawn of the 20th Century. *Journal of Economic Perspectives*. Vol. 14, No. 1, winter 2000, pp. 95-108

<sup>24</sup> Goodwin, N., Harris, J., Nelson, J., Roach, B., Torras, M

<sup>25</sup> Green, S. (2002). *Rational Choice Theory: An Overview*. Baylor University.

<sup>26</sup> Carfi, D., Lapidus, M., Pearse, E., Frankenhuijsen, M. (2013). *Fractal Geometry and Dynamical Systems in Pure and Applied Mathematics II: Fractals in Applied Mathematics*. United States of America. Pp 361-362.

<sup>27</sup> Salvatore, D. (2008). *Microeconomics : Theory and Applications*. Oxford University Press Inc. pp 38.

<sup>28</sup> Carfi, D., Lapidus, M., Pearse, E., Frankenhuijsen, M. (2013). *Fractal Geometry and Dynamical Systems in Pure and Applied Mathematics II: Fractals in Applied Mathematics*.

<sup>29</sup> Nicholson, W. & Snyder, C. (2008). *Microeconomic Theory Basic Principles and Extensions*. Thomson South Western: Tenth Edition. Pp 89.

<sup>30</sup> Nicholson, W. & Snyder, C. (2008). *Microeconomic Theory Basic Principles and Extensions*. pp 90.

<sup>31</sup> Salvatore, D. (2008). *Microeconomics : Theory and Applications*.

where PX is the price of good X, QX is the quantity of good X, PY is the price of good Y, QY is the quantity of good Y, and I is the consumer's money income<sup>32</sup>.

### 1.1.3. Behavioral Economics

In the past few decades, the neoclassical view of human behavior has been challenged by a strong alternative called behavioral economics, which is a subfield of macroeconomics and studies how individuals and organizations make economic decisions<sup>33</sup> and investigates the psychological foundations of people's economic behavior<sup>34</sup>. Whereas conventional economics assumes that the utility of an outcome depends only on the outcome itself, some economists showed how counterfactual emotions, which arise from considering alternative outcomes that could have occurred, can influence decision making<sup>35</sup>. Studies in this area suggest that a more sophisticated model of human motivations is required to explain behaviors such as the ways that people react to good and bad fortune, and why people often seem to act against their own self-interest<sup>36</sup>.

According to behavioral economics, the decision makers, when they make their choices, are affected by their emotions and actually consult their emotions, even if they do this unconsciously<sup>37</sup>. Moreover, the individuals that are affected by their environment, beliefs, attitudes, expectations and feelings are consciously or unconsciously take unreasonable decisions when it comes to their buying behavior (and not only). All these non-rational decisions are called cognitive biases - a term that has prevailed in psychology. Cognitive-biases in a more simple way according to Kahneman is the word "Familiarity" since it is easier to believe a statement that sound familiar and jump to conclusions, even if you do not remember the source of the statement<sup>38</sup>.

These cognitive biases are many and psychologists and behavioral economists have classified them to three major categories: First, *Decision-making, belief, and*

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<sup>32</sup> Salvatore, D. (2008). *Microeconomics : Theory and Applications*.

<sup>33</sup> Goodwin, N., .Harris, J., Nelson, J., Roach, B., Torras, M. pp 147

<sup>34</sup> Virlics, A., (2013). Emotions in Economic Decision Making: a Multidisciplinary Approach.. *Procedia - Social and Behavioral Sciences*. pp 1011 –1015.

<sup>35</sup> Rick,S. & Loewenstein, G. (2008). The Role of Emotion in Economic Behavior. *Wharton University of Pennsylvania*. pp 5. Retrieved from: [http://opim.wharton.upenn.edu/risk/library/WP2008-04-07\\_SR,GL\\_RoleofEmotioninEconomicBehavior.pdf](http://opim.wharton.upenn.edu/risk/library/WP2008-04-07_SR,GL_RoleofEmotioninEconomicBehavior.pdf)

<sup>36</sup> Goodwin, N., .B ,Harris, J., Nelson, J., Roach, Torras, M

<sup>37</sup> Kahneman, Daniel (2011). *Thinking, fast and slow*. Penguin Group, Penguin Books Ltd, England

<sup>38</sup> Kahneman, Daniel (2011). *Thinking, fast and slow*. Penguin Group, Penguin Books Ltd, England

*behavioral biases*, second the *Social biases* and third the *Memory errors and biases*<sup>39</sup>. Because of the purpose of this analysis, I will examine some of the cognitive biases that are included in the first category, the so called decision-making, belief, and behavioral biases.

The first bias that I will examine is the anchoring or focalism. Anchoring or focalism is a psychological term used to describe the human tendency to overly or heavily rely, anchor on one trait or piece of information when making decisions<sup>40</sup>. This trait or piece can be words, numbers or pictures that can affect the decision maker to make a certain decision<sup>41</sup>.

Another bias is the attentional bias, which means that a person selectively attends to a certain category or certain categories of stimuli in the environment while tending to overlook, ignore, or disregard other kinds of stimuli. For example, one person might selectively attend to stimuli related to food, particularly food that is perceived to be particularly delicious<sup>42</sup>.

A third bias is the Availability heuristic. This refers to the tendency to assess the probability of an event occurring based on the ease with which instances of that event can be brought to mind. The individual applying this heuristic disproportionately weights salient, memorable or vivid evidence over objectively better quality but less striking evidence, leading to availability bias<sup>43</sup>.

Another bias is the Herd behavior. It has been observed that, when information is imperfect, many people can converge on the same choice of action as a result of copying the behavior of others. Herding is deemed to be non-rational when no particular logic is deployed, resulting in the bandwagon effect. But herding can be

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<sup>39</sup> Virlics, A., (2013). Emotions in Economic Decision Making: a Multidisciplinary Approach. *Procedia - Social and Behavioral Sciences*

<sup>40</sup> Zhang, Y., Lewis, M., Pellon, M. and Coleman, P. (2007). A Preliminary Research on Modeling Cognitive Agents for Social Environments in Multi-Agent Systems. pp. 116–123. Retrieved from: <https://pdfs.semanticscholar.org/ae51/a4a099dca38614fc82fcf8a42a02b682a66e.pdf>

<sup>41</sup> Kahneman, Daniel (2011). *Thinking, fast and slow*. Penguin Group, Penguin Books Ltd, England

<sup>42</sup> Fadardi, J.S, Miles, C., and Rahmani A., (2016). Neuroscience for Addiction Medicine: From Prevention to Rehabilitation - Constructs and Drugs. *Progress in Brain Research*. Volume 223. pp 77-89.

<sup>43</sup> ESRC Centre for Competition Policy. (2013). *Behavioral Economics in Competition and Consumer Policy*. Edit Mehta, J.

rational if an individual believes the person or people whose behavior they are copying is/are better informed than they are<sup>44</sup>.

Last but not least, the status quo bias implies that individuals have a strong tendency to remain at the situation (status quo), because the disadvantages of leaving it loom larger than advantages<sup>45</sup>. This happens when someone buys a product or a service. Due to his/her fear of dissatisfaction from the purchase of the new product, customers tend to remain stable in their choices despite the fact that there are strong indications that the new product may be more useful to them<sup>46</sup>.

When all is said and done, the supporters of behavioral economics believe that biases cannot be completely bypassed, and the effects of psychological factors will not disappear totally by any kind of learning<sup>47</sup>. And many people act intelligently and with purpose in their decision makings, but they are not perfectly rationally<sup>48</sup>.

## **1.2. Guilt and Human Behavior**

Guilt is a broad notion that has been studied by many sciences as philosophers, theologians, lawyers, sociologists and psychologists have wrestled with the concept of guilt for centuries<sup>49</sup>. In this analysis it is more useful to examine guilt mainly by the perspective of psychology and economics.

Friedrich Nietzsche, although philosopher, expressed his belief that guilt bears a close conceptual connection to the notion of debt. Just as a debtor's failure to repay gives the creditor the right to seek alternative compensation, so a guilty party owes the victim some form of response to the violation, which serves as a kind of compensation for whatever harm was suffered<sup>50</sup>. Nietzsche's conjectural history of the "moralized" notion of guilt suggests that it developed through a transfer of this

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<sup>44</sup> ESRC Centre for Competition Policy. (2013). *Behavioral Economics in Competition and Consumer Policy*

<sup>45</sup> Kahneman, D., Knetsch, J., Thaler, R. (1991). Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias. *The Journal of Economic Perspectives*. pp. 193-206.

<sup>46</sup> Samuelson, W., and Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty*. Volume 1, Issue 1, pp 7-59

<sup>47</sup> Barberis, N. & Thaler, R. (2003) A survey of behavioral finance in G.M. Constantinides, M. Harris and R.M. Stulz (Eds) *Handbook of the Economics of Finance*. pp 1053-1128.

<sup>48</sup> Rabin, M.(1998). Psychology and Economics, *Journal of Economic Literature*, Vol. 36, No. 1. pp. 11-46.

<sup>49</sup> Tilghman-Osborne, C., Cole, D., Felton, J., (2010). Definition and measurement of guilt: Implications for clinical research and practice. *Clinical Psychology Review*. Volume 30, Issue 5, pp 536-546.

<sup>50</sup> Lanier, A. (2017). Friedrich Nietzsche. *Stanford Encyclopedia of Philosophy*. Retrieved from: <https://plato.stanford.edu/entries/nietzsche/>

structure—which pairs each loss to some (punishment-involving) compensation—from the domain of material debt to a wider class of actions that violate some socially accepted norm<sup>51</sup>.

Psychologists have a longer tradition in studying guilt as psychology has always shown interest in the field of emotions<sup>52</sup>. A broad and general definition of guilt in psychology refers to an emotional state associated with the violation of an intrinsic moral standard<sup>53</sup>.

The father of Modern Psychology Freud, was first mentioned in 1905-1906 to guilt, and in 1913 connected it with male power and the Oedipus complex<sup>54</sup>. Later, in his book “The Ego and the Id and The Economic Problem of Masochism” (1923-1924), expressed the traditional Freudian view, that sees guilt to reside under the surface veneer of our behavior, a conflict between the id, ego, and superego<sup>55</sup>. The superego as the highly moral part of our subconscious is the part of us that fights against injustice and points out wrongs in others<sup>56</sup>.

In cognitive theory, thoughts cause the emotions. Under this circumstance, guilt is an emotion that people experience because they’re convinced they’ve caused harm. The guilt of emotion follows directly from the thought that you are responsible for someone else’s misfortune, whether or not this is the case<sup>57</sup>. It is an unpleasant emotion accompanied by beliefs that one should have thought, felt, or acted differently<sup>58</sup>.

Personal construct theory (PCT) developed by Kelly in 1955 defines guilt as a person's realisation that she is (about to be) acting in a way which would reveal her not to be the sort of person she thought she was: in other words, a guilt-provoking

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<sup>51</sup> Lanier, A. (2017). Friedrich Nietzsche. *Stanford Encyclopedia of Philosophy*.

<sup>52</sup> Baumeister, R. F., Stillwell, A. M., Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin*, 115,243-267.

<sup>53</sup> Hoffman, M.L. (1982). Development of Prosocial Motivation: Empathy and guilt. In Eisenberg, N. (ed), *The Development of Prosocial Behavior*. Academic, New York, pp 281-313.

<sup>54</sup> Di Gennaro, P. (2015). *Wandering through Guilt: The Cain Archetype in the Twentieth-Century Novel*, Cambridge: British Library Cataloguing in Publication Data, pg 13

<sup>55</sup> Di Gennaro, P. (2015). *Wandering through Guilt: The Cain Archetype in the Twentieth-Century Novel*

<sup>56</sup> Whitbourne, S.K. (2012). The Definitive Guide to Guilt. The five types of guilt and how you can cope with each. *Psychology Today*. Retrieved from: <https://www.psychologytoday.com/intl/blog/fulfillment-any-age/201208/the-definitive-guide-guilt>

<sup>57</sup> Elster, J., (1994). Rationality, Emotions, and Social Norms. *Springer*. Vol. 98, No. 1, pp. 21-49.

<sup>58</sup> Kubany, E. S., & Watson, S. B. (2003). Guilt: Elaboration of a multidimensional model. *Psychological Record*, 53, 51–90.



action is one construed by the actor as inconsistent with her self-image - an image which may include as one of its dimensions conjectures about the kinds of moral codes to which she adheres<sup>59</sup>. On the contrary with Freud, Kelly argued that instead of seeing human action as 'motivated' by, say, sex-drives or imprinted tendencies, it may be useful to see people as if they are intent on trying to predict and control events<sup>60</sup>.

