Perceptions and Concerns of Taiwanese on Fukushima Nuclear Food Imports

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Abstract

On March 11, 2011, a severe nuclear disaster occurred in Fukushima, Japan. This incident led to the release of a large amount of radiation, severely contaminating local food. In February 2022, Taiwan announced that it would open imports from Fukushima and five other prefectures. The primary aim of this study is to deeply understand the views of the Taiwanese people regarding this decision. Research through a questionnaire survey, collecting 220 valid responses. Our survey focused on four main areas: the level of knowledge about Fukushima's nuclear food, the degree of concern, satisfaction with the government's import policy, and their purchasing behavior. Data were analyzed using SPSS, with a deep dive into the cognition section. Using independent sample t-tests and ANOVA, results showed that women generally had a higher level of knowledge than men; from a professional perspective, blue-collar workers were more knowledgeable than white-collar workers. Additionally, those who had previously purchased Fukushima nuclear food differed significantly in their level of knowledge compared to those who hadn't purchased or were unaware. Furthermore, concerning the level of attention, significant differences were found based on age and frequency of cooking. In terms of education, those with higher academic qualifications were more concerned about this issue. The research proves that there are significant differences in attitudes towards the import of Fukushima nuclear food among different groups, mainly influenced by their personal background and living environment.

Keywords: Taiwanese, Fukushima nuclear food, Food safety, Cognitive concerns

摘要

在 2011 年 3 月 11 日，日本福島發生了嚴重的核災事故。這場事故造成了大量的輻射釋放，使得當地的食品受到嚴重的輻射汙染。2022 年 2 月，台灣宣布將開放進口福島以及其他五縣的產品。本研究的主要目的是深入了解台灣人民對於這一決策的看法。研究透過一項問卷調查，共收集了 220 份有效的回答。我們將調查的焦點集中在四大領域：對福島核食品的認知程度、關注程度、政府開放進口政策的滿意度，以及他們的購買行為。我們使用 SPSS 進行數據分析，並對認知部分進行了深入的研究。使用獨立樣本 t 檢定以及 ANOVA 分析結果顯示，女性的認知程度普遍高於男性；從職業上看，藍領工人的認知程度也高於白領工人。另外，那些曾經購買過福島核食品的人與那些沒有購買或不清楚的人在認知程度上存在明顯的差異。此外在關注程度部分，年齡和下廚的頻率也有顯著差異，則教育程度方面，高學歷的人群相對更加關注這一問題。研究證明，不同的人群對於福島核食品進口的態度存在著顯著的差異，這些差異主要是受到他們的個人背景和生活環境的影響。

關鍵字:台灣人、福島核食品、食品安全、認知關注

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PREFACE

On the fateful day of March 11, 2011, the Fukushima Daiichi nuclear power plant disaster irreversibly changed the environmental and public health landscape of Japan and its surrounding regions. Subsequent radioactive contamination of local food supplies cast a shadow on the safety and integrity of agricultural products in the affected areas, triggering international concern and import restrictions. More than a decade later, Taiwan decided to resume imports from Fukushima and surrounding counties, a major policy shift that has brought the issue back into the spotlight. The controversial decision, announced by the Taiwanese government in February 2022, has reignited important conversations about food safety, consumer trust and the lingering shadow of Fukushima.

The purpose of this study is to comprehensively and carefully examine Taiwanese people's views on the resumption of imports. To this end, the focus is on concerns about Fukushima food, satisfaction with government policies, and purchase intentions. Our findings paint a complex picture of public sentiment, with clear distinctions between gender, occupational sector, and personal experiences with Fukushima-related food. To this end, a total of 220 questionnaires were collected, and the results of the questionnaires were mainly analyzed to verify the assumptions and main findings of the questions.

In summary, this research charts a path of inquiry and is indebted to those who have facilitated its advancement. I would like to express my sincere gratitude to my supervisor, Daniel, whose valuable advice and guidance contributed significantly to the depth and quality of this research. I would like to express my deep gratitude to my family and friends, whose support has provided an important foundation for my academic pursuits. In addition, the enhancements I made using ChatGPT as a supporting tool played an important role in improving the rigor of the analysis and presentation of this report. In order to ensure the authenticity and academic integrity of this work, the results and findings presented are from my own ideas. I guarantee that all the content and ideas contained in this article come from my own thinking and creativity and are modified using ChatGPT words.

INTRODUCTION

Background

The Fukushima nuclear accident, which occurred on March 11th it was caused by a serious earthquake and tsunami and that devastated the Fukushima nuclear power plant. The six reactors of the Fukushima Nuclear Plant immediately stopped operating, and the power supply was also interrupted. However, the backup power system was damaged by the impact of the huge tsunami, and the key cooling system also stopped working, causing the temperature of the reactors to soar.[1] In the end, they detonated one after another, and some metal protective shells were broken. This accident resulted in great damage that led the release of radioactive material. For example, like Cesium, Iodine and Strontium internal radioactive releases to the environment.

Over the ten more years still raises concerns about food safety due to the release of radioactive substances that have contaminated soil, water, and food.[2] The disaster resulted in the release of radioactive material into the air and water, contaminating the surrounding environment, including farmland and food supplies. Fukushima's nuclear power plant not only caused the leakage of radioactive materials, but also

[1] Huang-Sheng Chiu et al., "Radioactivity inspection of Taiwan for food products imported from Japan after the Fukushima nuclear accident," *Applied Radiation and isotopes* 81 (2013).
[2] Stefan Merz, Katsumi Shozugawa, and Georg Steinhauser, "Analysis of Japanese radionuclide monitoring data of food before and after the Fukushima nuclear accident," *Environmental science & technology* 49, no. 5 (2015).

continuously injected seawater in order to prevent the melting of the furnace core and cause a nuclear explosion crisis, hoping to reduce the high temperature of the nuclear reactor, but the injected seawater was also discharged into the ocean. Organisms are threatened by radiation, which affects the food chain at a high level. After severe weather changes, such as heavy rain, typhoon and other natural disasters, the pollutants that have stabilized migrate again and spread. Thus, the food of Fukushima also the nearly five district included Ibaraki, Tochigi, Gunma and Chiba prefecture had already been banned by 55 countries in the world.[3] Various countries have responded to these concerns by proposing a ban on nuclear food imports. Since 2014, various countries have lifted the control and ban on Fukushima nuclear food, allowing these foods to be imported to countries such as New Zealand or the United States, but there are still a few countries that have not opened up yet. However, in recent years, the Taiwanese government has relaxed its policy on 2022 October, allowing nuclear food to enter the market and can be sold. Basic on the public's trust given to the government, it is unclear whether nuclear food truly meets edible standards. And so on, the government once held a nine-in-one local election in November 2018. The referendum topic was "opposition to Japanese nuclear food imports"[4]. Knowing the

[3] Tsaiyu Chang and Daisuke Takahashi, "Taiwanese voter surveys on restrictions of food imports from five prefectures near fukushima, japan: an empirical analysis," *Journal of Contemporary East Asia Studies* 10, no. 2 (2021).

[4] Strategic Challenges Taiwan's, "蔡英文總統第二任期: 台灣的戰略機遇與挑戰," (2020).

government's policy changes has also caused the government to fail to understand the needs of the people in a timely manner when formulating policies.

As environmental concerns continue to grow, coupled with the opening of imports of Fukushima nuclear food products to Taiwan after 11 years post-disaster, there have been public protests and concerns regarding the potential health effects and disease risks posed by these contaminated foods[5]. It is necessary to understand the views and evaluations of people who cook rice regarding the import of nuclear food products.

The target group of this study is Taiwanese people, and it mainly focuses on the opinions of Taiwanese people divided into those under 30 years old and those over 30 years old on the import of Fukushima nuclear food to Taiwan. This is because the ideas of those under 30 years old and those over 30 years old may be quite different and cover a wide range of issues. Taiwanese people are also paying more and more attention to health issues. Sensitivity to health issues and age groups also tend to be younger, so this is the main target for collecting questionnaires. Taiwanese people's concerns about food safety and their views on imported Fukushima nuclear food are the main parts of this study.

[5] 林宗弘, 蕭新煌, and 許耿銘, "邁向世界風險社會? 台灣民眾的社會資本, 風險感知與風險因應行為＊," *調查研究—方法與應用* 40 (2019).

Eating contaminated food from the Fukushima area has always been a controversial issue in Taiwan, and everyone has different opinions. Therefore, this research topic will use this as a starting point to explore the Taiwanese people's attention to the government or to health issues and Japan.

To achieve this goal, the study will first collect data on food imports from Fukushima and analyze the potential impact of banning food imports from the region. Then, a questionnaire will be designed to collect the opinions of housewives and their responses will be analyzed to understand the potential impact on Taiwanese society.

Subsequently, this will be used as a research question to collect Taiwanese people's views on Fukushima and food imports to Taiwan, and study whether there are differences. This study aims to take the different opinions provided by the public and explore how these can ensure safe food consumption without posing risks to public health due to food safety issues, and to investigate nuclear food acceptance and public opinion.

