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COVID-19 IMPACT ON FOOD SECURITY IN AZERBAIJAN

Bachelor Thesis

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This paper conforms to the requirements for a Bachelor Thesis

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(signature of the supervisor)

Admitted for defence“ “..... (date)

I have written this Bachelor Thesis independently. Any ideas or data taken from other authors or other sources have been fully referenced

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(signature of the author and date)

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Introduction

Important policy goals that focus on eradicating poverty and hunger, which are substantial and fundamental causes and consequences of food insecurity, are critical to resolving Azerbaijan's national food security crisis. A number of studies have examined the state of food security at the national, family, and individual levels. The main problem, which lead to food insecurity is non-availability of food, which creates price shocks, is one of the main causes of food insecurity. Food security is more difficult in a country like Azerbaijan, where agriculture accounts for a small percentage of GDP development. Despite enormous investment in macroeconomic programs, advances in gross domestic product growth, and trade between 2010 and 2015, food insecurity among rural households and individuals remains a major concern in Azerbaijan (FAO,2015). (Huseynov,2019).

The COVID-19 pandemic is a global health and humanitarian issue that puts millions of people's food security and nutrition at risk (FAO,2020). According to the The Food and Agriculture Organization, the Covid-19 affected the supply and demand of the food, and these two aspects are connected with food security. (UN,2020). COVID- 19 factors contributed to substantial and widespread rises in global food insecurity, affecting vulnerable households in almost every country, and the effects are anticipated to last until at least 2022(World bank,2021). In 2020-2021, COVID-19 is expected to have significantly increased the number of persons experiencing acute food insecurity and WFP (2021) estimates that 272 million people in the countries where it works are food insecure or at danger of becoming so.

According to the Azerbaijan's health authorities, the first case of Covid-19 was detected in February 28, 2020 and this number increased till 596973 and the number of confirmed death is 7983 people(WHO,2021). After detecting first case, government made a lot of restrictions and in Azerbaijan, quarantine was introduced, as in many other countries. Also, Azerbaijan closed their borders which impacted on trade of food with a negative side.

According to the FAO statistics (2018-2020) Azerbaijan in indicator of prevalence of undernourishment is less than 2.5% from 2018-2020 (annually 3 years), and the prevalence of moderate or severe food insecurity in the total population from 2018-2020 was 8.9% and prevalence of severe food insecurity in the total population was less than 0.5%. Number of severely food insecure people in Azerbaijan was less than one hundred thousand and the number of moderately or severely food insecure people was nine hundred thousand (FAO, n.d). According to this number, 1% of the population of Azerbaijan had problems with the acute food shortages, and 9% of the population had moderate or severe food shortage

problems. Comparing with the Europe indexes, based on FAO statistics (2018-2020) the prevalence of undernourishment was less than 2.5%, prevalence of severe food insecurity in the total population was 1.3%, prevalence of moderate or severe food insecurity in the total population was 8.1%. number of severely food insecure people in Europe was nine million seven hundred thousand and the number of of moderately or severely food insecure people was sixty million seven hundred thousand (FAO, n.d). So based on this number, 1.3% of the population of Europe had problems with the acute food shortages, and 8.1% of the population had moderate or severe food shortage problems. Comparing Europe and Azerbaijan indexes, it is understandable that there are no huge differences between them, and in one even index Azerbaijan and Europe has same index. Condition of the food security in Azerbaijan and in Europe almost the same.

Azerbaijan has a huge investment and works regarding the agriculture. It is one of the main part of the economy of Azerbaijan after oil production. The Covid-19 disease had impacted on the world with negative side and here is a question, how does Covid-19 impacted on a Food security. As it was mentioned before, food security in Azerbaijan faced with a lot of problems. Does Covid-19 aggravate the situation or oppositely helped to solve this problem?

The aim of this bachelor thesis is to map out the impact of Covid-19 on food security on the case of Azerbaijan. Government try to pay more attention on agriculture, as it wants to change their direction from oil to agriculture, and the agriculture sectors main aspect is food security. And it will be good to show this research on Azerbaijan case.