An assumption from the above could be that guilt refers to emotional distress resulting from one's transgressions and is often considered a "moral" emotion<sup>61</sup>. However, is this emotion powerful enough to affect consumer's choices? As mentioned previously, when it comes to consumer's choices there are both economic determinants such as cost, income, availability and psychological determinants such as mood, stress and guilt that can affect their choice. Already from 1979 Kelman referred to guilt as one of a number of moral dilemmas argued and that guilt was a powerful agent in attitude change<sup>62</sup>. In fact, according to Roberts consumers are more likely to act when they feel that their decisions will make a difference<sup>63</sup>.

## Chapter 2: Willingness to Pay

Willingness to Pay (WTP) is an economic term used to study consumer's reactions to prices. As part of the price perception process, is linked to other variables that influence decision-making<sup>64</sup>.

### 2.1. Definition

Willingness to pay is defined as the maximum amount that a buyer will pay for a good<sup>65</sup>. It measures how much that buyer values the good at that point in time<sup>66</sup>.

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<sup>59</sup> Earl, P.(1990) Economics and Psychology: A Survey. The Economic Journal. Vol. 100, No. 402. pp. 718-755

<sup>60</sup> Earl, P.(1990) Economics and Psychology: A Survey. The Economic Journal. Vol. 100, No. 402. pp. 718-755

<sup>61</sup> Cohen, T. R., Wolf, S. T., Panter, A. T., & Insko, C. A. (2011). Introducing the GASPscale: A new measure of guilt and shame proneness. *Journal of Personality and Social Psychology*, 100, 947–96

<sup>62</sup> Kelman, H. C. (1979), "The Role of Action in Attitude Change," paper prepared for the 1978-79 Nebraska Symposium on Motivation, Department of Psychology, University of Nebraska, Lincoln,

<sup>63</sup> Rubin, J., & Shaffer, W. F. (1987). Some interpersonal effects of imposing guilt versus eliciting altruism. *Counseling and Values*, Vol 31, pp 190-193.

<sup>64</sup> Breidert, C., Hahsler, M., Reutterer, T. (2006). A review of methods for measuring willingness-to-pay. *Innovative Marketing*.

<sup>65</sup> Mankew, G., (2009). *Principle of Microeconomics*. Fifth edition: USA. pp 138.

<sup>66</sup> Mankew, G., (2009). *Principle of Microeconomics*. Fifth edition: USA

There are two distinct concepts that determine how much a customer is willing to pay for goods or services. These are the maximum price and the reservation price<sup>67</sup>. These two are often confused by the researchers so we will give the distinguished definitions.

The maximum price ( $P_{\max}$ ) of a product is formed by a consumer as the perceived reference price of the reference product plus the differentiation value between the reference product and the product of interest. Formally, the maximum price for a product can be expressed as  $P_{\max} = P_{\text{ref}} + P_{\text{diff}}$

The maximum price is denoted by  $P_{\max}$ , the reference value is  $P_{\text{ref}}$ , and  $P_{\text{diff}}$  is the differentiation value<sup>68</sup>.

The reservation price ( $P_{\text{res}}$ ) of some product is the price at which the consumer is indifferent between consuming or not consuming the good (or any other good of the same product class) at all<sup>69</sup>. A product class is defined to be a set of products from which the utility of consumption is additive separable from all other consumption<sup>70</sup>.

Based on the circumstances outlined above two purchase situations can be identified:

Purchase situation  $P_{\max} < P_{\text{res}} \rightarrow$  The reservation price is higher than or equal to the maximum price.

Purchase situation  $P_{\max} > P_{\text{res}} \rightarrow$  The reservation price is below the maximum price<sup>71</sup>.

## 2.2 WTP studies in the literature. What questions do they answer?

In order to examine Willingness to Pay in the literature review we have reviewed papers through two electronic bibliographic databases named “Scopus” and “JSTOR” that have papers written in English. The search was conducted using keywords singularly (Willingness to pay) in order to examine the fields-areas that use WTP as an estimation method and in combination with the field that this thesis examines.

The results found that willingness to Pay as a method first appeared in literature in 1931 and the research was about chemistry<sup>72</sup>. However, according to

<sup>67</sup> Breidert, C. Estimation of Willingness-to-Pay: Theory, Measurement, Application pp 26.

<sup>68</sup> Nagle, T., and Holden, R.K. (2002). *The Strategy and Tactics of Pricing*. Prentice Hall.

<sup>69</sup> Breidert, C., (2006). *Estimation of Willingness-to-Pay*. Deutscher Universitäts-Verlag. pp 24

<sup>70</sup> Breidert, C., (2006). *Estimation of Willingness-to-Pay*. pp 26

<sup>71</sup> Breidert, C., (2006). *Estimation of Willingness-to-Pay*.

papers, the WTP seems to appear in economic literature more than a century ago and was designed to determine prices for pure public goods and services<sup>73</sup>. Furthermore, from 1931-2019 it was used in many fields with the most common Environmental Science, Medicine, Economics-Econometrics and Finance, Social Sciences, Agricultural and Biological Sciences, Business-Management and Accounting. The last decade it has been used in Medicine, Environmental Science, Social Sciences, Economics-Econometrics and Finance, Agricultural and Biological Sciences, Business-Management and Accounting and in Engineering. As we can see the concept of willingness-to-pay (WTP) has become very popular over the last twenty years in economic assessment studies in the health field.

In particular, the search was conducted using keywords with different combinations such as: How much does the guilt cost?, Guilt, WTP, Consumers, WTP AND Consumers, Animal Product, Animal Product of Increased Prosperity, Enhanced Welfare Animal Products, Enhanced Welfare Animal Products and WTP, WTP AND Omnivores, WTP AND Lacto-vegetarians, Animal-Friendly Products, High Welfare Status, Food Products, Animal Welfare, Living Conditions of Farming Animals, Farmed Animals AND Guilt, Live Stock Breeding AND Guilt, Ethical Values AND Animal Breeding, Animal-Friendly AND Husbandry systems, Animal-Friendly Husbandry Systems AND WTP, Applied ethology, Animal Welfare AND Economic Interests, WTP AND vegans, Plant-based diet, Ethical Consuming, Ethical Consumption AND WTP, WTP AND Vegan Products, Sustainable Food Production, WTP AND Organic Products, Social Consensus AND Animal Products, Green Products AND WTP and etc.

Moreover, researchers have shown the importance of valid WTP estimates<sup>74</sup>. Considering the WTP-animal welfare-enhanced welfare animal products the research has shown that most studies estimate WTP and legislation and how social consensus and moral beliefs affect WTP. These researches are mainly conducted to U.S.A and in European Countries through the European eurobarometer.

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<sup>72</sup> Le Gall-Ely, M. (2009). Definition, Measurement and Determinants of the Consumer's Willingness to Pay: a Critical Synthesis and Directions for Further Research. *Recherche et Applications Marketing*, Volume 24, 2, pp 91-113.

<sup>73</sup> Smith, R., Olsen, J.A., Harris, A. (1999). Review of Methodological Issues in the Conduct of WTP Studies in Health Care II: Administration of a CV Survey. *Centre for Health Program Evaluation*. Working Paper No 35.

<sup>74</sup> Breidert, C., Hahsler, M., Reutterer, T. (2006). A review of methods for measuring willingness-to-pay. *Innovative Marketing*.

## Chapter 3: Enhanced Welfare Animal Products

It has been estimated that people make approximately two hundred food-related decisions each day<sup>75</sup> and that exactly shows that food is an essential part of our lives. Besides the food quality characteristics, the nutritional content of foods, nowadays researches have shown that there are other factors, mainly ethical concerns, like animal welfare and environmentally friendly production that are playing an important and determinant role in consumers' food choices<sup>76</sup>. As the information spread, partially, consumers have started to show more interest, especially for the evaluation of conditions regarding the well-being of animals<sup>77</sup>. There are existing evidence that highlighted a growing interest from the consumers to know the welfare conditions relating to the animal products they eat or use in order to make more informed choices on the products they buy<sup>78</sup>. And although the majority of consumers are price-sensitive, the results of several surveys have revealed the existence of a group of consumers who are interested in products that are from animals that have lived under better circumstances<sup>79</sup>.

### 3.1 Animal Welfare and Enhanced Welfare Animal Products

The issue of animal welfare is a broad subject with differing definitions and assessment criteria. The animal welfare issue came seriously to the forefront only after World War II and it was an outcome of the many social movements (civil rights movement, environmental movement, animal rights) that blossomed this period<sup>80</sup> and an unanticipated result of convergent trends in demographics, animal utilization, science, technology, moral philosophy, and popular culture<sup>81</sup>. It was the same period that livestock sectors and intensive breeding practices bloomed to the industrialized

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<sup>75</sup> Wansink, B. and Sobal, J. (2007). Mindless eating: the 200 daily food decisions we overlook. *Environment and Behavior*. Vol 39: 106.

<sup>76</sup> Tsakiridou, E., Tsakiridou, H., Mattas, K., & Arvaniti, E. (2010). Effects of animal welfare standards on consumers' food choices. *Acta Agriculturae Scandinavica, Section C — Food Economics*. Volume 7, Issue 2-4: Food Industry and Food Chains in a Challenging World.

<sup>77</sup> Shields, S., Shapiro, P., Rowan, A. (2017). A Decade of Progress toward Ending the Intensive Confinement of Farm Animals in the United States. *Humane Society International*. Volume 7, Issue 5.

<sup>78</sup> Ingenbleek, P., Harvey, D., Ilieski, V., Immink, V., De Roest, K., Schmid, O., (2013). The European Market for Animal-Friendly Products in a Societal Context. *Animals Basel*. pp 808–829.

<sup>79</sup> Nocella, G., Hubbard, L., & Scarpa, R. (2009). Farm Animal Welfare, Consumer Willingness to Pay, and Trust: Results of a Cross-National Survey

<sup>80</sup> Lubinski, J. (2004). Introduction to Animal Rights (2nd Ed). Michigan State University College of Law.

<sup>81</sup> Unti, B., & Rowan, A., (2001). A Social History of Postwar Animal Protection. *The Humane Society Institute for Science and Policy Animal Studies Repository*.

countries in order to lower average production costs<sup>82</sup>. Those consequences of intensive breeding began to cause concern in intellectual circles and to the society and during the 1950s humane groups squared off with the meat industry to secure the enactment of the Humane Slaughter Act (1958)<sup>83</sup>. During the mid 1970s Peter Singer's book *Animal Liberation* introduced a total new idea for ethical consideration as he highlighted the human obligation to animals and gave to the animal protection movement a unifying ideology<sup>84</sup>.

Animal welfare can be a difficult concept to pin down, and many people have their own personal views. Despite this there is general agreement within the scientific community about what represents good animal welfare<sup>85</sup>. The animal welfare issue is what happens to animals before death, including the living conditions, the effect on them of how they are treated during the last part of their lives and the killing procedure<sup>86</sup>. According to the World Organisation for Animal Health (OIE) "animal welfare means how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear, and distress. Good animal welfare requires disease prevention and veterinary treatment, appropriate shelter, management and nutrition, humane handling and humane slaughter or killing. Animal welfare refers to the state of the animal; the treatment that an animal receives is covered by other terms such as animal care, animal husbandry, and humane treatment."<sup>87</sup> These definition expresses animal welfare in two both two notions. The one of the objective, physical condition of the animal (if the animal is healthy) and its living environment and the second of the conception stresses emotions and feelings referring to animal treatment.

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<sup>82</sup> Nocella, G., Hubbard, L., & Scarpa, R. (2009). Farm Animal Welfare, Consumer Willingness to Pay, and Trust: Results of a Cross-National Survey. *Applied Economic Perspectives and Policy*. Volume 32, number 2, pp. 275 – 297.

<sup>83</sup> Unti, B., & Rowan, A., (2001). A Social History of Postwar Animal Protection

<sup>84</sup> Singer, P. *Equality for Animals?*. Excerpted from *Practical Ethics*, Cambridge, 1979, chap. 3.

Retrieved from: <https://www.utilitarian.net/singer/by/1979----.htm>

<sup>85</sup> Kjærnes, U., & Keeling, L., *Principles and Criteria of Good Animal Welfare*. European Union. Retrieved from: [http://www.welfarequality.net/media/1084/wq\\_factsheet\\_10\\_07\\_eng2.pdf](http://www.welfarequality.net/media/1084/wq_factsheet_10_07_eng2.pdf)

<sup>86</sup> Broom, D., (2017). *Animal Welfare in the European Union*. Directorate General for Internal Policies Policy Department C: Citizens' Rights and Constitutional Affairs. Brussels: European Union.