Research purpose

The research purpose is to investigate the attitudes and behaviors of Taiwanese towards food imported from Fukushima after the nuclear disaster. Focusing on four main part concern level, cognitive level, satisfaction of government policy and purchasing behavior.

Research question

Since we understand that Taiwanese people's views on Fukushima nuclear food are divided into four main parts: cognition, concern, purchasing behavior, and government regulatory attitude and satisfaction, we use these as three main research questions to investigate Taiwanese people's views on Fukushima. Views on open import of nuclear food.

1. How aware are Taiwanese people of the Fukushima nuclear food?
2. How concerned are Taiwanese people about the Fukushima nuclear food?
3. How satisfied are Taiwanese people with government policies?
4. Does Taiwanese people have different opinion on the purchasing behavior of Fukushima nuclear food?

LITERATURE REVIEW

Fukushima Nuclear Food Import

History and Development of Fukushima Nuclear Disaster and Nuke Food

On March 11, 2011, a severe nuclear accident occurred in Fukushima, Japan. After conducting a risk assessment, March 25, 2011, the Taiwanese government implemented a ban on the import of food products from five prefectures in Japan[6]. After a span of 11 years, on February 8, 2022, the Taiwanese government lifted restrictions on Fukushima nuclear food products. The decision was made based on assurances provided by the food safety department of the Executive Yuan and the publication of food testing results by the Food and Drug Administration, ensuring food safety. The import policy transitioned from a "complete ban" to "restrictions on specific products," although there are still some products that remain subject to import restrictions.

The Fukushima nuclear disaster occurred on March 11, 2011, when a magnitude 9.0 earthquake struck the Tohoku region of Japan. The earthquake triggered a tsunami that hit the Fukushima Daiichi nuclear power plant, damaging its power supply and emergency backup systems. This resulted in an extended period of fuel rod exposure in the reactors, leading to overheating and subsequent explosions, causing a significant release of radiation. This disaster was classified as a Level 7 nuclear

[6] 陳國瑋, "受核事故影響食品之人體健康風險評估" (2018).

accident, the highest level on the International Nuclear Event Scale. The Chernobyl disaster, which was another major nuclear accident in the past, is also classified at this level.

The Taiwanese government has issued an immediate ban on food imports from Fukushima and the other four prefectures and cities (Tochigi, Ibaraki, Chiba, and Gunma). However, in 2014, Taiwan's Ministry of Health and Welfare announced that food imported from Japan must pay for the origin and origin of the food. However, in 2015, it was discovered that unscrupulous importers were changing labels and pretending to be produced in other regions in order to comply with this policy. Therefore, this regulation came to an end after being issued, and import restrictions were maintained until 2016. The Executive Yuan announced the opening of imports and food, but Fukushima Prefecture maintained the ban. The remaining four counties are required to comply with radiation testing certificates and certificates of origin. The import of bird and animal meat products, wild mushrooms and vegetables is prohibited across Japan[7]. In 2018, the government held a in a referendum, and respecting public opinion, the main article "Maintaining the ban on the import of food from Japan's nuclear disaster areas" was passed with 7.79 million votes in favor.

The nuclear accident caused radioactive contamination, not only affecting the

[7] "2022 年 2 月前，台灣限制日本福島核災區食品進口的措施," 焦點事件, https://eventsinfocus.org/issues/1218.

local Fukushima area but also spreading to five prefectures including Ibaraki, Tochigi, Gunma, and Chiba. The radiation contamination affected agricultural produce, seafood, meat, vegetable products, baby products, and dairy products. Even the ocean was contaminated by the radiation. The widespread radiation contamination led to import restrictions on Fukushima food products by all countries, severely impacting the Japanese economy.

Debate on Fukushima Nuclear Food Imported

After Taiwan opened the import of Fukushima food, many Taiwanese people still have great concerns about the safety of these products. They have doubts about the government's position, especially since the policy was implemented. In 2018, the Taiwan government proposed a global referendum project "Do you agree with the government's maintenance of the ban on the opening of areas related to the 311 nuclear disaster in Fukushima, Japan, including Fukushima and the surrounding 4 counties and cities (Ibaraki, Tochigi, Gunma, Chiba) and other areas of agricultural products and food imports?" , passed the referendum on November 25, 2018 with 7.19 million yes votes and 2.31 million no votes, but two years have passed since the referendum deadline, and the Taiwan government has opened the import of Fukushima nuclear food to Taiwan in 2022, which confuses the public And some

controversies were entrained, which aroused dissatisfaction among the people, who believed that the move was too sudden, and made the people think that the government did not respect public opinion.

In recent years, food safety has become a growing concern for Taiwanese people. Yet when it comes to Fukushima food, a conflict of interest between health risks and economic benefits has polarized the debate over its importation. Some believe the financial benefits outweigh the risks, while others believe the health risks outweigh any financial benefits. Although Taiwan is Japan's fourth largest food importer, it continues to ban food imports from Fukushima. According to the data, before the Fukushima nuclear disaster occurred on 311, Taiwan imported mainly Koshihikari rice, natto, salted mackerel, kelp, and saury, etc. After the disaster, Taiwan’s imports of Koshihikari rice from Japan have not decreased but increased, and the rest of the food has also slowly recovered. The potential impact on the economy is worth considering. In early 2022, Taiwan's government has been discussing joining the Comprehensive and Advanced Trans-Pacific Partnership (CPTPP), which has become a topic of debate. In the 11 years after the Fukushima nuclear disaster, Taiwan and China are the only remaining countries that have imposed restrictions on Fukushima food, but Taiwan has not relaxed its position on lifting the ban. However, in early 2022, the Taiwan government has relaxed the standards, which makes people

suspicious At that time, Japan was the leading country of CPTPP, did Taiwan relax the standards because of this, just to be able to smoothly enter the CPTPP and become a member of it, so as to bring greater economic benefits, while ignoring the health risks and the opinions of the people.

Consumer Perceptions and Concerns

Taiwanese Attitudes towards Food Safety and Public Health

Following the lifting of the ban on Japanese food imports, the concerns of the Taiwanese public regarding food safety did not wane. In fact, this policy intensified their apprehensions about foods originating from Fukushima and other disaster-stricken areas. For a long time, food safety has been a major concern for the people of Taiwan. In 2022, when the Taiwanese government announced the decision to permit the import of Fukushima-related nuclear food products, the decision made a portion of the Taiwanese public even more aware of the potential health risks associated with such foods.

To delve deeper into this issue, a series of surveys were conducted targeting individuals below 30 and those between 30-50 years old. These age groups form a significant proportion of the population in Taiwan, and their views and attitudes often influence societal and policy directions.

According to the survey, a majority of the respondents expressed reservations about the safety of food products from the Fukushima region. Especially after the anti-nuclear movement initiated by the Taiwan Homemakers' Union, the public skepticism towards imported nuclear food products from Fukushima grew. They pointed out that although environments affected by radiation were gradually

recovering, Taiwan had long prohibited the import of food from Fukushima. Additionally, while 14 eastern Japanese prefectures, which were heavily contaminated by radiation, banned the sale of food products, Taiwan's control over food safety from other prefectures seemed to be lacking.

Therefore, for the government to gain public trust and support, it was indeed necessary to disclose its food inspection standards more transparently and ensure their stringency. Only when the government can provide sufficient information and evidence to prove these foods are safe will the public consider supporting the import policy.

Trust in government and Consumer perceptions

The Taiwan Housewives' Union launched an anti-nuclear campaign, specifically mentioning the import of nuclear food from Fukushima[8]. Their primary concern was that the environment, although slowly recovering, had been compromised for years. Furthermore, Taiwan had prohibited the import of food from five prefectures in Fukushima for eleven years. Fourteen prefectures in eastern Japan had prohibited the sale of food due to severe radiation pollution. However, Taiwan seemed to lack adequate control over the situation in other prefectures. The government needed to heed consumers' perspectives and had to ensure rigorous food safety standards to amplify risk awareness. Many consumers perceived the risks of consuming Fukushima-derived foods as excessively high, leading them to entirely avoid these products. To assure that the imported Fukushima nuclear foods did not pose significant health threats and considering that the complete health implications of radiation exposure might not have been entirely understood, the government's testing

[8] "日本食品中的輻射風險與恐懼," 主婦聯盟環境保護基金會, 2017, accessed 2017/07/17, https://www.hucc-coop.tw/topic/issue7/6919.

protocols for these products needed to be transparent and stringent. Such clarity and rigor were essential to garner citizen support for the policy, rather than having them blindly adhere to governmental decisions.

Estimated by Government

Food Import Policies and Regulations in Taiwan and How Policies and Regulations are Developed and Implemented

Taiwan has strict food safety standards for imports. In order to ensure food safety for its citizens. Taiwan has strict standards in terms of food import licenses, inspection and quarantine safety standards, labeling requirements, and traceability of product. Food imports must pass the Food Safety Law[9] before they can be distributed to the market for people to buy[10]. The Taiwan government has certain strict procedures and standards for food import safety testing, such as: food import license standards, inspection and quarantine safety standards, labeling requirements, product source traceability, etc. For food safety in the Fukushima area, there is a set of strict procedures and standards. The qualified standard for foods other than infant food and drinking water is 100 Bq/kg. If it exceeds 100 Bq/kg[11], the food will be destroyed on the spot[12].

