Study of Knowledge, Attitudes and Behavior of Georgian Citizens Regarding Food Safety and Ongoing Reforms in the Field

Quantitative and Qualitative Study Reports

June 2023

The survey has been commissioned by the Center for Strategic Research and Development of Georgia (CSRDG) in the framework of the project Capacitated Agricultural Practices and Consumer Awareness (CAPCA) under the European Neighbourhood Programme for Agriculture and Rural Development in Georgia (ENPARD – Georgia), phase IV (ENPARD IV). CAPCA project is implemented by the coalition comprised of Georgian Farmers' Association (GFA, lead partner) and two co-implementers: Center for Strategic Research and Development of Georgia (CSRDG) and Beekeepers Association of Georgian Mountainous Regions (Ambrolauri District).

Contents

Introduction by the Center for Strategic Research and Development of Georgia

Center for Strategic Research and Development of Georgia (CSRDG) is a civil society organization founded in 1995. The mission of the Center is to care about for the well-being of society, and to promote good governance, stable, inclusive economic development, and the formation of an active civil society in Georgia. Please, visit the CSRDG website https://csrdg.ge/ for further details of the organization.

Since 2009, CSRDG has been working to establish an effective system of consumer rights protection in Georgia, and its main activities in this direction include raising public awareness, monitoring the activities of state structures and the market, and advocating for legislative reforms. For more information about the consumer rights protection program, please, see the website momxmarebeli.ge.

Since 2023, Consumer Rights Protection program of CSRDG is involved in implementation of EU-funded project Capacitated Agricultural Practices and Consumer Awareness under the European Neighbourhood Programme for Agriculture and Rural Development in Georgia (ENPARD – Georgia), phase IV (ENPARD IV). The project is implemented by the coalition comprised of the Georgian Farmers' Association (lead partner), CSRDG and Beekeepers Association of Georgian Mountainous Regions (Ambrolauri District).

In frames of above project, CSRDG has commissioned quantitative and qualitative studies to explore the knowledge, attitudes, and behavior of the population of Georgia concerning food safety and related ongoing reforms.

Quantitative study was carried out by Research and Consultancy Company 'ACT', and qualitative study of Food Safety Behavior Drivers was conducted by the team of Behaviour Insights Strategy and Communication Partners (BISC Partners).

The immediate practical purpose of the studies was related to supporting the CSRDG in its food safety related civic education and participation activities. However, the findings of studies are quite broad and might be beneficial for success of food safety reforms carried out by governmental institutions, as well as for all those donor, international, civil society or private organizations that work towards food safety in Georgia.

General Conclusions

1. Population of Georgia is poorly informed about various food safety issues and the related activities of relevant state agencies. The situation is even worse among ethnic minority population compactly settled in Kvemo Kartli and Samtskhe-Javakheti regions.

2. Food safety information is not widely available, it is difficult to obtain any data; moreover, certain habits and perceptions rooted in society create obstacles to awareness-raising.

3. Even though many citizens have witnessed violations of food safety requirements, the level of response on their part is quite low, especially in rural areas. The main impeding factors are

nihilism, the lack of up-to-date information and the rooted perception of such behavior as socially unacceptable.

4. At the same time, there is a realistic potential to improve the situation, as the significant part of the population:

   - Is interested to get more information on food safety issues;

   - Is willing to respond to food safety violations;

   - Feels that food safety situation is improving;

   - Feels the necessity of state control and approximation to EU requirements;

   - Has certain level of trust in state agencies working on food safety.

5. Moreover, a practice of successful response to food safety violations is established by significant portion of citizens.

6. Certain additional resources are required to raise awareness and engagement of population, although, if the political will exists, the situation can be improved with minimal efforts on the part of the state; and with the support of donor organizations, greater impact can be achieved.

7. Taking into account as much as possible the recommendations developed by behavioral scientists (see the "Food Safety Behavior Drivers" below) might help to improve the situation.

General Recommendations

To State Institutions of Georgia

Review and consider improvement of the current practices related to informing the public on food safety issues, as well as mechanisms for receiving food safety complaints from citizens.

For donors, international, civil society and private organizations working towards food safety in Georgia

As part of ongoing programs and projects in the field of food safety in Georgia, as well as when planning future interventions, direct more effort towards a) increasing the food safety awareness of citizens (including ethnic minorities and rural population), b) encouraging their active participation in food safety control, and c) improving the mechanisms for citizen reporting to National Food Agency about food safety violations.

Study of Knowledge, Attitudes and Behavior of Georgian Citizens Regarding Food Safety and Ongoing Reforms in the Field

Quantitative Study report

ACT.

Prepared by Research and Management Company ACT for the Center for Strategic Research and Development of Georgia (CSRDG)

May, 2023

Abbreviations

ACT (ACT) – Analysis and Consulting Team

CSRDG - The Center for Strategic Research and Development of Georgia

CAPI – Computer-Assisted Personal Interviews

Main Findings

❏ **Awareness of food safety topics**

➔ The vast majority of respondents buy three main products: bread and baked goods (94%), sugar/salt (92%), and oil/clarified butter (91%).

➔ Differences were reported by type of settlement in terms of the purchase of milk and dairy products. For example, while only half of the respondents living in rural areas purchase milk and dairy products (49%), the majority of the respondents in other cities (except Tbilisi) (76%) and Tbilisi (91%) buy milk and dairy products.

➔ When assessed on a 5-point scale, the safest products named by respondents included honey (76%), baby food (61%) and mineral drinks (59%).

➔ Four out of ten respondents (39%) believe that food safety is ensured when expiration dates are followed. An equal share of respondents agreed that to ensure food safety, the following are essential: *product to be organic (31%), product storing instructions to be followed (30%), and product not to include harmful ingredients* (30%).

➔ As demonstrated by the study, 71% of respondents completely agreed with the statement that "harmful food may not poison at once, but will eventually harm human health". A total of 63% of respondents also agreed that *"GMO products are harmful to their health",* while 61% of respondents fully agreed with the statement that *"eggs from the village are not harmful",* and almost half – 46% of respondents – fully agreed with the statement that *"lots of GMO products are sold in Georgia".*

➔ More respondents from the group of ethnic minorities believe that village eggs are completely harmless (73%), while this index is 58% among other respondents.

➔ A large portion of respondents disapproves of unregulated street trade (81%).

➔ Two out of three inquired respondents reported having heard about the National Food Agency (67%).

➔ At the same time, half (52%) of respondents from ethnic minorities have not heard about the National Food Agency, while this index does not exceed 28% among other respondents.

➔ Among those who have heard about the National Food Agency (67%), only 5% can exactly identify its function – that the agency is a state body for food safety, veterinary and plant protection. A majority (78%) believes that the function of the National Food Agency is control of food safety, which is quite close to the correct answer. Among other answers, 44% are also somewhat close to the functions and duties of the National Food Agency. Only 10% of provided answers are completely outside of the National Food Agency's functions, while 8% of respondents were unable to answer the question *(multiple answer options were provided for this question).*

➔ From those respondents who are aware of the National Food Agency (67%), only 5% have used the agency's website and/or Facebook page (42 respondents).

❒ **Sources of information**

➔ **Television (70%) and social networks (54%)** are the two most frequently named sources of information regardless of settlement type, ethnicity, gender, and age.

➔ The two main sources of information on food safety topics are: **internet/social networks (47%), and television (44%).**

➔ Respondents assessed their knowledge of food safety topics with a **slightly higher score than medium (3.2).**

➔ **More than half of the respondents (61%)** are willing to obtain **additional information** on food safety issues.

➔ Respondents who are interested in obtaining additional information on food safety topics are particularly interested in the following topic: **methods of selecting harmless products (42%).**

➔ Two preferable sources of information on food safety topics include: **internet/social networks (70%) and television (53%).**

➔ However, **only 58% of respondents living in rural areas prefer to obtain information through the internet/social networks,** while the share of such respondents is 83% in the capital city.

➔ The number of respondents in the 18-34 age group who prefer to obtain additional information on food safety through the internet/social networks is high (86%). This index significantly decreases in the 55+ age category (55%).

❒ **Experience related to grocery stores**

➔ Among all possible places where respondents shop for food products, the following outlets were named most frequently – **hypermarket/supermarket (86%), agrarian market (51%), and corner store (37%).**

➔ It is worth mentioning that the frequency of using a hypermarket/supermarket in villages (75%) compared to other cities (89%) and Tbilisi (97%) is lower, which can be explained by the limited availability of such establishments in rural areas.

➔ When selecting a grocery store, **the most frequently named first criterion is the proximity of the shop (34%), followed by the safety of food products (hygiene and expiration dates) at 23%.** Product price (named as the first criterion) is crucial only for 14% of respondents, but almost double the number of respondents name it as their second most important criterion (26%).

➔ At the same time, **for 72% of respondents living in Tbilisi, location** is a crucial factor when selecting a place to shop for food. This index somewhat decreases in other cities (62%), while being a **crucial factor for just 43% of respondents living in rural areas.**

➔ When asked about important criteria for purchasing groceries, **the most frequently named main criterion is the price of goods (30%).**

➔ **The largest portion of respondents (77%)** do not report having experience in purchasing products that did not meet food safety criteria but were cheap.

➔ A large portion of respondents reported having discovered a violation of food safety rules at the grocery shop over the past 2 years (57%). Respondents reported the following violations: *sold expired product (34%), product label was unclear/misleading/printed in small font (34%), product had gone bad regardless of the expiration date (34%), perishable products were not stored at the relevant temperature (31%), and the place did not follow hygiene norms* (30%).

➔ A total of 9% of respondents noted that they or their family member had food poisoning from products purchased at the grocery store over the past 2 years.

❐ Experience regarding eateries

➔ Over the past 3 months, six out of ten respondents (58%) have bought ready-made food or visited an eatery (restaurant, canteen, confectionery, bakery, Shawarma place, etc.).
➔ Those who do not buy food from eateries provided the following reasons: cooking food at home to eat healthy (24%), expensive prices of products (17%), unavailability of eateries in the settlement or nearby (14%).
➔ The share of respondents buying food from eateries/visiting eateries is high in the capital city and equals 76%, was lower in other cities (except Tbilisi) (58%) and was even lower in rural areas (45%).
➔ More men (67%) visited or purchased food from eateries over the past three months compared to women (50%).
➔ When visiting eateries, regular consumers named the most important selection criterion - the integrity of hygiene norms (31%). It is important to note that when choosing an eatery, this factor is more important for female respondents (64%) compared to male respondents (50%).
➔ Product quality is a crucial factor for 21% of respondents. It is worth mentioning that approximately half of the respondents (47%) find it difficult to name a second and third (50%) criterion according to which they choose eateries. Every third respondent (30%) failed to name the most important criteria when selecting eateries.
➔ The two most important criteria according to which respondents assess the condition of food safety at the eatery are: observation of hygiene conditions of the establishment (35%) and visual aspect of the product (32%).
➔ The share of respondents who have discovered any kind of food safety issue at a food place over the past 2 years is 22%.
➔ Over the past two years, respondents have discovered the following violations at eateries: hygienic norms were not met at the establishment (18%), food was not stored according to standard (14%), and food was spoiled/poisoned (8%).
➔ A small portion of respondents reported that they or their family members had food poisoning from food purchased at eateries over the past 2 years (4%).

❐ Responses to food safety violations

➔ 58% of respondents discovered some kind of food safety violation at a grocery store/market and/or eatery over the past 2 years.
➔ Regardless of having discovered food safety violations, almost half (48%) of respondents have not taken any measures.
➔ As for the most frequently taken measures in case of food safety violations, respondents named the following: presented my complaint on-site / wrote to the website/Facebook page of the establishment (28%). Only 5 respondents have notified the National Food Agency.
➔ Tbilisi residents tend to be more active in reacting to food safety violations of any form (59%). This index is 45% in other cities (except Tbilisi) and almost half in rural areas (31%).

➔ A total of 23% of respondents (334 respondents) who reacted to food safety violations of any form declared that their complaint did not have any outcome. The same portion (23%) of respondents confirmed that their action was followed by a positive result and the place fixed the problem. In total, **50% of respondents received some kind of positive outcome after reacting to a food safety violation.** 23% of respondents state that the business operator resolved the violation, one-fifth (20%) of respondents were paid compensation/the product was replaced, and 13% of respondents declared that the relevant product was removed from the counters of the establishment after their complaint. It is worth mentioning that 22% of respondents did/could not share their experience.

➔ According to the study results, one-fourth (25%) of respondents who observed a food safety violation at an establishment have a nihilistic attitude and believe that there is no point in filing a complaint.

➔ **53% of respondents believe that they would notify the National Food Agency if they encountered any violation in the future.**

➔ Respondents believe that citizens' participation in fixing issues related to food safety **is very important and rate this action with 4.5 out of 5 points.** The main portion (84%) of respondents assesses citizens' involvement in fixing problems related to food safety as very important or important.

❐ **Awareness of public institutions and trust towards them**

➔ **The vast majority (97%) of respondents believe that the state is supposed to regulate issues related to food safety.**

➔ In order to identify the level of awareness of food safety issues, respondents were asked which state institutions they believe are responsible for regulating food safety. **Almost none of the respondents were fully informed about this issue, but half of the respondents (51%) named the National Food Agency. Respondents also named other agencies whose competencies include food safety issues.** These agencies include the Ministry of Environmental Protection and Agriculture (23%), the Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs of Georgia (19%). It is worth mentioning that only 4% of respondents named the Customs Department of the Revenue Service, which is responsible for the control of food safety in the import process.

➔ Among those who named the National Food Agency, **43% assessed the work done by this agency as good or excellent (4 and 5 points), while 52% trust or fully trust the NFA (4 and 5 points).**

➔ **According to the type of settlement,** the smallest portion of respondents in Tbilisi (35%) assessed the work of the National Food Agency as good or excellent. This index is relatively higher in other cities (except Tbilisi) with 39% and villages with 44%.

➔ The share of those respondents representing **ethnic minorities** who find it difficult to assess the work done by different institutions (22%) is higher than the corresponding share of the ethnically Georgian respondents (15%).

➔ **Analysis done by the settlement type** identified that the share of those who fully trust the National Food Agency is higher in rural areas (33%), while this index decreases in other cities (except Tbilisi) and equals 26%. The share is the smallest in Tbilisi and equals 21%.

➔ The following difference has been detected in terms of ethnicity: the share of respondents who fully trust the National Food Agency is higher in the group of ethnic Georgian respondents (29%). There is a 10% decrease in the group of ethnic minorities and the share of those who fully trust the National Food Agency is 19% in this group.

➔ Half (49%) of citizens believe that the National Food Agency should be the institution responsible for the regulation of food safety issues. A total of 32% of respondents had no answer to this question.

❐ Trust towards entrepreneurs and assessment of the situation in terms of food safety

➔ According to the respondents, three top high-risk products in terms of food safety include: meat and meat products (86%), milk and dairy products (70%), and fish and fish products (66%).

➔ More than half of the respondents (54%) believe that the country of origin is a very important factor when purchasing products.

➔ The main portion of respondents (85%) stated that they consume food products made in Georgia.

➔ When it comes to purchasing products made in different countries, a relatively higher portion of respondents in the group of ethnic minorities buy products made in Azerbaijan (20%) and Armenia (14%), while the share of purchasing goods made in Azerbaijan and Armenia is low among the rest of the population and equals 5% and 3%, respectively.

➔ As demonstrated by the study, respondents highly trust products made in Georgia. A total of 66% assesses Georgian goods as safe or completely safe. More than half of the respondents (57%) fully trust or trust products made in Western Europe. The share of those who trust or fully trust products made in Ukraine (52%) and Russia (46%) is relatively high. The least amount of trust was reported to products made in Iran and China, with only a small portion of respondents (7% and 8%, respectively) assessing those products as safe or completely safe.

➔ Half of the respondents (51%) positively assess the current food safety situation in Georgia and believe that it is improving. The situation remains the same for 32% of respondents, one out of ten respondents (10%) believes that the situation is getting worse, and 7% failed to assess the food safety situation.

➔ Four out of ten respondents (43%) believe that there are ongoing reforms in the field of food safety that bring the country closer to conditions in the EU. One-fifth (22%) of respondents partially agree with this statement, and one-fourth (24%) found it difficult to assess this statement. A total of 12% of respondents declared that there are no reforms implemented that would bring the country closer to European standards in terms of food safety.

➔ In order to improve the food safety situation in the future, an almost equal portion of respondents believes that the state needs to reinforce control over locally produced (53%) and imported (50%) products.

Methodology

1. Research goal and objectives

The **goal** of the research is to study the knowledge, attitudes and behaviors of citizens in terms of food safety and ongoing reforms in the field. Obtained results are supposed to help CSRDG plan activities to increase civic education and participation in this area. Additionally, the study results should be interesting for other organizations that work in this field.

In order to achieve the goal, the following **objectives** were defined:

➔ Assess the awareness level of citizens on food safety issues
➔ Identify sources of information
➔ Study the experience related to grocery markets/stores
➔ Evaluate the experience related to food places/eateries
➔ Study the experience of reacting to food safety violations
➔ Define the awareness of public institutions and trust towards them
➔ Assess trust towards businesses and the situation in terms of food safety.

2. Research design

The study was conducted through a **quantitative study** incorporating the *face-to-face interviewing technique.* The electronic method of data collection – CAPI (Computer Assisted Personal Interview) was applied within the scope of the quantitative study. The target segment of the study included adult residents 18 years of age or older.

A total of 1203 interviews were conducted and the average length of an interview was 25 minutes.

The study utilized two-stage cluster sampling with advanced stratification. The primary unit of stratification was the cluster (district) and the secondary unit of sampling was the household. Households were selected by random sampling and the respondent within the household was selected randomly through the last birthday principle.

The margin of error for the survey data is 2.8% on the national level with 95% reliability.

In regions, the margins of error vary based on the number of respondents. The margin of error for different regions and the distribution of interviews by region is given in Table #1.

Table # 1. Distribution of interviews by region

Stratum	Region	Sample size	Margin of error
1	Tbilisi	151	8.0%
2	Adjara	120	8.9%
3	Guria	70	11.7%

4	Imereti	120	8.9%
5	Kakheti	120	8.9%
6	Mtskheta-Mtianeti	70	11.7%
7	Kvemo Kartli	122	8.9%
8	Racha-Lechkhumi and Kvemo Svaneti	70	11.7%
9	Samtskhe-Javakheti	120	8.9%
10	Samegrelo-Zemo Svaneti	120	8.9%
11	Shida Kartli	120	8.9%
	Total	1203	2.8%

The report presents data in four additional perspectives: according to *settlement type, ethnicity, gender, and age.* The margins of error for these perspectives and the distribution of interviews are presented in table #2.

Table # 2. Distribution of interviews by settlement type, ethnicity, gender, and age

	Sample size	Margin of error
Type of settlement		
Tbilisi	151	7.9%
Other cities	402	4.8%
Villages	650	3.7%
Ethnicity		
Ethnic minorities living in compact settlements	242	6.2%
The rest of the population	961	3.0%
Gender		
Woman	635	3.8%
Man	568	4.0%
Age		
18-34 y/o	357	5.1%
35-54 y/o	415	4.7%
55 and above	431	4.6%
	1203	

Data was processed using statistical software (SPSS 23.0). The last phase of database processing included statistical weighting of the data for the entire sample of the study in order to generalize the study results.

Fieldwork was conducted on April 12-26, 2023. Control and revision of interviews took place alongside and after the completion of fieldwork. In total, 40% of interviews were controlled (phone and GPS control).

3. Notes

In order to clarify some of the findings and their interpretation, it is important to take the following into consideration:

→ Research findings are fully based on participants' experience, attitudes and assessments.

→ The study required participants not to be employed in the following fields: Ministry of Environmental Protection and Agriculture and its subordinate agencies, food production (except for unregistered individual producers), food trade, food distribution, or food place (including kindergarten).

→ For questions where respondents were allowed to choose multiple answers, the sum of answers exceeds 100%.

→ Data in the report are given throughout the country and partially in the following perspectives: *settlement type* – *Tbilisi, other cities, villages;* *ethnicity* – *ethnic minorities, the rest of the population;* *gender* – *woman, man; and* *age* – *18-34, 35-54, 55 and above.* The given perspectives are presented in the report only if significant and statistically reliable differences are detected between the data.

→ For analytical purposes, age categories were narrowed down from 5 categories to the following 3: 18-34 y/o, 35-54 y/o, as well as 55 and above.

→ Respondents were asked to assess different statements. In order to assess these statements a 5-point scale was utilized, where 1 meant the lowest assessment and 5 meant the highest. Over the course of the analytical work, the said numbers were given importance depending on the question, and they were regrouped as needed. For questions where the respondent was asked to assess trust on a 5-point scale, where 1 means 'I completely distrust' and 5 means 'I completely trust', data can be grouped and presented as follows: completely distrust (1 point), distrust (2 points), neutral (3 points), trust (4 points), and completely trust (5 points).

→ In the group of ethnic minorities, the study implies ethnic minorities living compactly in Kvemo Kartli and Samtskhe-Javakheti.

→ Eatery implies any place where ready-made food is sold, such as restaurants, fast food places, bakeries, and the deli section of hypermarkets/supermarkets.

→ Visiting/purchasing from an eatery implies visiting the place or/and taking food out, as well as ordering through delivery companies.

Research Results

Respondents' Profile

The distribution of respondents by gender is almost equal, with 54% female and 46% male. The distribution is also more or less equal by age group. The smallest age group among all respondents is represented by youth in the 18-24 age group (12%), while other age groups are somewhat similar in size and their share does not exceed 20%.

Chart # 1. Gender and age of respondents
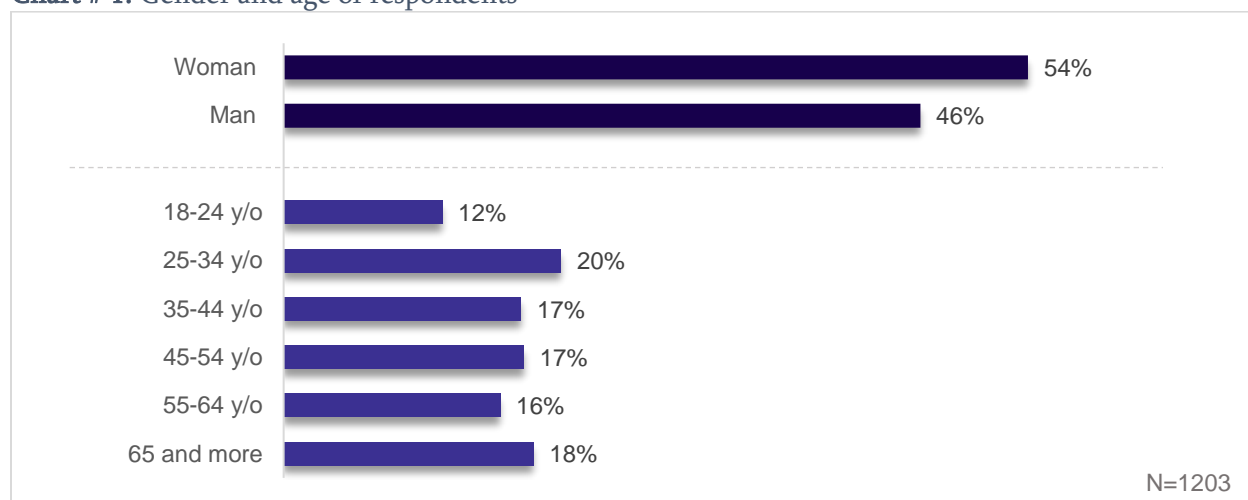
Four out of ten respondents have complete secondary (40%) or higher education (36%), while one-fifth of respondents (20%) have vocational education.

Seven out of ten respondents are married (67%), and two out of ten are single (21%). The share of divorced (3%) or widowed (6%) respondents is small.

The majority of respondents are ethnic Georgians (90%), while the distribution of ethnic minorities includes Azeri (5%) and Armenian (4%) respondents. The share of other ethnic minority groups is small and does not exceed 0.3%.

Chart # 2. Respondents' education level and marital status

Incomplete secondary	3%
Complete secondary	40%
Vocational	20%
Complete higher	36%
Postgraduate/scientific degree	0.4%
Refused to answer (Do not read)	0.5%
Single	21%
Married	67%
Divorced	3%
Widow	9%

N=1203
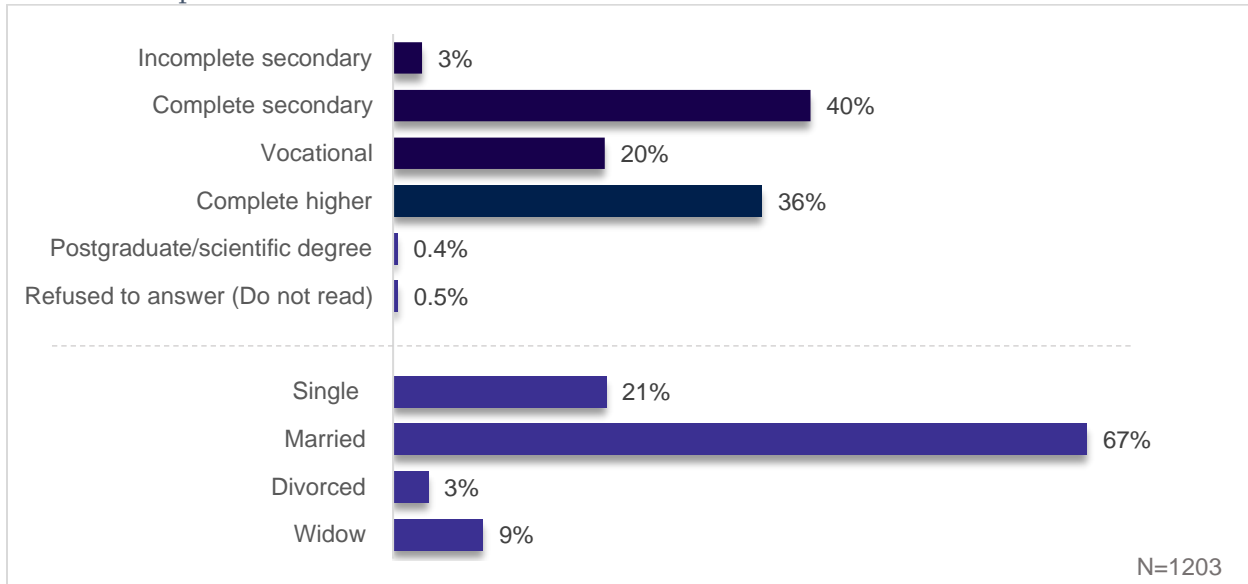
A total of 40% of respondents reported having some form of employment, with 26% reporting that they are hired employees, 10% reporting that they are self-employed (entrepreneur, farmer, without hired employees or a person involved in a professional occupation), and 4% reporting that they are both self-employed and a hired employee at the same time. One-fifth of respondents are pensioners (20%) or housewives (19%), while share of those reporting that they are unemployed is 17%.

Chart # 3. Employment status

Hired employee	26%
Self-employed (employer)	4%
Self-employed (entrepreneur, farmer, without hired employees or person involved in professional occupation)	10%
Pensioner	20%
Housewife	19%
Student	4%
Unemployed	17%

N=1203
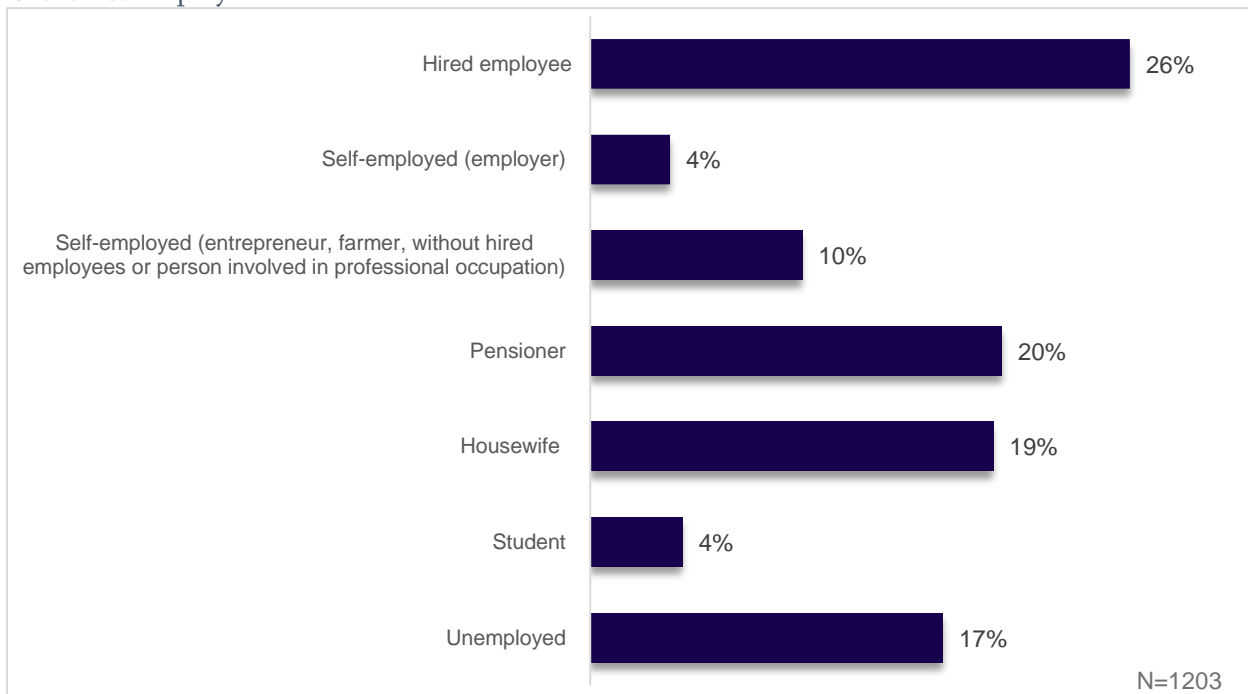
Every three out of ten respondents (30%) do not have personal income, and almost the same share (31%) have a personal income no greater than 500 GEL. Almost one-fifth of respondents reported having a personal income between 501 GEL and 1000 GEL. Only 8% of respondents have a personal income from 1001 to 1500 GEL. 8% of respondents refused to disclose information on their income.

As for household income, one-fourth (26%) of respondents reported that their household's monthly income ranges from 501 to 1000 GEL. For 14% of households, monthly income does not exceed 500 GEL, only 12% of households have income between 1001 GEL and 1500 GEL, and only one (10%) out of ten households reported having income from 1501 GEL to 2000 GEL. The share of households with monthly income greater than 2001 GEL does not exceed 13%. 24% of respondents refused to disclose information on income or could not answer/did not know.