For achieving the aim of the bachelor thesis, the author should complete the follow tasks:

- Introducing theoretical aspects of term food security
- To analyse previous empirical studies about Food security in Azerbaijan before Covid-19
- To analyse the impact of Covid-19 on food security globally and analyse the effect of Covid-19 on food security in different countries
- Choosing research method for this work
- Make an interview with Azerbaijani specialist, in order to understand the Covid-19 impact on food security in Azerbaijan
- Analyse the information taken from specialists.
- Make a conclusion based on Covid-19 impact on food security in Azerbaijan

The bachelor thesis consists of two part. In the first part, theoretical background of food security will be: What is food security, the global effect of Covid-19 on food security,

and analysing the previous researches based on food security in Azerbaijan and in other countries: how was it before Covid-19. Second part will be introducing the methods; which author will use to reach the aim. Which way of analysing is better, quantitative or qualitative methods. After choosing the methodological part, author will analyse the results in section 2.2.

Key words: Food security, Covid-19, Azerbaijan:

1. Food security issues and impact of Covid-19

1.1 Definitions of food security

A changing climate, a growing global population, rising food prices, and environmental stressors will all have substantial but unknown effects on food security in the next decades. Adaptation techniques and policy solutions to global change are urgently needed, including alternatives for dealing with water allocation, land use patterns, food commerce, postharvest food processing, food costs, and food safety. (IFPRI, N.d).

But firstly, there should be an explanation of “what is food security”. As evidenced by the numerous attempts at characterization in research and policy use, food security is a fluid notion. Many previous definitions focused on food production, whereas more modern versions emphasize food access. Explanation of food security term was very challengeable for 20th century. This term explained in different ways, by adding new meaning for it, and since that a lot of definitions and reverse were emerged. The 1974 World Food Summit cleared that the right definition of food security is “appropriate world food supplies of basic commodities available at all times to maintain a steady development of food consumption and offset changes in production and prices”, in 1983 the Food and Agriculture Organization of the United Nations emended and broadened the definition for focusing on access on physical and economic resources for satisfaction of people needs, and finally in 1996 World Food Summit appended to these meaning two extra aspects: "safe and nutritious" food that corresponds to dietary requirements plus "food preferences" for an active and healthy lifestyle, so because of that, there have been 194 studies on the idea and definition of food security, as well as 172 studies on indexes (Renzaho & Mellor, 2010). All this adding and changes in the meaning, made a lot of discussion and argues among the researches on the theme of what is exact meaning of food security, which dimension does it measure, and how correctly to measure food security.

One of the biggest effort, which played role in explaining the definition of food security was that, there was distribution on not right access to the food in country, but among

the householders, for instance, analyses of data on intra-household behaviour suggested that expenditure allocations by women compared with men favoured investments in the health, nutrition, and education of children in the household and that parents do not always have identical preferences toward male and female children. (Jones, Ngure ,Pelto & Young, 2013).

For better understanding the term of food security, author has decided to select the most common explanations of term food security, compare them and analyse which meaning do people use more in our days. There are almost 200 explanation of a food security, but the author would like to point five definitions: FAO (1996) “Rome Declaration on World Food Security and World Food Summit Plan of Action, the British organization Oxfam (2001), World Bank Organization (1986), Anderson (1990), and FAO (1983).

The most common definition, on which all authors rely, is “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” firstly was introduced in Rome in 1996 on “Rome Declaration on World Food Security and World Food Summit Plan of Action” (FAO, n.d). Although, in most research papers and books, based on food security, use this term of speech with introducing this term. According to Mechlem (2004), it incorporates components from previous definitions, but adds the words "safe" and "nutritious," recognizes dietary demands and the importance of cultural influences, and views an active and healthy life as a larger objective than food security. the definition maintains three traditional aspects of food security: availability of staple foods, supply stability, and universal access to these supplies, but also introduces the concept of adapted food, or the 'biological utilization' of food, which is dependent on factors such as cooking methods, food consumption patterns, and a person's health, which also covers food security as a problem at all levels, from individual to global (Mechlem 2004). This explanation was presented first by Anderson (1990), but he had distinctive Dimensions: “a) The ready availability of nutritionally adequate and safe foods, and B) The assured ability to acquire acceptable foods in socially acceptable ways (EG, without resorting to emergency food supplies, scavenging, staling, and other coping strategies) (p. 1575)” (Quandt, Arcury, McDonald & Bell & Vitolins, 2001). Almost all industrial countries rely the definition of food security on these dimensions. In opinion of different authors, it is incorrect way explanation. For example, Renzaho and Mellor (2010) in their work “Food security measurement in cultural pluralism: Missing the point or conceptual misunderstanding”? had criticized these determinations, because in their opinion, when viewed in light of present political and economic circumstances, the term falls apart. They mention that despite the environment of

all countries are almost the same, the political and economic factors making impact. For example, drought, armed wars, insufficient agricultural policy, and weak governance have all had an impact on household livelihood in African countries, which has been exacerbated by the human immunodeficiency virus/acquired immunodeficiency syndrome epidemic; high population density, limited human resources, lack of skilled labor due to high migration within and outside of islands, limited access to markets due to difficulty of community outreach and interisland transportation, declining soil fertility, land ownership issues, and natural disasters have all been factors in food insecurity in the Pacific region's less developed countries (Renzaho & Mellor,2010). All this factors show that food security is not only reliable with a food, also economics, industrial, humanity factors play a rural role in food security.