In Taiwan, policies and laws related to food safety are formulated and implemented by various government agencies such as the Council of Agriculture, the

[9] 法源法律網>, "
法規名稱：食品安全衛生管理法," (2019/6/12),
https://db.lawbank.com.tw/FLAW/FLAWQRY03.aspx?lno=4%2c15&lsid=FL013890.
[10] 廖又生, "論國民健康與食品安全問題," *亞東學報*, no. 39 (2019).
[11] "日本福食解禁：台灣核食標準世界最嚴？銫 90 檢驗、水產品安全性成焦點," 2022/02/18,
https://www.healingdaily.com.tw/articles/%E6%A0%B8%E9%A3%9F%E6%A8%99%E6%BA%96-%E6%96%B0%E8%81%9E%E5%A0%B1%E5%B0%8E/.
[12] Chang and Takahashi, "Taiwanese voter surveys on restrictions of food imports from five prefectures near fukushima, japan: an empirical analysis."

Ministry of Health and Welfare, and the Food and Drug Administration to increase the risk of food safety.

How CPTPP Impacted

The full name of CPTPP is the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). It is a comprehensive and high-standard regional trade agreement involving 11 member countries. Taiwan is actively seeking to join the CPTPP due to several reasons. Firstly, five of the member countries are among Taiwan's top ten trading partners, which would bring significant economic benefits to Taiwan's trade market. Additionally, joining the CPTPP would provide Taiwan with opportunities to connect with the global economy and access international markets[13].

Taiwan's nuclear food issue has sparked concerns about joining the CPTPP. For Taiwan, it has not joined the CPTPP, but with the opening up of nuclear food, this topic has reached its peak. CPTPP is an organization that Taiwan actively applied to join after the World Trade Organization (WTO). For Japan, which is the chairman[14], Taiwan's openness to Japanese nuclear food has become an important bargaining chip for entry[15]. This has also led the public to believe that the government approved the import of Fukushima nuclear food in order to enter the "Comprehensive and

[13] 廖又生, "論國民健康與食品安全問題."
[14] 謝正一, "探討台灣申請 CPTPP 入會的若干問題," *華人經濟研究* 19, no. 2 (2021).
[15] 徐子涵 et al., "我們也可以?-台灣申請加入 [跨太平洋夥伴全面進行協定]((CPTPP) 可行性評估," (Oct. 2022 2022).

Progressive Agreement for Trans-Pacific Partnership".

Assessing the Public Health Implications of Fukushima Nuclear Food Imports

Understanding how contaminated food may harm consumers' bodies is important when assessing the impact of Fukushima nuclear food imports on public health. The Taiwan government formulates food safety standards based on whether excessive consumption will cause harm to people's health, but the same core food has different health risks and individual differences for consumers, as well as different harm to the body. In the detection of radiation food, three radioactive isotopes of iodine 131, cesium 134 and cesium 137 are usually used for detection[16]. The environmental half-life of cesium 137 is as long as 30 years, which will seriously pollute the soil, ocean, and crops, and invert these radiations, and evaluate the cancer risk of each age group for long-term consumption of nuclear disaster food[17].

[16] 陳國瑋, "受核事故影響食品之人體健康風險評估."
[17] 陳國瑋, "受核事故影響食品之人體健康風險評估."

METHODOLOGY

Research Design

My research topic is "Taiwanese's Views on Imported Fukushima Nuclear Food". I used a quantitative method to understand the views and overall acceptance of Taiwan's food suppliers on Taiwan's opening of imports of Fukushima nuclear food in 2022.

The quantitative part of the research will involve conducting a questionnaire survey that includes questions about the respondents' basic knowledge about nuclear food, their level of concern about the issue, their satisfaction with government policies, and their buying habits. The survey will primarily use closed-ended questions to collect data and analyze the distribution of responses, with Google Forms serving as the primary data collection tool.

I divided the questionnaire into five main sections. The first part collects basic demographic information, the second part focuses on participants' knowledge and understanding of nuclear foods, the third part explores participants' level of concern about nuclear foods, and the fourth part assesses participants' satisfaction with government regulation of nuclear foods, The fifth part investigates whether the participants' purchasing behavior is influenced by nuclear food.

Through this study, we aim to gain insight into Taiwan's perceptions and perceptions of imported Fukushima nuclear food. We also aimed at household food providers to explore their satisfaction with government policies as well as their attitudes and behaviors towards purchasing nuclear food. In addition, we wanted to compare perceptions, awareness and concerns about Fukushima nuclear food imports in different age groups to ensure more accurate results.

In summary, the research project employs a quantitative approach, employing a

survey that includes issues related to nuclear food. This approach will provide quantitative information on Taiwan's at-home food providers' perceptions and overall acceptance of imported Fukushima nuclear foods, thereby providing valuable insights for future research and policymaking.

Population and Sample

The survey participants will be selected as individuals responsible for food providers at home with the aim of ensuring that a wide range of individuals can participate. However, there will be a specific focus on Taiwanese food provider between the ages above 30 and compare with the age under 30, representing those who have experienced and those who have not experienced the period of Fukushima nuclear disaster. People over the age of 30 may pay much more attention to health awareness and cognition of food safety risks than people under 30 years old, and through the accumulation of experience and knowledge, they can provide different perspectives and more in-depth perspectives, and 30 years old are more likely to play the role of housewives or parents in the family, so they have stricter food choices and a higher possibility of cooking

The primary objective of selecting this demographic is to explore the perspectives and viewpoints of Taiwanese Food Provider at home who have gone through the Fukushima nuclear disaster period compared to those who have not. This difference will be a key focus of my research, particularly in examining their thoughts and opinions on the import of nuclear food into Taiwan.

By including Taiwan food providers who have experienced the Fukushima nuclear disaster, I aim to gain a deeper understanding of their unique perspectives. Their personal experiences and memories of the event may influence their attitudes

and views on the importation of nuclear food products to Taiwan. Understanding how this specific group perceives this issue will contribute to a comprehensive analysis of the overall viewpoints on the research question.

In The inclusion of both experienced and inexperienced individuals, as well as those who maintain a neutral stance, provides different perspectives unaffected by direct disaster experiences. The opinions regarding the importation of nuclear food products will offer valuable insights into the broader societal attitudes towards this issue. By comparing and contrasting the viewpoints of these two groups, I ensure that my research aims to comprehensively understand and encompass the perspectives of Taiwan food providers on the importation of Fukushima nuclear food products.

Research Instrument and Its Use

The primary research tool used in this study is an online survey questionnaire aimed at collecting comprehensive data on Taiwanese housewives' opinions regarding the importation of Fukushima food. The survey questionnaire can be found in Appendix A, which was constructed based on relevant literature to ensure the comprehensive coverage of accurate information, as well as a wide range of attitudes and behaviors related to Fukushima food.

The questionnaire consists of six main sections. The first section is demographic information, including participants' gender, age, educational level, household size, and economic status. This information can be used to investigate variables and their relevance to viewpoints on Fukushima food, comparing food providers who participate and those who do not participate in Fukushima food consumption. The second, third, fourth, and fifth sections all employ Likert scale items, including a multiple-choice question and an open-ended question. The second section aims to

assess the basic knowledge of Taiwanese housewives regarding Fukushima food. The third section measures the level of concern about Fukushima food. The fourth section evaluates the Taiwanese government's regulatory attitude towards Fukushima food, including a multiple-choice question. The fifth section investigates purchasing behavior, with the final question being an open-ended question. By utilizing Likert scales, the data distribution can be understood to explore the perspectives of Taiwanese food providers.

Google Forms will be used to distribute the survey questionnaire primarily due to its platform's anonymity, convenience for participants to fill out and quick dissemination, as well as its backend integration capabilities. The platform facilitates backend data integration, making it the preferred choice as the primary survey platform.

The Taiwan Housewives' Union will serve as the main official communication channel for recruiting this particular group. They can distribute the survey questionnaire to their members via email or leverage the power of social media for recruitment. All data will be treated with confidentiality, and any subsequent reports or publications will not include any personally identifiable information of the respondents. The data will be used solely to assist this research and will not be used for any other purposes.

Data Editing, Coding, and Analysis

Based on the valid samples that were collected, the methodology of this study was bifurcated into two primary segments: descriptive statistics and inferential statistics. The investigation commenced with a comprehensive enumeration of the descriptive statistics, addressing both demographic variables and the level of Taiwanese

apprehension concerning Fukushima nuclear food.

Data analysis was conducted using SPSS. In the realm of descriptive statistics, particular emphasis was placed on discerning differences under distinct categories. For instance, disparities were examined between age groups such as individuals over 30 years old and those aged 30-50. Gender-based analysis was also undertaken, as well as comparisons between individuals who did not engage in cooking and those who did frequently. To ascertain these variations, an independent sample T-test was employed. Additionally, a one-way analysis of variance (ANOVA) was utilized to compare differences across respondents from various educational backgrounds.

It was crucial to interpret the 'p' value correctly. When the p-value exceeded 0.05, this indicated that there wasn't a statistically significant difference between the compared groups. Conversely, in the variance analysis, if the p-value was less than 0.05 for the sample mean, it signified a significant difference. In such cases, a post hoc analysis was further employed to delineate which specific groups exhibited these noteworthy discrepancies.