Chart # 4. Income
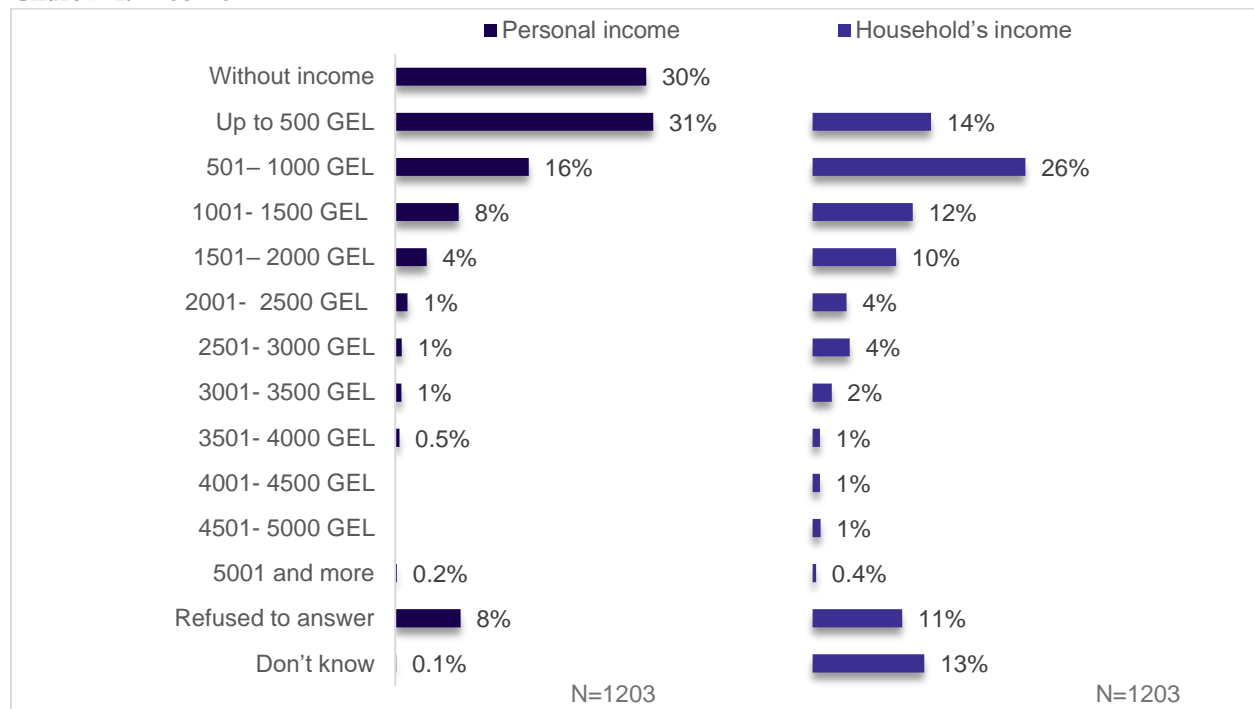
In addition to factual income, respondents were asked to assess the economic condition of their families. One-fifth (22%) of respondents describe their condition as hardly able to buy food. One-fourth (25%) noted that they have money for food, but have to save or borrow money to buy clothes and shoes. Every third respondent stated that their family's income is sufficient to meet basic needs for food and clothes/shoes, however they need to save or borrow money to buy household appliances and high-end clothes. Only 14% of respondents declared that their household has enough money to buy food for everyday consumption, clothes and shoes, but that they have to save or borrow money to buy real estate (apartment) or a car. Only a very small portion of respondents (2%) believe that they can buy anything they want at any time.

Chart # 5. Assessment of household's economic condition
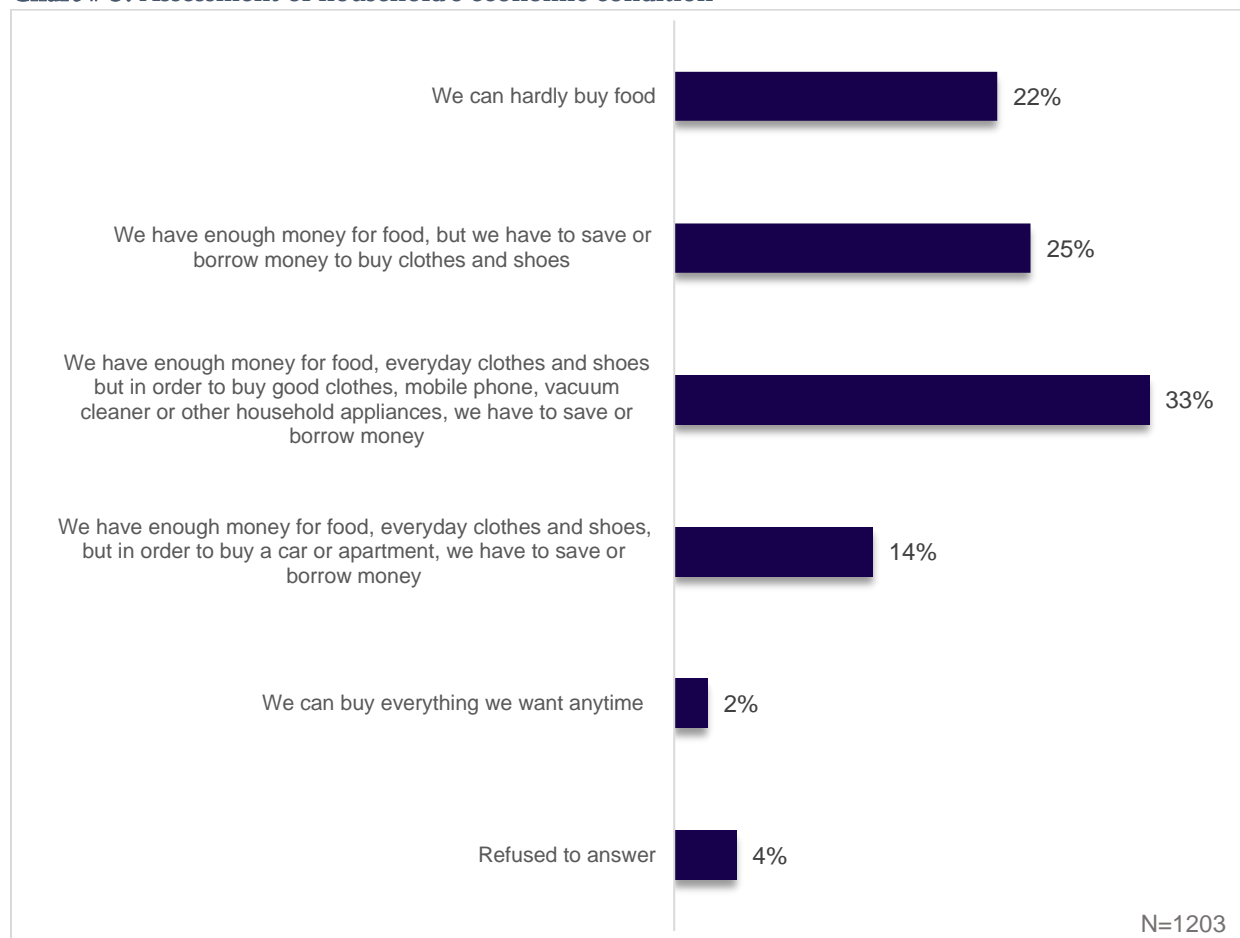
Awareness of Food Safety Issues

As demonstrated by the study, the vast majority of the respondents buy **three main products:** bread and baked goods (94%), sugar/salt (92%), and oil/clarified butter (91%). Other highly purchased products are: fruit and vegetables (88%), meat and meat products (84%), sweets (83%) and grains (81%). The share of those who purchase canned products and alcoholic beverages is relatively lower than other product categories (32% and 27%, respectively). The least frequently purchased product category is baby food, which can be explained by the specific nature of this category.

The frequency of shopping for some categories of products differs by **settlement type (Tbilisi, other cities, villages).** For example, only half of the respondents living in rural areas buy milk and dairy products (49%), while the share of respondents who buy milk and dairy products in other cities (except Tbilisi) is 76% and 91% in Tbilisi. In addition, the frequency of purchasing alcoholic beverages is low in villages (19%), two times more respondents buy alcohol in Tbilisi (30%) and this share is 25% in other cities. This can be explained by a large number of respondents making alcohol at home in villages compared to cities. Canned products are the most frequently consumed in Tbilisi – 41%. This index is

the lowest in other cities and equals 20%, while 31% of respondents living in rural areas purchase canned products.

Slightly more than half of **ethnic minorities** (54%) buy eggs, while every seventh of the remaining respondents reported buying this product (72%).

The main difference detected in terms of both **gender** and **age** is in connection with purchasing alcohol: the share of men who purchase alcohol is much higher than the share of women (40% and 16%, respectively). In addition, juices/carbonated drinks are much more frequently bought by men (82%) than women (69%). The frequency of purchasing alcohol decreases as age increases and is represented in the following manner: 18-34 y/o – 38%, 35-54 y/o – 29%, 55 and above - 16%. Baby food is mostly purchased by respondents from the 18-34 age group – 17%, while this index is 11% in the 35-54 age group and only 8% of respondents aged 55 and above buy baby food.

Chart # 6. Main products purchased by respondents
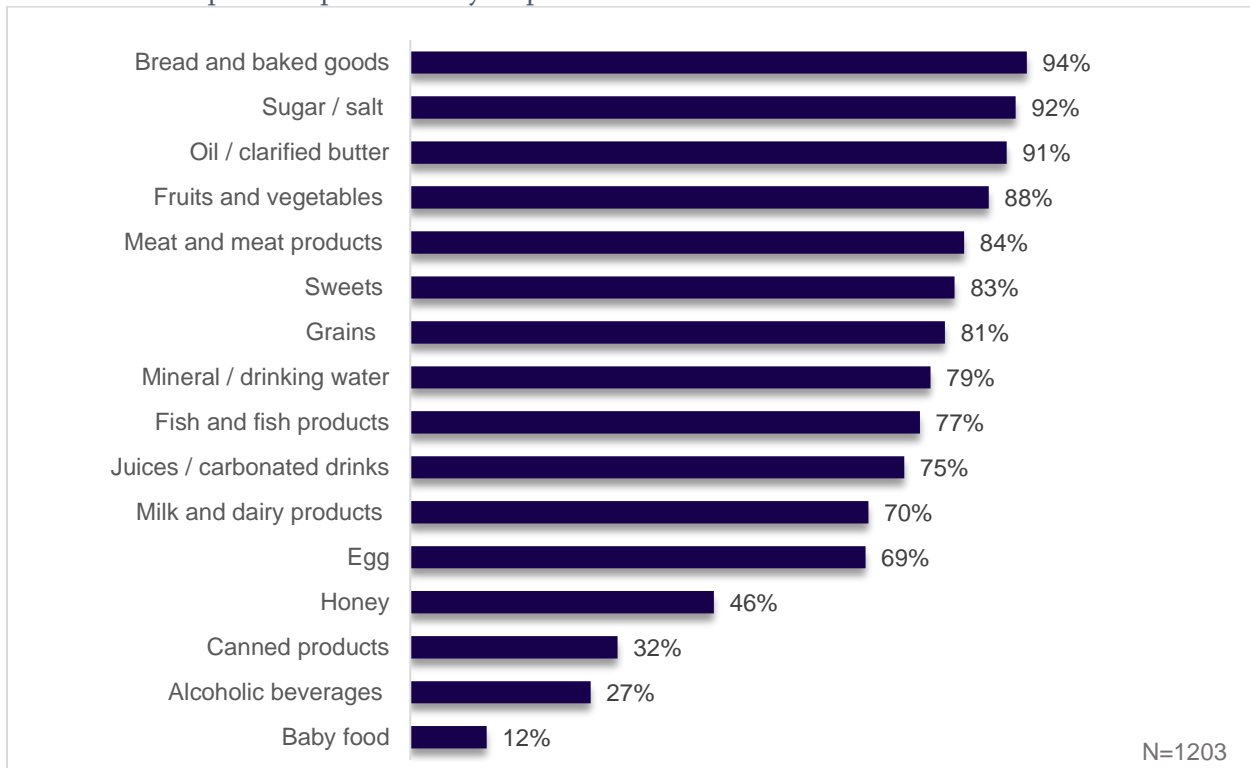
Product	Percentage
Bread and baked goods	94%
Sugar / salt	92%
Oil / clarified butter	91%
Fruits and vegetables	88%
Meat and meat products	84%
Sweets	83%
Grains	81%
Mineral / drinking water	79%
Fish and fish products	77%
Juices / carbonated drinks	75%
Milk and dairy products	70%
Egg	69%
Honey	46%
Canned products	32%
Alcoholic beverages	27%
Baby food	12%

N=1203

Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Research participants were asked to assess the safety of the food products they purchase. They assessed the safety of different food products on a 5-point scale, where 5 means completely safe and 1 means completely unsafe. The majority of respondents assessed the following products as the safest with 5 points: honey (76%), baby food (61%) and mineral water (59%). Products such as alcohol, juices/carbonated drinks, confections and canned products are rated as completely safe by a small portion of respondents, with the frequency of naming these products not exceeding 30%.

The following differences have been identified in terms of **age** and **gender,** when respondents were asked to assess the safety of products: every third man (29%) believes that juices/carbonated beverages

are completely safe, while 18% of female respondents agree with this statement. Among men, 35% believe that alcoholic products are completely safe, while this index is three times lower among women and equals 12%. There are also differences according to **age** when it comes to the assessment of the said product category. Only 7% of respondents aged 55 and above believe that juices/carbonated drinks are completely harmful, while this index significantly increases in other age groups: 35-54 y/o (15%) and 18-34 y/o (20%). Different age groups differently assess the safety of sweets: only a small portion of respondents aged 55 and above believe that sweets are unsafe or completely unsafe (12%). This index increases in the 35-54 age group to 21%, while the highest index is reported in the 18–34-year-old age group and reaches 29%. Different age groups also differently assessed canned products: every fourth respondent (40%) aged 55 and above consider canned products to be completely safe. This index is two times lower in the 35-54 age group and equals 17%, while 22% of young respondents in the 18-34 age group believe that canned products are completely safe.

Table # 3. Assessment of the safety of consumed food products

	1	2	3	4	5	Don't know/hard to answer	Number
Bread and baked goods	2%	6%	27%	24%	38%	3%	1096
Oil / clarified butter	4%	9%	25%	24%	35%	3%	1088
Fruits and vegetables	2%	5%	23%	27%	42%	1%	1020
Sugar / salts	5%	7%	20%	21%	45%	2%	1112
Meat and meat products	2%	5%	24%	29%	39%	1%	999
Fish and fish products	1%	6%	22%	25%	44%	2%	994
Sweets	7%	14%	29%	22%	27%	1%	978
Grains	0%	3%	19%	27%	48%	3%	969
Mineral / drinking water	1%	2%	14%	23%	59%	1%	930
Juices / carbonated drinks	14%	18%	26%	15%	24%	3%	902
Egg	2%	4%	20%	24%	48%	2%	760
Milk and dairy products	2%	5%	20%	28%	43%	2%	745
Honey	1%	11%	7%	13%	76%	2%	569
Canned products	8%	11%	31%	21%	26%	3%	346
Alcoholic beverages	11%	12%	23%	23%	27%	4%	312
Baby food	8%	11%	31%	21%	26%	3%	142

Respondents identified the necessary criteria for food safety protection. **Four out of ten respondents (39%) believe that food safety is maintained if the expiration date is valid,** while an equal share of respondents agree that in order to ensure the safety of food products, the following are necessary: *product is organic* (31%), *proper storage conditions are maintained* (30%), and the *product does not contain harmful ingredients* (30%). The frequency of naming other criteria significantly falls behind the abovementioned criteria and does not exceed 13%.

There are a range of differences in terms of required criteria for ensuring food safety in **the group of ethnic minorities.** Every fourth respondent from this group finds it important that product storage rules are followed (40%), while this criterion is deemed important by 28% of the remaining respondents. Almost half of the respondents representing ethnic minorities (46%) believe that product needs to be organic, while one-fourth of (28%) other respondents agree. One-fifth of ethnic minority respondents (21%) believe that product labeling is also important, while this factor is important for 11% in the group of remaining respondents. The share of respondents representing ethnic minorities who believe that unpleasant smell is the main criterion for assessing food safety is three times higher (27%) compared to the group of remaining respondents (8%).

Chart # 7. Food safety criteria
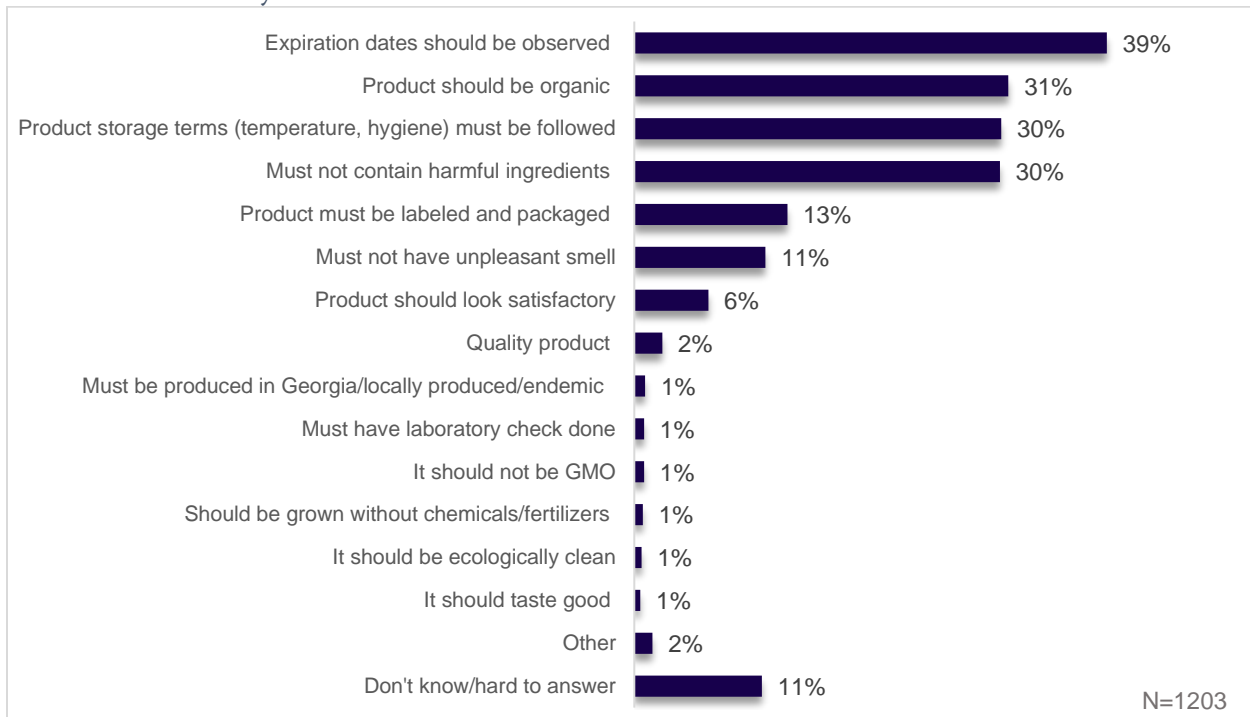
Note: respondents had the option to choose multiple answers to this question, thus the sum of answers exceeds 100%.

Respondents were asked to assess to what extent they agreed with a range of statements regarding food safety on a 5-point scale, where 5 means completely agree and 1 means completely disagree. As demonstrated by the study, respondents gave 5 out of 5 points and fully agreed with the statement: **"harmful food may not poison at once but will eventually damage a person's health" (71%).** Respondents also fully agree (5 points) with the statement that GMO products are harmful to health (63%). 61% fully agree with the statement that "eggs from the village are harmless", and almost half of

the respondents (46%) agree with the statement that "lots of GMO products are sold in Georgia". Inquired respondents are less persuaded that "visually attractive products are harmless" – only 10% of respondents fully agree with this statement.

Analysis of the collected data **according to type of settlement** demonstrated that the statements that refer to products produced in villages are highly trusted by those living in rural areas and get 5 points. More than half of the respondents living in rural areas (55%) completely agree with the statement that *"products harvested in the village are necessarily organic",* while only 22% of respondents in Tbilisi and 36% of respondents in other cities (except Tbilisi) believe the same. The statement "*products that were produced in the village need no inspection"* gets the highest ranking by 40% of respondents in rural areas, while the index is 4 times lower in Tbilisi and equals 10%. As for other cities (except Tbilisi), 23% of respondents completely agree with this statement. The statement "*eggs produced in the village are harmless"* is no exception, with 79% of respondents in villages fully agreeing with this statement. This index is almost cut in half in Tbilisi – (38%), while 58% of respondents in other cities (except Tbilisi) fully agree with the given statement.

In terms of **ethnicity,** differences were detected in the frequency of naming different criteria. For example, a larger portion of respondents representing ethnic minorities consider village eggs completely harmless (73%), and the corresponding share is 58% among remaining respondents. In addition, there are differences in the number of respondents who fully agree or agree with the statement that entrepreneurs overwrite dates on expired products: 37% of respondents in the group of ethnic minorities agree with this statement and 51% of the remaining respondents agree. It is worth mentioning that half of the remaining population agrees with the statement that lots of GMO products are sold in Georgia (49%), while 32% of respondents in the group of ethnic minorities share the same viewpoint.

The following differences were detected in terms of statements related to food safety by **gender and age.** Among men, 63% believe (agree/fully agree) that branded and labeled products are more trustworthy in terms of food safety, while this viewpoint is shared by 49% of female respondents. The share of men who believe that the price of food products is directly connected to safety is 40% and is 10% higher than the share of women who agree with this statement (30%). As for differences in age groups – 26% of respondents aged 55 and above fully agree with the statement that the price of food products is directly related to safety. This rate decreases in other age groups: 18-34 y/o – 13%, and 35-54 y/o – 18%.

Table # 4. Assessment of statements related to food safety

	1	2	3	4	5	Refused to answer	DK/hard to answer
Harmful food may not poison at once, but will eventually damage a person's health	3%	3%	8%	14%	71%	0%	1%
Products harvested in the village are necessarily organic	9%	7%	22%	21%	40%	0%	1%
Visually attractive products are harmless	35%	17%	23%	10%	10%	0%	5%

Products that were produced in the village need no inspection	27%	14%	16%	16%	26%	0%	1%
Branded and labeled products are better in terms of safety	10%	8%	20%	24%	32%	0%	6%
GMO products are harmful to our health	3%	4%	10%	14%	63%	0%	6%
Lots of GMO products are sold in Georgia	3%	3%	17%	18%	47%	0%	12%
Food price is directly connected to safety	25%	11%	22%	16%	19%	0%	7%
Eggs from the village are harmless	5%	5%	10%	17%	61%	0%	2%
It's easier to buy safe products in regions	8%	7%	17%	24%	39%	0%	5%
Entrepreneurs overwrite dates on expired products	12%	5%	15%	15%	34%	0%	19%
Expired products are updated through different additives	16%	5%	12%	14%	26%	0%	27%
N=	1203						

When discussing topics related to food safety, respondents shared their point of view on unregulated street trade. **A large portion of respondents do not approve of unregulated street trading (81%).** Unregulated street trading appeared to be acceptable to only 15% of respondents.

Chart # 8. Opinions on whether unregulated street trade should be allowed
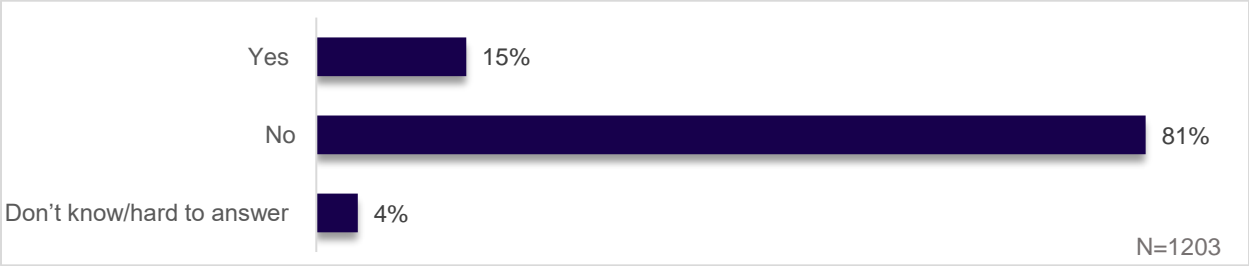
Even though a large portion of respondents disapproved (81%) of unregulated street trade, the majority (63%) fully agreed with the statement that those who sell in the streets will end up in a tough situation if street trade is banned. In addition, 36% of respondents stated that consumers will no longer be able to buy cheap products. However, respondents also agree with the statement that streets will be cleaner and more orderly if street trade is forbidden, that those sellers who follow food safety rules will be in a more favorable situation (53%) and that the situation in terms of food safety will improve in the country (45%).

Table # 5. Assessment of statements related to the banning of unregulated street trade

|	1	2	3	4	5	DK / hard to answer
Those who sell in the streets will appear in a tough situation	4%	2%	11%	17%	63%	3%
Consumers will no longer be able to buy cheap products	12%	8%	20%	19%	36%	5%
The situation in terms of food safety will improve in the country	10%	6%	13%	19%	45%	7%
Streets will be cleaner and more orderly	4%	3%	8%	15%	68%	2%
Those sellers who follow food safety rules will be in a more favorable situation	4%	3%	12%	20%	53%	8%
N=	1203					

Two out of three respondents have heard of the National Food Agency (67%), while 32% of respondents have not.

Awareness of the National Food Agency differs by **type of settlement.** This index is highest in Tbilisi (77%) followed by other cities (67%). A relatively smaller portion of respondents are informed about the National Food Agency in villages (59%).

Awareness of the National Food Agency is also different for **ethnic minorities** and the awareness rate is lower than among the remaining population. If half of ethnic minorities (52%) have not heard of the National Food Agency, this rate is 28% among the remaining respondents.

There are also slight differences in terms of the awareness of the National Food Agency by **age.** A relatively larger number of respondents aged 55 and above have not heard of the National Food Agency (38%). This index decreases in other age groups: 35-54 y/o – 28%, and 18-34 y/o – 29%.

Chart # 9. Rate of hearing about the National Food Agency
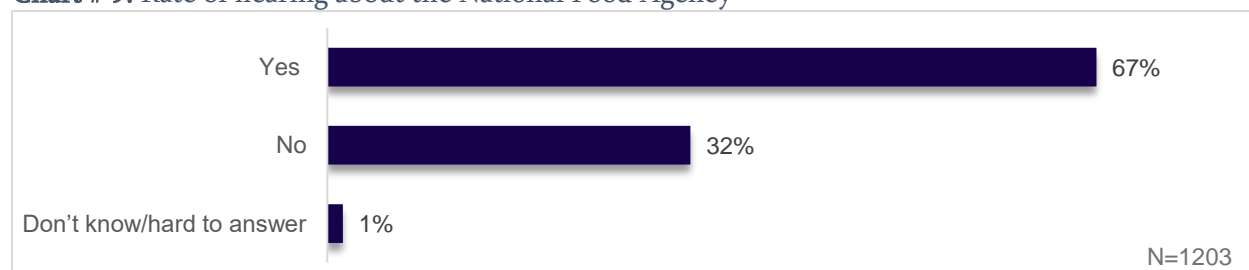
Among those respondents who have heard of the National Food Agency (67%), **only 5% named its exact function – that the Agency is a state body in the field of food safety, veterinary and plant protection. Most respondents (78%) stated that the function of the National Food Agency is the control of food safety, which is close to the right answer.** A total of 44% of other answers are also somewhat close to the functions and duties of the National Food Agency. Only 10% of provided answers are completely outside of the National Food Agency's functions, while 8% of respondents were unable to answer the question *(multiple answer options were provided for this question).*

There are also differences in views of the functions of the National Food Agency according to **ethnicity** – more ethnic minorities believe the National Food Agency *keeps a registry of products produced in the country* (17%), than the remaining respondents – (6%). More ethnic minorities also believe the *National Food Agency responds to food safety violations* – (33%), than the rest of the population (18%). Finally, more ethnic minorities believe that the *National Food Agency informs citizens about harmful products* – (16%), than the rest of the population (8%).

Chart # 10. Functions of the National Food Agency
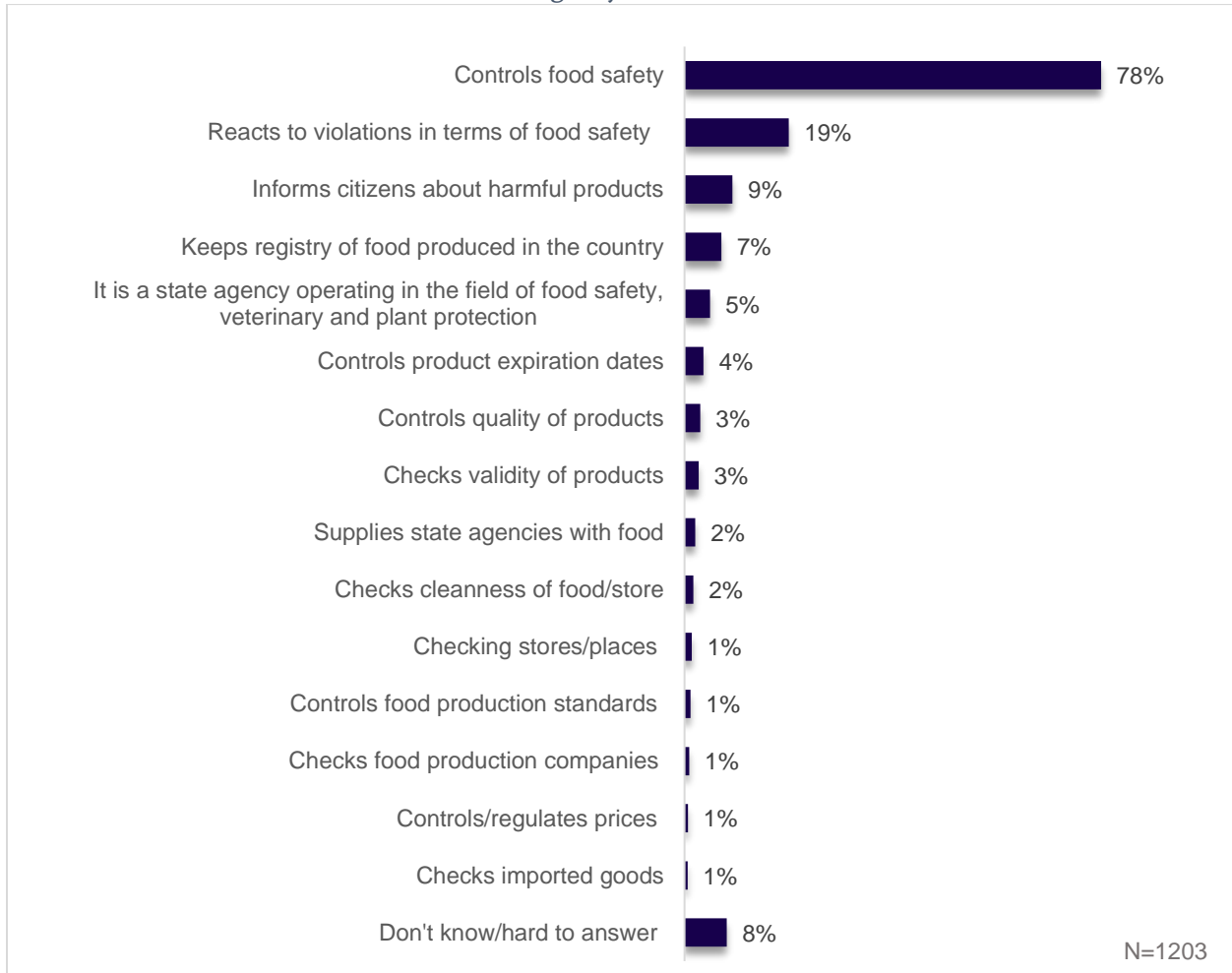
* *Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.*

Respondents rarely use the website and/or Facebook page of the National Food Agency (5%). Most of the population has no experience or cannot recall using the website/Facebook page of the National Food Agency.