When it comes to Oxfam definition, firstly, it is worth saying what this organization is. Oxfam is a global movement of people battling inequality to end poverty and injustice, which work with thousands of partners and allies in over 70 countries to help communities build better lives for themselves, grow resilience, and protect lives and livelihoods even in times of disaster. Their purpose combat the inequities that keep people imprisoned in poverty and injustice by addressing the systems rather than the symptoms, and we campaign for real, long-term change. (Oxfam,2021).

Oxfam's explanation of the term food security: when everyone has constant access to and control over adequate quantities of high-quality food for an active and healthy lifestyle. A review of fundamental information regarding the emergency setting is part of an Oxfam food-security assessment. There are two elements of food security in explanation of Oxfam: availability (the quality and amount of food available), access (right to food obtained through purchases, exchanges, or claims) Oxfam is frequently concerned about the gender dimension of food security, as there are usually defined gender roles in food purchasing, management, and preparation, as well as gender divisions in food access outside the house and overall access to and management of resources. Oxfam's work frequently includes an examination of gender interactions. For example, the Public Health Assessment Tool (PHAT) emphasizes the significance of including both men and women as important informants, as well as interviewing women as household leaders. However, acquiring information on inequalities within the family is not always a priority during an initial fast evaluation of a situation of acute food insecurity, because interventions are typically targeted at entire communities or populations.(Young, Jaspars, Brown, Frize & Khogali, 2001)

Oxfam takes the basis of the sexual separation between people. Assurance here such expressions as the correct separation of food, focus that Oxfam also agrees with the fact that base of food security located in a right dividing foods, but nevertheless, their attention directed on gender sharing of food between male and female.

FAO research focused on food access in 1983, resulting to a definition based on the demand and supply sides of the food security equation: “Ensuring that all people at all times have both physical and economic access to the basic food that they need” (FAO, 1983). In food security analysis, the concept was revised to incorporate the individual and household level of aggregation in addition to the regional and national levels of aggregation. (FAO, 2006).

The World Bank Organization (1986) define the food security as an as all individuals having access to enough food for an active, healthy existence at all times. In their document, they mention Efforts to secure food security can be viewed as an investment in human capital that will result in a more productive society. So point of view of World Bank Organization based on based on, a population that is well-fed, healthy, active, and alert contributes more efficiently to economic development than one that is physically and mentally impaired due to low nutrition and health.

Food security issues are caused by a lack of purchasing power on the side of nations and households, not by insufficient food supplies, as is commonly assumed. Most households will eventually have enough income to buy enough food as a result of economic expansion. Supporting economic growth while ensuring an equitable distribution of income is thus the first aim of economic policy, and it should remain so. But there are two well-known difficulties: economic growth takes time, and, even when it is achieved, the present distribution of assets and opportunities means that large numbers of poor people are likely to increase their purchasing power only slowly. (World Bank Organization, 1986)

World Bank organization associate the food security with economic factors. As mention above, without the proper food security, the economics of the country can be in a worse situation, than it was.

For better understanding, table 1 will be presented, in which all definition would be introduced.

Table 1

Definition of food securities

| Name of Organizations | Year | Meaning |
|--|------|--|
| Rome Declaration on World Food Security and World Food Summit Plan of Action | 1996 | Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life |
| Anderson | 1990 | The Ready Availability of Nutritionally ADEQUATE AND SAFE FOODS, AND B) The Assured Ability to Acquire Acceptable Foods in Socially Acceptable Ways (EG, WITHOUT RESORTING TO EMERGENCY FOOD Supplies, SCAVENGING, STALING, AND OTHER COPING STRATEGIES) |
| Oxfam | 2001 | everyone has constant access to and control over adequate quantities of high-quality food for an active and healthy lifestyle |
| FAO | 1983 | Ensuring that all people at all times have both physical and economic access to the basic food that they need |
| World bank organization | 1986 | all individuals having access to enough food for an active, healthy existence at all times. |

Source: Compiled by author based on definitions of Rome Declaration on World Food Security and World Food Summit Plan of Action(1996), Anderson (1990), Oxfam(2001), FAO(1983), World bank organization(1986)

As in more works, authors present the meaning of of Rome Declaration on World Food Security and World Food Summit Plan of Action(1996), author would like to make a research relied on this meaning “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”, as many authors in many works mostly rely on this meaning.