The questionnaire will be divided into five parts, namely: basic information, awareness, concern, government regulatory policies and purchasing behavior. The basic information is coded as gender, age, occupation, education, place of residence and frequency of cooking. The questions in the cognitive part will be coded starting with a1. When a checked option is encountered, the code will be started with aa1 to facilitate subsequent data review.

DATA ANALYSIS

Opening of Chapter

The core objective of this study was to investigate differences in perceptions, knowledge levels, and attitudes towards Fukushima nuclear food among various age groups. Specifically, it focused on two primary demographic groups: those aged over thirty and those aged under thirty, aiming to provide a deeper insight into their viewpoints and sentiments regarding Fukushima nuclear food.

The questionnaire for this study was designed to assess the foundational awareness of Taiwanese citizens concerning Fukushima nuclear food products, their knowledge of relevant legal regulations, their level of concern about Fukushima nuclear food, and their perceptions of potential health risks associated with it. Additionally, it sought to understand their comprehension of government policies and their expectations for policy improvements. Throughout this research, several hypotheses were formulated to further investigate variations among different demographic groups. For instance, one hypothesis suggested that individuals who frequently engaged in cooking might possess greater knowledge and concern about Fukushima nuclear food compared to those who seldom cooked. Furthermore, another hypothesis suggested that citizens over the age of thirty might have had a deeper understanding of and concern about the health risks associated with Fukushima nuclear food compared to those under the age of thirty.

Data Examination

This research project focused on the awareness and perceptions of Taiwanese individuals regarding food products related to the Fukushima nuclear disaster. It primarily targeted two distinct age groups: those under 30 and those between 30 and 50 years old for comparative analysis. The research also aimed to investigate whether age-related differences resulted in varying perspectives and if lifestyle habits impacted their opinions.

A total of 220 questionnaires were collected, with fewer than ten being deemed invalid. These invalid responses included anomalies such as identical answers for each question and questionnaires with missing data. These excluded questionnaires were not included in our analysis. The focus was on analyzing the data accurately collected from the remaining questionnaires.

The questionnaire for this research project gathered information about the participants' age, gender, occupation, education level, residential area, and cooking frequency. This information facilitated subsequent comparative analyses. The questionnaire predominantly used Likert scales for categorization and coding. In this scale, "5" represented "very," "4" signified "well-informed," "3" denoted "average knowledge," "2" indicated "poor understanding," and "1" represented "no understanding at all." For frequency-based questions, "5" corresponded to "always,"

"4" stood for "most of the time," "3" meant "sometimes," "2" represented "rarely," and "1" signified "never." For binary questions, "1" indicated "yes," "2" meant "no," and "3" represented "don't know."

The main focus of the analysis was to address the research question. Gender, age, occupation, education level, place of residence and weekly cooking frequency are used as independent variables. Age is to combine the five options into two options for comparison and divide them into under 30 years old and 30 years old. For the above occupation, the original 16 occupations were combined and divided into two options, white-collar class and blue-collar class, for subsequent comparison. In terms of education level, junior high school (including) and below were removed because the number of samples was only Two digits are not enough to constitute the data for discussion. The three options for residence are northern Taiwan, central Taiwan, and southern Taiwan. Since there are only three samples in eastern Taiwan, they are removed. The weekly cooking frequency is Merge them into two options, not cooking and groups 1-6 times or more, to facilitate subsequent comparisons.

The research question will use T-TEST and ANOVA in SPSS as the main analysis tools and compare Taiwanese people's views on Fukushima-related foods.

Descriptive Statistics

Through descriptive statistics (Appendix B), in analyzing main demographic insights from the survey, it is observed that the majority of respondents were female, constituting 72%, while males accounted for 28%. The data, imported into SPSS, focused on using age as an independent variable and employed a T-TEST to examine concerns among Taiwanese people regarding Fukushima-related food products. Regarding occupation, students comprised 40% of respondents, with the remaining 60% being employed, notably in the financial and insurance (18.2%) and service (8.2%) industries. Education levels predominantly centered around bachelor's degrees (75%), followed by postgraduate education (14.5%). Geographically, most respondents lived in the central region (39.3%), followed by the northern region (36.8%), while the eastern region had the lowest representation (1.4%). Cooking habits revealed that "almost never" cooking was the most common (41.8%), followed by cooking one to two times a week (31.8%), with fewer respondents cooking more frequently. These findings offer valuable insights into the survey's demographic characteristics.

Research Question One

Research question one: "How aware and concerned are Taiwanese people about the Fukushima nuclear food?" The cognitive part is divided into three questions, so average them (a1+a2+a3)/3 and use the average value in the research questions. Based on six questions including the interviewees' background information and work experience, it is assumed that these six attributes are factors that influence the interviewees' opinions. The following will analyze the differences in gender, age,

cooking frequency and the question code B1. Ages under 30 years old are compared with those over 30 years old. Frequency of cooking is compared between groups who do not cook and those who cook, so that the results can be understood more clearly.

On Gender Difference

There were significant differences about the cognitive of Fukushima nuclear food in the gender differences. After use an independent sample T-Test (Appendix 1), the female was more than male, so this study wanted to understand if female were concerned on the Fukushima nuclear food was much more than male. The studies used T-Test to compare the average of cognitive for males M= (3.07) SD= (1.01) and female M=(2.79) SD=(0.81) in cognitive part. The t (219) =0.06, and p=0.03 which lower than 0.05. Therefore, female was much more understand than males.

On Age Difference

There were no significant differences about the cognitive of Fukushima nuclear food in the age differences. After use an independent sample T-Test (Appendix 2), the age under 30 was more than the age above 30, so this study wanted to understand if the age more than 30 was more concerned on Fukushima nuclear food. Age under 30 M= (3.00) SD=(0.91) and the age above 30 M=(2.77) SD=(0.84) in cognitive part. The t(220)=0.70, and p=0.06 which higher than 0.05. It can be seen from the research results that there is not much significance in age differences in cognition.

On Occupation Difference

There were significant differences about the cognitive of Fukushima nuclear food in the gender differences. After use an independent sample T-Test (Appendix 3),

white collar and blue collar, this study wanted to understand the different occupation had different opinion. The studies used T-Test to compare the average of cognitive for white collar M=(2.80) SD=(0.80) and blue collar M=(3.16) SD=(0.92) in cognitive part. The t(211)=0.342, and p=0.00 which lower than 0.05. Therefore, this result indicates that there was a significant difference between blue-collar workers and white-collar workers in their perceptions of Fukushima nuclear food.

On Education Level Difference

There were no significant differences about the cognitive of Fukushima nuclear food in the gender differences. In the analysis data, only put forward three variables for comparison: graduate school or above, high school vocational education and university education. Since there are only two interviewees with junior high school or below, the sample number is not enough to serve as a basis, and I will whose data are excluded. After running ANOVA (Appendix 4), the p=0.840 which higher than 0.05. It can be seen from the research results that there is not much significance in education difference on the cognitive of Fukushima nuclear food.

On Location Difference

There were no significant differences about the satisfaction with government regulatory policies the of Fukushima nuclear food in the location differences. The research group selected people from northern, central and southern Taiwan as the main survey subjects. Since there were only three respondents from the eastern group, the results were not significant, so they were excluded. After running ANOVA (Appendix 5), the result showed the analysis revealed no statistically significant differences in scores for the mean number of different location, with north, central,

south p = 0.629 which higher than 0.05. It can be seen from the research results that there is not much significance in location difference on the cognitive of Fukushima nuclear food.

On Cooking Frequency Difference

There were no significant differences about the cognitive of Fukushima nuclear food in the age differences. After use an independent sample T-Test (Appendix 6), Using the number of times of cooking per week as a comparison factor, the awareness of Fukushima nuclear foods was compared between those who cooked every week and those who non cooked. Cooked M=(2.94) SD=(0.87)and non-cooked M=(2.76) SD=(0.89).The t(219)=0.686 and p=0.14 which higher than 0.05. Therefore, compared with those who cook and those who do not cook, there is no significant effect.

On Question B1 Difference

Question B1 is about" Have you ever purchased Fukushima nuclear food?". This question is located in the first question in the concern section of the questionnaire, so the non-attitude scale is used as an independent variable to measure whether people have changed their understanding of Fukushima nuclear food because they have purchased it. According to the ANOVA (Appendix 7), according to the results, the mean difference is about 0.90, with a 95% confidence interval of 0.44 to 1.377, and the result "Yes" vs. "No" has a p-value = 0.00 lower than 0.05 and the other "Yes" vs. "Unknown" compared with p value = 0.00, indicating that the result is statistically significant, and the individual standard deviations in the two options of "Yes" and "No" and "Unknow" are SD=0.909 and SD=1.248 respectively, showing "No" Group differences were higher for "Unknow" than for "No", meaning that individuals who

purchased Fukushima nuclear food ("Yes") had higher average scores on awareness-related cognitions.