Chart # 11. Experience using the website/Facebook page of the National Food Agency

I have not used	93%
I have used Facebook page	2%
I have used website	2%
I have used both website and Facebook page	1%
Don't know/ hard to answer	1%
Refused to answer	1%

N=781

A small portion of the respondents who have used the website/Facebook page of the National Food Agency use the website once a year or more rarely (8 respondents), while 6 respondents reported using the Facebook page several times a month. Respondents who use the Facebook page of the National Food Agency positively assess their experience, with a rating of 4.5 points out of 5, than those who used the website – 3.9 points.

Table # 6. Use of the website/Facebook page of the National Food Agency

	Website	Facebook page
Almost every day	1	0
Several times a month	4	6
Once a month	3	4
Once in 2-3 months	2	2
Once in 6 months	4	5
Once a year or more rarely	8	2
Refused to answer	1	0
N=	23	19

Summary of sub-chapter

The following main findings were identified in the process of assessing food safety. The majority of respondents named three products they buy the most: *bread/baked goods, sugar/salt, and oil/clarified butter* – more than 90% of respondents purchase these items. Respondents in villages have more access to *milk/dairy products and alcohol* than in other cities and Tbilisi.

As believed by respondents, the three safest products are *honey, baby food and mineral water.* Baby food was named and respectively assessed by a small portion of respondents (136 respondents). As perceived by the respondents, the most important and leading criterion for ensuring food safety is *following product expiration dates.* In addition, every third respondent believes that other important factors for ensuring food safety include the following: *product is organic* (31%), *proper product storage conditions are followed (*30%) and *the product does not contain harmful ingredients* (30%). Respondents agree with the statement that *"harmful products may not poison at once, but eventually*

will damage a person's health". An almost equal share of respondents (63%-61%, respectively) also agree with the statements that "GMO products are harmful to health" and that "eggs from the village are harmless". Almost half of the respondents (46%) agreed that "lots of GMO products are sold in Georgia". Respondents rarely agree with the statement that "visually attractive products are safe" – only 10% of respondents agree with this statement.

The majority of respondents do not approve of unregulated street trade, but they also agree that sellers who sell food in streets will be disadvantaged, if street trade is forbidden and citizens will no longer be able to buy cheap products. However, respondents also emphasize the advantages of restricting unregulated street trade, such as cleaner streets, an improved situation in terms of food safety, etc.

A large number of respondents (67%) state that they have heard about the National Food Agency. However, many of them do not have information regarding the agency's functions or name them incorrectly.

A relatively smaller portion of respondents representing ethnic minorities have heard of the National Food Agency. Among those who have heard of this agency, the majority declared that *control of food safety* is the primary function of the National Food Agency.

Sources of Information

Research participants identified two main sources of information: internet/social networks (70%) and television (54%). The use of other sources of information is low and does not exceed 9%. As demonstrated by the study, the following two sources are also primary sources for obtaining information on food safety issues: internet/social networks (47%) and television (44%).

Regardless of gender, age, type of settlement, and ethnicity, television and social networks are the two most frequently named sources for obtaining information. As for the **type of settlement,** it is worth mentioning that for citizens living in rural areas, television turns out to be the main source of information in general (60%) and more specifically, for food safety (47%), while this index is relatively lower in other cities and Tbilisi. Internet and social networks are utilized as main sources of information for 80% of respondents inquired in Tbilisi, 72% of respondents in other cities, and 61% in villages.

There are differences for **ethnic minorities** when it comes to sources of information. Only 9% of respondents obtain information through social communication – such as colleagues, friends, and family members, but the share of using this source is relatively higher in the group of ethnic minorities and reaches 15%. Only 8% of the remaining respondents obtain information through face-to-face communication.

The main sources of information differ by **age groups.** A total of 57% of respondents aged 55 and above use television as a primary source of information and 23% of respondents from this age group use social networks to obtain information. An almost equal share of respondents in the 35-54 age group use

television (45%) and internet/social networks (51%). The rate of using internet/social networks is higher in the youngest group (18-34 y/o – 69%), and this group tends to use the television as a source of information less often (28%).

Chart # 12. Main sources of information
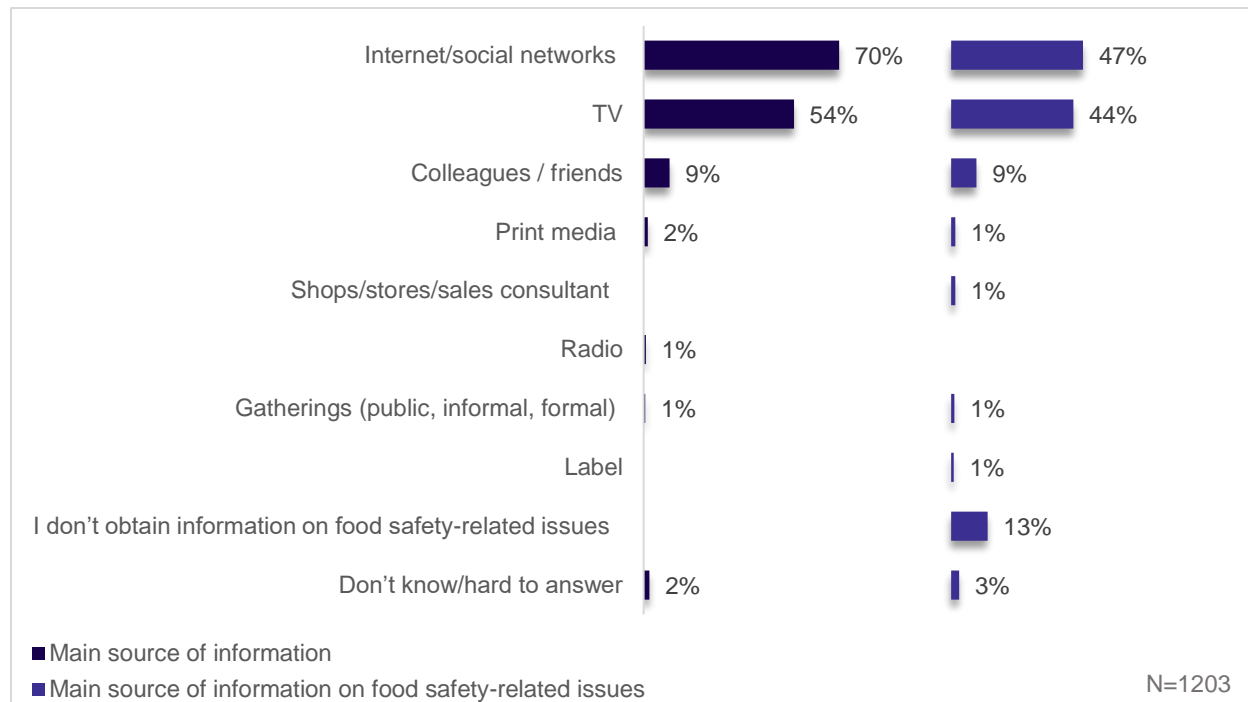
Internet/social networks — 70% / 47%
TV — 54% / 44%
Colleagues / friends — 9% / 9%
Print media — 2% / 1%
Shops/stores/sales consultant — 1%
Radio — 1%
Gatherings (public, informal, formal) — 1% / 1%
Label — 1%
I don't obtain information on food safety-related issues — 13%
Don't know/hard to answer — 2% / 3%

■ Main source of information
■ Main source of information on food safety-related issues

N=1203

* Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Respondents were asked to assess the level of awareness on food safety issues. On a 5-point scale where 1 means "I am completely uninformed" and 5 means "I am completely informed", on average respondents assessed their knowledge with **3.2 points.** Among them, almost half of the respondents (43%) rated their knowledge with 3 points, while 36% of respondents believe they are informed or very informed about the said topics and rated their knowledge with 4 or 5 points.

There is a difference in terms of assessing the awareness level on food safety-related issues by **ethnic groups:** a larger portion of ethnic Georgians believe they are informed or fully informed regarding food safety issues (38%). This index is 28% in the group of ethnic minorities.

More than half of the respondents (61%) are willing to obtain additional information regarding food safety issues. 35% are satisfied with their level of awareness and are not interested in obtaining additional information.

As for distribution by the **type of settlement,** the largest portion of respondents who are willing to obtain additional information on food safety issues is from Tbilisi, while a somewhat equal share of respondents in other cities and villages are willing to obtain additional information (59% and 55%, respectively).

Data analysis by **gender** clarified that relatively more women (65%) are willing to obtain additional information on food safety issues, than men (56%).

Yes	61%
No	35%
Don't know/hard to answer	4%

N=1203
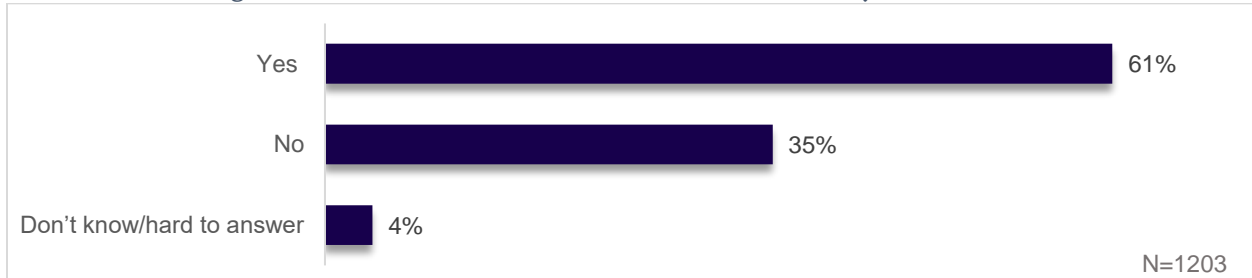
Respondents interested in obtaining additional information on food safety issues are particularly interested in the following topics: *methods to choose harmless products (42%), inspection results of food and food places (23%) and information on the production process in different enterprises (17%).* The frequency of naming other issues does not exceed 6%. It is worth mentioning that 17% of respondents find it difficult to identify the topic on which they would like to obtain additional information.

Slightly more than half (58%) of respondents **representing ethnic minorities** would like to obtain additional information on *methods to choose harmless products,* while this share is 39% among the remaining respondents. A somewhat equal portion of respondents from ethnic minorities and the remaining population are willing to obtain information on the inspection of food and food places (43% and 39%, respectively).

Chart # 14. Topics related to food safety on which respondents would like to obtain additional information

Topic	Percentage
Methods for choosing safe products	42%
Inspection results of food and eateries	23%
Information on production process in different enterprises	17%
Information on product safety	6%
Information regarding quality of different products	5%
Information on requirements for entrepreneurs	5%
Information on ongoing reforms in this field	5%
Information on ingredients of different products	3%
Information on storage and consumption rules of different products	2%
Information on control over production of different products	1%
Information on quality/safety of imported goods	1%

N=721

* Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Similar to sources of information in general, **two main preferable sources of information are internet/social networks (70%) and television (53%).** The level of preference for all other sources of information does not exceed 3%.

There are differences in sources of information related to food safety issues by **type of settlement.** A total of 58% of respondents living in villages prefer internet/social networks, while this index is higher in Tbilisi (83%) and other cities (68%).

There are important differences according to **age groups:** a large portion of respondents in the 18-34 age group prefer to obtain information on food safety issues through the internet/social networks (86%). This index decreases to 69% among respondents aged 35-54 and particularly decreases for respondents aged 55 and above (55%). A total of 71% of respondents in the last age group prefer to obtain information on food safety issues through television.

Chart # 15. Preferable sources to obtain additional information on food safety issues

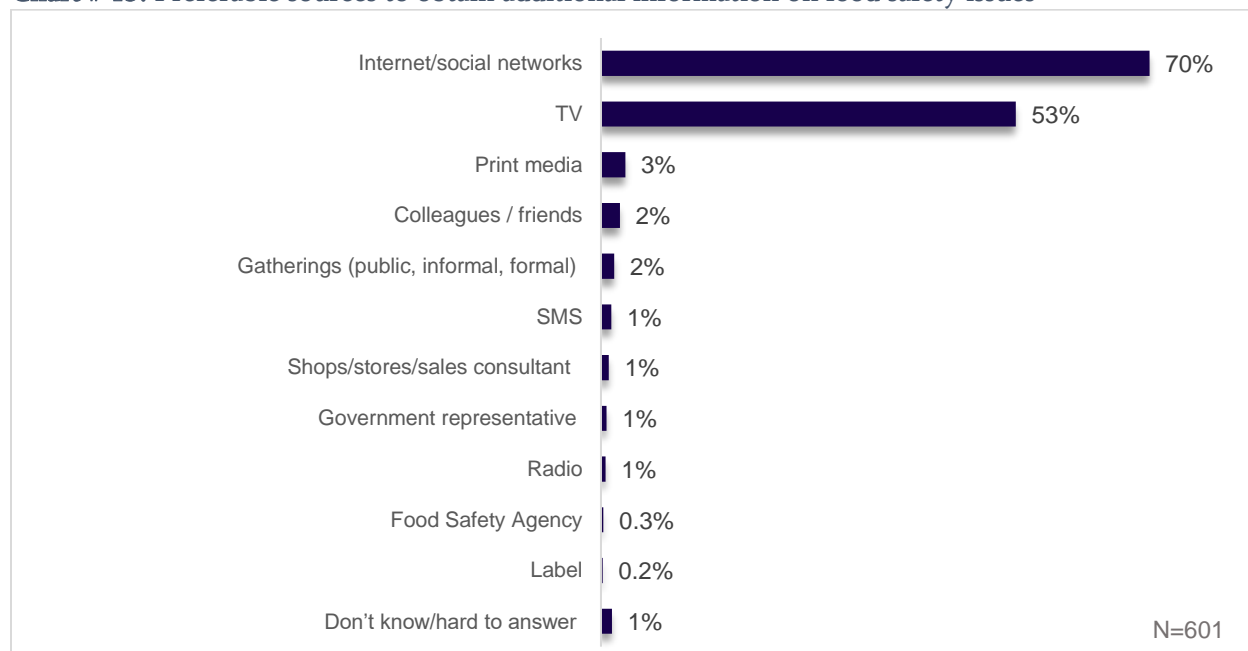| Source	Percentage
Internet/social networks	70%
TV	53%
Print media	3%
Colleagues / friends	2%
Gatherings (public, informal, formal)	2%
SMS	1%
Shops/stores/sales consultant	1%
Government representative	1%
Radio	1%
Food Safety Agency	0.3%
Label	0.2%
Don't know/hard to answer	1%

N=601

Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Summary of sub-chapter

An analysis of topics related to sources of information revealed the following important points. The two most prevalent sources of information regardless of settlement type, ethnicity, gender, and age are *television and social networks.* Social networks as the main source of information were most frequently named by respondents from Tbilisi and in the 18-34 age group, while the practice of obtaining information through television is more prevalent in villages and among respondents aged 55 and above.

Respondents assessed their own knowledge of issues related to food safety as *satisfactory.* More than half of the respondents are willing to obtain information on these issues. The share of such respondents was higher in Tbilisi compared to other cities and villages. Respondents willing to obtain additional information on food safety issues mostly prefer to obtain information on *methods for choosing safe products.* The two most preferable sources of information are still *television and social networks.*

Experience Related to Grocery Stores

The majority of respondents (86%) do grocery shopping at hypermarkets/supermarkets, while half of the respondents (51%) shop at agrarian markets and four out of ten respondents shop at neighborhood stores (37%). 11% have purchased groceries from street sellers, while only 10% of respondents purchase food directly from manufacturers/farmers.

When it comes to the **type of settlement,** the share of those who shop at hypermarkets/supermarkets is lower in villages (75%) compared to other cities (89%) and Tbilisi (97%), which can be explained by

low accessibility of such establishments in rural areas. The practice of buying directly from farmers is most prevalent in regional cities (15%), while 9% of respondents reported such a practice in the capital city and villages.

Representatives of ethnic minorities shop less frequently at hypermarkets/supermarkets (71%) compared to the remaining respondents (88%), even though hypermarkets/supermarkets are the most frequently named places to shop in this group. In addition, the study also demonstrated that representatives of ethnic minorities more frequently buy food at district shops (53%) and agrarian markets (66%), than other respondents (district shops – 34%, agrarian markets - 49%).

Chart # 16. Use of grocery shops

Category	Percentage
Hypermarket/supermarket	86%
Agro market	51%
Neighborhood store	37%
Street sellers	11%
Directly from entrepreneur/farmer	10%
From the car that sells products	1%
In wholesale stores	0.3%
Don't know/hard to answer/refused to answer	0.2%

N=1203

* Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Research participants were also asked to name and rank the three most important criteria when choosing grocery shops. The most important factor is proximity / location of food store, for 34% of respondents, while the safety of food products (hygiene and following of expiration dates) was named by 23% of respondents. Product price is the most important factor for only 14% of respondents, but it is ranked as the second most important factor by 26% of respondents and the third most important factor by 16% of respondents. High product quality is crucial for 15% of respondents. This was ranked as the second and third most important factor by one-fifth of respondents (20%-20%, respectively). The study revealed that personal trust towards the seller/owner is not crucial for respondents when choosing a food store, and the percentage of naming this factor does not exceed 9%. 14% of respondents find it difficult to rank the third most important factor.

When it comes to criteria for selecting food stores, there were differences detected according to the **type of settlement. Location is key for 72% of respondents living in Tbilisi, while this index slightly decreases in other cities to 62% and appears to be crucial for just 43% of respondents living in villages.** Even though trust towards the seller/owner is crucial only for a small portion of respondents (9%), the tendency shows that this factor is the most important for 14% of Tbilisi residents, while 23% of respondents in other cities and one-fourth of respondents (25%) in villages identify trust towards the seller/owner as the most important factor.

No significant differences were detected in terms of **ethnicity,** however, one-fifth of respondents in the group of ethnic minorities (20%) rank the price of the product as the most important factor (first criterion), while this is the most important factor for only 13% among the remaining respondents.

There are a range of differences by **gender and age.** It turns out, that when choosing a place to purchase groceries, 64% of women pay attention to product safety (hygiene condition), while 50% of men reported the same. The safety of food products and hygiene norms at food stores is also an important criterion for 62% of respondents in the 18-34 age group, 60% in the 35-54 age group and only for 51% of respondents aged 55 and above.

Chart # 17. Three most important criteria when choosing a place to buy food
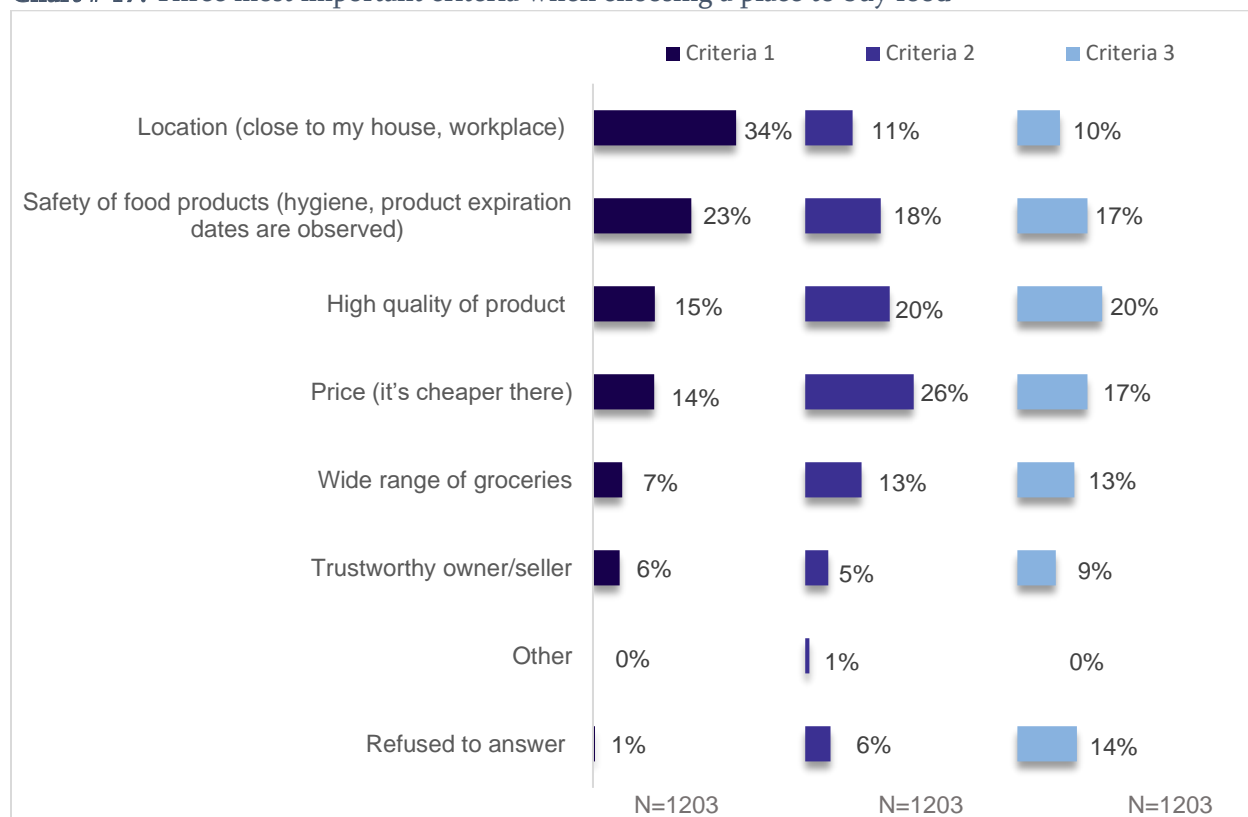
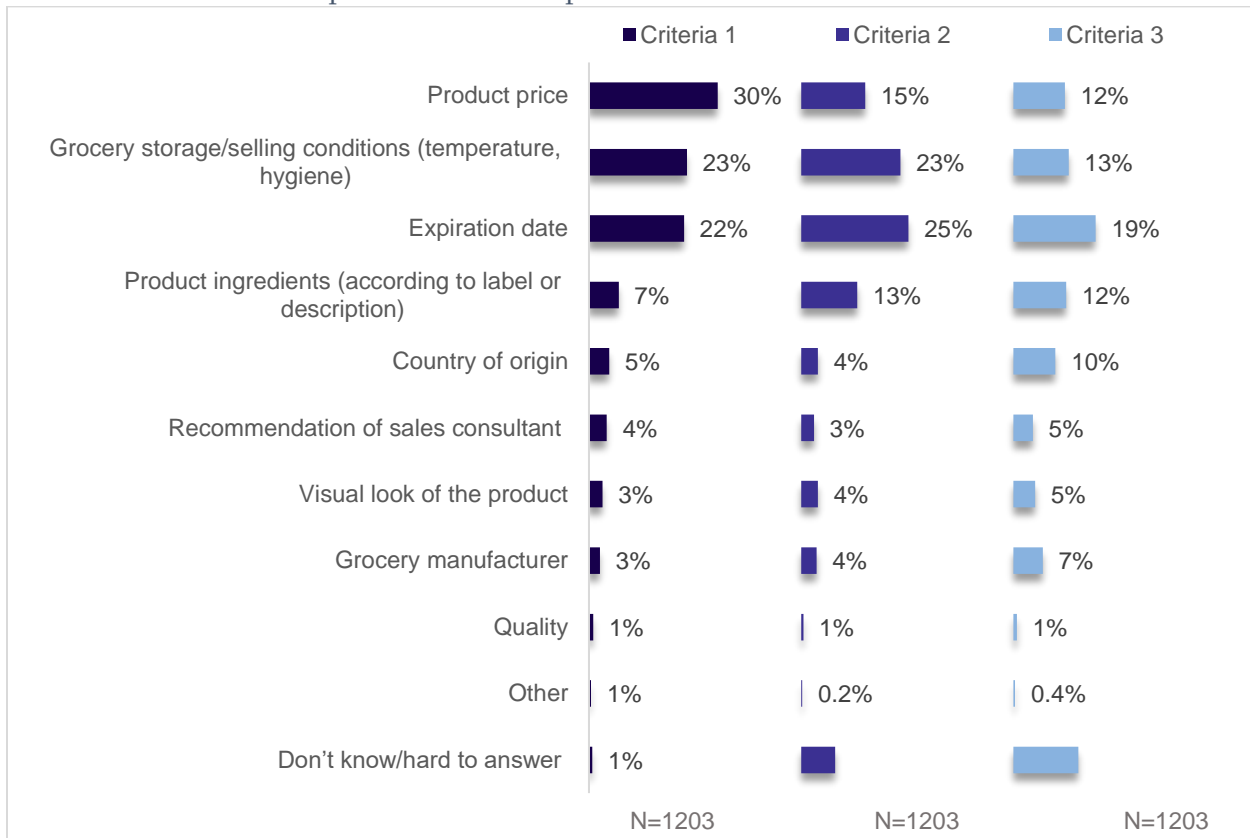Other criteria become a priority for respondents in the process of shopping. Every third respondent (30%) named price as the first criterion, while 23% of respondents prioritize storage conditions (temperature, hygiene), almost the same portion of respondents (22%) prioritize the product expiration date. One-fourth of respondents ranked the product expiration date as the second most important factor (25%), while this factor was ranked third by one-fifth of respondents (19%). Product description (label), country of origin, food manufacturer and visual appearance of the product are not that important for a majority of respondents, and the frequency of prioritizing these as the most important factors does not exceed 7%. 8% and 15% of respondents find it difficult to identify the second and third most important criteria when buying food products.

In Tbilisi, a smaller portion of respondents (32%) pay attention to whether the expiration date is valid when grocery shopping, than respondents in other cities (43%) and villages (41%).
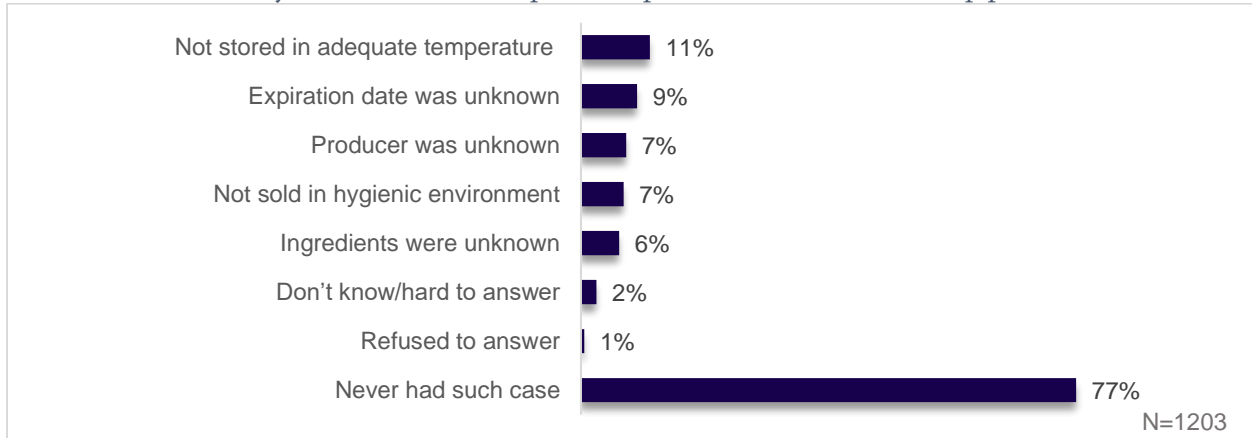
No differences were detected among obtained answers in terms of ethnicity. Even though the sales consultant's advice as an important factor when buying harmless products was named by only 12% of respondents, in terms of **age**, it seems that the sales consultant's recommendation is important for 16% of respondents aged 55 and above. The same index is 13% in the 35-54 age group and only 6% in the 18-34 age category. Relatively more respondents in the 35-54 age group identify the expiration date as the third most important criterion when doing grocery shopping (26%). A total of 17% of respondents in the 18-34 age group and 14% of respondents aged 55 and above feel the same way.

Chart # 18. Three most important criteria for product selection

	Criteria 1	Criteria 2	Criteria 3
Product price	30%	15%	12%
Grocery storage/selling conditions (temperature, hygiene)	23%	23%	13%
Expiration date	22%	25%	19%
Product ingredients (according to label or description)	7%	13%	12%
Country of origin	5%	4%	10%
Recommendation of sales consultant	4%	3%	5%
Visual look of the product	3%	4%	5%
Grocery manufacturer	3%	4%	7%
Quality	1%	1%	1%
Other	1%	0.2%	0.4%
Don't know/hard to answer	1%		
	N=1203	N=1203	N=1203

Respondents were asked whether they had purchased a product, that violated any food safety norms, due to its cheap price. **The majority (77%) of respondents state that they have not done so.** The rest of them noted that they had bought products that were not stored at the relevant temperature (11%), the product expiration date was unknown (9%), the producer was unknown (7%), the product was not stored in a hygienic environment (7%) and the product ingredients were unknown (6%).