<sup>87</sup> OIE (2014). *Terrestrial Animal Health Code, Chapter 7.1 – Introduction to the Recommendations for Animal Welfare*. Paris. Retrieved from: [http://www.oie.int/fileadmin/Home/eng/Health\\_standards/tahc/2010/chapitre\\_aw\\_introduction.pdf](http://www.oie.int/fileadmin/Home/eng/Health_standards/tahc/2010/chapitre_aw_introduction.pdf)

The products that come from animals that have lived in better conditions are called Enhanced Welfare Animal Products. The Enhanced Welfare Animal Products refer to the transparent certification that the product has been obtained under productive schemes exceeding the minimum mandatory requirements in terms of animal protection<sup>88</sup>.

Given that there are significant differences in the welfare of animals exposed to different production methods, labelling has the potential to provide consumers with consistent and reliable information on the welfare of the animal concerned<sup>89</sup>.

### **3.1.1 Food Labelling on Enhanced Welfare Animal Products and Consumer's Choices**

As Verbeke mentioned (2009) individuals are both potential consumers of animal products and citizens who hold particular values and moral stances over issues such as animal welfare<sup>90</sup>. Besides the price that influences consumer's choices, results of several surveys in the last years have revealed the existence of groups of consumers who are interested in buying products with specific qualities and characteristics including animal welfare attributes<sup>91</sup>. They want to be fully informed about the composition of the products, the manufacturing process, where the raw materials come from, about farming practices including how the animals were treated. These category of consumers have the power through their purchase choices to impact in changing laws, codes of practice, and food company policies in relation to farming practices<sup>92</sup>. In this context, labels of food products play a significant role in providing the relevant information to consumers.

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<sup>88</sup> Di Pasquale, J., Nannoni, Adinolfi, F., Del Duca, I., Capitanio, F., Sardi, L., Vitali, M., & Martelli, G., (2016). A case-study on profiling Italian consumers of animal-friendly foods. *Italian Journal of Animal Science*, Volume 15,-Issue 2.

<sup>89</sup> Royal Society for the Prevention of Cruelty to Animals. *What are animal welfare-friendly food products?* Retrieved from: <https://kb.rspca.org.au/knowledge-base/what-are-animal-welfare-friendly-food-products/>

<sup>90</sup> Verbeke, W. (2009). Stakeholder, citizen and consumer interests in farm animal welfare. *Animal Welfare*. Volume 18, pp 325-333.

<sup>91</sup> Commission of the European Communities (2009). Options for animal welfare labelling and the establishment of a European Network of Reference Centres for the protection and welfare of animals. *Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions*. Retrieved by: [https://ec.europa.eu/food/sites/food/files/animals/docs/aw\\_other\\_aspects\\_labelling\\_report\\_en.pdf](https://ec.europa.eu/food/sites/food/files/animals/docs/aw_other_aspects_labelling_report_en.pdf)

<sup>92</sup> Broom, D. (2016). Considering animals' feelings. *Centre for Anthrozoology and Animal Welfare University of Cambridge*

The valuation and assessment of the enhanced welfare animal products is conducted through the labelling scheme which is a certification system that certifies an animal welfare standard<sup>93</sup>. As pointed out by Caswell and Mojduszka (1996), labels can facilitate consumer choice by transforming credence and experience attributes into searchable characteristics, thereby decreasing the information gap between consumers and producers<sup>94</sup>. And although studies that conducted in the European Union have highlighted that a significant proportion of citizens wish to be informed not just about the "physical qualities", such as the contents of desired and undesired ingredients, but also about other qualities of the food they buy, which include the ethical factors related to production and the way animals are treated<sup>95</sup>, in European Union there is no harmonised system of animal welfare standards for labelling purposes<sup>96</sup>.

Currently, no specific laws exist regarding the labeling of products on animal welfare, except the EU-wide system of compulsory labelling on animal welfare - for table eggs (cages, free range, barn, etc.). Such classification of production methods does not exist for other types of animal production in the EU<sup>97</sup>. In this research we will examine the most common labels that a consumer can meet in products in the Greek market, and we used in our questionnaire which are:

“The Not Tested on Animal Label” which is verified by Choose Cruelty Free (CCF) and means that one of its products and ingredients have ever been tested on animals by it, by anyone on its behalf, by its suppliers or anyone on their behalf and must not contain any ingredients derived specifically from killing an animal or provided as a by-product from killed animals<sup>98</sup>.

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<sup>93</sup> European Commission (2009). Feasibility study on animal welfare labelling and establishing a Community Reference Centre for Animal Protection and Welfare Part 1: Animal Welfare Labelling. Retrieved from:

[https://ec.europa.eu/food/sites/food/files/animals/docs/aw\\_other\\_aspects\\_labelling\\_feasibility\\_study\\_report\\_part1.pdf](https://ec.europa.eu/food/sites/food/files/animals/docs/aw_other_aspects_labelling_feasibility_study_report_part1.pdf)

<sup>94</sup> Caswell, J.A. & Mojduszka, E.M. , (1996). Using Informational Labeling to Influence the Market for Quality in Food Products. *Research in Agricultural and Applied Economics*.

<sup>95</sup> Welfare Quality®: Science and society improving animal welfare in the food quality chain. EU funded project. Retrieved from: <http://www.welfarequality.net>

<sup>96</sup> European Commission. Labelling related to animal welfare. Retrieved from: [https://ec.europa.eu/food/animals/welfare/other\\_aspects/labelling\\_en](https://ec.europa.eu/food/animals/welfare/other_aspects/labelling_en)

<sup>97</sup> European Commission. Labelling related to animal welfare.

<sup>98</sup> Ethical Elephant (2015). Cruelty-Free and Vegan Labels & Logos Explained. Retrieved from: <https://ethicalelephant.com/cruelty-free-vegan-labels-logos/>

“The Leaping Bunny” certification is the global gold standard for cosmetics, personal care products and household products. It is the only internationally recognised certification that requires a supplier monitoring system to be implemented by the brand, supply chain checking for animal testing right down to ingredient manufacturer level, adherence to a fixed cut-off date policy and acceptance of ongoing independent audits to ensure compliance<sup>99</sup>.

“Organic” regulations define the conditions that meet the high welfare standards to the health and well-being of farm animals. Organic animals have more space and access to outdoors to express their natural behavior<sup>100</sup>. Moreover, it refers to the food that farmed animals eat which is free of antibiotics and pesticides<sup>101</sup>.

“The Free Range” claim on a label suggests that the animals on a farm were able to range freely outdoors; however, the claim does not have to be verified through on-farm inspections, and producers can make the claim on a label as long as the animals were given some access to an outdoor area of unspecified size. For chickens, this outdoor area does not have to be big enough to accommodate all birds and for beef products this labeling claim means that the animals were given free access to the outdoors for a minimum of 120 days per year. There are no space requirements, and no requirements for the condition of the outdoor space. The claim does not mean that the animals only grazed on range. That is why this label is one of the most potentially misleading labels because of the discrepancy between what it implies and what is required to make the claim. “free range”<sup>102</sup>.

If the words “free range” appear on an egg carton label it means that the laying hens were given access to an outdoor area for at least 6 hours per day, weather permitting. The outdoor area could be covered with vegetation where possible; gravel, straw, mulch, or sand are also acceptable materials for ground cover. The minimum

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<sup>99</sup> Cruelty Free International. Leaping Bunny Certification Programme. Retrieved from: <https://www.crueltyfreeinternational.org/what-we-do/corporate-partnerships/leaping-bunny-certification-programme>

<sup>100</sup> IFOAM. Animal Health and Welfare. Retrieved from: <https://www.ifoam-eu.org/en/farm-food-environment/animal-health-and-welfare>

<sup>101</sup> Schilling, N. (2017). What Do “Free-Range,” “Organic” and Other Labels Really Mean?. IN DEFENSE OF ANIMALS. Retrieved from: <https://www.idausa.org/campaign/farmed-animal/latest-news/what-do-free-range-organic-and-other-labels-really-mean/>

<sup>102</sup> IFOAM. Animal Health and Welfare.



amount of uncovered outdoor area required per hen is 2 square feet, which is roughly 17 by 17 inches<sup>103</sup>.

A “cage free” claim on an egg carton label means that the hens were not confined in cages. It does not mean that the hens had access to the outdoors. In a caged housing system, laying hens are granted just enough space to stand upright, but not enough space to stretch wings or move around. The industry standard for space per bird in a cage is generally slightly more than 8 inches by 8 inches – that’s less than the size of a sheet of paper. On a chicken label cage free claim on chicken adds no value; meat chickens are not raised in cages, but in large, open structures known as “growout houses.” Meat chicken houses typically house tens of thousands of birds and grant less than a square foot of space per bird (approximately 10.5 inches by 11 inches per bird)<sup>104</sup>.

Certified Vegan Logo is a registered trademark, for products that do not contain animal products or byproducts and that have not been tested on animals. In order for a product to be approved for Vegan Certification it must: A) not contain meat, fish, fowl, animal by-products, eggs or egg products, milk or milk products, honey or honey bee products, insects or products from insects such as silk or dyes, or sugar filtered with bone charm B) may not contain or be sourced from leather, fur, silk, feathers, down, bone, horn, shell, wool, cashmere, shearling, angora, animal skin, suede, or mohair, C) Liquids such as beer, wine, maple syrup, and fruit juices may not be filtered, defoamed, or clarified with animal products, D) Products must not have involved animal testing of ingredients or finished products by the supplier, producer, manufacturer, or independent party and may not be tested in the future, E) Products may not contain any animal-derived GMO's or animal-derived genes used to manufacture ingredients or finished product<sup>105</sup>.

Despite the absence of a harmonized label system, information on the packaged foods including details of the food content and composition can at the same time develop trust between consumers and producers and help them in overcoming

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<sup>103</sup> IFOAM. Animal Health and Welfare

<sup>104</sup> Consumer Reports’ Greener Choices. “Cage Free”. Retrieved from: <http://greenerchoices.org/2017/02/06/cage-free-mean/>

<sup>105</sup> Vegan Org. What is the Certified Vegan Logo?. Retrieved from: <https://vegan.org/certification/>

the obstacles for effective communication and the establishment of trust<sup>106</sup> and affect consumers while they are making food purchasing decisions<sup>107</sup>.

### 3.2 Consumer's Dietary Patterns and Guilt

Animal welfare is a broad subject with differing definitions and assessment criteria, as mentioned before. The notion of animal welfare is often contrasted with those of animal rights and animal liberation, which hold that animals should not be used by humans, and should not be regarded as their property<sup>108</sup>.

First of all it is useful to make one significant distinction that concerns the ethics of not killing animals for human food, human clothing, and scientific research and the animal welfare of animals that are raised for production of animal products (meat, dairy, eggs, fur, leather, feathers, wool, etc) as they are two distinguished categories.

The first category refers to the ethical view that supports absence from products, services, foods that their production includes exploiting animals in order to satisfy human's needs (food, clothe, research)<sup>109</sup>. This lifestyle is called veganism. According to the Vegan Society, veganism is "A philosophy and way of living which seeks to exclude all forms of exploitation of, and cruelty to, animals for food, clothing or any other purpose; and by extension, promotes the development and use of animal-free alternatives for the benefit of animals, humans and the environment. In dietary terms it denotes the practice of dispensing with all products derived wholly or partly.<sup>110</sup> Researches have shown that people following a vegan diet may choose to do so for different reasons, which in turn, may affect their food and lifestyle choices<sup>111</sup>. These reasons vary with both quantitative and qualitative research to show that health

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<sup>106</sup> Messer, K., Costanigro, M., Kaiser, H. (2017). Labeling Food Processes: The Good, the Bad and the Ugly. *Applied Economic Perspectives and Policy*. Volume 39, number 3, pp. 407–427.

<sup>107</sup> Nurliyana, G., Norazmir, M. N, Khairil Anuar, M.I (2011). Knowledge, Attitude and Practices of University Students Regarding the Use of Nutritional Information and Food Labels. *Asian Journal of Clinical Nutrition*.