Research Question Two

Research question two: " How concerned are Taiwanese people about the Fukushima nuclear food?". The concerned level part is divided into three questions, so average them (b2+b3+b4+b5+b6)/5 and use the average value in the research questions. Based on six questions including the interviewees' background information and work experience, it is assumed that these six attributes are factors that influence the interviewees' opinions. The following will analyze the differences in gender, age, occupation, education, location, cooking frequency and the question code B1. Question B1 was different to concerned part because only B1 was “Yes” “NO” question. Ages under 30 years old are compared with those over 30 years old. Frequency of cooking is compared between groups who do not cook and those who cook, so that the results can be understood more clearly.

On Gender Difference

There were no significant differences about the concerned level of Fukushima nuclear food in the gender differences. After use an independent sample T-Test (Appendix 8), the female was more than male, so this main result in understand if female were concerned on the Fukushima nuclear food was much more than male. The studies used T-Test to compare the average of cognitive for males M= (2.50)

SD=(0.9) and female M=(2.57) SD=(0.97) in cognitive part. The t (218) =0.458, and p=0.632 which higher than 0.05. The result of the concerned level on Fukushima nuclear food was no significant differences.

On Age Difference

There were significant differences about the concerned level of Fukushima nuclear food in the age differences. After use an independent sample T-Test (Appendix 9), the age under 30 was more than the age above 30, so this study wanted to understand if the age more than 30 was more concerned on Fukushima nuclear food. Age under 30 M=(2.86) SD=(0.92) and the age above 30 M=(2.33) SD=(0.91) in concerned part. The t(219)=0.700, and p=0.00 which lower than 0.05. It can be seen from the research results that there was significance in age differences in concerned level.

On Occupation Difference

There were no significant differences about the concerned level of Fukushima nuclear food in the gender differences. After use an independent sample T-Test (Appendix 10), white collar and blue collar, this study wanted to understand the different occupation had different opinion. The studies used T-Test to compare the average of cognitive for white collar M=(2.56) SD=(0.95) and blue collar M=(2.63) SD=(0.90) in concerned level on Fukushima nuclear food. The t(210)=0.637, and p=0.660 which higher than 0.05. Therefore, this result indicates that there was

significant difference between blue-collar workers and white-collar workers in concerned level on Fukushima nuclear food imported.

On Education Level Difference

There were significant differences about the satisfaction with government regulatory policies the of Fukushima nuclear food in the education level differences. In the analysis data, I only put forward three variables for comparison: graduate school or above, high school vocational education and university education. Since there are only two interviewees with junior high school or below, the sample number is not enough to serve as a basis, and I will whose data are excluded. After running ANOVA (Appendix 11), in high school education compared with university degree, the p=0.017 which lower than 0.05. It can be seen from the research results that there was much significance in high school and university education difference on the concerned of Fukushima nuclear food.

On Location Difference

There were no significant differences about the concerned level on Fukushima nuclear food in the location differences. The research group selected people from northern, central and southern Taiwan as the main survey subjects. Since there were only three respondents from the eastern group, the results were not significant, so they were excluded. After running ANOVA (Appendix 12), the result showed the analysis revealed no statistically significant differences in scores for the mean number of different locations, with north, central, south p = 0.979 which higher than 0.05. It can

be seen from the research results that there is not much significance in location difference on the concerned level of Fukushima nuclear food.

On Cooking Frequency Difference

There were significant differences about the concerned level on Fukushima nuclear food in the cooking frequency differences. After use an independent sample T-Test (Appendix 13), Using the number of times of cooking per week as a comparison factor, the awareness of Fukushima nuclear foods was compared between those who cooked every week and those who non cooked. Cooked M=(2.69) SD=(0.97)and non-cooked M=(2.35) SD=(0.88).The t(218)=0.323 and p=0.010 which lower than 0.05. Therefore, compared with those who cook and those who do not cook, there was significant result.

Research Question Three

Research Question Three: "How satisfied are Taiwanese people with government policies?" Since the government policy part is divided into five questions, among which the four-question attitude scale is presented, the average is (c1+c2+c3+c4)/4, and through six questions including the interviewee's background information and work experience. It is hypothesized that these attributes will be factors that had different opinion. Gender, age, occupation, education level, location, and cooking frequency are analyzed below.

On Gender Difference

There were no significant differences about the satisfaction with government regulatory policies the of Fukushima nuclear food in the gender differences. After use an independent sample T-Test (Appendix 14), the female was more than male, so this

study wanted to understand what different between male and female. The studies used T-Test to compare the average of cognitive for males M= (3.33) SD= (0.53) and female M=(3.36) SD=(0.49) in this part. The t (216) =0.148, and p=0.68 which higher than 0.05. Therefore, the result of the concerned level on Fukushima nuclear food was no significant differences.

On Age Difference

There were no significant differences about the satisfaction with government regulatory policies the of Fukushima nuclear food in the age differences. After use an independent sample T-Test (Appendix 15), the age under 30 was more than the age above 30, so this study wanted to understand if the age more than 30 was more concerned on Fukushima nuclear food. Age under 30 M= (3.36) SD= (0.55) and the age above 30 M= (3.36) SD=(0.47) in cognitive part. The t (216) =0.72, and p=0.95 which higher than 0.05. It can be seen from the research results that there is not much significance in age difference on the satisfaction with government.

On Occupation Difference

There were significant differences about the satisfaction with government regulatory policies the of Fukushima nuclear food in the occupation differences. After use an independent sample T-Test (Appendix 16), white collar and blue collar, this study wanted to understand the different occupation had different opinion. The studies used T-Test to compare the average of cognitive for white collar M=(3.39) SD=(0.49)

and blue collar M=(3.29) SD=(0.54) in concerned level on Fukushima nuclear food. The t(207)=0.672, and p=0.20 which higher than 0.05. Therefore, It can be seen from the research results that there is not much significance in occupation difference on the satisfaction with government.

On Education Level Difference

There were no significant differences about the satisfaction with government regulatory policies the of Fukushima nuclear food in the education level differences. In the analysis data, I only put forward three variables for comparison: graduate school or above, high school vocational education and university education. Since there are only two interviewees with junior high school or below, the sample number is not enough to serve as a basis, and I will whose data are excluded. After running ANOVA (Appendix 17), the p=0.977 which higher than 0.05. It can be seen from the research results that there is not much significance in education level difference on the satisfaction with government.

On Location Difference

There were no significant differences about the satisfaction with government regulatory policies the of Fukushima nuclear food in the location differences. The research result was from north, central and south because the east side of Taiwan is less than five, so the sample was not enough. After running ANOVA (Appendix 18), the result showed the analysis revealed no statistically significant differences in scores for the mean number of different locations, with north, central, south, p =0.952 which

higher than 0.05. It could be seen from the research results that there is not much significance in location difference on the satisfaction with government.

On Cooking Frequency Difference

There were no significant differences about the satisfaction with government regulatory policies the of Fukushima nuclear food in the location differences. After use an independent sample T-Test (Appendix 19), Using the number of times of cooking per week as a comparison factor, the satisfaction with government regulatory policies of Fukushima nuclear foods was compared between those who cooked every week and those who non cooked. Cooked M=(2.94) SD=(0.73)and non-cooked M=(2.93) SD=(0.65).The t(216)=0.670 and p=0.93 which higher than 0.05. Therefore, compared with those who cook and those who do not cook, there was no significant result.

Research Question Four

Research question 3: "Does Taiwanese people have different opinion on the purchasing behavior of Fukushima nuclear food?". Purchasing behavior will be divided into three questions, two questions will be presented in the form of attitude scale, and the average will be (d1+d2) / 2. Another one question D3 that I took it out independent because it was different to attitude scales, and I put it in the last. This research analysis will use six parts including the respondent's background information and work experience, assuming that these attributes will be affected by the respondent's assessment points. Age, location, frequency of cooking is analyzed below.

On Gender Difference

There were no significant differences about influence on the purchasing behavior of Fukushima nuclear food in the age differences. After use an independent sample T-Test, the female was more than male, so this study wanted to understand what different between male and female. The studies used T-Test (Appendix 20) to compare the average of cognitive for males M= (3.00) SD= (0.71) and female M=(2.92) SD=(0.69) in this part. The t (216) =0.673, and p=0.703 which higher than 0.05. Therefore, it can be seen from the research results that there is not much significance in gender difference on the purchasing behavior.

On Age Difference

There were no significant differences about influence on the purchasing behavior of Fukushima nuclear food in the age differences. After use an independent sample T-Test (Appendix 21), the age under 30 was more than the age above 30, so this study wanted to understand if the age more than 30 was more concerned on Fukushima nuclear food. Age under 30 M= (2.94) SD= (0.69) and the age above 30 M= (2.95) SD=(0.71) in cognitive part. The t (217) =0.818, and p=0.93 which higher than 0.05. It can be seen from the research results that there is not much significance in age difference on the purchasing behavior.

On Occupation Difference

There were no significant differences about the opinion on the purchasing

behavior of Fukushima nuclear food in the age differences. After use an independent sample T-Test, white collar and blue collar, this study wanted to understand the different occupation had different opinion. The studies used T-Test (Appendix 22) to compare the average of cognitive for white collar M=(2.93) SD=(0.71) and blue collar M=(2.95) SD=(0.63) in concerned level on Fukushima nuclear food. The t(208)=0.896, and p=0.931 which higher than 0.05. Therefore, it can be seen from the research results that there is not much significance in occupation difference on the purchasing behavior.