Chart # 19. Food safety norm violations of products purchased because of cheap price

Not stored in adequate temperature	11%
Expiration date was unknown	9%
Producer was unknown	7%
Not sold in hygienic environment	7%
Ingredients were unknown	6%
Don't know/hard to answer	2%
Refused to answer	1%
Never had such case	77%

N=1203

* Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Respondents shared whether they or their family members had experienced food poisoning after eating an expired/bad product that they purchased over the past 2 years. **The majority of respondents have not experienced this (91%),** while 9% of respondents declared that they or their family members had food poisoning from a harmful product. A significant portion of inquired respondents have discovered food safety violations at food stores (57%). One out of three inquired respondents observed the following violations at food stores: an expired product was sold (34%), a label was unclear/misleading/printed too small (34%), although it was not expired, the product had gone bad (34%), perishable products were not stored at an adequate temperature (31%) and hygiene norms were not followed (30%).

Chart # 20. Food safety violations

Sold expired food	34%
Perishable products were not stored at an adequate temperature	31%
Hygiene norms were not followed	30%
Food label was unclear/misleading/in a language I don't understand/printed in too small size font	34%
Product was spoiled even though it was not past its expiration date	34%

N=1203

Summary of sub-chapter

Based on their experiences with places that sell food products, the following information was obtained: the majority of the respondents do grocery shopping at *hypermarkets/supermarkets.* Village residents tend to shop at hypermarkets/supermarkets relatively less often compared to residents from the capital city and other cities.

When asked about the most important criterion when selecting a place to buy food, the most frequently named answers were *proximity of the grocery store* and *safety of groceries (hygiene).* The location of food stores is more important for Tbilisi residents than for residents in villages.

Different criteria become important for respondents when it comes to choosing actual products. Price is the most important priority for respondents.

The majority of the respondents state that they do not have experience purchasing food under violation of any food safety norms. According to the majority, neither they nor their family members had food poisoning after eating food purchased at a grocery store over the past 2 years. A total of 9% of respondents shared their experience with food poisoning.

A total of 57% of respondents have found at least one type of food violation at the grocery store. The following violations were identified: expired food was sold, the food label was unclear/misleading/small, food was expired before the expiration date had passed, perishable food was not kept at the right temperature, and hygiene norms were not maintained at the establishment.

Experience Related to Eateries

Six out of ten respondents (58%) purchased from or visited eateries (restaurant, canteen, confectionery, bakery, Shawarma place, etc.) over the past 3 months. Four out of ten respondents (42%) have not used the service of eateries over the past three months. Those who have not visited any eatery over the past three months mostly provided the following reasons: *preparing food at home in order to eat healthy (24%), food is expensive at eateries (17%), unavailability of eatery in the settlement or nearby (14%).*
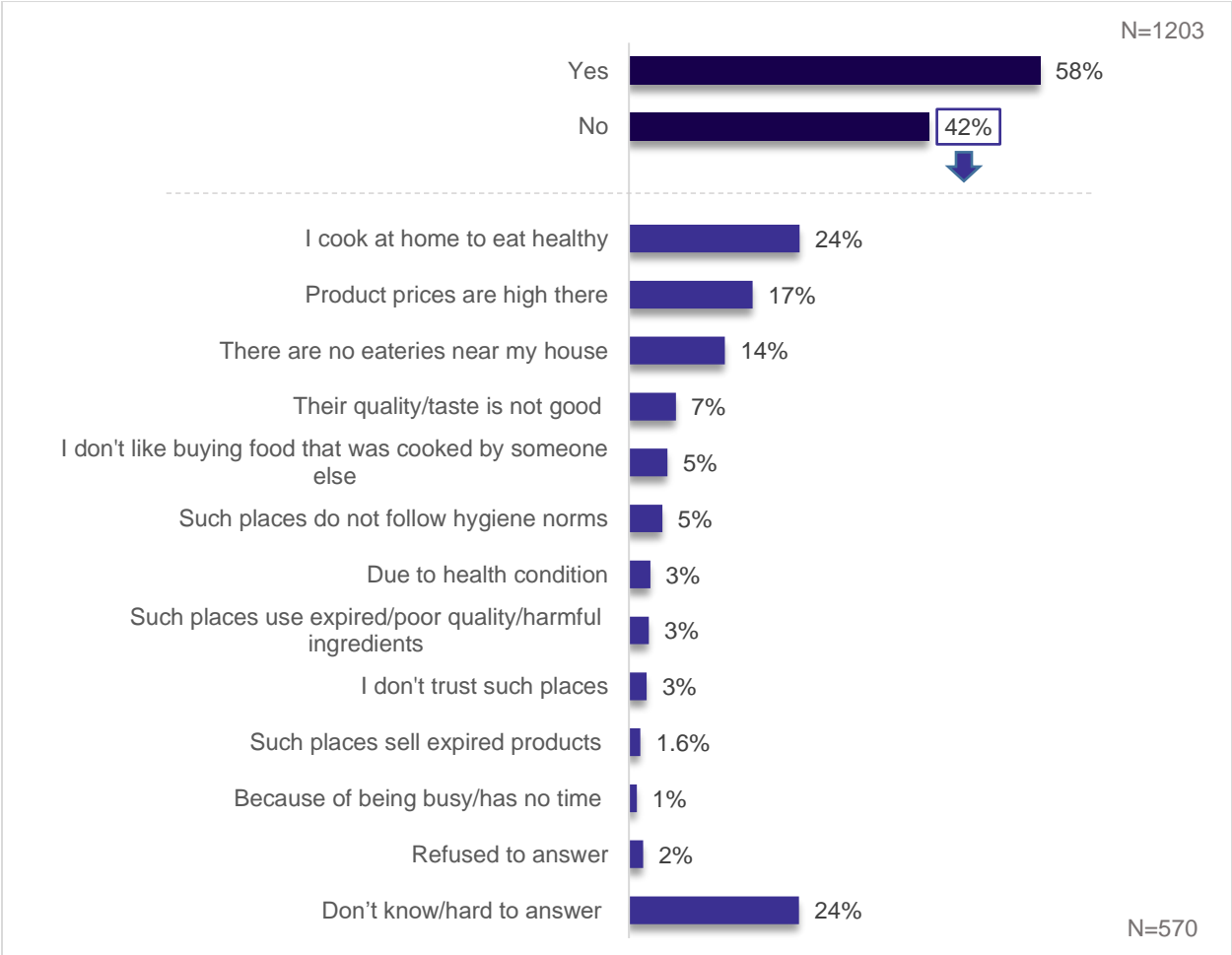
The use of eateries **by settlement type.** This index is high in the capital city (76%). The index decreases in the case of other cities (58%). As for villages, 45% of the respondents used the service of eateries over the past 3 months.

The use of services provided by eateries is relatively lower among **ethnic minorities** (50%), compared to the remaining population (59%). Very few respondents from ethnic minorities (15%) reported cooking food at home in order to eat healthy. This index among the rest of the respondents reaches 26%.

The use of eateries **by age and gender** reveals some important differences. Among those who used the services of eateries over the past three months, the share of men is higher (67%) than women (50%). As for respondents who cook at home to eat healthy, the share of women is higher (27%), while 19%

of men agree with this statement. In addition, the share of respondents aged 55 and above who purchased food at food places is 37%. The rate of purchasing food from food places increases as the age decreases, reaching 60% in the 35-54 age group and 78% in the 18-34 age group. It is also worth mentioning the equal and relatively large portion of respondents aged 55 and above and 35-54 who cannot afford to visit/buy food from eateries due to expensive prices (19% for both age groups), while the share of such respondents in the 18-34 age group is low and equals 9%.

Chart # 21. Rate of buying food from eateries/reasons for not purchasing food from eateries

N=1203

Yes	58%
No	42%

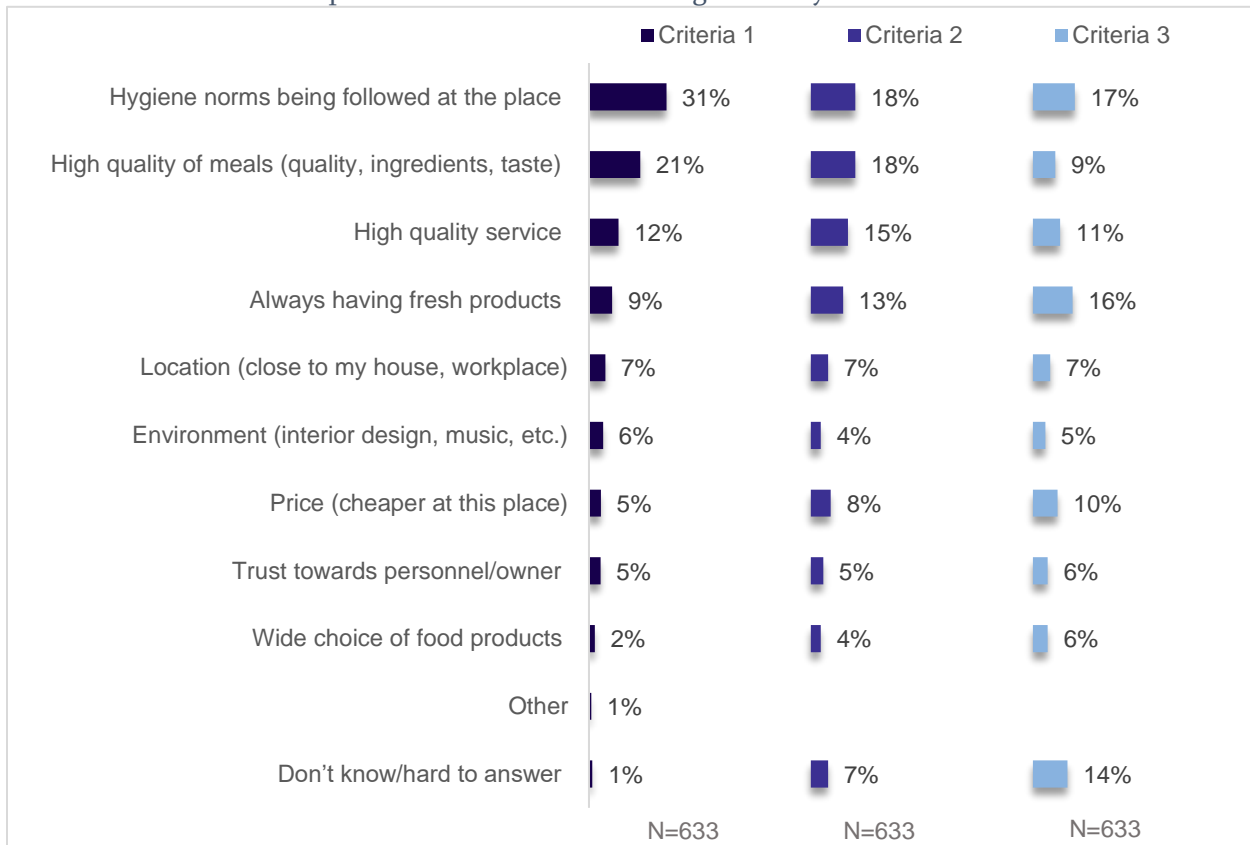|	
I cook at home to eat healthy	24%
Product prices are high there	17%
There are no eateries near my house	14%
Their quality/taste is not good	7%
I don't like buying food that was cooked by someone else	5%
Such places do not follow hygiene norms	5%
Due to health condition	3%
Such places use expired/poor quality/harmful ingredients	3%
I don't trust such places	3%
Such places sell expired products	1.6%
Because of being busy/has no time	1%
Refused to answer	2%
Don't know/hard to answer	24%

N=570

Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Among those respondents who have used the service of eateries over the past three months, 31% of them prioritize the maintenance of hygiene norms while choosing an eatery, while 21% prioritize *the quality of products and* 12% named *the quality of service* as the most important factor. Only a small portion of respondents pay attention to details such as environment (interior, music), price, owner, and wide selection of food products. Half of the respondents find it difficult to name the second (47%) and third (50%) most important criterion when selecting an eatery.

No significant differences were detected by the **type of settlement.** The factor that is relatively more important for Tbilisi residents is the location of the place (25%), which is important for 19% of respondents living in other cities and only 14% of village residents.

Differences have been detected in terms of **gender and age.** Maintaining hygiene norms at eateries is important for 73% of women and 61% of men. In addition, more women are focused on high quality of products (53%) than men (43%). Environment (interior, music, etc.) is important for only 15% of respondents. Environment is important for 18% of the respondents in the 18-34 age group and 15% of the respondents in the 35-54 age group, while only 9% of the respondents named this factor in the group of respondents aged 55 and above. Additionally, eateries always having fresh food is important for 27% of respondents aged 55 and above, while this criterion is important for 41% and 40% of respondents in the 18-34 and 35-54 age groups, respectively.

Chart # 22. Three most important criteria when selecting an eatery

| Criteria	Criteria 1	Criteria 2	Criteria 3
Hygiene norms being followed at the place	31%	18%	17%
High quality of meals (quality, ingredients, taste)	21%	18%	9%
High quality service	12%	15%	11%
Always having fresh products	9%	13%	16%
Location (close to my house, workplace)	7%	7%	7%
Environment (interior design, music, etc.)	6%	4%	5%
Price (cheaper at this place)	5%	8%	10%
Trust towards personnel/owner	5%	5%	6%
Wide choice of food products	2%	4%	6%
Other	1%		
Don't know/hard to answer	1%	7%	14%
	N=633	N=633	N=633

The two most important criteria respondents use to assess food safety conditions at eateries include hygiene (35%) and the visual aspects of products (32%). The frequency of naming the third criteria is two times lower – *I read the date it was made* (15%). 30% of respondents failed to answer this question.

No significant differences were detected in terms of assessing food safety conditions at eateries **according to settlement type.** Tbilisi residents pay relatively less attention to the visual appearance of

products (40%), which is an important factor for 31% of respondents from other cities and 27% of village residents.

As it appears, **age groups** utilize different criteria to assess food safety at eateries. A large portion of respondents in the 18-34 age category assess product safety based on the visual appearance of products (41%). A relatively lower portion of respondents from other age groups use visual appearance to judge whether a product is safe or not: 35-54 y/o – 37%, 55 and above - 27%. A total of 42% of respondents from the 18-34 age category observe whether or not hygiene norms are followed at eateries. This factor is less important for respondents aged 55 and above, and it is utilized as assessment criterion by 27% of respondents from this age group. A total of 37% of respondents in the 35-54 age group observe whether or not hygiene norms are followed.

Chart # 23. Assessment criteria of food safety at eateries
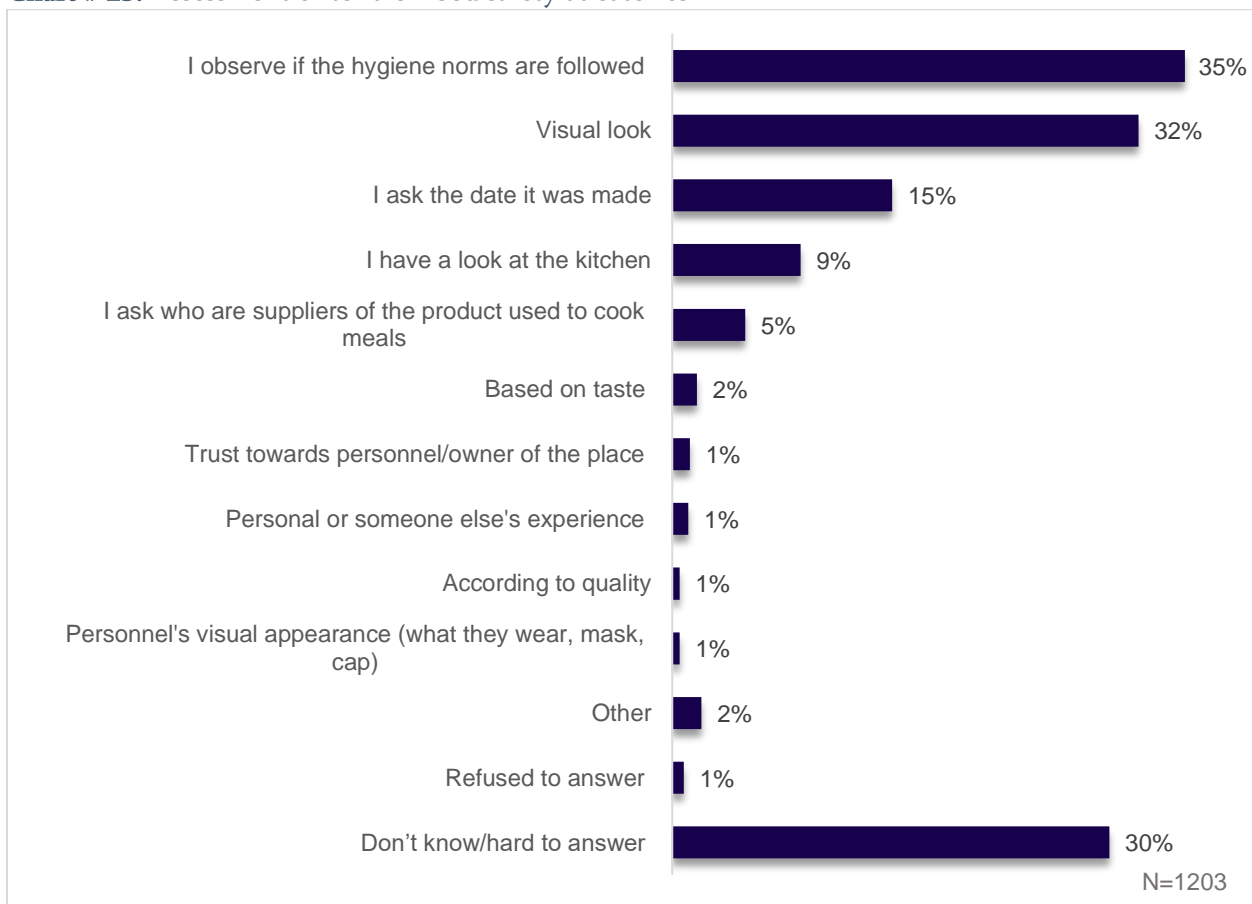
* Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Very few respondents reported having experience with food poisoning from the food purchased at an eatery over the past 2 years (4%) for either themselves or their family members. Regardless, respondents have reported food safety violations at eateries over the past two years (22%), which include: hygiene norms were not followed (18%), food was not stored according to rules (14%), food was bad/poisonous (8%).

Chart # 24. Experience with food safety violations at eateries

Hygiene norms were not followed at the place	18%
Food was bad/poisonous	8%
Food was not stored as required	14%
Something unpleasant was discovered in food	0.2%

N=1203

Summary of sub-chapter

Half of the respondents shared that they have purchased from or visited eateries (restaurant, canteen, confectionery, bakery, Shawarma place, etc.). The main reason provided for not buying from or visiting eateries is *cooking at home to eat healthy.* More respondents in Tbilisi bought something from an eatery over the past three years, while this index is particularly lower in villages.

The most important criterion when selecting an eatery was its maintenance of *hygiene norms. It is worth mentioning that this factor is more important for female respondents than for male respondents.* As for criteria used to assess the condition of eateries, the two most important assessment criteria named by respondents included: *observation of hygiene norms at eateries and visual look of the product.* These two factors were named by an almost equal portion of respondents. It is worth mentioning that 30% of the respondents using eateries cannot name the criteria they used to select the place.

A rather large number of respondents have discovered a food safety violation of any kind at an eatery over the past 2 years (22%). However, only 4% noted that they or their family member had food poisoning at eatery over the past 2 years.

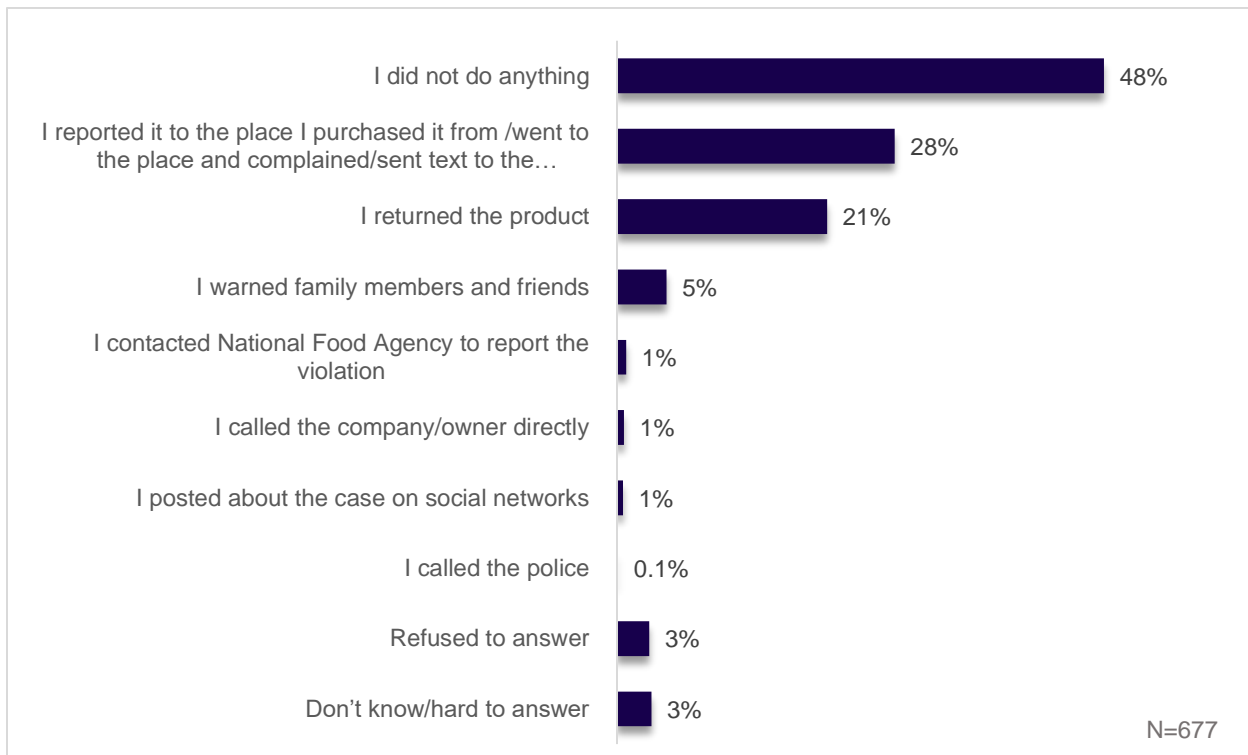## Response to Cases of Food Safety Violations

A total of 58% of respondents have encountered at least one type of food safety violation at a grocery store or an eatery. A small portion of respondents (or their family members) have had food poisoning after eating the food they purchased at the grocery store/eatery. Regardless of the experience, almost half of them (48%) did not take any measures in case of discovering the food safety violation. The most prevalent forms of responding to food safety violation cases are as follows: *reported complaint to the establishment/wrote to website/Facebook page of the place (28%), returned the product (22%).* Other forms of responses are not widely practiced, and the frequency of naming them does not exceed 5%. Only 1% of respondents (5 respondents) have experience applying to National Food Agency.

In terms of **settlement type,** respondents in Tbilisi more actively react to food safety violations of any form (59%). This index is 45% in other cities and 31% in villages.

As for representatives of ethnic minorities, 57% of them have not reacted in any way to the discovery of a food safety violation. This index is lower than half among the rest of the respondents - 47%.

Differences were detected in terms of **age and gender,** and mostly refer to one of the forms of response to food safety violations – *returning the product.* A total of 24% of women have returned a product to the place of purchase and 17% of men have had a similar experience. As for age groups, 14% of the respondents aged 55 and above have returned a product to the purchase place, while this index increases in other age groups to 23% in the 35-54 age group and 24% in the 18-34 age group.

Chart # 25. Response to food safety violations

| Response	Percentage
I did not do anything	48%
I reported it to the place I purchased it from /went to the place and complained/sent text to the…	28%
I returned the product	21%
I warned family members and friends	5%
I contacted National Food Agency to report the violation	1%
I called the company/owner directly	1%
I posted about the case on social networks	1%
I called the police	0.1%
Refused to answer	3%
Don't know/hard to answer	3%

N=677

* Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Among those who have responded to food safety violations (334 respondents), 23% declared that their complaint did not result in anything, while 50% of them (156 respondents) confirmed that their action had some kind of positive outcome. 23% of respondents state that the business operator resolved the violation, one-fifth of respondents (20%) were paid compensation/got a product replacement; while in the case of 13% of respondents, as a result of their complaint, the establishment removed the product from sales. A small portion of respondents recalled that their case was solved through communication on-site. Just 4% of respondents got an apology, while 3% of the respondents reported more negative communication and aggression/humiliation they had to face. For 2% of the respondents, owners made excuses. 22% of the respondents could not/did not share their experience.

A total of 20% of the representatives of **ethnic minorities** have experience when, as a result of their complaint, the product was removed from sales. Only 11% of the remaining respondents have such experience, but the share of those who received compensation is small among ethnic minorities (13%) compared to the experience of the remaining respondents (21%).

Regarding complaints **from a gender and age perspective,** the research shows that more men reported products being removed from sales as a result of their complaint (17%). The same experience was reported by almost half as many women (9%). More women (23%) received compensation/replacement of the product as a result of their complaint, while 15% of men reported having a similar experience. In terms of age groups, only 7% of the respondents aged 55 and above have experience receiving compensation/product replacement. This index is growing in other age groups (35-54 age group – 23%, 18-34 age group – 25%).

Chart # 26. Responses of establishments to food safety violations
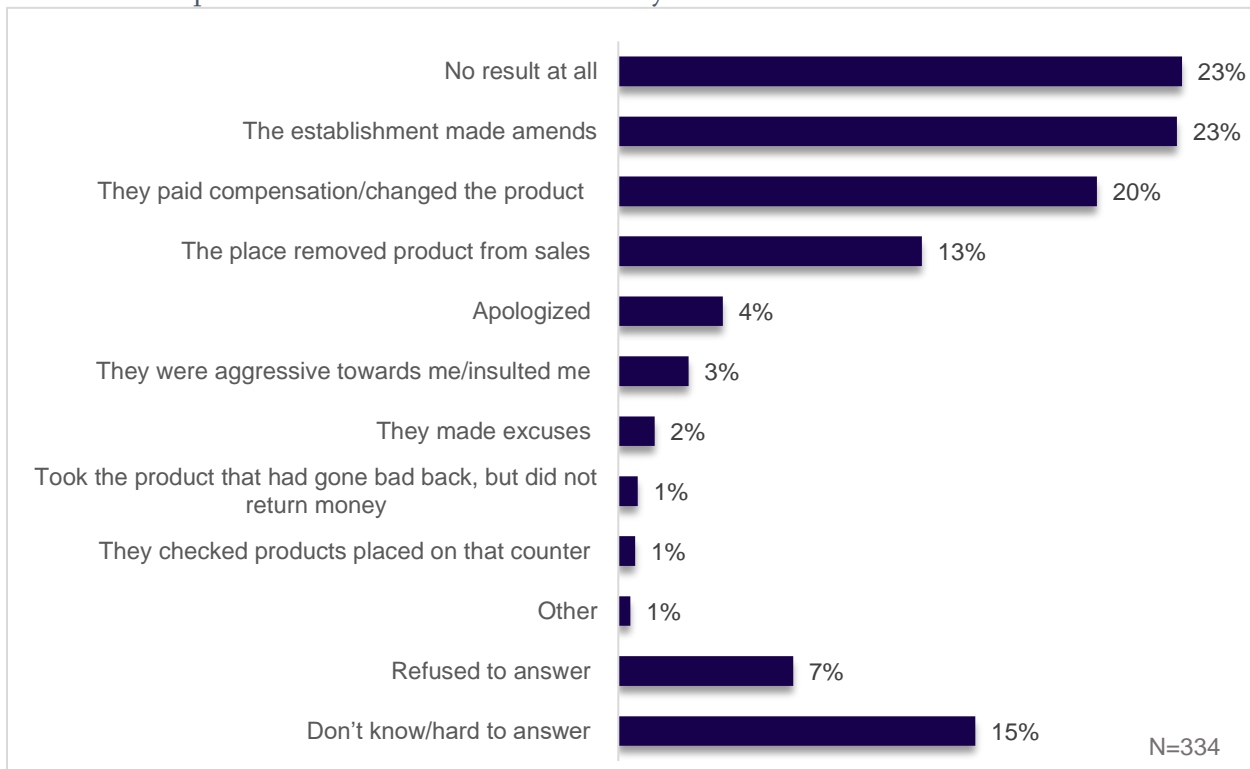
Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Within the scope of the study, respondents who have discovered violations at an establishment but did not report, were asked to share their reasons for not reporting food safety violations. **According to the study, one-fourth (25%) of respondents have a nihilistic attitude and believe that there is no point in complaining as it won't bring any outcome.** A total of 16% of respondents did not pay much attention to this fact, while 14% of respondents had a more personal reason for not reporting: to try to avoid conflict. A small portion of respondents did not have time to report the case (4%), and 2% of respondents named personal acquaintance with personnel. One-fourth (25%) of respondents cannot/did not respond to the question.

As for the **type of settlement,** a smaller number of respondents inquired in Tbilisi discovered food safety violations, but did not pay much attention to them (8%), while this index is 15% in other cities and 20% in villages.

A larger portion of respondents from the group of **ethnic minorities** did not have information about what to do when discovering food safety violations (19%) than among the remaining respondents (9%).

Reasons why respondents did not take any measures when discovering food safety violations differ by **gender and age.** It turns out that more women did not know what to do in this situation (14%), while only 8% of men were uninformed on measures to take when discovering violations. As for age groups, the largest portion of respondents believe that there is no point in reporting violations in the eldest group (55 and above – 31%), while this index decreases in younger age groups: 25% in the 35-54 age group and 19% in the 18-34 age group.