<sup>108</sup> Retail Forum for Sustainability (2014). Animal Welfare. Issue Paper No 13. Retrieved from: [http://ec.europa.eu/environment/industry/retail/pdf/issue\\_paper\\_13.pdf](http://ec.europa.eu/environment/industry/retail/pdf/issue_paper_13.pdf)

<sup>109</sup> Engster, D., Care Ethics and Animal Welfare. Retrieved from: <https://webs.wofford.edu/williamsnm/animal%20ethics%20articles/care%20ethics%20and%20animal%20welfare.pdf>

<sup>110</sup> The Vegan Society. *Definition of veganism*. Retrieved from: <https://www.vegansociety.com/go-vegan/definition-veganism>

<sup>111</sup> Dyett, P. A., Sabaté, J., Haddad, E., Rajaram, S., & Shavlik, D. (2013). Vegan lifestyle behaviors. An exploration of congruence with health-related beliefs and assessed health indices. *Appetite*, Vol.67, pp.119-124.

and ethical reasons (animal rights) to be the most common and environmental concern, influence of others, and sensory disgust to follow<sup>112</sup>.

Considering the well-being of the farmed animals there is disagreement as to the moral significance of the quantity – duration – of life for these animals. It seems too many to be commonsense that healthy animals, experiencing a good quality of life, lose out by having their lives prematurely terminated<sup>113</sup>. By this concept the notion of animal welfare does not play an important role for this type of consumers.

The second category refers to the consumer's that use totally or partially animal products but care about their well-being and are willing to pay more to purchase animal products that makes them feel better about the life the animals had<sup>114</sup>. These consumers can be vegetarians or omnivores.

Omnivore is the scientific term when we refer to the dietary pattern of a human<sup>115</sup> and it means that the diet consist plants (vegetables, fruits), animals cooked as meat or used for products like milk or eggs, fungi such as mushrooms, algae, in the form of edible seaweeds such as nori, which are used to wrap sushi rolls, and sea lettuce, eaten in salads<sup>116</sup>.

Vegetarian is a person who does not eat meat (including fowl) or seafood, or products containing these foods but eats eggs and dairy products. The eating patterns of vegetarians may vary considerably. From the one hand there are the lacto-ovo-vegetarian which is an eating pattern is based on grains, vegetables, fruits, legumes, seeds, nuts, dairy products, and eggs. From the other hand there are the lacto-vegetarian diets that exclude eggs as well as meat, fish, and fowl, but the diet includes dairy products.<sup>117</sup>

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<sup>112</sup> Fox, N. & Ward, K. (2008). Health, ethics and environment: A qualitative study of vegetarian motivations. *Appetite*, Volume 50, pp 422-429.

<sup>113</sup> Monsó, S. Benz-Schwarzburg, J. & Bremhorst, A (2018). Animal Morality: What It Means and Why It Matters. *The Journal of Ethics*. Volume 22, Issue 3–4, pp 283–310

<sup>114</sup> Sechi, R., Baldinelli, C., Iulietto, M., Cenci Goga B., (2015). Animal Welfare: Data from an Online Consultation. *Italian Journal of Food Safety*. pp 5504

<sup>115</sup> Blundell, J. (2019). Appetite Control—Biological and Psychological Factors. In *Eating Disorders and Obesity in Children and Adolescents*. pp 17-22.

<sup>116</sup> National Geographic. Omnivore.

Retrieved from: <https://www.nationalgeographic.org/encyclopedia/omnivore/>

<sup>117</sup> Winston, C., Mangels, A.R., (2009). Position of the American Dietetic Association: Vegetarian Diets. *Journal of the American Dietetic Association*. Volume 109 Number 7 pp 1266-1282.

A numbers of these consumers may translate their ethical values-interest in animal welfare into purchasing intentions. Guilt plays a significant role in decisional making<sup>118</sup>. For example, individuals who had more pets in childhood where found to refrain from consuming certain animal products, and were also found to endorse greater concern for animals in general; that is, they had empathy not only for companion animals, but that empathy generalized to include laboratory, farm, and wildlife animals<sup>119</sup>. There is also evidence to suggest that a positive relationship with a companion animal in childhood is positively associated with meat avoidance, motivated by ethical, rather than health or other concerns, later in life<sup>120</sup>.

However, it is worth to mention that people often se defense mechanisms to protect themselves from feelings of guilt, which arise because the id or superego becomes too demanding and this defense mechanisms operate at an unconscious level and help ward off unpleasant feelings<sup>121</sup>. Studies have shown that people generally do not like to be reminded of the fact that an animal had to be slaughtered in order to become a food product. In other word, people have a tendency to ‘de-animalise’ the meat, motivated by reducing feelings of guilt<sup>122</sup>.

## **PART B: EMPIRICAL ANALYSIS**

### **Chapter 4: Questionnaire Design and Data**

In order to examine the questions that this thesis tries to answer which are how much does the guilt cost?, Greek’s consumers’ willingness to pay for enhanced welfare animal product and if there is a difference between omnivores and lacto-vegetarians. We chose to answer these questions through the questionnaire.

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<sup>118</sup> Steenhaut, S. & Van Kenhove, P. (2006). The Mediating Role of Anticipated Guilt in Consumers' Ethical Decision Making. *Journal of Business Ethics*. Volume 69. pp 269-288.

<sup>119</sup> Paul, E.S., & Serpell, J.1993). Childhood Pet Keeping and Humane Attitudes in Young Adulthood. *Animal welfare*. Volume 2, pp 321-337.

<sup>120</sup> Heiss, S., & Hormes, J. (2017). Ethical concerns regarding animal use mediate the relationship between variety of pets owned in childhood and vegetarianism in adulthood. *Appetite*. Volume 123, pp 43-48

<sup>121</sup> Goldstein, E.(2008). Ego Psychology Theory. *Human Behavior in the Social Environment*. Volume 2

<sup>122</sup> Roex, J. & Miele, M. (2005). Farm Animal Welfare Concerns. Consumers-Retailers and Producers. *Welfare Quality Reports No1*. Retrieved from: <http://www.welfarequality.net/media/1093/wqr1.pdf>

The questionnaire was available from 19<sup>th</sup> of February to 5<sup>th</sup> of March 2019 and 655 participants answered. Regarding the questionnaire due to the lack of budget we use the “Google Form”, which is free and the forms are integrated with Google Sheets which gives a spreadsheet view of the data collected similar to excel, making it easy to analyze. Regarding the sample, to overcome the restrictions in budget, human resources and time we decided to administer the questionnaire via the Web, mainly social media (Facebook and Instagram) and email (through the academic members of the Panteion University). So we can admit that our sample is consisted by participants that are readily available and accessible, as there is no geographical or time restriction and this is why we can call our sample «a convenience sample»<sup>123</sup>. However, because vegans, vegetarians, lacto-vegetarians and parents with small children were important for our sample, purposely we shared the questionnaire in groups in the social media which belong in these categories and we asked similarly to forward the questionnaire to similar participants. Through this method we achieved the “snowball sampling”. Snowball sampling uses a small pool of initial informants to nominate, through their social networks, other participants who meet the eligibility criteria and could potentially contribute to a specific study. The term "snowball sampling" reflects an analogy to a snowball increasing in size as it rolls downhill<sup>124</sup>.

The questionnaire was designed in parts with some of the questions-statements were selected from the literature and adapted to this research:

The first part was the demographic information, meaning these questions that give us the profile of the participants. The socio-economic data about consumer's sex, age, education and economic status, people in the house and their categories, if they are pet owners, religious and their dietary patterns. Considering the question about dietary pattern because we wanted our results to be reliable we gave to the participants a list of products (meat, dairy, molluscus, honey) to choose what they consume and according to their answers we categorized them to omnivores, vegetarians and vegans.

The second part had questions that were trying to measure the guilt, if the participants had knowledge about the enhanced welfare animal products, and with the

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<sup>123</sup> Warner, R. (2008). *Applied Statistics: From Bivariate Through Multivariate Techniques*. United States of America: Sage Publication.

<sup>124</sup> David L., Morgan (2008). *The SAGE Encyclopedia of Qualitative Research Methods*. SAGE Publications, Inc. pp. 816–817.

idea of animal welfare generally (questions about books related to animals, animal campaign's, labels) and last but not least if they are willing to pay more for specific foods. There were also questions about substitutes of animal products because we would like to know if the participants are familiar with them and if they consume them.

The questions that tried to measure consumer's attitudes towards guilt and enhanced welfare animal products were expressed on a Likert-type scale from one (1) to five (5), where one meant full disagreement, and five meant full agreement with a particular statement.

Regarding the questions that asked if the participants are willing to pay more for specific enhanced animal welfare products, we have given them the price of the conventional products and then to choose between 5 different prices and the options that do not consume it at all or there are not willing to pay more. Considering the prices of the conventional products were selected from the website of Ministry of Finance of the Hellenic Republic for the month of November<sup>125</sup>. For the products that we couldn't find in the Ministry and for the enhanced welfare animal products, the prices were retrieved from electronic supermarket of Greece and from different electronic shops where enhanced products were available.

Data collected in the survey were analysed using the Statistics and Data (Stata) Version 15.1. The main reason that we choose this program is that it recommended also for beginners in the statistic analysis<sup>126</sup>.

It is worth to mention that although this thesis is written in English, the questionnaire is in the Greek language as it refers to Greek's consumers' Willingness to Pay (WTP) for enhanced welfare animal products and we can't take for granted that all the participants would perfectly know the English language. In order to have more reliable outcomes, we chose the questionnaire to be on the participant's mother tongue.

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<sup>125</sup> Ministry of Finance of the Hellenic Republic. Retrieved from: [http://www.mindev.gov.gr/category/times-proionton-teleutaia-arxeia/page/3/?fbclid=IwAR3M3GBi21E6sdm0NoyhFxdYRgKZqD5-sZuiLL\\_Km6IbMQrlsJ2zag8gk6Q](http://www.mindev.gov.gr/category/times-proionton-teleutaia-arxeia/page/3/?fbclid=IwAR3M3GBi21E6sdm0NoyhFxdYRgKZqD5-sZuiLL_Km6IbMQrlsJ2zag8gk6Q)

<sup>126</sup> Long, S. & Freese, J. (2001). Regression models for categorical dependent variables using stata.

Finally, we concluded with a sample of 655 observations. Table 1 presents the description of the sample.

<b>Main Characteristics of the Sample</b>		
<b>Categories</b>	<b>Number</b>	<b>Percentage %</b>
<b><u>Gender</u></b>		
<b>Male</b>	<b>154</b>	<b>23,50%</b>
<b>Female</b>	<b>500</b>	<b>76,30%</b>
<b>Don't Want to Answer</b>	<b>1</b>	<b>0,20%</b>
<b>Total</b>	<b>655</b>	<b>100,00%</b>
<b><u>Age Groups</u></b>		
<b>&lt;17</b>	<b>2</b>	<b>0,30%</b>
<b>18-25</b>	<b>144</b>	<b>22,00%</b>
<b>26-35</b>	<b>264</b>	<b>40,30%</b>
<b>36-45</b>	<b>169</b>	<b>25,80%</b>
<b>46-55</b>	<b>61</b>	<b>9,30%</b>
<b>56-67</b>	<b>13</b>	<b>2,00%</b>
<b>68&gt;</b>	<b>2</b>	<b>0,30%</b>
<b>Total</b>	<b>655</b>	<b>100,00%</b>
<b><u>People Per House</u></b>		
<b>1</b>	<b>98</b>	<b>15%</b>
<b>2</b>	<b>123</b>	<b>18,80%</b>
<b>3</b>	<b>221</b>	<b>33,70%</b>
<b>4</b>	<b>171</b>	<b>26,10%</b>
<b>5</b>	<b>29</b>	<b>4,40%</b>
<b>6&lt;</b>	<b>13</b>	<b>2%</b>
<b>Total</b>	<b>655</b>	<b>100%</b>
<b><u>Children in House (1 month-12 years old)</u></b>		
<b>Yes</b>	<b>331</b>	<b>50,50%</b>
<b>No</b>	<b>324</b>	<b>49,50%</b>
<b>Total</b>	<b>655</b>	<b>100,00%</b>
<b><u>Education</u></b>		
<b>Secondary</b>	<b>53</b>	<b>8,10%</b>
<b>Higher Education</b>	<b>264</b>	<b>40,30%</b>
<b>Private Universities</b>	<b>69</b>	<b>10,50%</b>
<b>University Student's</b>	<b>68</b>	<b>10,40%</b>
<b>Master</b>	<b>172</b>	<b>26,30%</b>
<b>PhD</b>	<b>29</b>	<b>4,40%</b>
<b>Total</b>	<b>655</b>	<b>100,00%</b>
<b><u>Income</u></b>		
<b>Don't' Want to Answer</b>	<b>50</b>	<b>7,60%</b>
<b>&lt; 5.000€</b>	<b>51</b>	<b>7,80%</b>
<b>5.001-10.000€</b>	<b>118</b>	<b>18%</b>
<b>10.001-20.000€</b>	<b>207</b>	<b>31,60%</b>