1.2 Previous studies of Food Security in Azerbaijan and international experience

This section will be divided in two parts. In first part author would like to introduce scientific researches, which were made based on Azerbaijan, and compare and analyse them. In second part, author would like to introduce international works of food security, which were done in different countries, compare and analyse them.

According to the works, which was done before the Covid-19 crisis, situation in Azerbaijan with food security wasn't stable. Azerbaijan government made a lot of efforts for increasing the agriculture sphere. One of them is the country devised a food security plan, which was authorized by presidential order on March 2, 2001(Quliyeva,2019). The implementation such plans stanching the problem of food security, but didn't solved this problem decisively. In this paragraph, author would like to analyze the works of three Azerbaijani authors and give a feedback for their work. These works are: Quliyeva(2019), Huseynov(2019), Faraliyeva(2021). Author would like to mention that Quliyeva(2019) and Faraliyeva(2021) works were done in Azerbaijan, and writing skills is not the same, as in Europe, and make a detailed analysis is impossible, as the research method used in this works are descriptive method.

Quliyeva (2019) connect the problem of food security with a human problem: food security is a vital indicator of human presence since it entails a system of measures to ensure the continuous and long-term satisfaction of the population's demand for food products within the framework of defined quality standards. According to Quliyeva (2019), The main problem, which countries faces, with ensuring the food security is: the agro industrial complex's capacities are not fully utilized, and the volume of production is somewhat offset by the population's demand for food. The agro-industrial complex aims to provide food, livestock, and feed to the population through the combined efforts of agricultural and industrial firms (Quliyeva, 2019). One of the main problem of Azerbaijan in a food sphere is consuming much less nutritional value on a daily and annual basis, with the majority of these items being high-calorie foods: the index of the meat is 84 kg, whereas in Azerbaijan, the number is 33 kg (Quliyeva,2019). Quliyeva(2019) states agricultural development has strategic value in terms of safeguarding the country's food security. For developing a food security in different regions of Azerbaijan there were established different labs, for determining the food product's quality physicochemical, chemical, and microbiological research is conducted, but various types of food goods, services, and maintenance conditions do not meet regulatory and technical documentation standards, and the provenance of food products is unknown, and In these circumstances, legislative changes, increased quality control, conformance of national standards to international criteria, the establishment of sophisticated laboratories, and the expansion of links with international organizations are all required for overcoming these problem (Quliyeva,2019).). Overall, in Quliyeva's opinion, the it can be stated that the government's economic policy is a critical role in guaranteeing food security.

Farzaliyeva (2019) connect a food security with more economical factor: a requirement for every country's economic well-being and independence, regardless of whether it exports or imports agricultural products, raw materials, or food, and if there is effective legislative backing, this state can be achieved. Whereas Quliyeva(2019) takes only in account the internal facts, Farzaliyeva(2019) in her work “food security in Azerbaijan: trends, problems and prospects” takes in account as internal facts, as external facts too, such as increasing risks of instability of the world economy, volatility of the exchange rate, reduction of world food supplies. the purpose of Azerbaijan's food security is to offer dependable, safe, and high-quality agriculture, fish, food, and raw resources to the population (Farzaliyeva,2019). Farzaliyeva(2019) brought in example two ways of prospering the food security: supporting national agricultural producers is a top priority, Equal support for both agricultural producers and food consumers. Despite Azerbaijan's efforts in recent years to actively support its agricultural producers, more detailed legal mechanisms for extending economic access to food for all sectors of the population and improving food quality are needed to address food security issues (Farzaliyeva, 2019). So her solves are: Prioritizing assistance to those who are most in need, more efficient use of mechanisms to assist regions with limited food production or those are experiencing harsh conditions, better food safety and quality control system throughout the entire manufacturing chain.