Chart # 27. Reasons for not reporting food safety violations
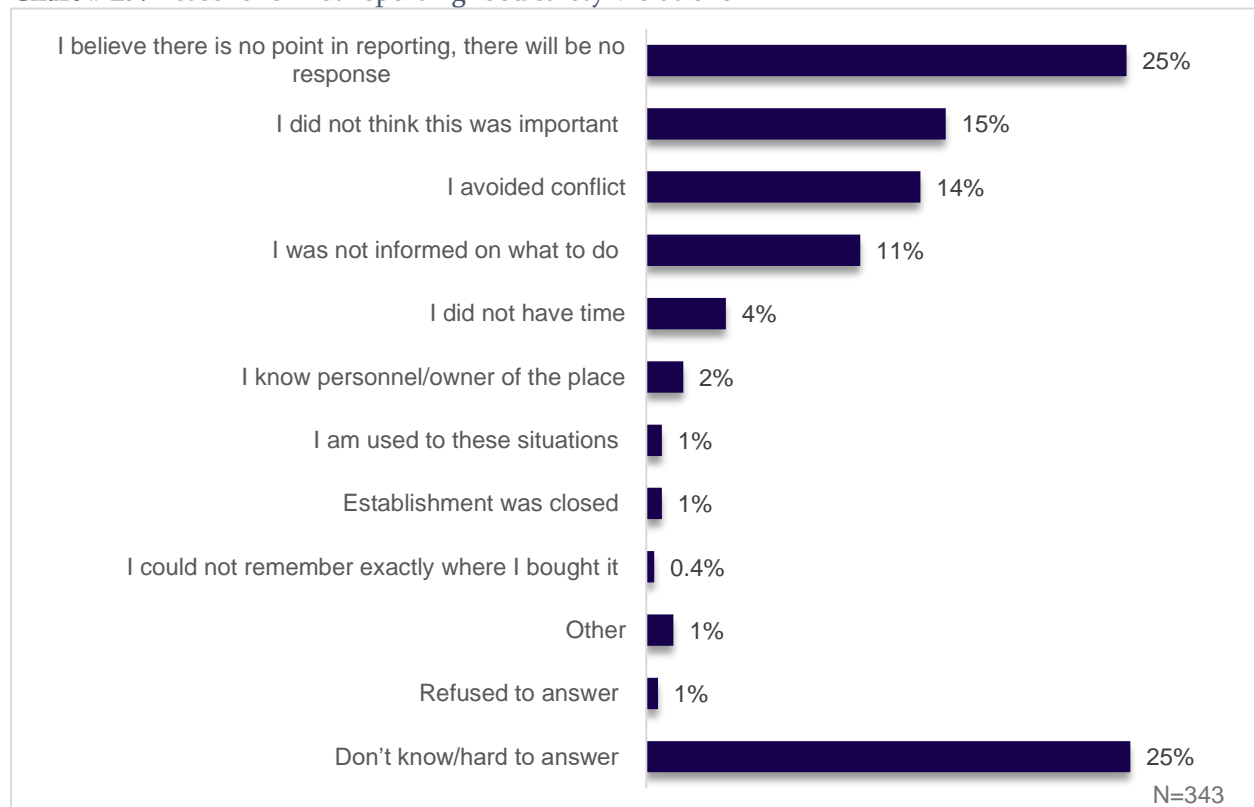
Only a few respondents notified the National Food Agency after discovering food safety violations (5 respondents). Three of the respondents declared that they didn't receive a response from the agency, while according to one respondents' experience, the agency responded to the complaint, but could not discover any violation. One respondent declared that the agency responded that fixing this problem was not in its area of competence.

Chart # 28. Response of the National Food Agency / rate of fixing food safety violations

I did not get any response from the Agency	3
The Agency notified me that they have checked the place/eatery or product but did not detect the violation I reported	1
The Agency notified me that fixing the reported violation was not in their competence	1
	N=5

The vast majority of respondents did not notify the National Food Agency after encountering food safety violations (99%). **Among all research respondents (1203 respondents), almost half (53%) still believe that if any kind of food safety violation is discovered in the future, they will notify the National Food Agency.** Every third respondent (34%) believes that they will not notify the National Food Agency if a food safety violation is discovered in the future, and 13% of the respondents did not/could not answer this question.

The number of respondents who plan to notify the National Food Agency if a food safety violation is discovered differs by **age group.** The lowest amount of readiness was expressed in the eldest age group (55 and above), in which every fourth (43%) respondent plans to notify the NFA if a food safety violation is discovered. This index increases as the age group decreases and equals 54% in the 35-54 age group, and 64% in the 18-34 age group.

Chart # 29. Willingness to notify the National Food Agency upon discovering a food safety violation

Yes	53%
No	34%
Don't know/hard to answer/refused to answer	13%
	N=1203
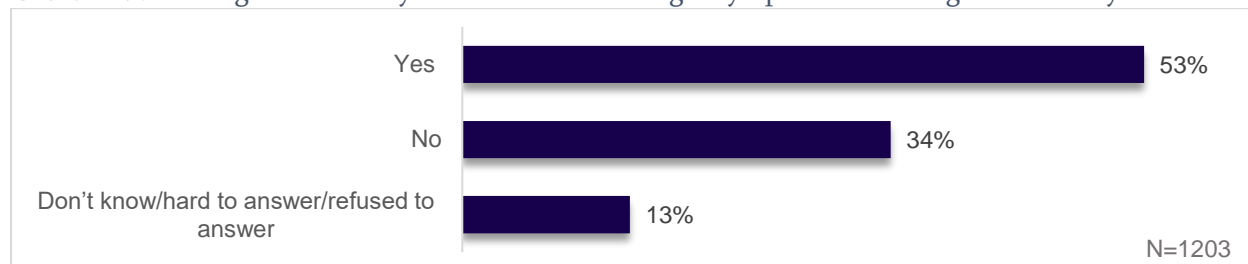
Despite not having responded to food safety violations, **respondents believe that citizens' engagement in fixing problems related to food safety issues is very important and rate it with 4.5 points on a 5-point scale. The majority (84%) of respondents believes that it is important or very important for citizens to be involved in fixing problems related to food safety violations.** This issue is of neutral importance for only 7% of respondents, while 5% believes that citizens' involvement in addressing food safety problems is not important.

In terms of the **settlement type,** it turns out that a larger portion of respondents living in Tbilisi deem citizens' involvement in fixing food safety issues important (77%). This viewpoint is shared by an approximately equal share of respondents in other cities and villages (68% and 67%, respectively).

A relatively smaller portion of respondents representing **ethnic minorities** believes that citizens' involvement in fixing food safety issues is important or very important – 77% and reaching 85% among the remaining respondents.

Summary of sub-chapter

The majority of respondents have noticed at least one type of violation at a grocery store/eatery (58%), while a small portion of respondents or their family members were poisoned after eating purchased food. *Almost half of the respondents have not responded to an observed food safety violation.* More respondents inquired in Tbilisi have responded to food safety violations than in other cities and villages. The number of responses to food safety violations among ethnic minorities is lower than among the rest of the population. Among those who have responded to food safety issues, the most prevalent forms are *reporting the violation on-site/writing to the website/Facebook page of the food place* and *returning the product.*

Only a small portion of respondents notified the National Food Agency after discovering a food safety violation – 5 respondents. Two of those respondents confirmed receiving a response from the agency.

Among the respondents who have responded to food safety violations, an almost equal portion of respondents declared that their action had an outcome in some cases, while for other respondents there was no outcome. Among those who did not report a food safety violation, the most frequently named reason is that *"there is no point in reporting the violation, there will be no response".* Slightly more than half of the respondents believe that they will notify the National Food Agency in the future if there is a food safety violation.

Regardless of the low participation of respondents in food safety issues, respondents believe that citizens' involvement in fixing food safety violations is very important and rate it with 4.5 points on a 5-point scale*.*

Awareness of and Trust Towards Institutions

The vast majority of respondents (97%) believe that the State should regulate issues related to food safety. Only 8 respondents (1%) believe that the State should not be involved in regulating issues related to food safety.

Chart # 30. Opinions about the state, regulating issues related to food safety

Yes, it should	97%
No, it should not	1%
Don't know /hard to answer/refused to answer	2%

N=1203
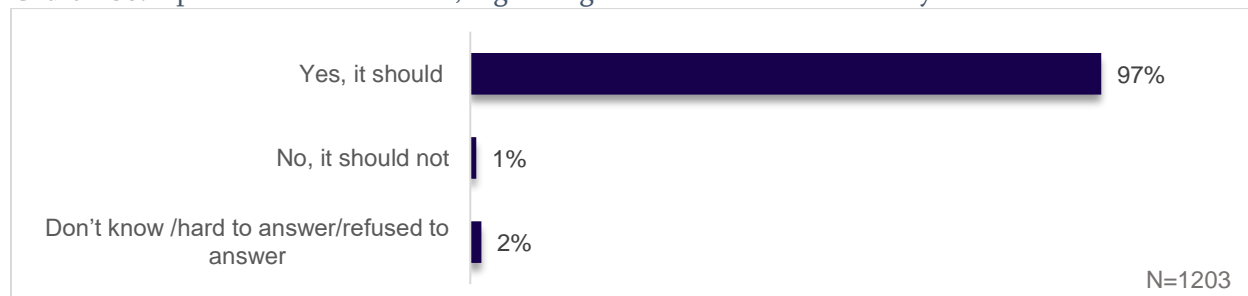
Within the scope of the study, research participants were asked which institutions they believe are responsible for regulating issues related to food safety. **Half of the respondents (51%) believe that the National Food Agency is the agency responsible for regulating issues of food safety.** Almost one-fourth (23%) of respondents think that the Ministry of Environmental Protection and Agriculture is

responsible for regulating issues related to food safety, while one-fifth (19%) of respondents think that the Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs of Georgia is responsible for regulating food safety issues. 28% of the respondents are not informed on this topic. The frequency of other responses is low and does not exceed 4%.

Chart # 31. Institutions responsible for regulating food safety issues
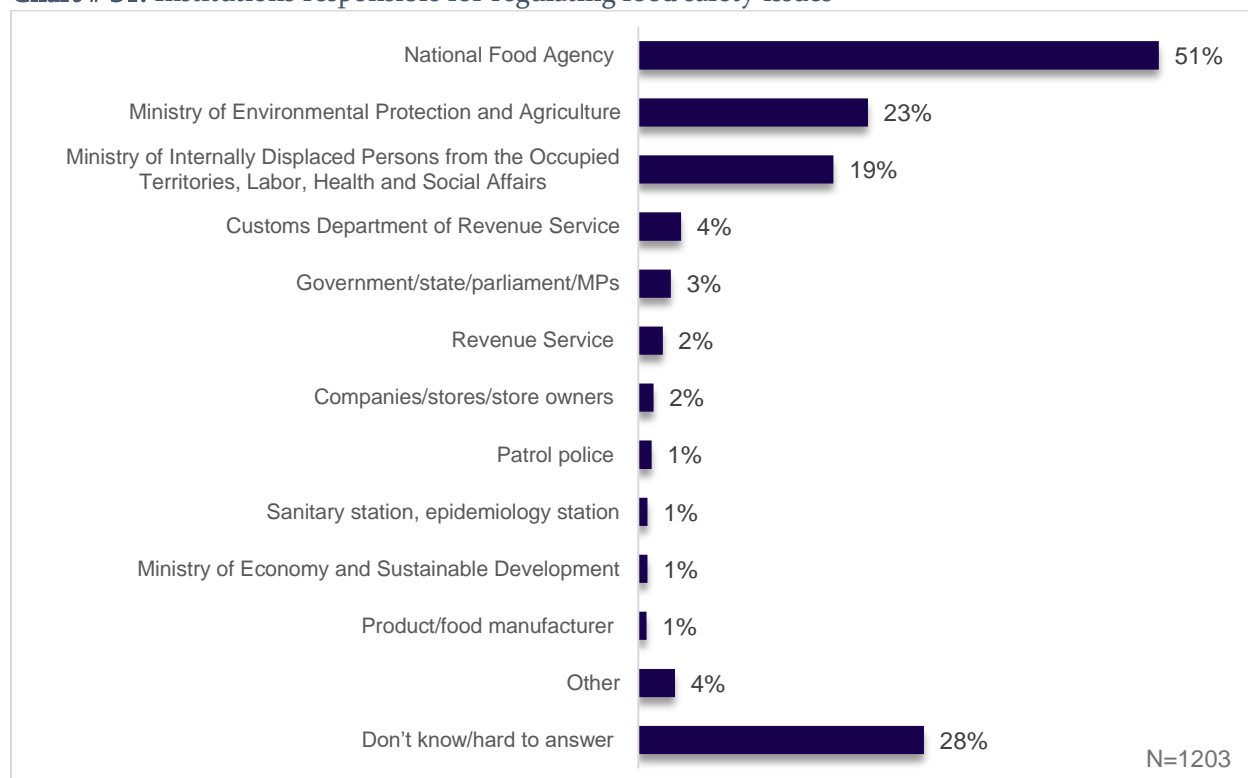
* Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Respondents were asked to assess how the agencies responsible for regulating food safety issues do their job. In their evaluation, they used a 5-point scale, where 1 means they do a very bad job and 5 means they do a really good job. A total of 43% of respondents assessed the work of the National Food Agency as good or very good (615 respondents), 33% of respondents also positively (good or very good) assessed the work of the Ministry of Agriculture (271 respondents), 40% of respondents assessed the work of the Customs Department at the Revenue Service as good or very good (53 respondents), while 33% positively assessed the work of the Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs of Georgia (196 respondents).

As for the type of settlement, among the respondents who assessed the work of the National Food Agency, the smallest share of respondents gave a positive evaluation in Tbilisi (35%). This index increases for other cities (39%) and villages (44%).

The share of respondents representing **ethnic minorities** who find it difficult to assess the work of different institutions is mostly higher (22%) than the same index for the remaining respondents (15%).

Table # 7. Assessment of how well institutions perform in terms of food safety regulation

	1	2	3	4	5	Don't know/hard to answer	N
National Food Agency	3%	5%	32%	26%	17%	17%	615
Ministry of Environmental Protection and Agriculture of Georgia	8%	9%	33%	23%	9%	18%	236
Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs	7%	6%	35%	24%	9%	19%	196
Customs Department of Revenue Service	10%	7%	23%	27%	13%	20%	53
Revenue Service	5%	7%	10%	39%	20%	19%	32
Government/state/parliament/MPs	17%	14%	26%	23%	15%	5%	38
Companies/stores/store owners	9%	6%	30%	6%	28%	21%	22
Product/food manufacturer	20%	0%	55%	23%	0%	2%	11
Patrol Police Department	0%	5%	17%	21%	32%	25%	20
Other	11%	15%	27%	14%	14%	18%	51

Respondents named different institutions they believe are responsible for regulating food safety issues and then assessed their trust on a 5-point scale, where 5 means "I completely trust" and 1 means "I don't trust at all". The National Food Agency was named by the largest portion of respondents (615 respondents) as the institution responsible for regulating food safety issues. More than half of the 615 respondents (52%) either trust or fully trust this agency. Other most frequently named institutions are the Ministry of Environment Protection and Agriculture (236 respondents), with 42% of respondents expressing either partial or full trust towards it. Additionally, almost half of the respondents – 48% out of 196 respondents feel trust towards the Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs and assessed their trust with 4 or 5 points. Among those who assessed their trust towards the Customs Department of Revenue Service – 48% expressed full trust or trust towards this institution (53 respondents).

An analysis by **settlement type** revealed that more respondents expressed trust or full trust towards the National Food Agency (33%). This index decreases in other cities and equals 26%, with the lowest amount of trust in Tbilisi (21%).

The following difference was detected in terms of **ethnicity:** more respondents among the ethnic Georgian population fully trust the National Food Agency – 29%. This index is 10% lower in the group of ethnic minorities and equals 19%.

Differences were also detected in terms of **gender and age.** A relatively larger portion of women express trust or full trust towards the National Food Agency (56%) than men (48%). Relatively more young respondents fully trust or trust the National Food Agency (64%). This index decreases as age increases and equals 50% in the 35-54 age group and 44% in the group of respondents aged 55 and above.

Table # 8. Assessment of trust towards institutions responsible for regulating food safety issues

	1	2	3	4	5	Don't know/hard to answer	N
National Food Agency	5%	4%	32%	25%	27%	8%	615
Ministry of Environmental Protection and Agriculture of Georgia	9%	12%	29%	24%	18%	8%	236
Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs	8%	6%	34%	23%	25%	4%	196
Patrol Police Department	0%	0%	34%	16%	47%	3%	20
Customs Department of Revenue Service	15%	9%	19%	37%	12%	8%	53
Revenue Service	6%	2%	14%	42%	27%	9%	32
Government/state/parliament/MPs	25%	3%	19%	21%	27%	5%	38
Companies/stores/store owners	9%	3%	36%	22%	30%	0%	22
Product/food manufacturer	20%	0%	57%	23%	0%	0%	11
Other	13%	3%	35%	32%	12%	5%	51

Respondents were asked to name institutions they believe are responsible for regulating issues related to food safety. Within the scope of the study, they were also asked which institutions they believe should regulate the said issues. Half of the respondents (49%) believe that the National Food Agency should be the institution that regulates food safety issues. An almost equal share of respondents, or one-fifth believe that the Ministry of Environment Protection and Agriculture (22%) and the Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs (19%) should be responsible for regulating these issues. The frequency of naming other institutions is low and does not exceed 4%. 32% of respondents were unable to answer this question.

In every perspective – settlement type, ethnicity, gender, and age – almost half or more respondents believe that the National Food Agency should be responsible for regulating food safety issues. A range of differences were detected in terms of **settlement type,** with 31% of respondents in Tbilisi and 25% in other cities (except Tbilisi) believing that the National Food Agency should be responsible for regulating food safety issues. Only 15% of village residents agree with this viewpoint.

As for **gender,** more men believe that the Ministry of Agriculture should be involved in regulating food safety issues (26%), than women (19%). Slight differences were detected in different **age** groups. More respondents from the 35-54 age category believe that the National Food Agency should be responsible for regulating food safety issues (56%). An almost equal share of respondents from the 18-34 (47%) and 55 and above (43%) age groups agree with this statement.

Chart # 32. Institutions that should be involved in regulating food safety issues
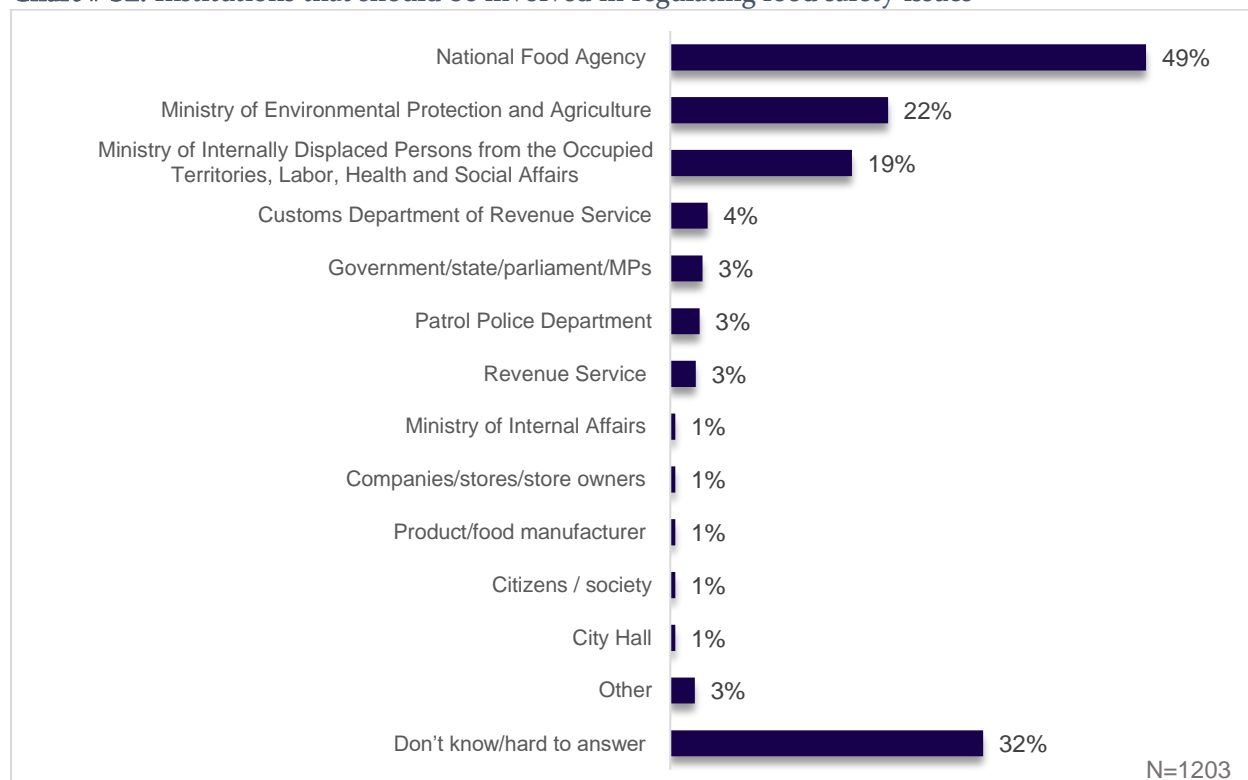
Institution	%
National Food Agency	49%
Ministry of Environmental Protection and Agriculture	22%
Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs	19%
Customs Department of Revenue Service	4%
Government/state/parliament/MPs	3%
Patrol Police Department	3%
Revenue Service	3%
Ministry of Internal Affairs	1%
Companies/stores/store owners	1%
Product/food manufacturer	1%
Citizens / society	1%
City Hall	1%
Other	3%
Don't know/hard to answer	32%

N=1203

Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Summary of sub-chapter

The vast majority of respondents believe that the state should regulate issues related to food safety. The regulatory agencies named by the respondents included the National Food Agency (51%), the Ministry of Environment Protection and Agriculture (23%) and the Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs (19%). Among those who named the National Food Agency, 43% assessed its work as good or very good. Among them, more respondents inquired in villages assessed the work performed by the NFA as good or very good than residents of other cities (except Tbilisi) and Tbilisi. Every third respondent does not have an answer to this question, and the share of those who found it difficult to assess the work of different institutions is higher among ethnic minorities. Half of the respondents (49%) believe that the National Food Agency should be responsible for regulating food safety issues.

## Trust Towards Business and Assessment of Overall Food Safety

The respondents who were asked to name three products at high risk of food safety violations in the processes of production, storage and sales mostly focused on livestock products. The three riskiest products included: meat and meat products (86%), milk and dairy products (70%), as well as fish and fish products (66%). For a large portion of respondents, less risky products in terms of food safety are

as follows: fruits and vegetables (12%), eggs (11%), bread and baked goods (10%) and canned products (10%).

The respondents in all **types of settlements** share the viewpoint that milk and dairy products carry increased risk in the processes of production, storage and sales. The majority of respondents in Tbilisi agree with this point of view (80%). This index is also high in other cities (73%), while the share of respondents in villages who believe that milk and dairy products are risky in terms of food safety is 20% lower than in Tbilisi (60%). Similarly, in the case of fish and fish products, the number of respondents who believe that this product category is risky is higher in Tbilisi (73%). This statement is shared by 65% of village respondents, while a relatively smaller portion of respondents inquired in other cities (except Tbilisi) agree (60%).

In terms of **age,** a relatively smaller portion of respondents aged 55 and older agree with the statement that milk and dairy products are risky (60%), while this index is high and almost equal in other age groups – 18-34 (74%), 35-54 (75%). Fruits and vegetables as the riskiest product in terms of food safety was named by 17% of young respondents aged 18-34. This index is two times lower (8%) in the 35-54 age group, while 11% of respondents aged 55 and older agree. Two times more respondents in the 34-54 and 55 and above age groups named bread and baked goods as risky products in terms of food safety (12% and 12%, respectively). This index does not exceed 6% in younger respondents (18-34 years).

Chart # 33. The riskiest products in terms of food safety
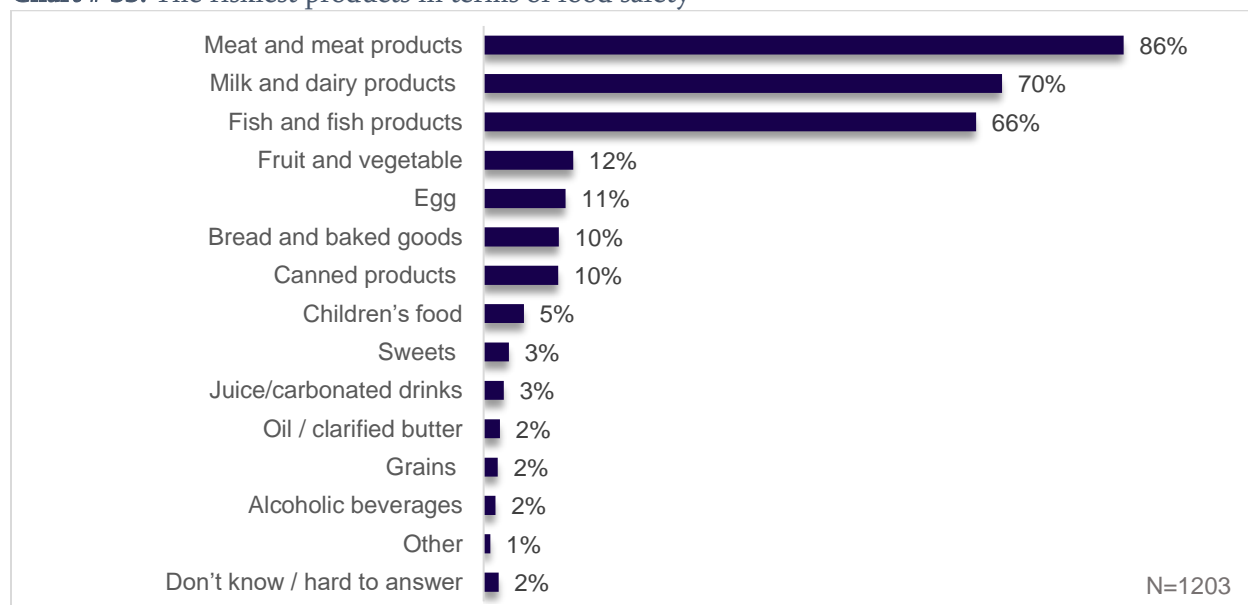
Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.
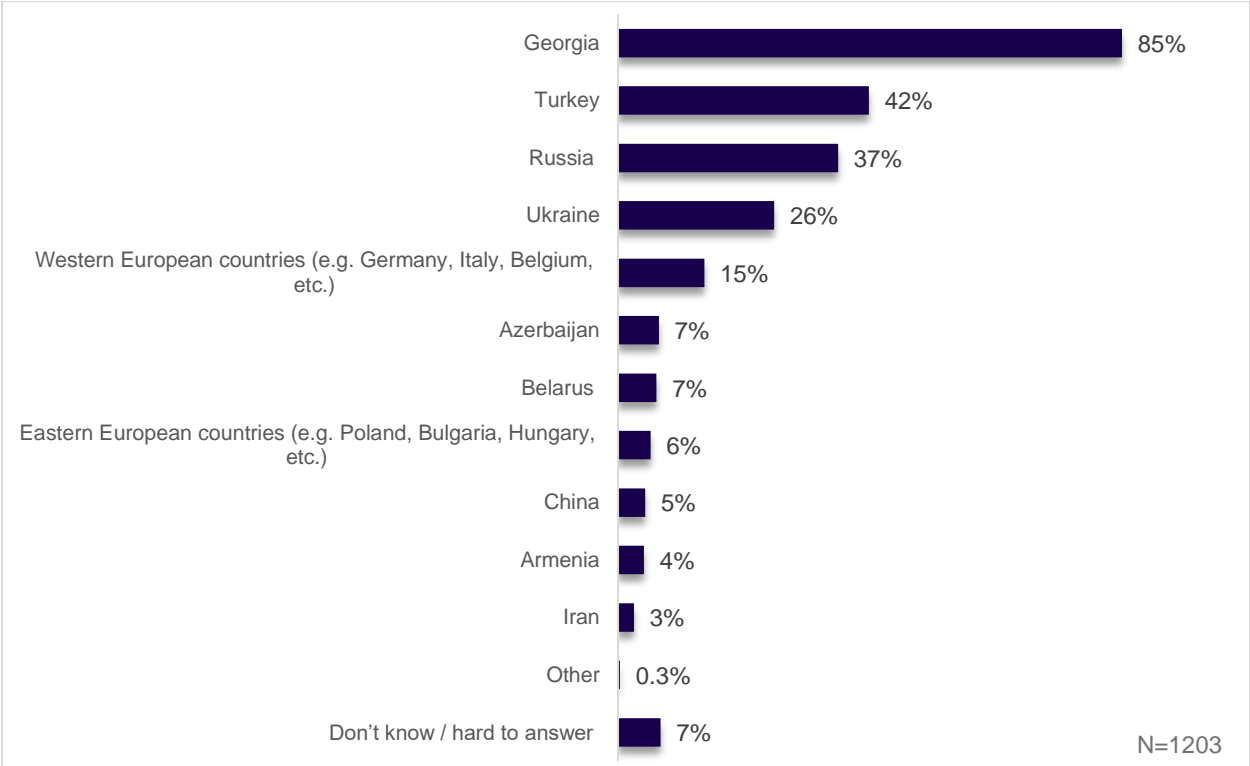
As demonstrated by the study, the vast majority of respondents (85%) consume products made in Georgia. Other countries of origin include: *Turkey - 42%, Russia - 37%, Ukraine -26%, Western European countries - 15%.* A small portion of respondents named neighbor country Azerbaijan (7%), Belarus (7%), and Eastern European countries (6%), while 7% of respondents refused to share their experience on this topic.

The following differences were detected in terms of **settlement type:** a relatively larger portion of respondents in Tbilisi reported mainly purchasing products made in Georgia (91%). This index is relatively lower in other cities (except Tbilisi) – 82% and villages – 83%. According to respondents in Tbilisi, their 35% do not actively buy products made in Turkey, while this index is higher in other cities (46%) and villages (45%).

When it comes to buying products made in different countries, a relatively large portion of respondents in the group of **ethnic minorities** tend to buy products made in Azerbaijan (20%) and Armenia (14%), while the share of respondents in the remaining population who state that they buy products made in those countries is low – 5% and 3%, respectively.

As for differences by **age and gender,** more female respondents (41%) state that they consume products made in Russia compared to male respondents (33%). A larger portion of male respondents state that they buy products made in Azerbaijan (10%) compared to smaller share of female respondents (4%).

Chart # 34. Countries of origin of the products respondents buy

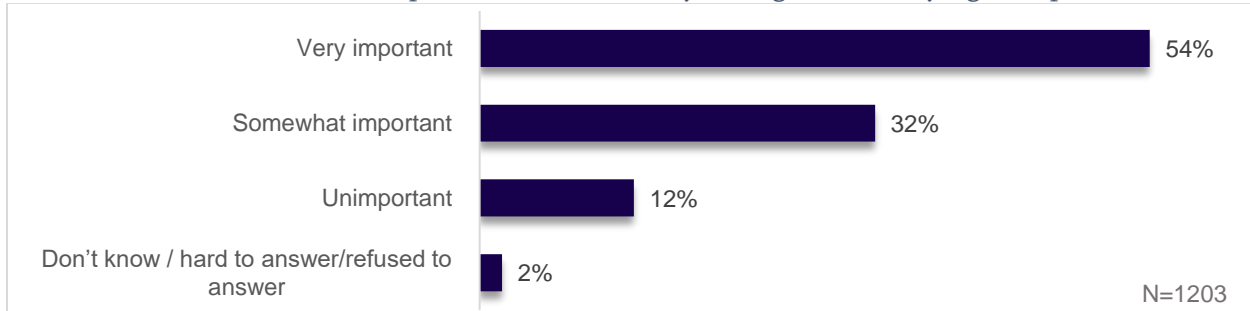| Country	Percentage
Georgia	85%
Turkey	42%
Russia	37%
Ukraine	26%
Western European countries (e.g. Germany, Italy, Belgium, etc.)	15%
Azerbaijan	7%
Belarus	7%
Eastern European countries (e.g. Poland, Bulgaria, Hungary, etc.)	6%
China	5%
Armenia	4%
Iran	3%
Other	0.3%
Don't know / hard to answer	7%

N=1203

* Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

More than half of the respondents (54%) believe that it is very important in the process of buying food products to pay attention to the country of origin. A total of 32% of the respondents perceive this factor as somewhat important, while 13% of the respondents do not prioritize this factor in the process of buying products.