20.001-30.000€	122	18,70%
30.001-50.000€	74	11,30%
50.000€>	33	5%
<b>Total</b>	<b>655</b>	<b>100,00%</b>
<b><u>Area</u></b>		
<b>Athens &amp; Attica Region</b>	<b>369</b>	<b>56,30%</b>
<b>Big Urban City (Thessaloniki, Patra, Heraklion, Chalkida, Larisa, Volos)</b>	<b>104</b>	<b>15,90%</b>
<b>Abroad</b>	<b>39</b>	<b>6%</b>
<b>Other (Village, Countryside, Islands)</b>	<b>143</b>	<b>21,80%</b>
<b>Total</b>	<b>655</b>	<b>100,00%</b>
<b><u>Religious</u></b>		
<b>Yes</b>	<b>296</b>	<b>45,20%</b>
<b>No</b>	<b>299</b>	<b>45,60%</b>
<b>Don't Want to Answer</b>	<b>60</b>	<b>9,20%</b>
<b>Total</b>	<b>655</b>	<b>100%</b>
<b><u>Pet Owner</u></b>		
<b>Yes</b>	<b>280</b>	<b>42,70%</b>
<b>No</b>	<b>375</b>	<b>57,30%</b>
<b>Total</b>	<b>655</b>	<b>100%</b>
<b><u>Dietary Pattern</u></b>		
<b>Vegan</b>	<b>47</b>	<b>7,20%</b>
<b>Vegetarians</b>	<b>28</b>	<b>4,30%</b>
<b>Lacto</b>	<b>8</b>	<b>1,20%</b>
<b>Omnivores</b>	<b>572</b>	<b>87,30%</b>
<b>Total</b>	<b>655</b>	<b>100,00%</b>

Table 1: Description of the sample

## CHAPTER 5: METHODOLOGY AND EMPIRICAL FINDINGS

### 5.1 Factor Analysis

In order to examine the questions that this thesis tries to answer, due to the large amount of questions, we conducted Factor Analysis. Factor analysis is a statistical method used as a tool for investigating the relationships between variables for complex concepts. It allows us to explore concepts by shrinking a large number of



variables (factors) into a smaller set<sup>127</sup>. In factor analysis, the number of factors extracted is the same as the number of observed variables. Each factor occupies a certain amount of the total variation of the observed variables. The factors are always listed based on the variation they explain<sup>128</sup>. For this purpose we wanted to summarize data so that relationships and patterns can be easily interpreted and understood, so we constructed 2 new variables that consisted questions from the questionnaire that we thought explain better the notions in order to isolate constructs and concepts.

However, it is worth to mention that prior to the extraction of the constructs, there are some tests which must be conducted to examine the adequacy of the sample and the suitability of data for Factor Analysis<sup>129</sup>.

Bartlett's test of sphericity is a statistical test for the presence of correlations among the variables, is one such measure. It provides the statistical significance that the correlation matrix has significant correlations among at least some of the variables. Small values ( $p < .05$ ) of the significance level indicate that a factor analysis may be useful with our data<sup>130</sup>.

Another test that assesses the sampling adequacy is Kaiser-Meyer-Olkin (KMO). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic that indicates the proportion of variance in your variables that might be caused by underlying factors. The KMO statistic varies between 0 and 1. A value of 0 indicates that the sum of partial correlations is large relative to the sum of correlations, indicating diffusion in the pattern of correlations (hence, factor analysis is likely to be inappropriate). A value close to 1 indicates that patterns of correlations are relatively compact and so factor KMO should yield distinct and reliable factors<sup>131</sup>. Kaiser recommends

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<sup>127</sup> Taherdoost, H., Sahibuddin, S., Jalaliyoon, N. Exploratory Factor Analysis; Concepts and Theory. Advances in Applied and Pure Mathematics. Malaysia-Japan International Institute of Technology (MJIT). Retrieved from: <https://pdfs.semanticscholar.org/1bd8/bbd66524ccf605c879982cd35ef3a3d52160.pdf>

<sup>128</sup> Maskey, R., Feib, J., Nguyenc, H-O. (2018). Use of exploratory factor analysis in maritime research. *The Asian Journal of Shipping and Logistics*. Volume 34, Issue 2, Pages 91-111.

<sup>129</sup> Burton, L. & Mazerolle, S. (2011). Survey Instrument Validity Part I: Principles of Survey Instrument Development and Validation in Athletic Training Education Research. *Athletic Training Educational Journal*. Pp 27-35.

<sup>130</sup> Hair, J., Black, W., Babin, B., Anderson, R. (2014). Multivariate Data Analysis 7<sup>th</sup> Edition. Essex: Pearson Education Limited. Pp 102

<sup>131</sup> Dogbegah, R., Owusu-Manu, D-G., Omoteso, K. (2011). A Principal Component Analysis of Project Management Competencies for the Ghanaian Construction Industry. *Australasian Journal of Construction Economics and Building*

accepting values greater than 0.5 as acceptable (values below this should lead you to either collect more data or rethink which variables to include)<sup>132</sup>. Furthermore, values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb<sup>133</sup>.

Regarding the factors that should be retained, according to Guttman-Kaiser rule only those factors with an eigenvalue larger than 1 must be kept and these factors that in total, account for about 70-80% of the variance<sup>134</sup>.

### Variable No 1: Guilt

From the questionnaire we chose these questions that thought explain better the guilt that consumer's felt towards the consumption of animal products and the exploitation of animals in general for human purposes. The questions we used were coded as:

(No kill to eat, Cell, Animals are for humans, Molluscus don't feel, Bothers Fish die asphexia, Fish feel no pain , Bothers feed, Bothers dress, Bothers entertain, Calve vs baby). These questions were expressed from Likert Scale from 1 to 5 where 1 means no Guilt and 5 mean total Guilt. Some of these questions needed to be reserved because they were expressed oppositely in contrast to others.

The Stata gave us the output that we named it "Table 2: Factor Analysis Test-Guilt". As we see in table Table 2 for the first variable pvalue is 0 and KMO value is 0,81, which falls into the range of being superb so, we should be confident that factor analysis is appropriate for these data.

### **Bartlett test of sphericity**

Chi-square = 2277.893  
 Degrees of freedom = 45  
 p-value = 0.000  
 H0: variables are not intercorrelated

### **Kaiser-Meyer-Olkin Measure of Sampling**

Adequacy  
 KMO = 0.817

<sup>132</sup> Kaiser, H. (1974). An index of factorial simplicity. *Psychometrika*, Volume 39, Issue 1, pp 31–36|

<sup>133</sup> Hutcheson, G. and Sofroniou, N. (1999) *The Multivariate Social Scientist: Introductory Statistics Using Generalized Linear Models*. Sage Publication, Thousand Oaks, CA. pp 224-225.

<sup>134</sup> Hooper, D (2012). *Exploratory Factor Analysis*. Dublin Institute of Technology. Retrieved from: <https://pdfs.semanticscholar.org/54e5/051315b716509ff703e156f661f7273d1dc8.pdf>

Table 2: Factor Analysis Test-Guilt

Regarding the factor analysis, Stata extracted 3 factors according to table 3 however as mentioned before we can keep only the factors that have eigenvalue higher than 1.

Factor	Eigenvalue	Difference	Proportion	Cumulative
<b>Factor1</b>	<b>3.35187</b>	<b>2.35283</b>	<b>0.8025</b>	<b>0.8025</b>
Factor2	0.99904	0.43730	0.2392	1.0417
Factor3	0.56174	0.52737	0.1345	1.1762

Table 3: Eigenvalue of Factor Guilt

This new factor consists the questions 4 questions (Bothers feed, Bothers dress, Bothers entertain, Calve vs baby).

#### Variable No2: Enhanced Welfare Animal Products-Welfare

The Second variable, consisted the questions that refer to the perception that consumers have about enhanced welfare animal products and the living conditions (welfare) about animals be destined for food or products (better quality, better human health, more profitable, contribute to sustainability, Welfare Price, Money over animals, Small farms better, Welfare Better products, No law for animals, Humans eat meat, Intensive better for environment, Humans eat dairy). It was also expressed in Likert Scale from 1 to 5 where 1 means that consumers have a negative attitude towards these products and 5 means that consumers have positive attitude about these products.

The Stata gave us the output that we named it “Table 4: Factor Analysis Test-EWAP-Welfare” As we see in table 4 for the first variable pvalue is 0 and KMO value is 0,80, which falls into the range of being superb so, we should be confident that factor analysis is appropriate for these data.

#### **Bartlett test of sphericity**

Chi-square = 2857.181  
 Degrees of freedom = 66  
 p-value = 0.000  
 H0: variables are not intercorrelated

**Kaiser-Meyer-Olkin Measure of Sampling Adequacy**  
KMO = 0.807

Table 4: Factor Analysis Test-EWAP-Welfare

Regarding the factor analysis, Stata extracted 6 factors according to table 5, however as mentioned before we can keep only the factors that have eigenvalue higher than 1.

Factor	Eigenvalue	Difference	Proportion	Cumulative
<b>Factor1</b>	<b>3.64776</b>	<b>2.66061</b>	<b>0.7916</b>	<b>0.7916</b>
Factor2	0.98715	0.48549	0.2142	1.0058
Factor3	0.50166	0.30884	0.1089	1.1147
Factor4	0.19282	0.12673	0.0418	1.1565
Factor5	0.06609	0.05059	0.0143	1.1708
Factor6	0.01550	0.07173	0.0034	1.1742

Table 5: Eigenvalue of EWAP-Welfare

This new factor consists 5 questions (better quality, better human health, contribute to sustainability, Small farms better, Welfare Better products).

#### 5.1.1. Guilt and Sociodemographic Characteristics of the sample

After we created the variables now, among them, we selected the New Variable “Guilt” through different categories in order to see how guilt is expressed among the sociodemographic characteristics of the sample.

In order to see how “Guilt” differs between our different categories of the sample we conducted t-test. However, the t-test shows that mean differences between two data sets<sup>135</sup>. For the data sets that we wanted to examine and have more than two categories, we did Anova analysis. ANOVA (Analysis of Variance) is a statistical technique that assesses potential differences in a scale-level dependent variable by a nominal-level variable having two or more categories<sup>136</sup>.

### Guilt Among the Categories of the Sample

<sup>135</sup> Evans, P., Lind, S., Dossey, T. (2010). Validation of high-definition electric power delivery network simulation. *Institute of Electrical and Electronics Engineers*.

<sup>136</sup> Girden, E. R. (1992). *ANOVA repeated measures*. Newbury Park, CA: Sage Publications.

Categories	Mean	Standard Deviation	P-Value
<b><u>Gender</u></b>			
Male	3,67	0,98	0,0003
Female	4,07	0,92	
<b><u>Pet Owner</u></b>			
Yes	4,09	0,92	0,0002
No	3,82	0,95	
<b><u>Age Groups</u></b>			
<17	4,17	0,87	
18-25	3,74	1	
26-35	3,94	0,93	
36-45	4,02	0,85	0,0079
46-55	4,09	0,94	
56-67	3,83	1,38	
68>	4,12	0,53	
<b><u>Religious</u></b>			
Yes	3,86	0,94	
No	4	0,97	0,0023
Don't Want to Answer	3,94	0,81	
<b><u>Education</u></b>			
Secondary	4,16	0,95	
Higher Education	3,94	0,91	
Private Universities	4,01	0,96	0,0006
University Student's	3,84	1,02	
Master	3,86	0,95	
PhD	3,89	0,94	
<b><u>Income</u></b>			
< 5.000€	4,08	0,86	
5.001-10.000€	3,92	0,88	
10.001-20.000€	3,81	1,04	0,0003

20.001-30.000€	4,05	0,91	
30.001-50.000€	3,87	0,94	
50.000€>	3,9	0,98	
<b><u>Dietary Pattern</u></b>			
Omnivores	3,83	0,92	
Vegetarians	4,57	0,81	0,0000
Vegans	4,7	0,71	

Table 6: Guilt Among the Categories of the Sample

### 5.1.2. Enhanced Animal Welfare Products and Sociodemographic

#### Characteristics of the sample

One of the questions that participants were called to answer is from whom they buy food products that come from animals that have lived in better conditions. Only 14% answered that they don't buy these type of products, 23,20% answered that they buy it for the children.

So, similarly through the same methods, t-test and Anova analysis, we selected the New Variable "Enhanced Welfare Animal Products-Welfare" in order to examine the picture that the different categories of our sample have about EWAP.