When it comes to Huseynov (2019), the main problems from his point of view is that, food availability and accessibility in Azerbaijan has not expanded enough to fulfil demand for household and individual socioeconomic circumstances. Numerous factors impacting food security – both directly and indirectly – have been empirically investigated in Azerbaijan at the micro level or through targeted group approaches at the home or farm level (Djuric, et al, 2017). Huseynov (2019) points out that the main factor, which impact on food security is a climate changes, and there is a widespread belief that climatic variability will act as a multiplier, amplifying the current food security threats. Huseynov’s (2019) aim was to using the ARDL approach, experimentally investigate the dynamic link between food security and a set of multidimensional drivers in Azerbaijan (food imports, trade-to-GDP ratio, exchange rate, inflation rate, climatic change, and urban population growth). Food imports, exchange rates, inflation, climatic change, and urban population increase, according to the ARDL model, have a detrimental impact on Azerbaijan's national food security dynamics and the trade-to-GDP ratio, on the other hand, has a beneficial impact on food security (Huseynov,2019). Regarding to the opinion of Huseynov (2019), in order to achieve Azerbaijan's long-term food security goals, inward-looking policies must be devised, and

agricultural research and development must be strengthened to boost agricultural growth and rural farmers' livelihoods.

Azerbaijani people invest on the food almost the half of their budget, 45%, whereas for example: in USA it was 6.5%, in UK- 8.7%, in Canada-9.3% in 2014 (Quliyeva, 2019). And despite of that, the Azerbaijani food security is in not good condition. All three authors have different opinion of why food security isn't systematically based on the proper way. The main problem of food security in Azerbaijan is that, Azerbaijan government never analysed the agriculture problem in a deep way. There weren't any tries of analyzation of the problem. Implementation the way of solving problem, which was written in Farzaliyeva's work (2020) doesn't mean that Azerbaijan faces the same problems as in Europe. In all these works, authors gave their point of view of what is the cause of food insecurity in Azerbaijan and all of them are differ from each other in some way. If there were detailed analysation of agriculture sector, the problem of food security might be decreased. Nevertheless, the ratio of trade to GDP has a favourable effect on food security (Huseynov,2019). The definition of the food security, which were used by the authors, is same in three works, Farazaliyeva(2021) and Huseynov(2019) but the written text is somehow different. Farzaliyeva (2021) claims that Food security is a state of the economy in which the country's population has guaranteed access to food, drinking water, and other products necessary for individual physical and social growth, as well as the country's population's expanded reproduction. Huseynov (2019) explain in different way, explaining the term of food insecurity - food insecurity arises when people lack physical, economic, or social access to safe and nutritious food, and chronic food insecurity develops when people are unable to mitigate or absorb the negative effects of food price shocks. Both these meanings are connected with each other and they are same, however explained in different language. Whereas Quliyeva (2019), author brought two meanings: Food security in the country is an important component of national economic security and social welfare, and it is also a top concern for public policy, involving a variety of elements, and another meaning, food security refers to a set of policies that ensure the population's need for food is met on a consistent and long-term basis while adhering to specified quality standards. Both meaning are connected with the previous authors' definitions. Three authors connected food security problem with the humanity and economic problems, but they did it in different ways of speech. About the works, the author would like to point out the work of Huseynov (2019), which deeply analysed the food security problem and this work might be helpful for future researches of food security in Azerbaijan.

With better understanding of food security problem, author decided to analyse food security problem in other countries for more deep understanding of food security problem.

The work of Meskhia (2016) is about food security problems in Georgia. Meskhia (2016) claims that in today's Georgia, a number of objective and subjective elements define the threats to food security: unfavourable climatic circumstances, low industrial performance standards, paucity of raw material resources, agricultural policy mismanagement, and so on. According to Meskhia (2016), Georgia has a particularly low ratio of agricultural fields, particularly plough land. The rural sector is known for its conservatism, and agriculture, unlike other real-world industries, has a built-in response time, and it is characterized by technical and technological underdevelopment, low investment attraction, and low electric power availability in arable farming and is dependent on edaphoclimatic conditions (Meskhia, 2016). For developing the agriculture sector and decreasing the food security, Georgian government implemented some programs, for example, "Plant Future" is being implemented with the goal of developing fruit growing and sapling nursery, an agro-insurance program has been implemented, more than 1200 agricultural cooperatives have been established with the help of the government, projects on rehabilitating ameliorative infrastructure have been completed, anti-hail rocket systems have been erected, genetically modified products must now be labeled, and the grip on milk and dairy products and their labelling has been tightened (Meskhia, 2016). Meskhia (2016) gave some recommendations too, such as:

A food security theory, food security strategy, and Georgian food security statute should all be developed, and these publications will be focused on providing the population with worldwide food standards and optimal nutritional consumption, as well as strategic products, all while leveraging governmental funding to dramatically expand local production volume.