An analysis by **settlement type** detected certain differences. In Tbilisi, the number of respondents who consider the country of origin as an unimportant factor when buying food products is very low (5%), while this index is approximately three times higher in other cities (17%) and villages (15%).

An analysis by **ethnicity** showed that the number of the respondents who find the country of origin unimportant when buying products is highest in ethnic minority group and reaches 18%, while this index is 12% among the remaining respondents.

Chart # 35. Assessment of the importance of the country of origin when buying food products

Category	Value
Very important	54%
Somewhat important	32%
Unimportant	12%
Don't know / hard to answer/refused to answer	2%

N=1203

A majority of respondents emphasized the importance of the country of origin. They were also asked to assess the safety of products by the country of origin on a 5-point scale, where 5 means completely harmless and 1 means completely harmful. As demonstrated by the study, a large number of respondents assess products made in Georgia as harmless or completely harmless (66%). More than half of the respondents (57%) believe that products made in Western Europe are harmless or completely harmless. A relatively large portion of respondents believe that products made in Ukraine (52%) and Russia (46%) are harmless or completely harmless. Respondents believe that the most harmful products are made in Iran and China, only 7% of respondents believe that these countries produce harmless or completely harmless products.

A significant difference was detected in terms of **settlement type** when it comes to respondents who believe that products made in Georgia are completely harmless. This index is particularly high in villages (42%l) and equals 33% in other cities (except Tbilisi), while only 17% of respondents inquired in Tbilisi believe that products made in Georgia are harmless. A large portion of Tbilisi residents (69%) believe that products made in Western Europe are harmless or completely harmless. This index decreases in other cities (except Tbilisi) and equals 54%, and villages this index equals 48%. The same can be said about products made in the Eastern European countries: more respondents in Tbilisi believe that products made in those countries are harmless or completely harmless (46%). The share of the respondents who agree with this viewpoint is equal in other cities (except Tbilisi) and villages – (36%-36%, respectively).

In terms of **ethnicity,** it is worth mentioning that a relatively larger portion of ethnic non-Georgians assess Armenian (25%) and Azeri (35%) products as harmless or completely harmless when compared to the remaining respondents [Armenian products are completely safe (18%), Azeri products are safe or completely safe (23%)]. It is also worth mentioning that respondents find it particularly difficult to assess products made in countries such as: Western European countries (ethnic minorities - 47%, remaining population – 24%), Eastern European countries (ethnic minorities - 58%, remaining population – 35%), and China (ethnic minorities – 49%, remaining population – 28%).

54

Table # 9. Assessment of the safety of products made in certain countries

	1	2	3	4	5	Don't know/hard to answer
Georgia	1%	2%	28%	34%	32%	3%
Turkey	12%	12%	36%	19%	8%	13%
Iran	16%	11%	17%	5%	2%	48%
Russia	7%	6%	28%	27%	19%	13%
Belarus	4%	5%	20%	19%	12%	40%
Ukraine	2%	3%	24%	31%	21%	19%
Western European countries (e.g. Germany, Italy, Belgium, etc.)	2%	1%	13%	27%	30%	27%
Eastern European countries (e.g. Poland, Bulgaria, Hungary, etc.)	2%	3%	17%	26%	13%	39%
China	25%	18%	19%	5%	2%	31%
Armenia	8%	9%	21%	13%	7%	42%
Azerbaijan	6%	8%	24%	16%	9%	37%
N=	1203					

Half of the survey respondents (51%) positively assess food safety in Georgia and believe that the situation is improving. The situation has remained the same for 32% of respondents. One out of ten respondents (10%) stated that the situation has become worse, while 7% could not make any assessment.

As for the results according to the **type of settlement,** the largest portion of respondents who believe that the food safety situation is improving is highest in Tbilisi (56%), while the share of such respondents is slightly lower in villages (50%) and in other cities (47%).

In terms of age, 13% of respondents aged 55 and above believe that the situation has become worse. This index decreases in the younger age groups (18-34 y/o – 6%, and 35-44 y/o – 10%).

Chart # 36. Assessment of the development of the food safety situation

|	
Improved	51%
Worsened	10%
Remains the same	32%
Don't know/hard to answer	7%

N=1203
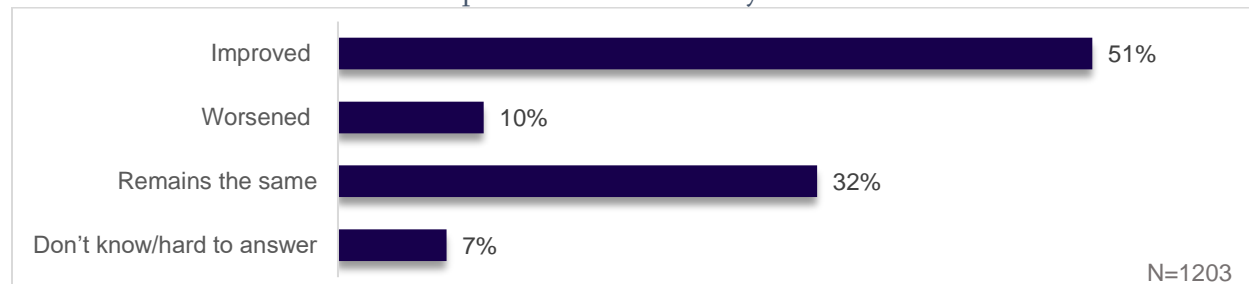
Together with assessing development trends in terms of food safety, respondents shared opinions of whether there are ongoing reforms to harmonize the food safety system in Georgia to conditions in the EU. **Four out ten respondents (42%) believe that there are reforms ongoing in the field of food safety**

to harmonize with conditions in the EU, one-fifth (22%) of respondents partially agree with this statement, one-fourth (24%) found it difficult to answer this question and 12% declared that there are no ongoing reforms to harmonize national standards with EU standards in the field of food safety.

No significant differences have been detected by settlement type, ethnic group, age, or gender on the said topic.

Chart # 37. Reform of the food safety system in Georgia to harmonize with EU standards

Yes	42%
No	12%
Partially	22%
Don't know/hard to answer	24%

N=1203
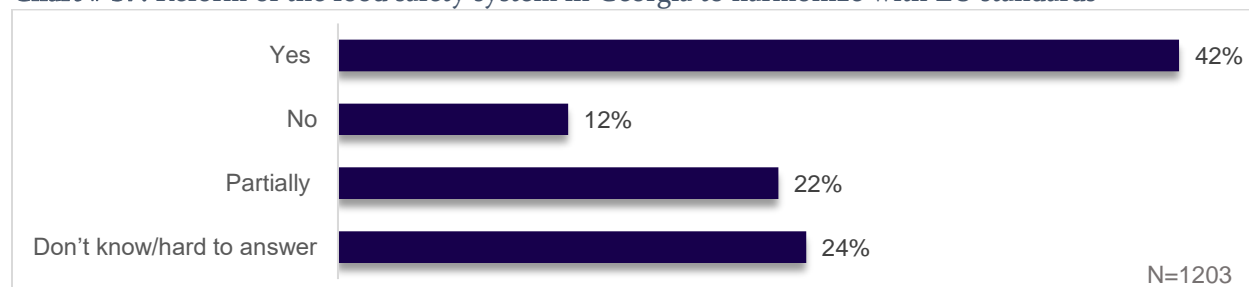
In order to improve the situation in terms of food safety, an almost equal share of respondents believe that **the state should enhance control on local production (53%) and imported products (50%).** Three out of ten respondents believe that the *establishment of the same food safety requirements as in* the *EU countries* would improve the situation in terms of food safety in Georgia (33%). The respondents emphasize the *importance of raising citizens' awareness (32%) and the dissemination of information on food safety regulations more widely* (24%) for improving the situation in terms of food safety in general. One-fifth of respondents (22%) believes that citizens should actively contribute to changing the food safety situation. More specifically, *they should be actively involved in the process of discovering food safety violations and lodging complaints.*

As for the **settlement type,** relatively more respondents inquired in Tbilisi believe that state control needs to be stricter in order to improve the food safety situation (59%). This index is somewhat lower in other cities and equals 52%, while half of village respondents – 49% believes that enhancing state control on local production will positively affect improvement of food safety conditions.

Only 13% of respondents from **ethnic minorities** believes that the increased activism of citizens in fixing food safety issues may result in the improvement of food safety conditions in general, while this index is 21% in the remaining population.

A comparison of **age groups** demonstrated that a relatively larger portion of young respondents (18-34 y/o) find that the increased involvement and activism of citizens is important for improving food safety (28%). This index is 21% for respondents aged 55 and above, while the lowest number of respondents from the 35-54 age group approve this method to improve the situation (17%).

Table # 10. Steps to improve the food safety situation

Enhanced state control of local production	53%
Enhanced state control of imported goods	50%
Introduction of food safety regulations similar to EU countries	33%
Raising awareness among citizens	32%
Dissemination of information on food safety violations	24%

Increased civic activity and participation in the process of detecting food safety violations	22%
Increased civic activity and participation in the process of reporting/complaining about food safety violations	20%
Study of food safety situation by civic groups, identification of systemic problems and requesting the government to address them	18%
Other	1%
Don't know / hard to answer	7%
N=	1203

Note: respondents had the option to choose multiple answers to this question, thus, the sum of the answers exceeds 100%.

Summary of sub-chapter

Respondents named the following high-risk products in terms of food safety: *livestock products, meat and meat products, milk and dairy products,* and *fish and fish products.* More than half of the respondents believe that the country of origin is important when buying food products.

The majority of respondents state that they buy products made in *Georgia* and this index is particularly high in Tbilisi. A significant portion of respondents representing ethnic minorities states that they buy products made in countries such as *Azerbaijan* and *Armenia.*

Along with products made in Georgia, respondents highly trust products made in Eastern and Western Europe as well as Ukraine.

Half of the survey respondents positively assesses the food safety situation and believes that it is improving. According to every third respondent, the food safety situation remains the same, while only a small portion of respondents (10%) believes that the situation is declining. The majority of the respondents believed that there are ongoing reforms in Georgia that bring the country closer to EU standards. One-fifth of respondents partially agreed with this statement, while one-fourth found it difficult to make an assessment. A small portion of respondents (12%) declared that reforms are not being implemented to harmonize national standards with those of the EU.

In order to improve the situation in terms of food safety, the majority of the respondents believe that *the state needs to enhance control of local production and imported goods.* A small portion of respondents representing ethnic minorities agreed that the active engagement of citizens in fixing food safety issues is important (13%), while this index was relatively higher among the remaining respondents (21%). A comparison of age groups demonstrated that a relatively larger portion of young respondents (18-34 y/o, 28%) believe that the increased activism of citizens is important to improve the food safety situation (28%).

Food Safety Behavior Drivers' Study

Qualitative Study Report

BISC Partners

Prepared by Behavior Insights Strategy and Communication Partners (BISC Partners) for the Center for Strategic Research and Development of Georgia

June 2023

Abbreviations and definitions

- **CSRDG** - Center for Strategic Research and Development of Georgia;

- **BISC Partners** - Behaviour Insights, Strategy and Communication Partners;

- **Behavior Insights (BI)** - an inductive multi-disciplinary approach that combines insights from behavioral science, behavioral economics, anthropology, social and cognitive psychology with empirically tested results to discover how humans actually make choices;

- **Behavioral Science** – the study of human behavior through the systematic experimentation and observation;

- **Pains** – existing difficulties / challenges;

- **Gains** – perceived benefit of change;

- **Comforts** – habit, routine;

- **Anxieties** – fears of change or novelty;

- **Jobs-To-Be-Done** – value goals;

- **Behavior drivers** – driving forces of behavior.

Study Summary

Recently, in the context of an overall improvement in the food safety situation, consumers remain insufficiently aware of the importance of food safety. Accordingly, their interest in the topic as well as their participation in food safety control is negligible. The practice of reporting food safety violations is also weak, which creates significant barriers to early intervention. Promoting consumer behavior change is one of the important objectives set within the "Capacitated Agricultural Practices and Consumer Awareness" project by the implementing consortium member, Center for Strategic Research and Development of Georgia (CSRDG).

Promotion of behavior change is a complex process that may require using different approaches and tools, as well as engaging different stakeholders. However, for any effort to truly influence consumer behavior change, it is essential to examine from a behavioral science perspective both drivers of existing behavior, and factors that impede and promote desired behavior. This was exactly the purpose of the *Food Safety Behavior Drivers* qualitative study carried out by the team of Behaviour Insights Strategy and Communication Partners (BISC Partners) in frames of the above project. The study aimed to examine the consumer behavior from the perspective of behavioral science and determine both obvious and concealed incentives and obstacles influencing consumers' decisions to choose and buy a specific food item, as well as their ability to perceive and respond appropriately to food safety related risks.

We believe that the findings presented in this report by BISC Partners are of interest and, most importantly, of practical value to all parties concerned with food safety issues.

Why Behavioral Science?

As a branch of social sciences, behavioral science examines the structure of human judgment and decision-making; in particular, it explores social, structural, or cultural barriers as well as motivators of a behavior.

Nowadays, many cities, regions, and governments worldwide are employing behavioral science, also known as Behavioral Insights (BI), to transform food systems. Their efforts provide compelling evidence that taking into account contextual opportunities and constraints, along with a scientific comprehension of human behavior and decision-making, enables the development of strategies, policies, and measures that are more efficient, acceptable, relevant, and overall better suited to specific objectives, compared to traditional model-based policies. Moreover, the use of behavioral approaches in defining food safety policy that contributes to the sustainability of systemic change is referred to as *behavior food policy*. Behavior food policy is the result of analysis of data and evidence obtained over the past nine years.

The presented study is also fully based on principles and approaches of behavioral science. The main purpose of behavioral science and behavior insights methodology is to overcome the so called Intention Action Gap[1] – when there is a certain level of awareness ("food safety is important"), the institutional

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[1] Hassan, L. M., Shiu, E., & Shaw, D. (2016). Who says there is an intention–behaviour gap? Assessing the empirical evidence of an intention–behaviour gap in ethical consumption. Journal of Business Ethics, 136(2), 219-236.

preconditions (institutional response mechanisms), and positive attitude (willingness to consume safe food), but no implementation at the level of action. The discrepancy between intention and action manifests itself in different ways, however, all these manifestations can be explained by the paradigm that the mechanism of human judgment and decision-making is often based on an irrational system. In most cases, it is due to forgetfulness, laziness, other priorities, the complexity or uncertainty of the process, irrational fear, etc., or because of deeper causes such as social unacceptability, ingrained myths, lack of social norms, and so on. Therefore, using the proposed approach we tried to understand the mechanism of consumer judgments and identify the extent to which an irrational system is involved while making decision to purchase a particular food item, or while assessing its safety. This will ultimately enable us to define tailored solutions to push people towards desired actions and ensure the sustainability of change.

To this end, based on the results of the study, we developed the Behavior Map, a document of behavior drivers and contextual analysis. In particular, we analyzed the factors that promote (*motivators*) and impede (*barriers*) human behavior related to choosing and buying food items as well as assessing their safety. The Behavior Map provides a crisp picture of current social and physical contexts and suggests what the theory of change can be based on.

The findings regarding motivators and barriers of the studied behavior may seem mutually exclusive at first glance. However, the context becomes clearer if we consider the fact that these are consumers' perspectives identified through in-depth interviews and arranged in the relevant fields of the Behavior Map. For example, the difficulty of reading the information on a label is a problem that is often named among the motivators: the consumer has a desire to read the label, hence the difficulty that interferes with reading must be eliminated. At the same time, another part of consumers identifies the content of the label as a barrier – they do not see the need to know the content of the label, because they do not trust it. This factor is associated with fears, and it cannot be eliminated by solving the problem of complicated reading; that is why seemingly similar problems are presented in completely different contexts. A detailed review is provided in subsequent chapters.

Jobs-To-Be-Done

To understand the factors that promote or hinder the desired behavior, it is necessary to view the problems from consumers' perspective. Their psychology, character, needs and desires should be taken as a starting point – what the consumers aspire to, what is most important and vital for them, what are their values that are met by the concept of food safety. These factors are called Jobs-To-Be-Done and represent some kind of umbrella motivators that should underlie any intervention, policy, or communication strategy. The study identified three types of the Jobs-To-Be-Done: functional (saving money and time; making informed decisions; taking care of health), emotional (caring for others by notifying the National Food Agency; restoring trust and overcoming fear; creating security through the implementation of European standards), and social (reporting food safety violations to the controlling authority is associated with European identity; caring about food safety and responding to violations is seen as a model of youth behavior – encouraging their participation is associated with desired change).

Motivators of Studied Behavior

According to the Behavior Map, **existing difficulties and challenges (Pains)**, in particular those problems, or shortcomings that are accompanying the current situation or condition, are considered as motivators of studied behavior, as they demonstrate the inevitable desire for change (**the consumers have difficulty reading the label and feel that they do not know what they are consuming, hence their desire to solve this problem**). **What are those main problems or shortcomings that would help us to actualize the food safety issue?**

- Consumers *feel insecure and uncertain about buying truly safe products or making any meaningful changes in this direction*. However, if they were aware of the various food safety compliance and control mechanisms in place, along with the actions being taken to ensure food safety, this knowledge could greatly alleviate their sense of hopelessness.

- For consumers it is *difficult to read and understand the ingredients listed on the label*. The desire and effort to read the label is obvious, therefore it is important to simplify the process.

- *Food safety is closely linked to quality* for consumers, but the quality is expensive, and often not affordable, and in such cases finding a compromise is the solution. By understanding the core distinction between the quality and safety, consumers can adjust their behavior.

- *Strong negative attitude towards consuming canned food, sweets, and products with additives*: these types of products are considered more dangerous in terms of food safety compared compared to ones with shorter shelf life.

- As a result, consumers often try to replace these products with alternatives they perceive as less harmful, which motivates them to pay closer attention to labels and ingredients.

- *The lack of confidence in food imported from specific countries* conditioned by current developments and/or existing bias and prejudices, makes consumers pickier during the grocery shopping and motivates them to read labels more carefully.

- *Distrust of products produced by the peasants or small farmers in the village*, stemming from personal contact with the production process: violation of hygienic and other norms disgusts respondents and strengthens their confidence that all types of products need to be controlled by the state.

Perceived benefits of change (Gains) are also regarded as motivators of studied behavior. In other words, if the desired behavior - *checking the food ingredients* - is carried out, then it creates the *opportunity to realize value – e.g. to choose safe food for kids*. According to Behavior Map, these values are associated with change and increase the motivation to perform the desired behavior. It was revealed that:

- For consumers, the concern for children is the main motive for checking food ingredients. They carefully read the label, can search for information on the Internet or on the website of manufacturer/brand, paying special attention to substances from the list of ingredients that they perceive as harmful.

- Consumers are motivated and interested in obtaining information on food safety from various sources, including the results of inspections conducted by the National Food Agency. Diverse information helps them to make decisions, which is an important prerequisite for implementing the desired behavior.

- Consumers' sense of improved food safety is linked to the attributes of minimum standards. Labeled food, hygiene in food facilities and refrigerators where perishable food is stored are the attributes that matter to the consumers, and through the presence of these attributes they assess the current food safety situation; all of this is an important part of the desired behavior.

- Consumers are interested in appropriate food storage conditions, which in their perception is directly related to food safety. This is a step forward in terms of raising consumers' awareness.

- Consumers are willing to pay a slightly higher price if they know they are buying safe products. The willingness to pay more indicates that food safety is important for them; therefore, they need help in identifying safe products for which they will pay a little more.

Barriers to Studied Behavior

The existing routine, the tried and tested path is accompanied by a sense of security that is always difficult to break. **The consumers tend to buy the regularly consumed food in the same place, avoid diversity, because diversity requires additional efforts to achieve a sense of security.** That is why, according to the map of behavior, **a habit, an established routine (Comforts)** is usually considered a barrier to the studied behavior. What is this sense of consumers' security based on? It turns out that:

- Consumers try to create a sense of security in the simplest possible way, for which they routinely buy only familiar brands and "factory-made"2 goods in the same large retail chains - they trust them, they do not need extra effort, there is no need to check the label for the expiration date. Even a small change in this routine requires additional actions and therefore breaks *Comforts*.

- Just checking the expiration date is enough to make the consumer feel that the food is safe, and if the food is nicely labeled and packaged, it doesn't even need to be checked, it is regarded as safe.

- High price is related to quality, and quality is related to safety. Consumers prefer to effortlessly pay more for a "quality" product, expecting it to be harmless.

- Personal acquaintance with a food manufacturer or retailer is a sufficient reason for a consumer to trust unlabeled or "non-factory" products. The recommendations of friends and acquaintances are also highly trusted, and in this case too, the consumer does not see the need to make additional efforts to check the safety of the product.

- Rural products (grown by a farmer in the village) are automatically perceived by consumers as natural /organic, so their reliability in terms of quality and safety is not questioned.

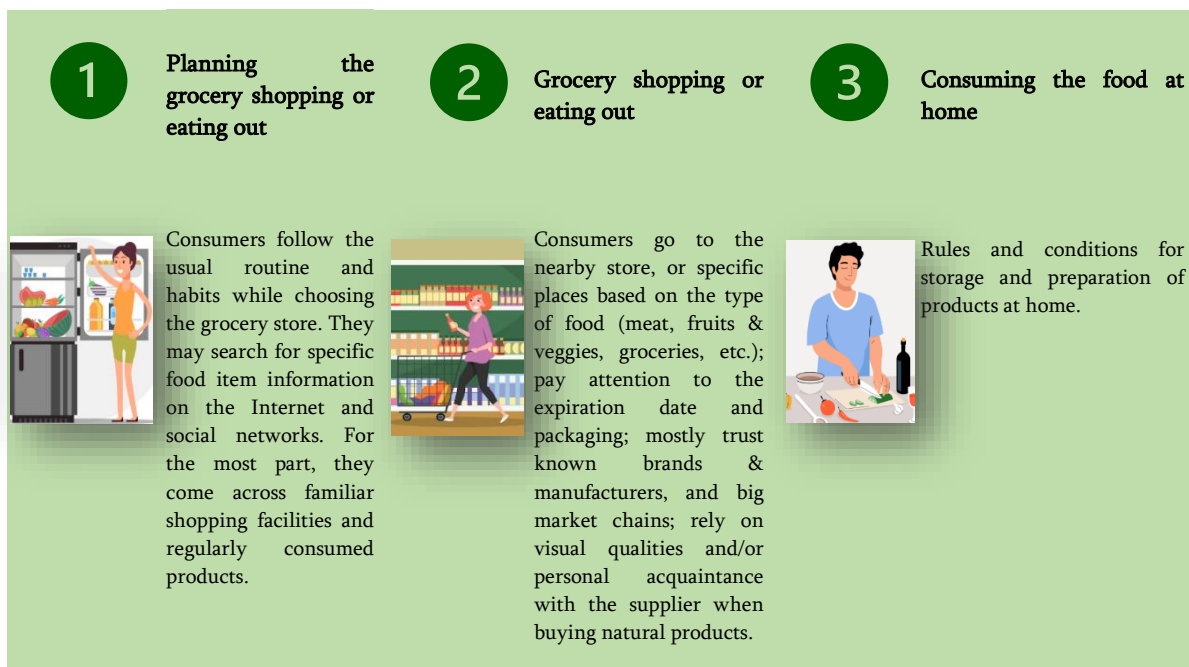2 In this case, unconditionally associated with safe.

- There is an expectation among consumers that Russian products are safe and could be trusted, because Russia has "a huge landmass and enough resources" and therefore "they do not need" to use chemicals and other harmful additives in food production.

- There is an attitude among consumers that concern for food safety is the sole responsibility of the state and official bodies, and not the consumer.

- Due to the visual abundance of the agricultural market, consumers feel that it is impossible, with such a variety of choices, not to be able to choose healthy food.

According to the behavior map, **anxiety caused by fear of change or novelty** is also defined as a barrier. Uncertainty is associated with danger, risk or anxiety, which may be quite conscious and real, or caused only by some gut feeling. **What kind of fear or anxiety is impeding the change?**

- There is an information avoidance practice among consumers when they prefer "to know less and sleep well". The information is complex, requires in-depth knowledge and is mentally "beyond reach".

- A pronounced fear of industrialization - consumers have a feeling that in case of introduction of European food safety standards, the production of natural food in Georgia may be called into question and completely replaced by an industrial model associated with artificial additives.

- Fear of cheap or discounted products: safe and healthy food cannot be cheap, and if the price of expensive food items is significantly reduced - something is wrong. The concepts of quality and safety are mixed up.

- Fear caused by distrust of the label information.

- Consumers are aware that when it comes to food safety, they need to act; yet it is difficult for them to respond properly to a violation (and that includes calling the National Food Agency hotline), because such behavior is still socially unacceptable.

Motivators and barriers to the studied behavior, including the main motivator - the value goals (Jobs-To-Be-Done) are discussed in detail in the following chapters.

Recommendations for Stakeholders

1 Planning the grocery shopping or eating out

Consumers follow the usual routine and habits while choosing the grocery store. They may search for specific food item information on the Internet and social networks. For the most part, they come across familiar shopping facilities and regularly consumed products.

2 Grocery shopping or eating out

Consumers go to the nearby store, or specific places based on the type of food (meat, fruits & veggies, groceries, etc.); pay attention to the expiration date and packaging; mostly trust known brands & manufacturers, and big market chains; rely on visual qualities and/or personal acquaintance with the supplier when buying natural products.

3 Consuming the food at home

Rules and conditions for storage and preparation of products at home.

Customer journey is divided into three stages:

1. Searching and planning;

2. Grocery shopping or eating out;

3. Consuming the food at home.

The motivation to receive information on food safety and report food safety violations to the National Food Agency is generally high, however, correct behavior drivers are needed to activate the desired social norm. It is important to carry out interventions at **so-called high-potential moments of the customer journey**, where the probability of individuals performing a certain behavior is the highest simply because this behavior is *relevant*, and individuals have sufficient *time* and *motivation* to perform it. The high-potential moments include grocery shopping, food poisoning, caring for a child (0-10 years). Since it is very much desirable for these moments to happen frequently, childcare and grocery shopping (or eating out) are the most favorable to this end.

Behavior Interventions

The recommendations are provided regarding two desirable behaviors: a) searching for/increasing the demand for food safety information - turning the issue top of mind of the consumer (creating and raising awareness) and b) increasing the number of violation reports to the National Food Agency.

When designing interventions, we utilize an **EAST framework** that allows tailoring solutions to identified barriers (comfort, fears) and motivators (jobs-to-be-done, benefits, challenges). Within this approach, for the desired behavior to occur, it needs to be simple (*Easy*), appealing and motivating (*Attractive*), socially acceptable (*Social*) and reminders to exercise behavior need to be made in moments of high potential (*Timely*).

MAKE IT EASY

People tend to engage in behaviors that are easy to perform and require no time, money, or cognitive effort. Access to information related to food safety should be free, diverse (communicated through various channels) and immediate.

The process of reporting at National Food Agency should be as simple as possible:

- **Hotline alternatives**: e.g., mobile app;

- Visibility of the National Food Agency hotline is quite low, it is difficult to find it on a NFA webpage; therefore, it is advisable to have a **special hotline** to serve exclusively those who are interested in this specific topic;

- **Labels are hardly readable** due to very small print; therefore, technical solutions are needed to overcome this difficulty (please, see the illustrative intervention "labeling and QR code");

- **Structuring the information** by breaking it down to simple actions that would help to understand / consume the information, and by organizing it into sequence of "steps";

- The information about the time of the last inspection of the object should be easily accessible (see above the app/website);

- **Defaults**: This principle implies the development of measures that make actions automatic, for example: imposing regulations or otherwise obliging businesses to display in the interior of the facility documents describing food safety standards or containing the results of the inspection, or to hang posters with National Food Agency hotline number or application logo. As for manufacturers, they should put this information on the label. Almost in parallel to these measures, active communication with consumers is necessary so that they are aware, prepared and willing to request food safety information from the seller or manufacturer.

MAKE IT ATTRACTIVE

Attractiveness is determined by two factors: **salience** – something that stands out, does not fit into standards, deviates from the usual format, and **incentives** – financial or intangible rewards.

Salience:

Any information intended to attract attention should be visually distinguishable (salient) and serve as a signal - for example, discount voblers on the shelves attract consumers' attention. Food safety signs -

hotline number, application name, labeling (see illustrative interventions, etc.) – can be placed similarly.

Incentives:

Gaming – contests and the expectation of a reward increase the motivation, and can be used, therefore, to improve food safety practices both in the business sector and among citizens.

In Business Sector:

- **National Food Agency award** for an enterprise or entrepreneur that complies with food safety requirements (e.g., during the recurring inspections); in addition, awards contribute to public recognition (see below "principle of commitment");

- **Incentives for business companies**, such as grants to entrepreneurs to raise standards, development of a list of preferred suppliers, tax incentives, technical assistance programs (training and education) and so on;

- **Ratings**: ratings could be created using the existing statistics both by an official state agency and by any non-governmental "watchdog" organization. It would be useful to ensure media coverage of the ratings.

Among citizens:

Food Safety Champions: Contest sponsored by the state agency or non-governmental organization that will highlight active citizens and display their contributions to the food safety issue. See also the demo interventions (online game). Such contest will also emphasize social norms (see below).

MAKE IT SOCIAL

Any behavior is conditioned by the **social context** – the degree to which it is accepted or approved by society. Emphasizing social norm always increases motivation.

Communicating Social Proof: reporting of food safety violations should be presented as desirable and acceptable behavior. See also "reframing" in demo interventions.

Principle of commitment: this principle of behavioral change is an efficient tool for promoting the food safety practices, because stakeholders recognize the importance of food safety standards and make commitment to the society to follow the rules. In this way, awareness will transform into a habit, into an acceptable norm. There are several factors to consider while applying the Principle of Commitment:

- **Public commitment**: it is advisable to communicate the willingness and determination to meet the standards *publicly*;

- **Public commitment with the hope of future recognition:** bringing in game elements described above to identify later the best contestant / leader;

- **Wide communication of public commitment**: displaying it in the facility interior, promoting through social networks, etc.;

- Involving opinion leaders in public commitment.