<b>Enhanced Animal Welfare Products Among the Categories of the Sample</b>			
<b>Categories</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>P-Value</b>
<b><u>Gender</u></b>			
Male	3,51	0,82	0,2315
Female	3,61	0,84	
<b><u>Pet Owner</u></b>			
Yes	3,49	0,90	0,0116
No	3,66	0,78	
<b><u>Age Groups</u></b>			
<17	2,9	0,14	
18-25	3,54	0,80	
26-35	3,60	0,85	0,8275
36-45	3,64	0,87	

<b>46-55</b>	3,53	0,89	
<b>56-67</b>	3,63	0,94	
<b>68&gt;</b>	3,80	0,28	
<b><u>Education</u></b>			
<b>Secondary</b>	3,28	0,86	
<b>Higher Education</b>	3,60	0,87	
<b>Private Universities</b>	3,36	0,93	0,0021
<b>University Student's</b>	3,57	0,80	
<b>Master</b>	3,74	0,73	
<b>PhD</b>	3,75	0,74	
<b><u>Income</u></b>			
<b>&lt; 5.000€</b>	3,58	0,88	
<b>5.001-10.000€</b>	3,36	0,85	
<b>10.001-20.000€</b>	3,43	0,91	0,0661
<b>20.001-30.000€</b>	3,63	0,82	
<b>30.001-50.000€</b>	3,69	0,80	
<b>50.000€&gt;</b>	3,70	0,85	
<b><u>Dietary Pattern</u></b>			
<b>Omnivores</b>	3,75	0,66	
<b>Vegetarians</b>	3,17	1,80	0,0000
<b>Vegans</b>	1,97	0,70	
<b><u>Children in House</u></b>			
<b>0-23 months</b>	3,75	0,73	
<b>2-6 years old</b>	3,72	0,78	0,0172
<b>7-12 years old</b>	3,51	0,79	
<b>13-18 years old</b>	3,55	0,81	
<b><u>Area</u></b>			
<b>Athens &amp; Attica Region</b>	3,63	0,77	
<b>Big Urban City (Thessaloniki, Patra, Heraklion, Chalkida, Larisa,</b>	3,55	0,84	0,1454

<b>Volos)</b>			
<b>Abroad</b>	3,74	0,87	
<b>Other (Village, Countryside, Islands)</b>	3,47	0,97	

Table 7: Enhanced Animal Welfare Products Among the Categories of the Sample

One interesting outcome is that vegans have totally negative opinion about ewap, vegetarians less negative and omnivores more positive. Furthermore, the more young the children in the house the more positive opinion.

One more question was that that tried to examine the participant's Acknowledgment about the practices that animals suffer when they kill them for their meat or in order to produce generally animal products. It was expressed from a scale from 1 to 4, where 1 means that they know about the practices and do not care at all and 4 means that they know them and totally care and included these questions (Mutilation, Weaning\_rings, stratching, Cage, Flay, no anesthesia) had about the practices that animals suffer when they kill them for their meat or in order to produce generally animal products. It was expressed from a scale from 1 to 4, where 1 means that they know about the practices and do not care at all and 4 means that they know them and totally care and included these questions (Mutilation, Weaning\_rings, stratching, Cage, Flay, no anesthesia). 90% percent answered 4,5 , 75% answered 4, 50% answered 3,5%, 25% answered 3 and 2 answered 10%.

## 5.2. Willingness to Pay for Enhanced Welfare Animal Products

In this subchapter we tried to explore if consumers are willing to pay more for every category of EWAP food products. However, because the prices differ for every category and we thought it would mislead the participants, there where expressed to 13 different questions.

<b>Category</b>	<b>Yes</b>	<b>Mean</b>	<b>1<sup>st</sup> Price</b>	<b>2<sup>nd</sup> Price</b>	<b>3<sup>rd</sup> Price</b>	<b>4<sup>th</sup> Price</b>	<b>Further Price</b>	<b>No</b>
<b>Beefsteak</b>	468	2,38	34,5%	28,10%	4,1%	2,10%	2,60%	28,60%
<b>Porksteak</b>	468	2,81	30,70%	28,20%	9,30%	1,80%	1,40%	28,60%
<b>Lamp</b>	381	2,74	33%	7,80%	13,30%	2,30%	1,80%	41,80%
<b>Chicken*</b>	515	3,05	23,70%	35,70%	13,30%	3,40%	2,60%	21,40%
<b>Rabbit</b>	216	2,97	13,30%	11,30%	5,30%	2,10%	0,90%	67%
<b>Gilt Head Bream</b>	426	2,68	38,60%	15,40%	6,30%	2,70%	2,00%	35%



<b>Toast Cheese*</b>	517	3,22	26,10%	27%	14%	6,10%	5,60%	21,10%
<b>Feta Cheese</b>	462	2,60	42,30%	19,70%	4,40%	2,40%	1,70%	29,50%
<b>Eggs*</b>	526	3,44	20,80%	26,70%	18%	6,30%	8,50%	19,70%
<b>Honey</b>	517	2,76	42,70%	22%	7,60%	3,80%	2,70%	21,10%
<b>Yoghurt*</b>	461	3,12	21,50%	27%	13,40	8,40%	-	29,60%
<b>Milk Cow</b>	400	2,32	47,60%	8,70%	3,10%	1,70%	-	38,90%
<b>Milk Kid</b>	262	2,65	22,90%	10,80%	3,80%	2,40%	-	60%

Table 8: WTP for EWAP

As table 8 shows, from 13 products consumers are willing to pay the first available higher price, except chicken, eggs, cheese for toast and yoghurt that are willing to pay the 2<sup>nd</sup> available higher price.

### 5.2.1. Willingness to Pay for Enhanced Welfare Animal Products and Guilt

After examining the percentage of the consumer's that are willing to pay more for enhanced welfare animal products and especially how much are willing to pay more for each product, we found that the mean of guilt is 3,932 and we measured the guilt above and below this price for each category of products as it follows:

<b>Category</b>	<b>Under the Average Guilt</b>	<b>Higher than the Average Guilt</b>	<b>P Value</b>
<b>Beefsteak</b>	2,71	2,77	0,5714
<b>Porksteak</b>	2,70	2,90	0,0206
<b>Lamp*</b>	2,74	2,74	0,9801
<b>Chicken</b>	3,03	3,07	0,6110
<b>Rabbit</b>	2,85	3,08	0,1115
<b>Gilt Head Bream*</b>	2,69	2,66	0,8255
<b>Toast Cheese</b>	3,23	3,20	0,7600
<b>Feta Cheese</b>	2,60	2,61	0,9399
<b>Eggs</b>	3,31	3,52	0,0516
<b>Honey*</b>	2,74	2,76	0,8253
<b>Yoghurt</b>	3,02	3,19	0,0539
<b>Milk Cow</b>	2,27	2,35	0,2610
<b>Milk Kid</b>	2,63	2,65	0,8461

Table 9: WTP for EWAP and Guilt

From the results extracted from table 8 although the p-value is larger than 0.05, so we cannot conclude that a significant difference exists, we can see that in 10 out of 13 categories (except categories with \*) of enhanced welfare animal products the value of guilt is higher in the consumer's that feel guilt above the average.

### 5.2.2. Guilt and Substitute Products

Given the results in the previous chapter between of WTP-Guilt, we thought it would be interesting to examine the guilt that consumers have that buy substitute animal food products. In our questionnaire there was a question “How often do you consume substitutes for the following animal food products?” expressed in a Scale from 1-5 where 1 is never and 5 daily. The results are the follow:

Category	Under the Average Guilt (405)	Higher than the Average Guilt (250)	P Value
Toast Cheese	1,73	2	0,0045
Yellow_cheese	1,69	1,82	0,1573
Spreads	1,56	1,63	0,3829
Feta	1,63	1,80	0,0629
Milk***	1,98	2,44	0,0000
Yoghurt	1,61	1,76	0,0991
Ice-cream	1,56	1,65	0,2439
Snitchel	1,35	1,37	0,7041
Saucages	1,43	1,44	0,8825
Burger	1,52	1,69	0,0183

Table 10: Guilt and Substitute Products

Although only in the category of milk or p-value is under 0,0005 we can see that in all of our categories consumer's that choose substitute products have more guilt than those that do not choose or rarely choose.

### 5.2.3. Does Willingness to Pay differ between omnivores and lacto-vegetarians?

One of the questions that this thesis tried to answer is if the WTP differs between omnivores and lacto vegetarians. However, due to the small sample for the category of lacto vegetarians (only 8 participants) the outcome of this interaction would not be reliable.

There is not an official research in Greece that measures how much lacto vegetarians are in Greece in order to make the comparison to our sample size.

This can be considered one of the limitations of our research. We tried to include lacto vegetarians in our sample size, however it is worth to mention that through the social media that our questionnaire was distributed, we did not found a group only with lacto vegetarians to especially forward the questionnaire.

## **Conclusion**

This thesis aimed to measure the guilt that consumers feel about consuming or not food animal products and if this guilt affects their willingness to pay for a specific category of products called enhanced animal welfare products. Moreover we tried to answer if this willingness to pay differs among omnivores and lacto vegetarians. The tool that we chose to help us collect all the information needed, was a questionnaire that was designed about us, including also questions from similar researches. The questionnaire was analyzed through the program Stata. We grouped the questions and created new variables. One of the limitations faced was due to the inexperience of the researcher the questions were not expressed to a similar Scale or couldn't be afterwards convert to a similar Scale, so an amount of questions that we want to examine and correlate, we couldn't. However, we tried to use every detail from the questions that were expressed to the same scale – or could be converted. Through factor analysis we created two new significant variables- guilt and enhanced welfare animal products-that we correlated them through different groups of our sample and to the different categories of EWAP and Substitute Products.

Among this research, both bibliographical and empirical, we found that guilt is a factor that can affect consumer's choices and that animal welfare is a sector that gains consumer's interest. Dietary pattern also plays a crucial role among guilt, willingness to pay and enhanced welfare animal products as vegans score the highest value among guilt. Moreover, the people that choose substitute food products tend to have more guilts than the people that scored guilt under the average. More specifically, through the questionnaire we can assume that consumer may have guilt, however, the group of participants that score higher level of guilt are willing to pay more for enhanced welfare animal product in the first high price, eventually, the difference between those who score high guilt than those who score low guilt is not statistically important.

Unfortunately, one restriction was that we couldn't answer one of the questions that this thesis tried to examine, if the wtp differ between lacto vegetarians and omnivores.

When all is said and done, I would like to close this master thesis with a saying of Zeno of Citium, an Ancient Greek Philosopher (334 – c. 262 BC), that said “ The good thing is not say things well but who says thing wells also to does them”

(Ου γαρ το ειπείν καλώς καλόν, αλλά τω ειπόντι δράσας τα ειρημένα.)



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## Appendix

### Questionnaire

#### Έρευνα για τις απόψεις καταναλωτών για προϊόντα διατροφής

Αγαπητοί συμμετέχοντες,

Σκοπός του παρόντος του ερωτηματολογίου είναι η διερεύνηση των στάσεων των Ελλήνων καταναλωτών για συγκεκριμένα προϊόντα διατροφής. Οι πληροφορίες που συλλέγονται μέσω του ερωτηματολογίου θα χρησιμοποιηθούν για την εκπόνηση διπλωματικής εργασίας στο πλαίσιο του Μεταπτυχιακού Προγράμματος Σπουδών «Εφαρμοσμένων Οικονομικών και Διοίκησης» του Τμήματος Οικονομικής και Περιφερειακής Ανάπτυξης του Παντείου Πανεπιστημίου, στο μάθημα "Εταιρική και Κοινωνική Υπευθυνότητα Επιχειρήσεων".

Μέσος χρόνος συμπλήρωσης: δώδεκα (12) λεπτά.

Δεδομένου ότι μέσω του ερωτηματολογίου συλλέγονται και υπόκεινται σε επεξεργασία προσωπικά δεδομένα, ισχύει ο ευρωπαϊκός Γενικός Κανονισμός για την Προστασία Δεδομένων (GDPR) 2016/679. Η συμπλήρωση του ερωτηματολογίου είναι προαιρετική και μέσω της συμμετοχής σας δηλώνετε υπεύθυνα ότι συναινείτε στην επεξεργασία των προσωπικών σας δεδομένων. Η συλλογή και η επεξεργασία των απαντήσεων γίνεται σύμφωνα με τον ισχύοντα Νόμο περί ευαίσθητων δεδομένων (ΓΚΠΔ), βλ. Αρχή Προστασίας Δεδομένων Προσωπικού Χαρακτήρα ([www.dpa.gr](http://www.dpa.gr)). Οι ερωτήσεις ζητούν καθαρά την προσωπική σας άποψη και, ως εκ τούτου, δεν υπάρχουν σωστές και λάθος απαντήσεις. Οι απαντήσεις σας σε όλες τις ερωτήσεις είναι ανώνυμες και εμπιστευτικές, και θα χρησιμοποιηθούν μόνο ομαδοποιημένες για τους σκοπούς της έρευνας.