On Education Level Difference

There were no significant differences about the opinion on the purchasing behavior of Fukushima nuclear food in the education level differences. In the analysis data, I only put forward three variables for comparison: graduate school or above, high school vocational education and university education. Since there are only two interviewees with junior high school or below, the sample number is not enough to serve as a basis, and I will whose data are excluded. After running ANOVA (Appendix 23), the p=0.721 which higher than 0.05. It can be seen from the research results that there is not much significance in education level difference on the purchasing behavior.

On Location Difference

There were no significant differences about the satisfaction with government regulatory policies the of Fukushima nuclear food in the location differences. The research result was from north, central and south because the east side of Taiwan is

less than five, so the sample was not enough. After running ANOVA (Appendix 24), the result showed the analysis revealed no statistically significant differences in scores for the mean number of different locations, with north, central, south p = 0.088 which higher than 0.05. It can be seen from the research results that there is not much significance in location difference on the purchasing behavior.

On Cooking Frequency Difference

There were no significant differences about influence on the purchasing behavior of Fukushima nuclear food in the age differences. After used an independent sample T-Test (Appendix 25), Used the number of times of cooking per week as a comparison factor, the awareness of Fukushima nuclear foods was compared between those who cooked every week and those who non cooked. Cooked M= (2.94) SD=(0.05) and non-cooked M=(2.95) SD=(0.73).The t(216)=0.44 and p=0.93 which higher than 0.05. Therefore, compared with those who cook and those who do not cook, there is no significant effect in the purchasing behavior of Fukushima nuclear food.

On Question D3

The question D3 is" Would you consider buying local Taiwanese alternatives instead of buying Fukushima nuclear food? If so, what products can replace it?" After analysis, the result is that the number of people who are willing to buy fresh and refrigerated fruits and vegetables from Taiwan as an alternative to fresh and refrigerated fruits and vegetables from Fukushima is significantly different. 72.3% are willing to buy local fresh fruits and vegetables, while 72.3% are not willing to buy

only fresh and refrigerated fruits and vegetables from Fukushima. Accounting for 27.7%, the difference is almost twice the proportion of the population, while the remaining live and refrigerated aquatic products also have significant differences.

The opposite is true for infant and child products. Most people are unwilling to consider Taiwanese local products, accounting for 68.2% of the population. As for tea, 68.2% are unwilling to consider local tea, while the rest of the products include: frozen aquatic products, dairy products, drinking water and mineral water, and seaweed, most of the results are close to half, and there is no significant difference.

Summary

Among these four research questions, only the first question involving cognition and the second question of attention showed significant effects, among which gender, age, occupation, education level, cooking frequency and purchasing behavior were all shown separately. There are obvious differences in opinions. However, no significant differences were found for the third and fourth research questions. This shows that personal behavior is most important for awareness and attention.

Overall, the average of each part is not high, or even lower than the middle value, so overall it is not taken seriously.

CONCLUSION

Discussion One

The first research question is to explore Taiwanese people's awareness of Fukushima nuclear food. After several analyses, the following results were obtained.

The research question was: "How the Gender aware and concerned are Taiwanese people about the Fukushima nuclear food?". A past reference states that "women are generally more aware of environmental risks than men, while men are less supportive of nuclear power than women". The research questions sought to explore in depth whether there were significant differences in gender perceptions of Fukushima nuclear foods.

The results of this study provide information on Taiwanese public perceptions of Fukushima nuclear food. Based on gender analysis, we found that gender plays a key role in perceptions of Fukushima nuclear foods. After data analysis, the results show that gender has a significant impact on awareness of Fukushima nuclear foods. Specifically, women are more aware than men. This result is consistent with past research showing that "Women are more likely to perceive environmental risks and changes[18]". This study shows that women have significantly higher awareness of Fukushima nuclear foods than men, a result consistent with past research showing that women are more likely to perceive environmental risks and changes. This may reflect women's characteristics of being more sensitive to risk perception and environmental

[18] Paul Slovic, "Trust, emotion, sex, politics, and science: Surveying the risk-assessment battlefield," *Risk analysis* 19 (1999).

changes, especially regarding food safety issues. It also emphasizes the importance of personal experience in raising awareness and concern about food safety issues.

This study explores “How the differences in awareness of Fukushima nuclear foods among different occupations?”. An independent samples T-test was used to analyze the perceptions of white-collar workers and blue-collar workers, and it was found that there was a significant difference in their perceptions of Fukushima nuclear foods. Specifically, the average cognitive value of blue-collar workers is M=3.16, while the average cognitive value of white-collar workers is M=2.80. The blue-collar class has higher awareness than the white-collar class, so its p-value is 0.00 (less than 0.05), both This significance was established. This may mean that blue-collar workers are more concerned about or aware of the Fukushima nuclear food situation than white-collar workers. This finding is consistent with the view that "People who work hard are objectively more vulnerable to harm, and at the same time have more knowledge and fear components in their risk awareness.[19]" High-risk environments may be more sensitive to external risks and more susceptible to external risks than white-collar workers working in offices.

The research question was: " Would people who have purchased Fukushima nuclear food have a higher awareness of Fukushima nuclear food?”. After in-depth analysis, it was found that there was a significant difference in cognitive awareness between those who had purchased Fukushima nuclear food and those who had not, and the significance of this difference was confirmed by a p value < 0.05. This means that consumers who have purchased Fukushima nuclear food clearly have a higher

[19] 景军, "泰坦尼克定律: 中国艾滋病风险分析," *社会学研究* 5, no. 123 (2006).

awareness of this food.

Research results show that people who have purchased Fukushima nuclear foods also have significantly higher awareness of Fukushima nuclear foods. This finding further emphasizes the importance of individuals' actual experiences and behaviors in perceptions of food safety issues. Since personal purchasing experience can enhance people's awareness and concern about food safety issues, personal cognition and behavioral experience have a key influence on food safety awareness and have practical guiding value for food safety policy formulation and risk communication.

Relevant past literature has shown that “Personal experience is critical in raising food safety awareness, especially those who have personally experienced food safety incidents”[20] , and “emphasizes the impact of personal behavior on perceptions of food safety issues, arguing to believes that “individual behavior was important factor in increasing food safety awareness”[21], so both further explore how purchasing behavior contributes to increasing food safety awareness. In order to verify the hypothesis of this research question, people’s personal purchasing experiences may affect the improvement of food safety awareness. Improve people's understanding of nuclear food. This finding further emphasizes the importance of personal actual experience and behavior in the perception of food safety issues.

Discussion Two

The second research question is "How concerned are Taiwanese people about

[20] Lynn Frewer, Janneke de Jonge, and Ellen van Kleef, "Consumer perceptions of food safety," *Medical Science* 2 (2009).

[21] Susan Miles et al., "Public worry about specific food safety issues," *British food journal* 106, no. 1 (2004).

Fukushima nuclear food?" The following are the analysis results, and those with significant results are presented for discussion.

In the research question, people over 30 years old and under 30 years old were used as independent variables to compare the differences between the two. Judging from the results, age does have a certain impact on the degree of concern about Fukushima nuclear foods. The average level of concern for Fukushima nuclear foods among people under 30 years old is M=2.86, while the index for people over 30 years old is M=2.33. This difference is statistically significant, which may mean that younger generations are more concerned about Fukushima nuclear food.

This finding is consistent with past research, which found that “Young people generally have higher concerns about environmental issues[22]”, which may be related to young people's increasing concerns about food safety and environmental issues, or because they are more exposed to Internet news and information.

In terms of education level, based on the results of comparing high school vocational graduates, university degrees and graduate schools, those with a college degree are more concerned than those with a high school vocational degree, and it shows that it has a significant effect. In this way, it can be found that those with higher education levels Greater Concern About Fukushima Nuclear Foods In comparison of

[22] Joachim Schahn and Erwin Holzer, "Studies of individual environmental concern: The role of knowledge, gender, and background variables," *Environment and behavior* 22, no. 6 (1990).

education levels, the study found that there are significant differences in the degree of concern about Fukushima nuclear foods among people with different educational backgrounds. Specifically, college students show a higher level of concern than high school vocational graduates, which is consistent with past research results that "people with higher academic qualifications have higher awareness of food safety behaviors[23]", which may mean that they accept more People with higher education are more likely to pay high attention to issues such as the environment and food safety due to their deeper academic training and information exposure.

People who cook frequently will naturally be more concerned about the quality and safety of ingredients, which also makes them more inclined to follow and understand news reports and safety issues about food. In addition, from a psychological perspective, people who cook frequently may be more self-conscious about their eating habits and choices and are therefore more susceptible to food-related risk issues. These findings are consistent with past research. The research article stated that "Eating behavior and ingredient selection are closely related to personal perceptions and attitudes towards food safety issues.[24]" Therefore, the results show that people who do not cook are concerned about M = (2.69), people who don't cook M = (2.35), it can be

[23] 張家蓉, "台灣地區中老年人保健食品使用相關因素探討" (亞洲大學, 2011), Airiti (2011 年).
[24] Peter Jones, Daphne Comfort, and David Hillier, "Healthy eating and the UK's major food retailers: a case study in corporate social responsibility," *British Food Journal* 108, no. 10 (2006).

seen that people who cook have a higher average level of attention than people who don’t cook.