MAKE IT TIMELY

Interventions at Moments of High Potential – see above the "High-Potential Moments".

Preface

A variety of factors influence the decisions people make when buying food. Over the past decades, policy makers, practitioners and researchers have been striving to determine how food systems can be made more sustainable and efficient to benefit humans' well-being. Evidence collected over the last 9 years confirms that behavioral approaches in policymaking contribute to the sustainability of systemic change. This approach is called behavior food policy. Today, many cities, regions, and governments around the world systematically use behavioral science (BI) to transform food systems. Results of their work provide compelling evidence that taking into account contextual opportunities and constraints, along with a scientific comprehension of human behavior and decision-making, enables the development of strategies, policies, and measures that are more efficient, acceptable, relevant, and overall better suited to specific objectives, compared to traditional model-based policies. Therefore, the use of BI approach will help to increase the efficiency of the expected results within the project and ensure sustainable changes in the behavior of all key stakeholders, including consumers affected by food safety policy.

The implemented study also fully takes into account the principles and approaches of behavioral science to determine what explicit and hidden motivators and barriers influence the decisions of consumers when they are choosing and buying a particular food product, of when they are assessing its safety, and properly responding to identified danger.

Using the behavior science and behavior insights methodology, we will try to determine, whether there is the so called Intention-Action Gap[3] in consumers – in other words, when there are intentions: a certain level of awareness ("food safety is important"), the institutional preconditions (institutional response mechanisms are in place), and positive attitude (willingness to consume safe food), but these intentions are not followed by appropriate action. Depending on a challenge, the discrepancy between intention and action manifests itself in different ways, however, all these manifestations can be explained by the paradigm that the mechanism of human judgment and decision-making is often based on an irrational system. In most cases, lack of action is a result of forgetfulness, laziness, other priorities, the complexity or uncertainty of the process, irrational fear, etc., or has deeper causes such as social unacceptability, ingrained myths, lack of social norms, and so on.

Therefore, using the proposed approach we tried to understand the mechanism of consumer judgment and decision-making and identify the extent to which an irrational system is participating in the decision to purchase a particular food item, or to assess its safety. This will ultimately enable us to define tailored solutions for pushing people and stakeholders towards desired actions.

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[3] Hassan, L. M., Shiu, E., & Shaw, D. (2016). Who says there is an intention –behaviour gap? Assessing the empirical evidence of an intention–behaviour gap in ethical consumption. Journal of Business Ethics, 136(2), 219-236.

Methodology

The study of factors that determine food safety related consumer behavior, was carried out using the BISC Methodology, which is a combination of several proven models of behavior change, namely, b=mat4, COM-B5 and BASIC6.

The BISC Methodology usually includes four stages: 1. Behavior Analysis; 2. Intervention Design; 3. Solutions Testing and 4. Change Strategy (developing the change strategy for scaling). The presented study was conducted within the first stage – Behavior Analysis – of BISC Methodology.

Behavior Analysis seeks to identify one or more actions or behaviors, known as Key Behaviors, focusing on which will enable to achieve significant large-scale impact. Behavior Analysis is made exactly in the context of these Key Behaviors and basically implies the study of the so-called drivers of desired or target behavior. Behavior Analysis (study) provides predictive indicators of actions that will form the basis of the concept of change. The study is carried out by means of in-depth interviews, the so-called *user research* - survey that observes consumption patterns on the example of a real user (usability testing) and identifies shortcomings or positive aspects. The main objective of an in-depth interview is to explore current or past experiences, rather than desires for the future, because, as noted above, stated intentions or desires, for the most part, will not result in actual actions/outcomes. Access to models of future behavior is possible by identifying subconscious barriers or emotional and psychological factors, which will subsequently form the basis of a "Behavior Map", namely7: a) cognitive priorities; b) biases; c) mental model and c) difficulty of decision (friction points).

For in-depth interviews, we selected 36 respondents, distributed across target regions according to the respective totals of population:

Tbilisi	16
Kakheti region	
Telavi	3
Large village	2
Racha-Lechkhumi and Kvemo Svaneti	

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[4] https://www.researchgate.net/publication/220962627_A_behavior_model_for_persuasive_design
[5] Michie, S., Atkins, L., & West, R. (2014). The behaviour change wheel: A guide to designing interventions.
[6] https://www.oecd.org/gov/regulatory-policy/tools-and-ethics-for-applied-behavioural-insights-the-basic-toolkit-9ea76a8f-en.htm

[7] ABCD model – part of BASIC framework of behavior change developed by OECD.

Oni or Ambrolauri	1
Lentekhi	1
Imereti	
Kutaisi	5
Zestaponi	3
Large village	2
Guria	
Lanchkhuti	1
Ozurgeti	1
Large village	1
	36

During the planning phase of the study, a guide for in-depth interviews was developed.

Interviews were conducted from 24 April to 11 May 2023; the study ultimately involved twenty-one women and fifteen men. The gender distribution was originally planned to be equal but had to be changed based on the availability of respondents. The age of respondents ranged from 25 to 83 years. Each interview lasted 60-70 minutes.

As a result of the process above, we developed Behavior Map – the document analyzing behavior drivers and context. Using this methodology, through the observation of models above and conducted surveys, we identified factors that promote the desired behavior (motivators) or, on the contrary, create barriers to it. At the same time, the Behavior Map provides a clear understanding of the existing social and physical context and suggests possible basis for change theory.

Behavior Drivers

Motivators of Studied Behavior / Action

Existing Difficulties and Challenges - PAINS	Perceived Benefits of Change - GAINS
The problems or shortcomings that accompany a situation or state and cause an inevitable desire for change. *What are the main problems or shortcomings?*	Realization of aspirations and values that are associated with change and increase motivation. *What additional values can be linked to change?*

Barriers to Studied Behavior / Action

Habit, Routine - COMFORTS	Fear of Change or Novelty - ANXIETY
The existing routine, proven and beaten path is accompanied by a sense of security, which is always difficult to destroy. *What is this sense of security based on?*	The unknown path is associated with a sense of danger, risk, or anxiety. It can be conscious and real, or it can be subconscious and driven by the gut feeling only. *What fears and anxieties are associated with change?*

It should be noted that the BI study also included an ethnographic component, which allowed us to observe the habitual purchasing behavior of consumers in their respective socio-cultural environment. Within the ethnographic component, we discussed:

- Whether oral statements or intentions are carried out at a level of behavior;

- How do consumers behave in their socio-cultural environment;

- What is obvious and what is not being said;

- Language and symbols, rituals and common meanings associated with the respondent's world.

A special checklist for ethnographic observations was developed.

A total of four (4) ethnographic observations were carried out - 2 in Tbilisi, 1 in Ozurgeti (Guria region) and 1 in Telavi (Kakheti region). Consumers for observation in Tbilisi were selected according to the following criteria: the first one was a consumer living in the central district of Tbilisi, whose behavior model implied grocery shopping in large chain stores; the second was a consumer living in the outskirts of Tbilisi, with a free model of behavior, which in this case meant shopping for groceries in various facilities, including street vendors. In the case of Telavi and Ozurgeti, respondents were selected from consumers residing in large settlements.

Ethnographic observations were carried out in Tbilisi on April 26-27, in Telavi on April 29 and in Ozurgeti on April 30.

Value Goals: Jobs-To-Be-Done

To understand the factors that facilitate or hinder the implementation of desired behavior mentioned above, it is necessary to view the problems from the consumer's perspective. The starting point should be the psychology / character of the consumer, their needs, desires, goals, and ambitions. People do not act aimlessly; when they behave in a certain way, they try to achieve the goals that carry value for them. Accordingly, in the present report paper we refer to the main driver of desired consumer behavior as "value goals" or "jobs-to-be-done"8 – the reasons why consumers engage in food safety control and the "scale" by which they eventually evaluate the quality of an action and the level of satisfaction with its outcome. Using this vision of consumer psychology as a starting point, we tried to explore:

- *What are those jobs-to-be-done that will ensure involvement of consumers in the food safety control, and*

- *How will the achievement of this objective be impacted by current contributing and impeding factors?*

We identified **functional, emotional,** and **social** types of *jobs-to-be-done* that consumers seek to achieve when they engage with food safety issues.

Functional jobs-to-be-done include the following:

- making an informed decision when choosing food;

- getting clear information about the safety of the selected food items simply by reading the label;

- caring about health by buying safe and reliable products, even if these are slightly pricier;

- saving time and money while shopping.

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[8] This concept was first developed by Harvard Business School Professor Clayton Christensen and aims to study consumer behavior; https://www.christenseninstitute.org/jobs-to-be-done/.

Emotional jobs-to-be-done include the following:

- a sense of caring for others, when responding to food safety violations and notifying appropriate authorities as necessary;

- overcoming fears and gaining confidence by learning the results of food and facility controls;

- feeling secure as a result of the European standards' implementation.

Food safety interest and responding to its violations are instrumental in achieving the **social jobs-to-be-done**, specifically:

- notification of a food safety violation to a relevant authority is associated with European identity;

- concern for food safety and response to violations are viewed as models of youth behavior; encouraging youth participation is associated with desired change.

By defining jobs-to-be-done, we were able to gain a better understanding of how to evaluate consumers' potential to achieve the desired behavior.

Consumers' Behavior Towards Food Safety

Using the Behavioral Influence Framework, we mapped the drivers of existing consumer behavior to define its psychology/character (see map visualization below). The below findings are not just opinions of the majority of respondents, but important points of view identified as a result of in-depth interviews and arranged in the relevant fields of the behavior map as contributing or impeding factors of the studied behavior.

According to the behavior map, the **existing Pains** - problems and shortcomings that accompany the current situation or state, are considered to be the motivators of the studied behavior, as they evoke an inevitable desire for change *(consumers find it difficult to read the label, and feel they do not know what they are consuming - so they want to solve this problem)*. What are the main problems or shortcomings that will help us actualize the issue of food safety?

- **Consumers feel insecure, they do not feel that food products sold in markets and stores are safe**. *However, if they were aware of the existing mechanisms of food safety control and of actions that are taken in this direction, this sense of hopelessness could be significantly reduced.* Consumers talk about lack of information, they are not confident that food safety is controlled in any way, they find it difficult to name the state agency that is primarily responsible for the food safety policy and control. When asked about state control, the majority of respondents can only recall the TV Show of Madonna Koidze "Public Control". Consumers note that the food safety situation has not improved, there are few positive changes in terms of respecting food shelf life, but more control is needed. As an illustrative example they cite the small groceries in the neighborhood where hygiene is often not observed, the sound of working

refrigerator is not heard and in general, it seems that no one controls these vendors. Significant part of consumers is not aware of state requirements regarding the food safety, and when asked about the agency responsible for the food safety policy, they usually cite the Ministry of Health instead of the Ministry of Environment and Agriculture; at the same time they cite Ministry of Internal Affairs as being responsible for the food safety control together with Ministry of Health. Given the low visibility and lack of information about food safety control, respondents do not expect any changes, even if they begin to respond to violations. They say that healthy natural products are exported from Georgia and replaced by cheap imports. This reinforces their sense that harmless products are no longer available on the market.

Consumers think that inspection and testing results cannot be trusted in Georgia. They question the objectivity of the results and explain this by the peculiarity of the Georgian mentality:

"After all, this is Georgia, and inspections are often biased."

"I know that the law does not protect me in my country, so I have to turn a blind eye to violations."

- **Product labels are difficult to read and understand** - consumers report both content-related and format-related problems of labeling. Some of them talk about coding used on the label that does not tell them anything - consumers do not know what the specific codes mean or how they might affect the safety of a particular food. In addition, consumers do not understand the meaning of specific terms / substances used on labels, and even more so do not understand what effect those substances can have on their health. Finally, consumers note that despite the desire, the text on the label is written in such small print that it is almost impossible to read it. The desire and effort to read the label is evident, it is important to simplify the process.

- **Food safety is closely linked to quality for consumers, but the quality is costly and often not affordable; in such cases finding a compromise is the solution.** In other words, food safety is not accessible because quality food is expensive. By understanding the core distinction between quality and safety, consumers can adjust their behavior.

It is difficult for consumers to draw a clear line between food quality and food safety. Therefore, when they talk about the high cost of a *quality* product, they mean the availability of *safe* food. For low-income families, the price is important in the first place, and then the quality. Rural products are also associated with luxury, and consumers note with disappointment that they must buy cheap products instead of the natural village goodies. Similar to costly products, cheap products are also linked to food safety, with *cheap* meaning *risky* in this case.

Almost all respondents noted that at least once they bought genetically modified products, intentionally or unintentionally. Most consumers consider genetically modified foods dangerous from a food safety standpoint, but they have to compromise and buy them, partly because they have no other choice, partly because they do not know how to identify genetically modified products.

Uncontrolled street trading is also a matter of compromise, and is generally unacceptable to the majority of respondents, although, given the current social problems and the economic situation, it is difficult for them to talk about completely banning it. It is expected and desired

that the state, both at the central and local levels, offers an alternative solution for street vendors and their consumers. Another important factor mentioned was related to the compliance with storage and hygiene standards in such facilities as farmers' market, outdoor trade facilities and wholesale facilities. While relevant demand, at the mental level, is high for large retail and catering facilities, for chain stores this demand is weak or completely absent.

- **A sharply negative attitude towards canned food, sweets, and products with additives** - from the point of view of food safety, perishable products are named among the products with the greatest risk, although the respondents are also wary of products that are associated with the possibility of provoking various serious diseases and fatal poisoning. Canned food is most often mentioned as a potential source of deadly botulism, as well as sweets and various additives as contributing to the development of serious diseases. Consumers are trying to replace such foods with those that are less harmful.

"I'm trying to choose gluten-free food for my child. Gluten slows down the mental development of the child. I'm trying to buy sourdough bread."

"I never buy canned food. I'm aware of botulism and many other toxic substances."

"I avoid foods containing vitamin E, fast food, chips, foods with emulsifiers."

- **Distrust of food products imported from specific countries** - consumers find it difficult to argue about food products of which particular countries they strongly distrust, and why. However, a certain negative attitude towards the produce of several countries was revealed. The attitude towards Turkish food products is generally neutral, however, during the conversation it was noted that there is a big difference between foods imported into Georgia and foods sold directly in Turkey; imported foods are not credible. There is an ambiguous attitude towards food imported from Iran; distrust is mainly caused by bad experiences in other areas:

"I do not trust Iranian production. From my personal experience, the quality of their building materials is very poor, foods might be the same".

India and China were also named among the unreliable countries, although it was difficult for respondents to give a specific explanation why they would not buy their products. Despite a generally benevolent attitude, respondents question the safety of food currently produced in Ukraine - mainly due to daily explosions and associated pollution:

"Countries refuse Ukrainian food due to smoke (ongoing military operations). I also very rarely pick Ukrainian production. I do not really like their products recently, there is no control in the country and standards are not respected."

This problem motivates the consumer to take a closer look at the label and identify the country of origin.

- **Distrust of the products produced by a peasant or a small farmer in the village is caused by personal experience of observing the production process.** This experience strengthens the consumer's confidence that state control is needed regarding all types of production.

Consumers note that after they personally got acquainted with the "inner kitchen" of rural production, their attitude changed to the negative. They are no longer guided by the habitual feeling that the products produced in the countryside are organic.

"It seems to me that rural products are more natural, but they need to be checked. Various fertilizers and pesticides are used uncontrollably."

"The more closely I looked at the production of village produce, the more I learned how irresponsibly they act. They add dyes even to Churchkhela."

Uncontrolled use of fertilizers and pesticides, according to respondents, is associated with low awareness of farmers. Those who are knowledgeable in agriculture note that today it is very difficult to grow fruits and vegetables without spraying. Therefore, it is important for a farmer to know how to use chemicals correctly, otherwise the safety of their products will be on the agenda.

"Nothing is harmless, both fruits and vegetables contain nitrates. When peeling potatoes and apples, I peel off a thick layer of skin."

Perceived benefits of change (Gains) are also regarded as motivators of studied behavior. In other words, if the desired behavior - *checking the food ingredients* - is carried out, then it creates the *opportunity to realize value – e.g. to choose safe food for kids*. According to Behavior Map, these are value realization aspirations that increase the motivation to perform the desired behavior. It was revealed that child protection is one of the most important motivators of food safety behavior:

- **Care for children is the strongest motivator to check the food composition/ ingredients.** Consumers are particularly meticulous when it comes to baby food. They talk in detail about the contents of the label and about substances they consider dangerous to the health of the child. They are cautious about the content of fats and carbohydrates, they try to keep the content of chemicals, starch, and sugar in food at the lowest possible level. Consumers say they strive to buy products for children that are as close to natural as possible. Unfortunately, they do not always succeed, but they spare no effort and do not mind overpaying. This is the case when consumers for real perceive the importance of food safety and do not equate it with quality in the context of a high price.

- **Consumers are motivated and interested in obtaining information on food safety issues from various sources, including the results of controls conducted by the National Food Agency. Diverse information helps them to make decisions**, which is an important prerequisite for implementing the desired behavior.

Consumers believe that access to food safety information will help them make decisions related to food purchase and consumption. In their opinion, the results of controls of food enterprises should be open to the public, which, on the one hand, will increase public confidence, and on the other hand, promote healthy competition and thus motivate food enterprises to meet the requirements. Positive results of a food enterprise control increases trust, a sense of security, and confidence that this or that particular food item is safe.

Consumers who are aware of the role of the National Food Agency note that they follow the results of controls, but there are very few such consumers. The majority talk about the need to simplify access to information about controls. For example, if for better visibility, the safety control marks ("checked for safety") will be placed in food facilities or directly on the food products, consumers believe, this will contribute to the higher sense of security. As for the communication channels, consumers mostly prefer social networks and television (the latter one was preferable for those living in regions).

- **Consumers' sense of improved food safety is linked to the attributes of minimum standards.** *Labeled food, hygiene in food facilities and refrigerators where perishable food is stored are the attributes that matter to the consumers and through the presence of which they assess the current food safety situation; all of this is an important part of the desired behavior.*

  Even though a significant number of consumers find it challenging to identify the specific minimum food safety standards and requirements for food manufacturers and suppliers, when asked why they think the food safety situation has improved, they actually describe the very same circumstances that these standards and requirements aim to fulfill. For example, food labeling was named as one of the attributes that contributes to the feeling of improved food safety. The presence of chain stores was also mentioned, where cleanliness and proper food storage conditions are clearly visible, and a wide selection of safe products and reliable manufacturers is available. The opening of new food manufacturing facilities, as well as good information coverage that allows consumers to see the clean and organized situation inside the facility, also reinforce this feeling. The feeling of improvement is stronger in those consumers who witnessed Georgia in the 1990s and can recall the times when, as they put it, not only food safety, but also food availability was a big problem.

- **Consumers are interested in observing the appropriate food storage conditions, which in their perception is directly related to food safety**. This is a step forward in terms of raising consumers' awareness. Storage compliance is a domain of food safety where consumers easily see the difference between food safety and food quality. The difference is obvious, since in this case the price and quality attributes of the product, including the packaging, are of no importance from the point of view of food safety. First of all, consumers are interested in the refrigeration of perishable food, and then in the general sanitary and hygienic conditions of the facility. Particular attention is paid to the placement of meat and dairy products in the refrigerator; then the general cleanliness of the facility is noted. When it comes to storage compliance, consumers are also interested whether the appropriate storage conditions are ensured during the food transportation process, and in this case food products imported from remote countries are of particular concern. Regardless of the level of development of supplier country, the ambiguity of the issue causes anxiety in consumers, and we will discuss this in the following sections of this document.

- **Consumers are willing to pay a slightly higher price if they know they are buying safe products**. The willingness to pay more indicates that food safety is important for consumers; therefore, they need help in identifying safe products so they can buy them at a relatively high price.

Consumers note that they have chosen grocery stores where they can save some money; with these savings they want to buy healthy food, even at a higher price. The word "quality" in the quotes below is used in the context of "safe".

"I prefer to buy less, but better in quality, such as cold-pressed oil."

"I'd rather pay 5 tetri more to buy a quality product."

"I avoid foods with high content of vitamins, I'd rather pay more."

The existing routine, the tried and tested path is accompanied by a sense of security that is always difficult to break. **The consumers buy the same proven food in the same place, avoid diversity, because diversity requires additional efforts to achieve a sense of security.** That is why, according to the map of behavior, **a habit, an established routine – Comforts -** is usually considered a barrier to the studied behavior. What is this sense of consumers' security based on? It turns out that:

- **Consumers try to create a sense of security in the simplest possible way, for which they routinely buy only familiar brands and "factory-made" goods in the same large retail chains** - *they trust them, they do not need extra effort, there is no need to check the label for the shelf life. Even a small change in this routine requires additional actions and therefore breaks Comforts.* Consumers explain their loyalty to large retail chains by a sense of security, which is caused both by the proper environment and the expectation that large retail facilities are checked more often, so hygiene, as well as terms and conditions of food storage are always observed there. As we have already mentioned, consumers directly associate food storage conditions with food safety, which is why they feel that grocery shopping in large chain stores is the safest choice. For them, it is enough to check the expiration date of the product a couple of times, after which they no longer do this and pick products from shelves without additional checks. In addition, they believe that large retail chains have more resources, and therefore more opportunities to equip a retail facility with proper food safety infrastructure.

"I buy frozen food from large chain stores. I know their refrigerators won't turn off due to a power outage, so I'm safe."

Consumers, especially those who are trying to save time, are comfortable with following a routine and buying a significant portion of groceries without much thought or effort.

The same routine behavior is observed in relation to food brands. Consumers have more trust in well-known brands that have been on the market for a long time. This trust comes from both personal experiences gained over the years and the presumption that because of better access to resources, food brands are better able to ensure a safe manufacturing process. Consumers note that since they constantly buy products from the same brands, most often they do not even check the expiration date or ingredients.

"I usually check the expiration date when I buy dairy products, although if it's a brand I'm familiar with - I don't."

Such an attitude towards large retail chains and familiar brands is a habitual comfort that reduces the consumer's desire to search for something new. They feel safe and see no need for

further action. In the same context consumers mention the "factory-made" products, especially when it comes to dairy. For them, "factory-made" means processed, bacteria-free, and therefore less harmful. It is enough for them to know that the product is manufactured at the factory to feel safe, and they do not delve into the details. Just knowing that the product is manufactured in a factory is enough for consumers to feel safe, and they do not delve into further details.

"I prefer to buy factory-made, readily available products. They are labeled with release and expiration dates. I feel more secure. Rural products require much more attention and caution."

Consumers are not interested in product ingredients if they buy baby food from a pharmacy, believing when the product is sold in a pharmacy, it is harmless by default. For example, if the same cookies are sold in both the store and the drugstore, buying from the drugstore makes consumers feel more secure.

"I feel more secure when I buy [for a kid] porridge, cookies or yogurt at the pharmacy."

- **Checking the expiration date is associated with caring about food safety, while the label and packaging, along with the expiration date, are associated with safe food** - *it is enough for the consumers to simply check the expiration date to feel that they care about food safety, and if the food is labeled and packaged then it does not need to be checked, it is considered harmless.* It can be said that checking the expiration date is a habitual behavior most often mentioned by consumers. By itself, the habit of checking the expiration date is not bad at all, if not for the fact that consumers' concern for food safety is limited to it alone. When talking about the food safety attributes, consumers primarily mention the date and ingredients, however, they admit that at a level of behavior, during the grocery shopping, they mainly check the date only.

"I always look at the expiration date, but I don't read the composition of the product."

"I pay attention to the production date. I can't read all the labels."

For consumers, a product that is labeled and well packaged is associated with safe food. There is nothing wrong in this regard either, however, since consumers rarely read the contents of the label, limiting themselves only to checking the expiration date, it turns out that the mere visual existence of the label is enough for their peace of mind, and they do not see the need for an additional food safety behavior.

"The label must be well attached, must not move, the packaging must not look suspicious."

"The product must have an expiration date and a label. In some cases, trust is critical. I don't pay much attention to the composition of the product."

In the case of buying ready meals and convenience food, the feeling of security is created by hygiene, smell, and taste. However, taste is still the most important for consumers:

"Georgians are people with taste, cleanliness is everywhere."

- **For consumers, paying higher price is a sufficient condition to feel that they are buying "harmless" food.** The expensive food is associated with quality, and the quality is associated with safety; according to this logic, safe food is always expensive. Therefore, when saying they are ready to pay for "quality", consumers feel that they are buying "safe food".

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- **Personal acquaintance with a food manufacturer or retailer, as well as recommendations of friends or acquaintances are enough for a consumer to trust unlabeled or "non-factory" products**. In this case too, consumers do not see the need to make additional efforts for checking the safety of the product – the human factor is a key when buying the meat or dairy "non-factory" products. On the one hand, consumers trust people whom they have discovered and tested themselves; on the other hand, they trust those who are recommended by friends or family. And even though the food production process is often invisible to consumers, human trust is so powerful that food safety issue is never questioned and completely delegated to other party.

  "I bought cheese but I'm sure the seller would not give me a bad product, so I did not look at anything. We've known each other for a long time, I trust them."

  "I don't check products, because we buy from our long-standing suppliers. If necessary, they will whisper to me: this meat is not for you."

  "I know well the family from whom I buy the cheese. If I buy it at farmers market, then only from a person I trust."

- **Trust in products produced by peasants in the villages is high in terms of quality and safety** – rural produce is automatically perceived by consumers as safer and more nutritional, because it's more natural /organic, contains less chemicals and additives. The reliability of rural food in terms of quality and safety is not questioned.

  "I feel that rural products are more natural, there is a very noticeable difference between rural and industrial eggs."

  "I consume rural products more often than factory ones. I feel like they are more natural and have fewer chemical additives."

  Consumers' trust and feeling that rurally produced food is natural is determined by their perception that the Georgian peasant is not "spoiled".

  "They don't even know how to use chemicals, haven't learned it yet."

- **Food products made in Russia are safe and reliable, as they do not contain chemicals and other harmful additives** - consumers who consider Russian food products to be harmless sincerely believe that Russia is large country with plenty of resources – lands, livestock, therefore it does not need to use chemicals and harmful additives. However, consumers do not feel the same way about other big countries like China or India.

  "I think Russian products are healthier than Turkish ones, maybe because I heard so in my childhood. In addition, Russia has resources, there is milk in there. They don't have to come up with all sorts of harmful stuff."

  "GMO foods are banned in Russia (and Belarus), so I think their products are safer than European ones."

- **There is an opinion among consumers that the responsibility for food safety lies solely with state and official bodies, and not with consumers**. Consumers feel that their participation is not

necessary to keep expired products from reaching grocery store shelves. In their opinion, such issues should be directly controlled by stores.

"Store manager must monitor the quality and expiration dates of the products to maintain the prestige of the store."

Respondents have also pointed out that for people who live in poverty and have to think about their daily slice of bread, food safety is not so important; they should not be expected to become involved in this process.

"Food safety should be controlled by the state; how can regular citizens do that?! You cannot give these tasks to citizens of a poor country; they have some many other things to worry about. When there is poverty, people do not care about beauty, they care to have at least something to eat."

- **Due to the visual abundance of the agricultural market, consumers feel that in such a variety of choices it is certainly possible to choose reliable food** - Diversity of produce in the agricultural market creates a feeling among consumers that here they can make a desired, rather than a forced choice. Furthermore, the agricultural market offers fruits and vegetables that are cultivated in rural areas and are sold at a rapid pace, all of which convinces consumers that their choice is safe.

"The farmers market is improved now, the products are laid out nicely and cleanly, there is a good choice, the appearance of the products is also good; and besides, most of the villagers sell their produce here. The meat is also well sorted, and you can choose it normally, compared to other places."

"As for food safety, who knows, what our generation was eating during the war? I try to feed our future generation so that they do not get sick, I try to support them with food, to find clean products. They say food is checked better in the stores than in the agricultural market, but to be honest, I do not think so. For example, they sell Golden [apple] in the store, but the seller does not know whether it is treated or not with chemicals. And on the market, there is big variety of products, it is entirely possible to make the better choice there."

According to the behavior map, **anxiety caused by fear of change or novelty** is also defined as a barrier. Uncertainty is associated with danger, risk or anxiety, which may be quite conscious and real, or caused only by some gut feeling. **What kind of fear or anxiety is hindering the change?**

Consumers' fears related to change include the following:

- **There is a practice of food safety information avoidance among consumers**. "The less I know, the better I sleep" is the best quote that explains such type of consumer behavior. Consumers do not want to know more, because then it will be difficult for them to make a choice. Accordingly, they deliberately avoid receiving information related to food safety, they are not

interested in the results of inspections. While visiting groceries and catering facilities, they try to convince themselves that everything is perfectly arranged there, and nothing threatens their health.

"I often go to one of the restaurants and deliberately do not look into their kitchen. I convince myself that the kitchen is ideal there. While eating there, I convince myself that sanitary standards are observed, that the meal was cooked by a clean, handsome person. If I think for a second that cook did not maintain cleanliness, I won't be able to eat a single bite."

"I heard that starch is harmful, but I intentionally didn't check this information. Of course, our food is not 100% safe, but we buy whatever is offered at the farmers market, since we have no other choice. I try not to think about the rest. Neither rural nor factory products are 100% safe."

The information is complex, requires in-depth knowledge and is mentally "beyond reach"; this complexity is one of the reasons for information avoidance. It is hard for consumers to understand what specific substances are harmful and must be avoided, they struggle to comprehend unknown words and abbreviations.

- **A pronounced fear of industrialization** - Consumers have a feeling that the introduction of European food safety standards is not really safe for Georgian reality. They believe that with new European standards, food production in Georgia might be completely rebuilt on an industrial model, which scares them. The fear stems from their misguided notion of industrialization; they think that small countries (developed Europe) lack resources and land, so they became adept at using chemicals, as well as producing proven fertilizers and genetically modified products; all of these, if introduced in Georgia, will harm Georgian genetics.

"It is necessary to introduce stricter norms than European standards. I've been there, and I know precisely how things are. We have a belief that everything is very neat and tidy in Europe, but that is not the case. Many people there use crude methods to prepare goods. Today, I trust Georgian products because less chemicals are used, although chemicals are already being imported here little by little, and this might damage our genetics."

For our respondents, industrialization is associated with products that have a long shelf life, palm oil, emulsifiers and dyes, soy grown with pesticides, milk powder, out-of-season fruits and vegetables that consumers consider dangerous to health. Accordingly, the prospect of industrialization becomes a matter of concern.