Το παρόν ερωτηματολόγιο, καθώς και οι πληροφορίες που εμπεριέχονται σ' αυτό, αποτελούν πνευματική ιδιοκτησία και προστατεύονται από τους νόμους περί πνευματικής ιδιοκτησίας της Ελλάδας και απαγορεύεται να αντιγράφονται ή να χρησιμοποιούνται από τρίτους για οποιονδήποτε σκοπό και χωρίς τη ρητή έγγραφη άδεια των ερευνητών.

Σας ευχαριστούμε εκ των προτέρων για τη συμμετοχή σας!

Ερευνήτρια: Βενέτα-Ιωάννα Σεληνιωτάκη

Επιβλέπουσα Καθηγήτρια, Υπεύθυνη Προστασίας Δεδομένων: Αν. Ψειρίδου, Επίκ.

Καθηγήτρια ΤΟΠΑ, [pseiridis@panteion.gr](mailto:pseiridis@panteion.gr)

Πάντειο Πανεπιστήμιο, 2018

## Ενότητα 2

### 1. Φύλο

Άνδρας

Γυναίκα

Δεν επιθυμώ να πω

### 2. Ηλικία

κάτω των 17

18-25

26-35

36-45

46-55

56-67

68 και άνω

### 3. Μορφωτικό Επίπεδο

Είμαι απόφοιτος Δημοτικού,

Είμαι απόφοιτος 3τάξιου Γυμνασίου

Είμαι απόφοιτος Λυκείου

Είμαι Απόφοιτος Ιδιωτικής Σχολής/ΙΕΚ

Είμαι απόφοιτος ΑΕΙ/ΤΕΙ



Είμαι κάτοχος Μεταπτυχιακού

Είμαι κάτοχος Διδακτορικού

Είμαι Φοιτητής

#### **4. Οικογενειακή Κατάσταση**

Άγαμος/-η

Έγγαμος/-η

Διαζευγμένος/-η

Σε χηρεία

#### **5. Στο νοικοκυριό σας ζουν κατοικίδια ζώα;**

Ναι

Όχι

#### **6. Ποια και πόσα από τα παρακάτω ζώα ζουν στο νοικοκυριό σας;**

	0	1	2	3	4 και πάνω
Σκύλος/-οι					
Γάτα/-ες					
Κουνέλι/-α					
Πτηνό/-α					
Ψάρι/-α					
Ερπετό/-α					
Άλλο					

#### **7. Τόπος διαμονής (Πού έχετε ζήσει τελευταία, για τουλάχιστον 12 συνεχόμενους μήνες;)**

Αθήνα και Αττική

Μεγάλο αστικό κέντρο (Θεσσαλονίκη, Πάτρα, Χαλκίδα, Ηράκλειο Κρήτης, Λάρισα, Βόλος)

Άλλο αστικό κέντρο ή πρωτεύουσα νομού

Κωμόπολη

Χωριό ή αγροτική περιοχή

Εκτός Ελλάδος

Άλλο

**8. Ετήσιο εισόδημα (προ φόρων) του νοικοκυριού σας.**

< 5.000€

5.001-10.000€

10.001-20.000€

20.001-30.000€

30.001-50.000€

50.001€-75.000€

75.0001-100.000€

100.001€<

Δεν απαντώ

**9. Πόσα άτομα στο νοικοκυριό σας μοιράζονται το εισόδημα αυτό;**

1	2	3	4	5	6	7	8	Άλλο
---	---	---	---	---	---	---	---	------

**10. Αριθμός Ατόμων στο Νοικοκυριό σας**

	0	1	2	3	4	5	6
Ενήλικες 19 και άνω							
Παιδιά 0-23 μηνών							
2-6 ετών							
7-12 ετών							

13-18 ετών							
---------------	--	--	--	--	--	--	--

**11. Θεωρείτε τον εαυτό σας θρησκευόμενο άτομο;**

Ναι

Όχι

Δεν απαντώ

## **ΕΝΟΤΗΤΑ Β**

**1. Ακολουθεί ένας κατάλογος με τρόφιμα. Παρακαλώ σημειώσετε ποια από τα παρακάτω τρόφιμα καταναλώνονται στο νοικοκυριό σας.**

Κόκκινο Κρέας

Εντόσθια (π.χ. συκώτι)

Πουλερικά

Λουκάνικα

Ψάρια

Μαλάκια (σαλιγκάρι, χταπόδι, καλαμάρι, μύδια, στρείδια)

Αυγά Πουλερικών

Γαλακτοκομικά (γάλα, γιαούρτι, τυρί, παγωτά, κ.ά.)

Μέλι και άλλα προϊόντα μέλισσας

Εγώ δεν καταναλώνω καθόλου ζωϊκά τρόφιμα

Στο νοικοκυριό μου δεν καταναλώνουμε καθόλου ζωϊκά τρόφιμα

**2. Ακολουθεί ένας κατάλογος με τρόφιμα. Παρακαλούμε επιλέξτε ποια από αυτά θα θέλατε να καταναλώνετε λιγότερο εσείς προσωπικά και τον κύριο λόγο που επηρεάζει την επιθυμία σας.**

	Για λόγο υς	Γιατί Κοστίζο υν	Για να συμβάλλω στη	Ηθικ ή στάσ	Άλλ ο	Δεν καταναλώ νω	Δεν θα ήθελα να μειώσω τη
--	-------------------	------------------------	---------------------------	-------------------	----------	-----------------------	---------------------------------

	υγεία ς	Ακριβά	βιωσιμότη τα του πλανήτη	η προς τα ζώα		καθόλου	κατανάλω σή του
Κόκκινο Κρέας							
Εντόσθια (π.χ. συκώτι)							
Πουλερικά							
Λουκάνικα							
Ψάρια							
Μαλάκια (σαλιγκάρι, χταπόδι, καλαμάρι, μύδια, στρείδια)							
Αυγά Πουλερικών							
Γαλακτοκομι κά							
Μέλι κ.ά προϊόντα μέλισσας							

**3. Ακολουθεί ένας κατάλογος με προϊόντα. Αν ΔΕΝ χρησιμοποιείτε κάποιο από αυτά, παρακαλούμε επιλέξτε τον κύριο λόγο που επηρεάζει την στάση σας.**

	Κοστίζουν Ακριβά	Για να συμβάλλω στη βιωσιμότητα του πλανήτη	Ήθική στάση προς τα ζώα	Άλλο	Το χρησιμοποιώ
--	---------------------	---	-------------------------------	------	-------------------

Αληθινές Γούνες					
Δερμάτινα είδη (παπούτσια, ζώνες, πορτοφόλια, κ.ά					
Παπλώματα- μαξιλάρια- μπουφάν από πούπουλα χήνας					
Μετάξι					
Μοχέρ- κασμίρ- μαλλί- angora- αλπακά- vicuña					

**4. Αν απαντήσατε "Άλλο" στις παραπάνω 3 ερωτήσεις, μπορείτε (προαιρετικά) να διευκρινίσετε την επιλογή σας εδώ.**

.....

**5. Ποιος είναι ο παράγοντας που είναι ο πιο σημαντικός κατά την επιλογή σας όταν αγοράζετε κρέας, γάλα, και άλλα ζωϊκά τρόφιμα;**

Προσιτή Τιμή

Τόπος Προέλευσης

Ετικέτα με επισήμανση (π.χ. ΠΟΠ, βιολογικό, ελευθέρως βοσκής)

Μάρκα ή όνομα παραγωγού

Φήμη Καταστήματος/πωλητή

Δεν αγοράζω καθόλου ζωϊκά τρόφιμα

Άλλο

**6. Παρακαλούμε επιλέξετε αν και ποιες από τις παρακάτω πιστοποιήσεις και φράσεις αναγνωρίζετε;**

	Την έχω ακουστά	Δεν την αναγνωρίζω	Αγοράζω πάντα	Αγοράζω συνήθως	Αγοράζω κάποιες φορές	Δεν αγοράζω ποτέ
Leaping bunny						
Vegan (ολική χορτοφαγία -χωρίς ζωικά)						
No animal testing (χωρίς πειράματα σε ζώα)						
Βιολογικής εκτροφής (organic)						
Ελευθέρως βοσκής (free range)						
Χωρίς κλουβιά (cage free)						

7. Αν γνωρίζετε τι σημαίνει η πιστοποίηση leaping bunny παρακαλώ δώστε μία σύντομη περιγραφή.

.....

8. Αν γνωρίζετε τι σημαίνει η πιστοποίηση vegan παρακαλώ δώστε μία σύντομη περιγραφή.

.....

9. Ακολουθεί μία λίστα με μερικές πρακτικές που ακολουθούνται κατά την θανάτωση των ζώων ή/και την παραγωγή ζωϊκών προϊόντων. Επιλέξτε τις φράσεις από την στήλη 2 που σας αντιπροσωπεύουν σχετικά με τις πρακτικές αυτές.

	Την γνωρίζω και με ενοχλεί	Την γνωρίζω και δεν με ενοχλεί	Δεν την γνωρίζω και με ενοχλεί	Δεν την γνωρίζω και δεν με ενοχλεί
Ακρωτηριασμός (ευνουχισμός, κόψιμο κεράτων- ουράς-ράμφους)				
Τοποθέτηση φίμωτρου με ακίδες στα μωρά μοσχαράκια για την αποτροπή θηλασμού (weaning rings)				
Ξεπουπούλιασμα πουλερικών (για μπουφάν, μαξιλάρια, παπλώματα)				
Εγκλεισμός σε κλουβιά				
Γδάρσιμο των				

ζώων όσο είναι ζωντανά (π.χ. κουνέλια, σκύλος, πρόβατα) για την παραγωγή ρούχων (μάλλινων, δερμάτινων και γούνινων ειδών)				
Θανάτωση του ζώου χωρίς αναισθητοποίηση				

## ΕΝΟΤΗΤΑ Γ

### 1. Παρακαλούμε δηλώστε τον βαθμό συμφωνίας σας στις κάτωθι προτάσεις.

	Διαφωνώ Απόλυτα	Διαφωνώ	Ούτε διαφωνώ, ούτε συμφωνώ	Συμφωνώ	Συμφωνώ Απόλυτα	Δε γνωρίζω
Εάν οι εκτροφείς βελτιώσουν τις συνθήκες διαβίωσης των εκτρεφόμενων ζώων, το κόστος παραγωγής των ζωϊκών προϊόντων θα αυξηθεί.						
Θα ήταν ιδανικό να μην έπρεπε να σκοτώνουμε ζώα για φαγητό.						



Αν μπορούσαμε να καλλιεργήσουμε κρέας σε εργαστήριο από λίγα κύτταρα ζώων, θα προτιμούσα αυτό το κρέας έναντι του συμβατικού.					
Οι εκτροφείς και οι εταιρείες τροφίμων ενδιαφέρονται περισσότερο για τα κέρδη τους και λιγότερο για τα εκτρεφόμενα ζώα.					
Τα εκτρεφόμενα ζώα που μεγαλώνουν σε μικρές φάρμες έχουν καλύτερη ζωή από εκείνα που μεγαλώνουν σε μεγάλες φάρμες.					
Τα ζώα που εκτρέφονται σε καλύτερες συνθήκες παράγουν ποιοτικά καλύτερα προϊόντα.					
Η ισχύουσα νομοθεσία για την καλή μεταχείριση των ζώων δεν διασφαλίζει την πραγματικά καλή μεταχείριση των ζώων.					
Το κρέας αποτελεί ουσιαστικό κομμάτι της διατροφής των ανθρώπων.					