Conclusion

This study deeply explores Taiwanese people's cognitive and concern about Fukushima nuclear food, satisfaction with government policies, and purchasing behavior. It analyzes and discusses from multiple perspectives: gender, occupation, purchasing experience, and age analyze. The results clearly show that the general average value is not greater than the median value, which is somewhat different from the original assumption that Taiwanese people will pay special attention to the issue of Fukushima nuclear food. However, there are still gaps in individual variables, such as different groups of people’s understanding of Fukushima nuclear food. There is a significant difference in awareness and attention. In particular, women and blue-collar workers, people who cook frequently, and young people under the age of 30 show higher concern about food safety issues. Therefore, only government policy satisfaction is not significant, which means that there is not much difference in satisfaction with government policies among different variables.

These research results can be mainly divided into two categories: "Personal experience" and "Environmental impact". They not only echo the results of past research based on personal experience and environmental influences, but further

highlight the centrality of personal experience, daily habits and certain demographic characteristics in food safety issues. Furthermore, these studies have re-highlighted the critical importance of variables classified as environmental influences in shaping perceptions of food safety.

In summary, understanding and considering the specific needs and characteristics of target audiences is key to increasing food safety awareness and, potentially, the success of related policies.

Suggestion

In view of the differences in perceptions of Fukushima nuclear foods between different genders, it is suggested that the government can design targeted publicity campaigns. For example: People with purchasing experience have a higher understanding of the product. Using the buyer's personal experience and providing information at the point of sale can help consumers make informed decisions and also improve the public's food safety awareness.

Appendix A

台灣民眾對福島核食品的認知與關注
Perceptions and Concerns of Taiwanese on Fukushima Nuclear Food

親愛的先生/小姐:

這是一份學術研究問卷，主要目的是探討「台灣民眾對福島核食品的認知與關注」，在此希望能耽誤您幾分鐘時間，依您真實的感受填寫此問卷，懇請您提供寶貴建議。

本問卷採不記名方式作答，您的回答僅供學術研究使用，絕不對外公開，請放心填寫。感謝您在百忙中抽空填答此問卷，您的協助將使本研究更具貢獻，在此獻上最誠摯的謝意。

敬祝 事事順心，健康愉快!

文藻外語大學 國際事務系
指導老師: 林建宏 教授
學生:張儷蓉

第一部分:您的基本資料

1. 性別:

□男性 □女性

2. 年齡:

□30 歲以下 □31-35 歲 □36-40 歲 □41-45 歲 □46-50 歲 □50 歲以上

3. 職業:

□軍公教 □金融保險業醫務人員 □服務業 □資訊業 □電子業 □營造業

□商業□大眾傳播 □製造業 □自由業 □家管 □農林漁牧業 □待業 □學生

□其他：

4. 教育程度:

□國中(含)以下 □高中(職) □專科及大學 □研究所以上

5. 居住地:

□台灣北部 □台灣中部 □台灣南部 □台灣東部

6. 一個禮拜的下廚頻率:

□不下廚 □1-2 次 □3-4 次 □4-5 次 □5 次以上

第二部分: 認知程度

1. 您是否了解福島核食品或者福島核災難後哪些食品來自福島核災區域?

□完全了解 □有些了解 □了解 □不了解 □完全不了解

2. 您是否了解台灣政府對進口福島核食品的監管措施？

□完全了解 □有些了解 □了解 □不了解 □完全不了解

3. 您是否了解福島核災區域的食品對健康產生負面影響的可能性？

□完全了解 □有些了解 □了解 □不了解 □完全不了解

第三部分: 關注程度

1. 您是否購買過福島核食品？

□是 □否 □不知道

2. 您是否關心福島核災後的福島核食品進口到台灣的情況？

□總是 □大部分時間 □有時 □很少 □從不

3. 您是否會主動查看食品標籤上的產地，以了解所購買的食品是 否來自福島

核災區域？

□總是 □大部分時間 □有時 □很少 □從不

4. 您是否會特別避開來自福島核災區域的食品？

□總是 □大部分時間 □有時 □很少 □從不

5. 您是否會主動查詢食品的安全性資訊，以確保所購買的食品安全？

□總是 □大部分時間 □有時 □很少 □從不

6. 您是否會參考消費者團體或官方機構針對福島核食品的建議，來做出購買決策？

□總是 □大部分時間 □有時 □很少 □從不

第四部份：政府監管態度

1. 您認為台灣政府對進口福島核食品的監管態度是否足夠嚴格？

□非常嚴格 □很嚴格 □嚴格 □不嚴格 □非常不嚴格

2. 您對台灣政府監管進口福島核食品的措施是否有信心？

□非常有信心 □有信心 □普通 □沒信心 □非常沒信心

3. 您認為政府是否應該全面禁止進口福島核食品？

□非常贊成 □贊成 □中立 □反對 □非常反對

4. 您認為政府增加公開資訊透明度，是否有助於消費者更容易理解核食品的情況?

□非常贊成 □贊成 □中立 □反對 □非常反對

5. 您認為政府應該採取哪些措施，以加強福島核食品的監管與管理？(可複選)

□食品檢驗 □食品公開資訊 □宣導食品安全 □嚴格執行法規

□其他:_____

第五部分:購買行為

1. 如果您購買福島核食品，是因為價格較便宜或者喜愛該食品？

□非常贊成 □贊成 □中立 □反對 □非常反對

2. 您是否會在福島核災事件發生後主動減少食用日本進口食品，包括非福島核食品？

□非常贊成 □贊成 □中立 □反對 □非常反對

3. 您是否考慮購賣台灣本地產的替代品，而非購買福島核食品? 若是的話有哪些產品能夠替代?

□生鮮冷藏蔬果 □活生鮮冷藏水產品 □冷凍水產品 □乳製品

□嬰幼兒食品 □飲水和礦泉水 □海草類（紫菜、海帶）□茶葉

問卷到此結束，感謝您的填答!

Appendix B

Demographic Information of Respondents

Table 2. Demographic Information of Respondent

Attribute	Demographic	Percentage
Gender	Male	27.7%
	Female	71.8%
Age	Under 30	59.1%
	31-35	15%
	36-40	4.1%
	41-45	5%
	46-50	6.8%
	Above 50	10%
Occupation	Military or government-related professions	6.4%
	Financial and insurance industry	8.2%
	Healthcare professionals	5.5%
	Service industry	18.2%
	Information technology industry	1.8%
	Electronics industry	0.9%
	Construction industry	0.5%
	Business sector	0.9%
	Mass media	0.9%
	Manufacturing industry Freelance/self-employed	2.3%
	Homemaker	5.6%
	Agriculture, forestry, fishing, and animal	1.9%
	husbandry	1.4%
	Unemployed	1.9%
	Student	41.1%
	Other	1.4%
Education Level	Junior high school or below	0.9%
	Senior high school	9.1%
	College or university	75.5%
	Graduate school or above	14.5%
Location	Northern Taiwan	37%
	Central Taiwan	39.3%

	Southern Taiwan	22.4%
	Eastern Taiwan	1.4%
Cooking Frequency	Do not cook	42%
	1-2 times	32%
	3-4 times	14.6%
	4-5 times	4.1%
	More than 5 times	7.3%

Appendix C

Appeddix1

	Gender	N	Mean	St. Deviation	Std. Error Mean
Cognitive	Males	61	2.7890	1.01492	0.12995
	Females	158	3.0710	0.80984	0.06443

Appeddix1-1

Gender: Independent Sample t-value										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Cognitive	Equality variances assumed	3.596	0.059	2.147	217	0.033	0.28201	0.13135	0.2312	0.5409
	Equality variances not assumed			1.944	91.022	0.055	0.28201	0.14504	-0.061	0.5701

Appeddix2

	Age	N	Mean	Std.Deviation	Std. Error Mean
Cognitive	30under	130	2.7744	0.84472	0.07409
	30above	90	3.0037	0.90841	0.09575

Appeddix2-1

Age: Independent Sample t-value

		Levene's Test for Equality of Variances		t-test for Equality of Means					
								95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Cognitive	Equality variances assumed	0.144	0.704	1.920	218	0.056	0.22934	0.11948	-0.00613	0.46482
	Equality variances not assumed			1.894	182.363	0.060	0.22934	0.12107	-0.00953	0.46822

Appeddix3

	Occupation	N	Mean	St. Deviation	Std. Error Mean
Cognitive	White collar	160	2.8021	0.80728	0.06382
	Blue collar	51	3.1699	0.92225	0.12914

Appeddix3-1

Occupation: Independent Sample t-value

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper

Cognitive	Equality variances assumed	0.908	0.342	-2.736	209	0.007	-0.36785	0.13447	-0.63294	-0.10276
	Equality variances not assumed			-2.554	75.981	0.013	-0.36785	0.14405	-0.65475	-0.08095