"EU standards are needed if they are better than ours, but I know that the crop harvested on our land is the best. I do not think anyone has it better than in Georgia."

- **Fear of cheap or discounted products:** If the expensive food mostly evokes a sense of security for the consumer, then in the case of cheap or discounted food, its safety is called into question:

"When the price is this low, I start wondering if the conditions were met and if the product is natural."

"I do not consume sausages. Meat is so expensive, and sausages are cheap, are they really made with meat?!"

All the above suggests that in the perception of the consumer, food safety and quality are inextricably linked to each other.

- **Fear caused by distrust of the label information** - The label lies, consumers say, and this time they do not mean the difficulty of reading and understanding the content of the label, mentioned previously among the problems; they mean their distrust of the information read on the label and the fear induced by this distrust. The consumer reads the label but does not believe it.

"It says it's powdered milk, but it could be something else, they just don't say that."

"I don't fully trust what the label says, it could be a lie, we love to cheat."

"Harmless food must have an expiration date; also, we must try our best not to list the wrong ingredients on the label. Yes, the composition is indicated here, but there was a case earlier when the actual composition was different from the written one and included vegetable fats, which they did not know about. Now they know."

The distrust of the label is significantly influenced by personal experience of the consumers themselves or the experience of persons they trust. In addition to the fact that the consumer stops using products that they do not trust, the feeling of distrust and fear extends to other "doubtful" products too:

"My husband worked at -----------9. As the label contained the wrong information, and in reality there was a lot of yeast and dyes in there, my trust was lost, and since then I stopped buying it."

"The amount of meat in the sausage was minimal, I wonder what else was contained in there."

- **Calling the National Food Agency's hotline is "scheming" and such behavior can "ruin a person's life."** *Most respondents are aware that food safety violations pose a significant risk to human health. Accordingly, they consider it appropriate to respond to a violation and report it; however, they find it difficult to overcome the barrier associated with the widespread false social norm that reporting is tantamount to denunciation.* While consumers generally agree that there will be positive changes if the number of people reacting to food safety violations increases, they admit that they are afraid of trouble and do not want to be called "schemers". It is even more difficult to overcome this barrier for consumers living in the regions, and especially in villages where everyone knows each other. Respondents say that if they notify relevant authorities about violation, they will no longer be able to appear in public, or will have to move to another place, because in the eyes of their fellow villagers they will become "schemers". Responding to violations is also hindered by the assumption of consumers that by doing so they can "ruin" a person's life. They point to the possibility of high fines administered as a result of the notice, which could seriously harm small family businesses and leave them without income.

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9 Manufacturer's name intentionally removed.

Ethnographic Observations

The primary goal of ethnographic observations was to, by way of surveying social-cultural environments endemic to the consumer, provide real-time validations of behavior models expressed through in-depth interviews. In addition to these behavior models, ethnographic observations allowed us to validate the persons presented below.

- **A 52-year-old consumer residing in Telavi stands out with a behavior model oriented towards budget-saving**; pricing is important for them, but quality within those prices can be crucial as well. They are discerning sales promotions and attempt to save money on some amount of produce to purchase afterwards imported cheese that is more expensive, at a higher-priced store. They classify stores based on the produce, starting with basic market goods, and ending with wholesale and street vendors. They are willing to travel to nearby villages to purchase meat, since they know it will be new, safe, and priced affordably. They purchase lamb meat in a village near Telavi. They purchase vegetables from ethnic Azerbaijanis. They purchase eggs from their student as they trust their student and feel no need for safety checks. They purchase Russian butter by weight, with additional sentiments towards Russian-made produce: they do not doubt the food safety – "why would Russia add chemicals to their food, their land is large enough to not require that". However, they express mistrust towards industrial products imported from countries in Europe – places they visited personally and are convinced that use chemicals abundantly. Here too, we came across the widespread model regarding expiration dates – they verbally claim to check the dates regularly but have never physically checked the expiration date on a perishable product during the moment of purchase, based on implicit trust.

- **A 42-year-old consumer residing in the center of Ozurgeti is a budget-saving woman**. With a shopping list in hand that she has prepared in advance, she approaches the exact shelves that she knows contain the products she needs. She pays no attention to other produce - spontaneous purchases are not part of her behavior. She buys her food goods in chain retail stores, at agricultural market, and from street vendors. She bases her decision on low pricing, diversity of choice, quality of produce, and accessible parking space. She prefers Georgian products and avoids those of Russian and Ukrainian make. She purchases her meat at chain retailer, based on reliable personal information that this specific market always stocks safety-checked food, although she still looks closely at the color of the meat. Regarding dairy, we revealed a widespread model – she buys cheese based on personal acquaintance, while the rest of dairy is bought at chain retail stores. She buys her fish in chain markets as well, and meticulously checks the fish's color and smell. She knows exactly how to examine it, and assuredly notes that the fish that "has bulging eyes, is not fresh". As for fruit and vegetables, she purchases those at the agricultural market, since the goods there are always fresh, available in a wide range of choices, and thus fall in line with her preferences. This is also a widely expressed model in frames of this study. Her behavior is very close to desired behavior; she closely discerns other products, including convenient foods, and knows how to identify pre-thawed products. Moreover, once she has even made a call to the hotline of the National Food Agency to report a violation of proper food storage, although her report was not followed up

anyhow. Her time ran short, and she could not drag the issue further in order to "achieve final justice", so she gave up.

- **A 33-year-old consumer residing in Tbilisi's central district, in a privately owned house along with their large family.** Their primary motivator is their children, picking safe food options for whom is of their utmost concern. For this reason, they have well-defined parameters for what and where they purchase: once a fortnight they need to drive to Dighomi, so they purposefully go there to the large chain supermarket, where they seek products unavailable closer to their home – e.g., veal for their children. This is also where they purchase convenience food, including frozen goods; they have a feeling that large chain markets have more quality control, plus the food there seems to taste great too. They purchase dairy in this supermarket as well, wherein they check expiration dates on cottage cheese but not on sour cream; they trust that the latter will be made from healthy milk. For cheese, they discovered a cheese seller at a local shop based on social proof (a lot of people buying cheese there). For red salmon meat, they visit the frozen food wholesale facility, recommended by a friend – not for the better price, but for better quality. They purchase their fruits and vegetables in district stores nearby, with a preference to buy in smaller quantities to keep them fresh. They are prepared to pay extra to protect their children's health, and will even call a hotline, if need be, although they do not know the exact number to dial.

- **A 31-year-old mother of two children lives on the outskirts of Tbilisi.** She is positioned closest to the desired consumer behavior. Children are the primary motivator for her as well. Healthy eating within budgetary constraints is very important to her. Because of this, she explores prices and tries to buy relatively healthy – in her understanding - products (she is checking for this). She has her grocery shopping points selected by product type, and primarily shops in chain stores, neighborhood shops and street vendors. She is well versed in her district's shopping locations and knows exactly where to make a purchase based on pricing. She saves even more if she happens to be near the station square, which isn't often, but she does know of a wholesale market there where the same produce is available for cheaper prices (including European products, otherwise found in chain stores). She has never doubted the safety of those food items because of low prices. Before, she would buy meat produce in special (premium) stores, however nowadays those prices have hiked too much and she has switched to a trusted neighborhood shop, where she liked storage conditions and cleanliness. She buys meat and cheese here. For the rest of the dairy, she turns to chain stores and checks all the expiration dates. She too purchases fish at a frozen food wholesaler, while for fruits and vegetables she visits local shops - unless she's looking to buy large quantities, in which case she heads to the station square. For wholesale market purchases, she makes her visits early in the day to ensure the produce she's purchasing has not been on counters for too long. She is not a consumer of frozen goods and convenient food, substituting the latter with home cooking. She always voices her opinion of product quality and storage conditions to the respective stores, although she has no expectations that this will have an impact, because, as a rule, the buck stops with on-site consultants.

Behavioral Models – Personas

During the consumer behavior mapping, several behavior models were identified that became the basis for Consumer Personas presented below. The Personas allow us to elaborate more specified target audiences for a behavior change communication campaign.

Soviet Citizen – Nostalgic Consumer

They are 40+ years old, with a nostalgia towards the Soviet past: where everything was safe and of high quality. Despite not necessarily buying Russian produce today, they still believe in Russia's infinite resources. For some, this is a sweet childhood memory, while for others it was an inextricable part of their life at some point: "I lived there, and I've seen it with my own eyes." They would still be buying Russian produce if not for the current Russia-Ukraine war and the ensuing political climate. They avoid buying Russian, sadly passing by the counters with Russian produce. They find joy in every opportunity when they have to buy Russian products for lack of an alternative. Their conscience rests easy in these moments. They consume factory-made produce, and in cases where they yearn for rural goods, they will only turn to trusted acquaintances. They don't have high income, but they manage – in their mind – to purchase safe produce for their family members. This person can be encountered both in the regions, and in Tbilisi's outskirts and center. They don't trust official sources of information, exhibit irrational patterns of trust based on past experiences, and have a high level of self-confidence.

Consumer Scared by Industrialization

This persona isn't limited by age and is frightened by all the novelties introduced by industrialization in food products. Part of this group cites personal experience as an argument – "I lived there, and I know precisely how things are. We have a belief that everything is very neat and tidy in Europe, but that is not the case. Many people there use crude methods to prepare goods." They believe that smaller countries lack the necessary resource and landmass and have thus resorted to, and mastered the use of chemicals. They believe that palm oil "kills", every non-seasonal food is drenched in pesticides, and that safe transport of frozen goods is impossible. Their current trust of Georgian-made produce stems from their belief that tested and approved chemicals are used less here, but that industrialization is nevertheless slowly introducing them. They believe this will harm our genetics. Along with trusting Georgian produce, they consume primarily Georgian as well, including butter and oil. Their irrational trust is high enough as to sometimes not check expiration dates, convinced that no harm will come to them before industrialization fully comes along. This persona is gripped with baseless fears, believes in urban legends and conspiracy theories, and exhibits a low-to-nonexistent level of trust towards the food safety management system.

Time-Savvy Consumer

Another case where age isn't a defining factor, although this persona is primarily under 45 years old. When asked what their food choices are based on, they admit they never think about it. They "have no time" to be picky about what they buy, or to fuss about food safety issues. For their emotional and physical comfort, they go for a large chain store with an accessible parking lot, where they'll find familiar brands and don't waste time thinking. Everything is familiar, and their form of caring for food safety is mainly in checking expiration dates, although their level of trust is high enough for them to sometimes not do that either. This persona also encompasses someone who will enter any other chain store that is on their way and accommodates parking. This persona is either working full-time or has other sources of income. They have access to technology and can cross-check information. They have a relatively higher level of trust in the system.

Quality Oriented Consumer

The most widely spread persona who selects shopping points based on desired produce. They approach their role of feeding their families with healthy food very responsibly. They typically own a car since their search for quality produce will likely take them to far distances. They do not lack diligence in seeking out specific stores for desired products, although if they are working, they have pre-defined days for those restocks. They have preferred spots for shopping for fruits and vegetables, meat, and cheese, although they are also open and interested in improving their options and getting off the beaten path for potentially better stores. Price is not as crucial for them as the quality of the goods; and quality is something they directly associate with food safety. This persona is very meticulous about food safety, guided by quality when choosing various outlets, and at the same time able to pay above the average prices for "reliable" goods. They are highly motivated to consume safe products and get more information about food safety.

Budget Oriented Consumer

This is a persona who prioritizes healthy eating. They could be living both in rural areas, as well as the city center. Eating healthy without food safety is impossible for them. They don't have high income, so they are always aware of any ongoing promotions or sales, are very attentive to promotional text messages – especially from pricier markets – and try to purchase high-quality European produce. In order to afford European, they tend to purchase those products that are available at wholesale markets – grains, for example. If they live in a village, they will at minimum cultivate their own greens, along with chicken and pigs. If they live in the city, apart from European products, they associate with luxury the Georgian rural produce, which they cannot always afford but always aim to save for. This persona is also notably self-assured and is convinced they understand food safety, even seeing themselves as experts on where to cheaply purchase trusted produce. They deal with their cognitive dissonance by "accepting" possibly lower food safety standards when shopping at wholesale markets, agricultural markets, and street vendors.

FOOD SAFETY BEHAVIOR DRIVERS			
Jobs-To-Be-Done (Value Goals)			
Functional		**Social**	**Emotional**
I want to make an informed choice – including reading what's on the label.		By informing the National Food Agency of food safety concerns, we move closer to European standards (identity).	By informing the National Food Agency, I am caring for others.
I want to take care about health.		Caring about food safety, including taking action when coming across violations, is a standard of conduct for new generation, for youth.	If I am aware of facility control results, I will retain my trust and overcome anxiety.
I want to save time and money when purchasing goods.			I want the introduction of European food safety standards, as this will increase my sense of security.
Motivators		**Barriers**	
Pains	*Gains*	*Comfort*	*Anxiety*
Problems/shortcomings describing the current state or situation and causing an inevitable desire for change. *What types of problems or shortcomings are important?*	Realizing aspirations and values associated with change, increasing motivation. *What are the benefits of change?*	Existing routines, habits, and well-worn solutions carry a sense of security that is always difficult to break. *What is this sense of security based on?*	Anxiety stemming either from conscious and real causes, or subconscious internal preconceptions. *What types of fears or anxieties are related to change?*
A feeling that safe food is unavailable and nothing essential is being done to change this.	The highest motivator is caring for children.	The consumer is trying to create a sense of security by simple means, by routinely buying familiar	Information avoidance practices: a) Preference to know less and "sleep better at night"

		brands and "factory"[10] products in the same large retail chains.	
The contents of the label are interesting, but difficult to read and understand.	Food safety attributes are simple: labels, packaging, visual state, hygiene level, and refrigeration.	It is enough for a consumer to check expiration dates to feel involved in food safety care; however, if the food is labeled and packaged, even that check becomes unnecessary; at that point it is considered safe.	b) The information is complex, requires in-depth knowledge, and is mentally "beyond reach".
It is important to notify the National Food Agency of violations, but there is low awareness of necessary procedures to reach the hotline or send a message.	The consumer is willing to pay slightly more if they will know that they're paying for safe food.	High prices are associated with quality, and quality is associated with safety.	Pronounced fear of industrialization – European standards might "extinguish" natural produce.
Food safety is associated with quality, which is an expensive luxury; the solution is to compromise.		Personal acquaintance with the manufacturer or seller is enough for the consumer to trust unlabeled or non-factory produce.	Fear of cheap or on-sale items – safety and quality concepts are mixed up. "Mark down food is no good".
Sharply expressed negative stance towards use of canned goods, sweets, and products with additives.		For consumers, a rural produce (grown by peasants) is automatically associated with natural/organic.	Fear caused by mistrusting information present on labels.
Mistrust of food/groceries imported from specific countries (Iran, China, etc.).		There is an assumption in consumers that Russian-made produce is safe as an abundance of	

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[10] In this case, unconditionally associated with safe.

		resources eliminates the need for use of chemicals.	
A mistrust towards rural produce by peasants or small farmers, emerging when looking deeper into the production process.		Responding to food safety is the duty of state and official state bodies exclusively, and not of the consumers.	
		With so many options to choose from, consumers feel like they can always find safe, healthy food in agricultural markets.	

Recommendations for Stakeholders

The customer journey breaks down into three stages:

1. **The searching and planning stage**: Consumers follow the usual routine and habits while choosing the grocery store. They may search for specific food item information on the Internet and social networks. For the most part, they come across familiar shopping facilities and regularly consumed products.

2. **Visiting shopping locations or catering facilities for purchase**: they select a shopping location based on proximity to their home, or by picking out specific stores based on required types of produce (meat, vegetables, fruits, and non-perishable goods). They take note of expiration dates and visual characteristics, packaging. They primarily trust brands/manufacturers and chain stores. When purchasing natural products, they trust visual qualities and/or prioritize personal acquaintances.

3. **Consuming food at home.**

In the mind of the consumer, the issue of food safety becomes critical when notable negative outcomes occur (e.g. food poisoning), however, in terms of risk assessment, we also revealed long-term and invisible anxieties that primarily stem from genetically modified foods, imports from "untrustworthy" countries, and industrial food. Additionally, certain anxieties were expressed in the consumer that are related to, in their understanding, harmful substances, however these can be difficult for them to identify. Trust towards labels is low, since consumers find it difficult to discern the fine print and identify ingredients. The issue of food safety is difficult to comprehend due to its complexity, especially in a climate of spreading misinformation and baseless fears. The motivation to receive information about, and then inform the National Food Agency of violations is high, but emphasis must be placed on correct drivers for activating desired social norms.

When designing interventions for achieving desired behavior, several psychological and social factors are especially notable:

Excessive Optimism: predisposition in people always leans towards positive expectations ("this will never happen to me"), which expresses itself in neglect of clear risks, especially if these risks aren't of immediate nature and instead operate on a long-term, invisible bases.

Halo Effect: drawing conclusions from first impressions, based on visual characteristics and lacking in statistical or other provable data. Preferences in taste and visual condition will often outweigh safety factors and create a sense of trust that requires no validation.

Confirmation Bias: only believing the information that conforms to existing viewpoints. Forces you to only pay attention to beneficial opinions at the expense of counterpoints. For example, there are firmly set beliefs that rural produce is natural, safe, and not in need of checking; or that genetically modified products are harmful.

Salience Effect: evaluating an issue based on vivid examples from memory, like a particularly media-covered case of food poisoning. This causes a residual belief in people that all similar products are potentially poisonous, and they avoid consuming them.

Social Norm: a widespread behavior model in society, forcing you to conform to tendencies even if they go against your values and aspirations. Informing the National Food Agency isn't commonly accepted practice and is viewed as "denouncement" and asocial behavior.

Avoiding Loss: people feel loss much more keenly than the reward from any gains. Accordingly, they will do everything in their power to avoid loss and even the slightest risk becomes not worth it. Despite the aforementioned "Excessive Optimism", there is a well-defined perception of risk when it comes to products that are considered "contaminated" or manufactured in non-hygienic conditions. This feeling is particularly intense in consumers who have had personal experience with rural or crude (homemade or small farm) production processes.

High-Potential Moments: moments of high potentials are points in the customer journey that provide the highest chance of information retention and analysis, since the topic is relevant and pushed to the foreground. This occurs naturally in the moment-to-moment of behaviors, such as grocery shopping, going through food poisoning, caring for a child (aged 0-10), etc. It is preferable for this moment to occur often, which makes childcaring and store visits as most advantageous in this regard.

High-Potential Personas: Using the trust and capacity chart, several personas were identified who show the most promise for desired behavior intervention. These Personas are (arranged by priority): quality-oriented consumer, budget-oriented consumer, time-savvy consumer, and consumer scared by industrialization.

Aspirations of these personas are to be considered when creating the communication strategy; for elaborating specific messages that fit, and for identifying thought leaders (messengers).

Behavioral Interventions:

Recommendations relate to two desired behaviors: a) searching, as well as increasing demand for the information related to food safety – actualization of this issue in consumers' minds (creating and raising awareness); and b) increasing the number of violation reports / notifications to the National Food Agency.

When elaborating the interventions, we use the EAST framework, which allows us to adjust solutions to identified barriers (comfort, anxieties) and drivers (jobs-to-be-done, gains, pains).

Using the aforementioned approach, achieving desired behavior requires its implementation be Easy (simple), Attractive (motivating), Social (socially acceptable), and Timely (reminding to implement behavior at high-potential moments).

MAKE IT EASY

People gravitate towards behaviors that are easy and do not require effort – be it financial, cognitive, or time-based. Even in conditions of high awareness a behavior will not occur if it is not simple. Several factors define this simplicity and considering them is crucial in elaborating interventions.

Information regarding food safety needs to be widely accessible (available through a variety of channels) and instantaneous:

- Wide accessibility: website or app tailored to the consumer, where information is readily provided, easy to filter through, and regularly updated;

- Instantaneous: information utilization needs to occur at the spot where the behavior happens, for example within the grocery or catering facility. After leaving the location motivation decreases and other priorities emerge for the consumer (see „Salience" and "High-Potential Moments").

Communicating and/or reporting to the National Food Agency needs to be simple:

- Besides the hotline, other communication channels have to be added. An example can be a mobile app that can be used to file a report. This will raise activity in the younger segment, which, based on research, exhibit the highest motivation in the regard. Additionally, remote (not in-person through phone) communication tools will help alleviate the aforementioned social barrier. Reporting digitally allows someone to do this at any moment, not just during work hours.

- The National Food Agency's hotline has low visibility and seeking it out requires the consumer to find the website first. Further, on the website the hotline isn't immediately visible, is placed at the bottom of the page, and the answering machine informs us that we've called to the "Ministry of Environmental Protection and Agriculture of Georgia", which can be confusing, since it isn't common knowledge that the NFA is a subordinate agency to the Ministry. A separate hotline is preferable that will only serve consumers seeking help with food safety issues; this will both emphasize the importance of the issue and speed up the process.

Label is not readable (due to the small fonts) and it is preferable to employ a technological solution to deal with this issue (see the illustrative interventions: "Labeling", "QR Code").

Chunking of information: highlighting several simple and commonly occurring behaviors to aid the understanding and use of information, and breaking it down into "steps", for example: 1. Check the expiration date; 2. Look up or ask when the last inspection took place; 3. Read the list of ingredients; 4. Make sure that perishable foods are stored in the fridge; et al.

Checking up the information about the last facility control is difficult. The consumer has to download Excel files from the website of the National Food Agency, which is realistic only in case of very high motivation (e.g., for academic research). Information needs to be easily accessible (see above – app/website).

Defaults: this principle implies thinking up events that will automate certain behaviors, for example: introducing a new regulation or otherwise obliging the business to display a document detailing food safety control results, or the National Food Agency's hotline and logo within the premises of their facility. As for the manufacturers – they must place this information on the label. All this should be communicated to consumers so that they are aware and willing to request this information later when visiting the facility or the manufacturer.

MAKE IT ATTRACTIVE

Attractiveness is defined by two factors: salience – whatever stands out due to being outside of established standards or formats; and incentives – financial or non-financial gain.

Salience:

Any information that we want to attract attention to has to be visually distinct and signal high priority. For example: on-sale labels at shelves are always noticeable, and similar methods can be used when elaborating and placing signs for food safety (e.g., the hotline number, app name, labeling, etc. See also: Illustrative Interventions).

Incentives:

Gaming: contests and reward expectations raise motivation and can be used to stimulate growth of food safety practices both in the business sector and the citizenry.

Business Sector:

- A reward from the National Food Agency for the entity or manufacturer that is compliant with the food safety standards (e.g. during repeated inspections). This also contributes to public acceptance (see Principle of Commitment below).

- Develop incentives for business companies: grants for raising standards, shortlisting best-performing vendors, tax benefits, technical assistance programs (training and education), etc.

- Ratings: ratings can be created both by the official state agency and by a "watchdog" NGO based on official statistics. Involving the media in publicizing the ratings will be beneficial.

Among citizens:

Food Safety Champions: Contest sponsored by the state agency or non-governmental organization that will promote active citizens and showcase their contributions to the food safety issue. See also the demonstration interventions (online game). Such contest will also emphasize social norms (see below).

MAKE IT SOCIAL

Any behavior is conditioned by the social context – the degree to which it is accepted or approved by society. Emphasizing social norm always increases motivation.

Communicating social proof: highlighting the food safety violation reporting as a desired and accepted form of behavior. Communicating and providing wide media coverage of respective Agency responses creates a feeling that this behavior is the right one, and it serves a positive goal. See also "framing" in demo interventions.

Principle of commitment: this principle for behavior change is an active tool in improving and expanding the food safety practices; it is expressed in business entities recognizing the importance of food safety standards and making a promise to society to comply with those. Several factors are to be considered when using the principle of commitment:

- A public commitment: it is preferable to communicate the commitment to comply with standards publicly; for instance, by means of a media or social media campaign and by using

various other channels such as company websites or facilities to spread the message that they are part of this "movement";

- Public commitment with the hope of future recognition: bringing in game elements described above to identify and celebrate the best contestants / leaders;

- Wide communication of public commitment: this refers to events such as displaying rewards or inspection results in the interior space of the business entity, sending a clear signal that they are part of the "movement" and reinforcing the commitment to comply with standards.

- Involving opinion leaders in public commitment: the effect of this principle increases when opinion leaders are involved in some form. Opinion leaders – people who are trusted in the eyes of the public, - either set an example and encourage others to follow, or publicly acknowledge the efforts of their audience in performing the desired behavior.

Interventions in high-potential moments (MAKE IT TIMELY) are described above in "High-Potential Moments" chapter of this report.

DEMO INTERVENTIONS

We are presenting several specific intervention ideas, the scale up of which needs to be defined through testing with various methods. Several activities are already implemented and underway, albeit in need of improvement or refinement.

Intervention #1: A food safety app or website (technological solution)

Due to the complexity of the issue, the consumers, as noted, have trouble retaining and analyzing large quantities of information. Awareness of harmful substances and the main determinants of food safety in general, is low. Additionally, the National Food Agency's website isn't very user-friendly, and navigating the control results is inconvenient. It is a positive fact that the UVNO app developed by the Europe Foundation is aimed at the same goal. It was used to browse through some parts of the results of controls carried out by the National Food Agency. Currently the app is not functioning. It would be beneficial to renew and upgrade it, to allow efficient access to all inspection results, as well as register consumers' reports on violations. Below we have listed some of the functions the app may have:

1. **Search for specific products** (by name, by scanning its barcode, or by photo ID) that would bring up the following information:
   a. Ingredients with explanations
   b. Harm labeling (indicating with icons)
   c. Safety rating (see below)

2. **A simple system for looking up specific manufacturers/facilities** (by name):
   a. Control results for manufacturing processes/facilities

b. Relevant certificates or documents (e.g. ISO) present at the facility

c. Website

d. Safety rating – see below.

3. **Frequently Asked Questions**

4. **Simple food safety guidelines (infographics):**

a. Glossary of Terms

b. List of allowed substances (tagged with searchable keywords)

c. Safety determinants

5. **Tool for Reporting Violations:**

a. Uploading photos/videos

b. Optional feature to attach textual information.

c. Option to select possible violation from a drop-down list.

This intervention will serve to ensure: a) simple search for information; b) simple search of label information; c) easy access to the food safety information; d) awareness raising on food safety importance; e) simple process for reporting of violations and f) better visibility of the National Food Agency. Simple reporting process should increase consumers motivation as they will have a possibility to notify the NFA about violation directly from the store or catering facility they are currently visiting, and to support their message with uploaded photo proofs. A remote notification system is much more effective11 than the currently available way of the phone call. An app is more efficient in terms of identifying a person; moreover, it is better adjusted for younger audience, which was notable in our study as being particularly motivated and self-conscious regarding the food safety.

Intervention #2: Safety Rating

A simple methodology of food safety rating, which classifies food by criteria of ingredients and safety control results. It is possible to apply here the tested and approved international practices.

Ratings can be utilized in various ways, namely for a) looking up a facility on the website and seeing its rating (via the web-resource mentioned above); b) giving the manufacturer an option to display the rating on their produce or website, thus improving their visibility in terms of safety. Rating is a simple way of identifying safe goods, while also motivating both manufacturers and retailers to comply with standards and avoid low ratings.

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[11] Kevin C. Desouza & Akshay Bhagwatwar (2012) Citizen Apps to Solve Complex Urban Problems, Journal of Urban Technology, 19:3, 107-136, DOI: 10.1080/10630732.2012.673056; Fadaei, H. and Bayazidi, M.: A Comparative Study of Utilizing Mobile-GIS Technology to Collect Online Crime..

Intervention #3: Labeling of Products (QR code)

Based on the safety rating, a QR code is generated that leads to the following information:

- Safety rating;

- Manufacturer's website or name (if website unavailable);

- Contact information;

- Date of last control;

- Ingredients.

The QR code can be acquired through the National Food Agency, and the manufacturer can choose to use it by placing it on their labels. By scanning the code, the consumer will be able to view contents and other information on a product right at the counter. As an option, the QR code can be visualized like the "safety icon" and then intensively promoted through the relevant information campaign.

Intervention #4: Control Sticker and Certificate

Displaying the National Food Agency's proof of evaluation certificate in the interior space of the facility, in a spot of high visibility, as well as placing a sticker on the entrance doors. This will serve to emphasize a social norm and push competitor facilities to acquire their own safety certificates. The sticker should be visually distinct, attractive, and be in line with the "safety icon" style.

Intervention #5: Reframing incentives for reporting violations to NFA

Building up the communication campaign using the jobs-to-be-done, such as caring for others and modern behavior model. Promoting success stories (about reported violations) by means of storytelling, describing what possible problems were prevented because of reporting. Positioning reporting to NFA as a **citizens' responsibility and manifestation of European, civilized behavior model of collective responsibility.** Promoting food safety not as a fixed concept, but as **a dynamic process** (similar to a weather forecast), which continuously needs recurrent control, as there is no constant data in food safety domain. The food safety app or other technological solutions are good means to achieving this goal; however, this campaign must be managed with care so as not to inadvertently increase the feeling of insecurity.

Intervention #6: information and awareness raising campaign

The campaign should aim to raise general awareness of food safety (e.g. promote the "safety icon"), especially in terms of raising the local produce standards. The campaign should be conducted through the aforementioned reframed approach and integrated communication strategy, and should preferably contain the following components:

- **Messenger**

Involving trustworthy and relevant opinion leaders, including integration with popular talk shows, engaging famous chefs, food bloggers, and doctors.

- **Gaming and Leaderboards**

A fun online game of food safety, which using quizzing and trivia testing awards users with points and ranks them on a leaderboard. Achievements should be sharable on social media, and food / catering facilities can be engaged to promote the game and motivate players by offering discounts or other gifts to winners.

- **Involving producers, manufacturers and food facilities in the "safety campaign":**

By engaging them to publicly acknowledge the importance of the issue and to set an example by joining the safety rules and standards compliance movement. Spread the information via social networks and mass media, where businesses will talk about their priorities and implemented measures. Possibility for partnering with a media agency for this.

- **National Food Agency Award**

The possibility to introduce a new category in an existing competition (integration in responsible business contests or similar events) and highlighting outstanding manufacturers and facilities in various media.

- **Focusing on Youth**

Young people are a standout segment, and the campaign could be directly targeted at this group as well, by planning tailored events.

INTERVENTION	EASY	ATTRACTIVE	SOCIAL	TIMELY
Food safety app or website (technological solution)	√	√	√	√
Safety Rating	√	√	√	√
Labeling (QR Code)	√			√
Control sticker and certificate		√	√	√
Reframing incentives for reporting to the National Food Agency			√	
Information and awareness raising campaign	√	√	√	√