Δεν με ενοχλεί που τα ψάρια πεθαίνουν από ασφυξία μετά την αλιεία τους.					
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**2. Παρακαλούμε δηλώστε τον βαθμό συμφωνίας σας στις κάτωθι προτάσεις.**

	Διαφωνώ Απόλυτα	Διαφ ωνώ	Ούτε διαφων ώ, ούτε συμφω νώ	Συ μφ ων ώ	Συμ φων ώ Από λυτα	Δε γν ω ρί ζω
Τα γαλακτοκομικά προϊόντα αποτελούν ουσιαστικό κομμάτι της διατροφής των ανθρώπων.						
Δεν καταλαβαίνω όλο αυτό το ενδιαφέρον για την καλή διαβίωση των ζώων. Τα ζώα έχουν φτιαχτεί για να καλύπτουν τις ανάγκες των ανθρώπων.						
Τα μαλάκια δεν είναι αισθανόμενα όντα, οπότε δεν υποφέρουν.						
Υπάρχει επαρκής ποικιλία ζωϊκών προϊόντων από ζώα που έχουν ζήσει σε καλές συνθήκες στα καταστήματα που ψωνίζω.						
Τα ψάρια δεν νιώθουν πόνο όπως άλλα ζώα (π.χ. θηλαστικά).						
Η εντατική εκτροφή ζώων (σε μονάδες με πολλά έγκλειστα						

ζώα) είναι καλύτερη για το περιβάλλον από την εκτατική (όπου τα ζώα έχουν περισσότερο ελεύθερο χώρο και βόσκουν ελεύθερα).						
Με ενοχλεί να βλάπτω ζώα προκειμένου να τραφώ.						
Με ενοχλεί να βλάπτω ζώα προκειμένου να ντυθώ.						
Με ενοχλεί να βλάπτω ζώα προκειμένου να διασκεδάσω.						
Η απομάκρυνση ενός μωρού από τη μητέρα του είναι εξίσου τραγικό γεγονός είτε συμβεί σε άνθρωπο είτε σε αγελάδα.						

**3. Τι είδους συνθήκες διαβίωσης πιστεύετε ότι προσφέρουν οι παρακάτω δομές στα ζώα;**

	Βασικές	Μέτριες	Καλές	Πολύ καλές	Τίποτα από τα παραπάνω	Δε γνωρίζω
Μια μικρή παραδοσιακή φάρμα						
Η γιαγιά/θεία ή άλλος συγγενής μου						
Μια οργανωμένη βιομηχανική φάρμα						
Μια πιστοποιημένη βιολογική φάρμα						

## ΕΝΟΤΗΤΑ Δ

- 1. Εάν αγοράζετε τρόφιμα που προέρχονται από ζώα που έχουν ζήσει σε σχετικά καλύτερες (κατά την κρίση σας) συνθήκες διαβίωσης, για ποιους τα αγοράζετε;**

Για εμένα

Για τα παιδιά

Για όλους

Για συγκεκριμένα άτομα στο νοικοκυριό

Δεν αγοράζω τέτοιου είδους προϊόντα

- 2. Δώστε τον βαθμό συμφωνίας ή διαφωνίας σας με τις ακόλουθες φράσεις.**

	Διαφωνώ Απόλυτα	Διαφωνώ	Ούτε διαφωνώ, ούτε συμφωνώ	Συμφωνώ
Τα προϊόντα καλύτερης διαβίωσης είναι καλύτερης ποιότητας.				
Τα προϊόντα καλύτερης διαβίωσης είναι καλύτερα για την υγεία του ανθρώπου.				
Τα προϊόντα καλύτερης διαβίωσης είναι πιο				

επικερδή προϊόντα για τους εκτροφείς.				
Τα προϊόντα καλύτερης διαβίωσης συμβάλλουν στη βιωσιμότητα του περιβάλλοντος.				

- 3. Πόσο αξιόπιστη πληροφόρηση πιστεύετε ότι σας προσφέρουν τα παρακάτω για να εντοπίσετε τα προϊόντα που προέρχονται από ζώα που απολαμβάνουν σχετικά καλύτερες συνθήκες διαβίωσης από τα συμβατικά προϊόντα;**

	Αξιόπιστη πληροφόρηση	Μετριώς Αξιόπιστη Πληροφόρηση	Καθόλου Αξιόπιστη πληροφόρηση	Δεν αγοράζω καθόλου ζωϊκά
Ετικέτες πληροφοριών στη συσκευασία με περαιτέρω εξηγήσεις (π.χ. βιολογικό, ελευθέρως βοσκής, κ.λπ.).				
Να φέρει πιστοποίηση από κάποιο φορέα.				
Η χρήση αληθινών				

εικόνων (φωτογραφιών) στη συσκευασία (π.χ., ελεύθερων ορνίθων και όχι σε κλουβιά).				
Ένα συγκεκριμένο λογότυπο από έναν οργανισμό πιστοποίησης στη συσκευασία.				
Αφίσες πληροφοριών που εμφανίζονται στα καταστήματα.				
Προφορικές διαβεβαιώσεις από παραγωγούς που γνωρίζω ή από άτομα του κοινωνικού μου κύκλου.				
Να φέρει τη φράση "πιστοποιημένο βιολογικό".				
Να φέρει τη φράση "ελευθέρως βοσκής".				

Να φέρει τη φράση "χωρίς κλουβιά".				
------------------------------------	--	--	--	--

**4. Παρακαλώ πείτε μας ποιες από τις παρακάτω εκστρατείες-οργανώσεις έχετε ακουστά, και αν έχετε συνυπογράψει ή συνεισφέρει.**

	Την έχω ακουστά	Έχω συνυπογράψει	Προσφέρω εθελοντικά	Έχω υποστηρίξει χρηματικά	Τιποτα από τα παραπάνω
"Τέλος στα κλουβιά (end the cage age) στην εκτροφή ζώων"					
"Κατά των πειραμάτων σε ζώα για καλλυντικούς σκοπούς (ECEAE)"					
"Veganuary"					
"Cube of truth"					
"Anonymous for the voiceless (Ανώνυμοι για αυτούς που δεν έχουν φωνή)"					
"Ελευθέρωσε το φίλο σου"					

"269 Ελλάδας"					
"Abolitionist Approach"					
PETA					

**5. Ποιο ή ποια από τα παρακάτω βιβλία έχετε διαβάσει;**

Living Among Meat Eaters, CAROL ADAMS

Τρώγοντας ζώα, JONATHAN-SAFRAN FOER

Eat like you care, GARY L. FRANCIONE

Bleating Hearts: The Hidden World of Animal Suffering, MARK HAWTHORNE

Why We Love Dogs, Eat Pigs, and Wear Cows, MELANIE JOY

My Year of Meats, RUTH OZEKI

The Case for Animal Rights, TOM REGAN

Η απελευθέρωση των ζώων, PETER SINGER

Meatonomics, DAVID ROBINSON SIMON

Making a killing the political economy of animal rights, BOB TORRES

Meathooked, MARTA ZARASKA

Άλλο

**6. Είστε διατεθειμένος να δαπανήσετε περισσότερα χρήματα για να αγοράσετε προϊόντα που προέρχονται από ζώα που έχουν ζήσει σε σχετικά καλύτερες (κατά την κρίση σας) συνθήκες διαβίωσης;**

Ναι

Όχι

Δεν αγοράζω καθόλου ζωϊκά

**ΕΝΟΤΗΤΑ Ε**



**Ακολουθεί μία σειρά ερωτήσεων με προϊόντα. Λαμβάνοντας υπόψιν τις τρέχουσες οικονομικές σας δυνατότητες, πόσο περισσότερο είστε διατεθειμένος/η να δαπανήσετε στα ακόλουθα προϊόντα, αν προέρχονται από ζώα που έχουν ζήσει με σχετικά καλύτερες συνθήκες διαβίωσης (λαμβάνοντας υπόψιν και τη μέση ενδεικτική τιμή του συμβατικού προϊόντος που δίδεται στην παρένθεση);**

**Για μοσχαρίσια μπριζόλα εγχώρια (μέση τιμή 6,38€/κιλό)**

δεν αγοράζω το προϊόν αυτό

καθόλου

έως 8€

Έως 12€

Έως 14,50€

έως 17,30€

παραπάνω ανεξαρτήτου τιμής

**Για χοιρινή μπριζόλα εγχώρια (μέση τιμή 5,17€/κιλό)**

δεν αγοράζω το προϊόν αυτό

καθόλου

έως 6,50€

Έως 8€

Έως 10,50€

Έως 14€

Παραπάνω ανεξαρτήτου τιμής

**Για κοτόπουλο ολόκληρο εγχώριο (μέση τιμή 4,25€/κιλό)**

δεν αγοράζω το προϊόν αυτό

καθόλου

έως 5,50€

Έως 6,50€

Έως 10€

έως 13€

παραπάνω ανεξαρτήτου τιμής

**Για κουνέλι εγχώριο (μέση τιμή 7,90€/κιλό)**

δεν αγοράζω το προϊόν αυτό

καθόλου

έως 8,50€

Έως 9,50€

Έως 12€

έως 14€

παραπάνω ανεξαρτήτου τιμής

**Για τσιπούρα (μέση τιμή 9,93€/κιλό)**

δεν αγοράζω το προϊόν αυτό

καθόλου

έως 12,50€

Έως 15€

Έως 18,50€

Έως 21€

παραπάνω ανεξαρτήτου τιμής

**Για τυρί για τοστ (μέση τιμή 2,35€/200γρ)**

δεν αγοράζω το προϊόν αυτό

καθόλου

έως 3€

Έως 3,50€

Έως 4,50€

Έως 5,50€

παραπάνω ανεξαρτήτου τιμής

**Για Φέτα ΠΟΠ (μέση τιμή 9,20€/κιλό)**

δεν αγοράζω το προϊόν αυτό

καθόλου

έως 11,50€

Έως 13,80€

Έως 16,10€

Έως 18,40€

παραπάνω ανεξαρτήτου τιμής

**Για γιαούρτι αγελαδινό πλήρες (μέση τιμή 0,72€/200γρ)**

δεν αγοράζω το προϊόν αυτό

καθόλου

έως 0,90€

Έως 1,35€

Έως 1,60€

παραπάνω ανεξαρτήτου τιμής

**Για γάλα αγελαδινό φρέσκο πλήρες (μέση τιμή 2,21€ /λίτρο)**

δεν αγοράζω το προϊόν αυτό

καθόλου

έως 2,80€

Έως 3,80€

Έως 4,40€

παραπάνω ανεξαρτήτου τιμής

**Για γάλα κατσικίσιο (μέση τιμή 2,21€ /λίτρο)**  
δεν αγοράζω το προϊόν αυτό

καθόλου

έως 2,80€

Έως 3,80€

Έως 4,40€

παραπάνω ανεξαρτήτου τιμής

**Για αυγά (μέση τιμή 0,30€/τεμάχιο)**

δεν αγοράζω το προϊόν αυτό

καθόλου

έως 0,37€

Έως 0,45€

Έως 0,60€

Έως 0,70€

παραπάνω ανεξαρτήτου τιμής

**Για μέλι (μέση τιμή 8,80€/κιλό)**

δεν αγοράζω το προϊόν αυτό

καθόλου

έως 11€

Έως 15,40€

Έως 17,60€

Έως 25€

παραπάνω ανεξαρτήτου τιμής

**2. Για ποιο ή ποια από τα παρακάτω προϊόντα γνωρίζετε ότι υπάρχουν φυτικά υποκατάστατα;**

	Δεν γνωρίζω ότι υπάρχουν υποκατάστατα	Γνωρίζω ότι υπάρχουν φυτικά υποκατάστατα, αλλά δεν έχω δοκιμάσει ποτέ	Γνωρίζω ότι υπάρχουν φυτικά υποκατάστατα και έχω δοκιμάσει ή καταναλώνω
Κίτρινο τυρί σε φέτες			
Κίτρινο τυρί (π.χ. κασέρι)			
Τυροκομικά επαλείμματα ή μαλακά τυριά			
Λευκό τυρί (π.χ. φέτα)			
Γάλα			
Γιαούρτι			
Παγωτά			
Σνίτσελ			
Λουκάνικα			
Μπιφτέκια			

**3. Πόσο συχνά καταναλώνετε φυτικά υποκατάστατα για τα παρακάτω προϊόντα;**

	Δεν το έχω καταναλώσει ποτέ	Τρώω Καθημερινά	Τρώω 2-4 φορές την εβδομάδα	Τρώω 1 φορά την εβδομάδα	Τρώω 2-3 φορές το μήνα	Τρώω 1 φορά το μή	Τρώω περισσότερα
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						να	
Κίτρινο τυρί σε φέτες							
Κίτρινο τυρί (π.χ. κασέρι)							
Τυροκομικά επαλείμματα ή μαλακά τυριά							
Λευκό τυρί (π.χ. φέτα)							
Γάλα							
Γιαούρτι							
Παγωτά							
Σνίτσελ							
Λουκάνικα							
Μπιφτέκια							