Appeddix4

Education Level: ANOVA						
Cognitive		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	2.731	3	0.910	1.188	0.315
	Within Group	165.558	216	0.766		
	Total	168.288	219			

Appeddix5

Location: ANOVA						
Concerned		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	4.495	3	0.598	0.773	0.510
	Within Group	166.476	215	0.774		
	Total	168.271	218			

Appeddix6

	Cooking Frequency	N	Mean	Std.Deviation	Std. Error Mean
Cognitive	Non-cooked	92	2.7645	0.88749	0.09253
	cooked	127	2.9423	0.86790	0.07701

Appeddix6-1

Cooking Frequency: Independent Sample t-value

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Cognitive	Equality variances assumed	0.164	0.686	1.482	217	0.140	0.17776	0.11995	-0.05866	0.41419
	Equality variances not assumed			1.477	193.640	0.141	0.17776	0.12038	-0.05967	0.41520

Appeddix7

B1: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Concerned	Between Groups	27.086	2	13.543	0.20811	0.00
	Within Group	140.562	216	0.651		
	Total	167.648	218			

Appeddix8

	Gender	N	Mean	Std.Deviation	Std. Error Mean
Concerned	Males	61	2.5082	0.90005	0.11524
	Females	157	2.5771	0.97085	0.07748

Appeddix8-1

Gender: Independent Sample t-value

		Levene's Test for Equality of Variances		t-test for Equality of Means					
								95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Concerned	Equality variances assumed	0.552	0.458	-0.480	216	0.632	-0.06887	0.14359	-0.35189	0.21414
	Equality variances not assumed			-0.496	117.290	0.621	-0.06887	0.13887	-0.03488	0.20614

Appeddix9

	Age	N	Mean	Std.Deviation	Std. Error Mean
Concerned	30under	129	2.3364	0.91001	0.08012
	30above	90	2.8667	0.92116	0.09710

Appeddix9-1

Age: Independent Sample t-value

		Levene's Test for Equality of Variances		t-test for Equality of Means					
								95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper

Concerned	Equality variances assumed	0.149	0.700	4.221	217	0.00	0.53023	0.12561	0.28265	0.77781
	Equality variances not assumed			4.212	190.160	0.00	0.53023	0.12589	0.28192	0.77855

Appeddix10

	Occupation	N	Mean	Std.Deviation	Std. Error Mean
Concerned	White collar	159	2.5686	0.95269	0.07555
	Blue collar	51	2.6353	0.90660	0.12695

Appeddix10-1

Occupation: Independent Sample t-value										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Concerned	Equality variances assumed	0.224	0.637	-0.440	208	0.660	-0.06674	0.15156	-0.36554	0.23205
	Equality variances not assumed			-0.452	88.191	0.653	-0.06674	0.14773	-0.36032	0.22684

Appeddix11

Education Level: ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Concerned	Between Groups	9.097	3	3.032	3.480	0.017
	Within Group	187.362	215	0.871		
	Total	196.423	218			

Appeddix12

Location: ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Concerned	Between Groups	4.495	3	1.498	1.673	0.174
	Within Group	191.619	214	0.895		
	Total	196.115	217			

Appeddix13

	Cooking Frequency	N	Mean	Std.Deviation	Std. Error Mean
Concerned	Non-cooked	91	2.3560	0.88433	0.09270
	cooked	127	2.6929	0.97518	0.08653

Appeddix13-1

Cooking Frequency: Independent Sample t-value							
	Levene's Test for Equality of Variances		t-test for Equality of Means				
							95% Confidence Interval of the Difference

		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Concerned	Equality variances assumed	0.983	0.323	2.614	216	0.010	0.33687	0.12888	0.08284	0.59090
	Equality variances not assumed			2.656	204.350	0.009	0.33687	0.12681	0.08684	0.58690

Appeddix14

	Gender	N	Mean	Std.Deviation	Std. Error Mean
Satisfied to policy	Males	60	3.3375	0.53247	0.06874
	Females	155	3.3694	0.49620	0.03986

Appeddix14-1

Gender: Independent Sample t-value										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Satisfied to policy	Equality variances assumed	2.111	0.148	-0.414	213	0.680	-0.03185	0.07701	-0.18366	0.11995
	Equality variances not assumed			-0.401	100.962	0.689	-0.03185	0.07946	-0.18948	0.12977

Appeddix15

	Age	N	Mean	Std.Deviation	Std. Error Mean
Satisfied to policy	30under	128	3.3594	0.47450	0.05840
	30above	88	3.3636	0.54787	0.04194

Appeddix15-1

Age: Independent Sample t-value									
		Levene's Test for Equality of Variances		t-test for Equality of Means					
								95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Satisfied to policy	Equality variances assumed	0.126	0.723	0.061	214	0.952	0.00426	0.07002	-0.13775	0.14277
	Equality variances not assumed			0.059	169.067	0.953	0.00426	0.07190	-0.13768	0.14620

Appeddix16

	Occupation	N	Mean	Std.Deviation	Std. Error Mean
Satisfied to policy	White collar	157	3.3965	0.49843	0.03978
	Blue collar	50	3.2900	0.54483	0.07705

Appeddix16-1

Occupation: Independent Sample t-value

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Satisfied to policy	Equality variances assumed	0.179	0.672	1.286	205	0.200	0.10650	0.08280	-0.05676	0.26975
	Equality variances not assumed			1.228	76.886	0.223	0.10650	0.08671	-0.06617	0.27917

Appeddix17

Education Level: ANOVA						
Satisfied to policy		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	0.220	3	0.073	0.286	0.836
	Within Group	54.488	212	0.257		
	Total	54.708	215			

Appeddix18

Location: ANOVA						
Satisfied to policy		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	0.928	3	0.309	1.220	0.304
	Within Group	53.780	212	0.254		
	Total	54.708	215			

Appeddix19

	Cooking Frequency	N	Mean	Std.Deviation	Std. Error Mean
Satisfied to policy	Non-cooked	91	3.4011	0.49424	0.05181
	cooked	124	3.3347	0.51293	0.04606

Appeddix19-1

		Cooking Frequency: Independent Sample t-value								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Satisfied to policy	Equality variances assumed	0.182	0.670	-0.953	213	0.342	-0.06642	0.06972	-0.20386	0.07102
	Equality variances not assumed			-0.958	197.992	0.339	-0.06642	0.06833	-0.20313	0.07029

Appeddix20

	Gender	N	Mean	Std.Deviation	Std. Error Mean
Purchasing behavior	Males	61	3.0000	0.71880	0.09203
	Females	155	2.9285	0.69036	0.05545

Appeddix20-1

Gender: Independent Sample t-value									
		Levene's Test for Equality of Variances		t-test for Equality of Means					
								95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Purchasing behavior	Equality variances assumed	0.179	0.673	0.703	214	0.483	0.07419	0.10557	-0.13389	0.28228
	Equality variances not assumed			0.691	106.027	0.491	0.07419	0.10745	-0.13383	0.28722

Appeddix21

	Age	N	Mean	Std.Deviation	Std. Error Mean
Purchasing behavior	30under	128	2.9414	0.68912	0.07540
	30above	89	2.9494	0.71129	0.06091

Appeddix21-1

Age: Independent Sample t-value									
		Levene's Test for Equality of Variances		t-test for Equality of Means					
								95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper

		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Purchasing behavior	Equality variances assumed	0.053	0.818	0.083	215	0.00	0.53023	0.12561	0.28265	0.77781
	Equality variances not assumed			0.083	185.576	0.00	0.53023	0.12589	0.28192	0.77855

Appeddix22

	Occupation	N	Mean	Std.Deviation	Std. Error Mean
Purchasing behavior	White collar	157	2.9363	0.95269	0.07555
	Blue collar	51	2.9510	0.90660	0.12695

Appeddix22-1

Occupation: Independent Sample t-value										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Purchasing behavior	Equality variances assumed	0.224	0.637	-0.440	208	0.660	-0.06674	0.15156	-0.36554	0.23205
	Equality variances not assumed			-0.452	88.191	0.653	-0.06674	0.14773	-0.36032	0.22684

Appeddix23

Education Level: ANOVA						
Purchasing behavior		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	9.097	3	3.032	3.480	0.017
	Within Group	187.362	215	0.871		
	Total	196.423	218			

Appeddix24

Location: ANOVA						
Purchasing behavior		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	4.495	3	1.498	1.673	0.174
	Within Group	191.619	214	0.895		
	Total	196.115	217			

Appeddix25

	Cooking Frequency	N	Mean	Std.Deviation	Std. Error Mean
Purchasing behavior	Non-cooked	91	2.3560	0.88433	0.09270
	cooked	127	2.6929	0.97518	0.08653

Appeddix25-1

Cooking Frequency: Independent Sample t-value		
	Levene's Test for Equality of Variances	t-test for Equality of Means

									95% Confidence Interval of the Difference	
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	Lower	Upper
Purchasing behavior	Equality variances assumed	0.983	0.323	2.614	216	0.010	0.33687	0.12888	0.08284	0.59090
	Equality variances not assumed			2.656	204.350	0.009	0.33687	0.12681	0.08684	0.58690

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