A new long-term strategy for the country's agricultural development should be developed. The plan will be centred on the rapid expansion of traditional agricultural production, the strengthening of the rural sector's competitiveness, and the application of cutting-edge technology and scientific and technological achievements to farming.

It would be prudent to establish an agricultural bank that would offer advantageous terms to the sector. It is also vital to develop rational budget loan-granting mechanisms and to include this special purpose bank in the process.

These were some examples of recommendations of Meskhia (2016).

When it comes to Japan, Japan's food security issue is distinct from that of the rest of the globe, as food security in Japan entails developing food self-sufficiency through expanding local output (Lama, 2017). Lama (2017) claims that The calorie-based food self-sufficiency ratio illustrates the ratio of calorie supply from domestically produced food to the total calorie supply from food in the country, however, today's issue for Japan is not just being self-sufficient in traditionally consumed foods such as rice, but also being self-sufficient in western-style foods such as wheat, beef, and dairy products, for which the Japanese have developed a taste as a result of the shift in dietary patterns. The problem of food security started in 1960's, when the economy developed, and people's per capita incomes increased, and as a result, people's dietary patterns shifted from traditional to western as they had more money to spend on food. As a result, demand for traditional foods declined, particularly rice, which Japan was self-sufficient in (Lama, 2017). In the point of view Lama (2017), Demand for labor increased as industries flourished during the period of strong economic growth, and as a result, labor migrated away from farms, resulting in a decrease in the overall population of farmers, and since the able farmers relocated to industries, the farms were left in the hands of the elderly farmers, who were rapidly aging, reducing agricultural production. Overall, Lama (2017) thinks that, while Japan intends to assure food security through local production, imports, and stockpiling, boosting the self-sufficiency of traditionally eaten food would be the best option.

The American food security analyzation, here Chilton, Rabinowich, Woolf (2012) analysed food security rates for female-headed households, as the indexes were high in compare with other households of USA. At the household level, very low food security is characterized as a periodic decrease in food consumption and disturbance of regular eating patterns due to a lack of money and resources (Chilton, Rabinowich, Woolf, 2012). According to the Colerman-Jenson, Nord, Andrews (2010) statistics, when compared to all other households, female-headed households with children had the highest prevalence of very low food security (10.8 percent v. 5.4 percent) in the USA. Chilton, Rabinowich, and Woolf (2012) clarify themes associated to violence exposure and analyse the potential association between the type and quality of reported violence exposures and the severity of household food insecurity. Quantitative research studies show a link between maternal depressive symptoms, household food security, and poor child development; far fewer studies have looked into links between food insecurity and experiences that may be linked to depression, such as domestic violence and adverse childhood experiences, while qualitative reports about rape and sexual assault, child abuse, attempted suicide, and perpetration of violence show a

link between food insecurity and experiences that may be related to depression, such as exposure to domestic violence and adverse childhood experiences (Chilton, Rabinowich, Woolf, 2012). Chilton, Rabinowich, Woolf (2012) for investigating women's experiences with food security and public assistance programs such as SNAP (Supplemental Nutrition Assistance Program), WIC (Special Supplemental Nutrition Program for Women, Infants, and Children), and TANF (Temporary Assistance for Needy Families), the study used qualitative research combined with quantitative measures. Basic demographics, membership in public assistance programs, and the eighteen-question US Household Food Security Survey Module are among the quantitative data collected and published here (Chilton, Rabinowich, Woolf, 2012). Chilton, Rabinowich, Woolf, 2012 used the Kemper three-item screen to assess maternal depressive symptoms, with mothers and caregivers being classified as having maternal depressive symptoms if they answered yes to two of the three depression questions. We also used validated questions from the Third National Health and Nutrition Examination Survey to assess mothers' self-rated health and caregiver-rated child health, while for qualitative method focus on investigation's violence-related findings. Because childhood trauma and life-changing violence are connected to severe food insecurity, policymakers and doctors should include violence prevention initiatives when addressing hunger, according to the findings (Chilton, Rabinowich, Woolf, 2012).

When it comes to Estonian food security problem, Poldaru & Roots (2018) started with that, historically, the volume of agricultural output produced in Estonia was adequate to feed the country's population while also allowing surplus production to be exported. Following Estonia's reunification in 1991, agricultural land use and productivity in the county began to decline, as seen by the shrinking area of agricultural land, which caused minimum number 682000 ha in 2002 (Poldaru & Roots, 2018). Poldaru & Roots set up 2 hypotheses for this study: describe the rational structure of land use in order to provide the population's food security in terms of the primary foodstuffs, as well as the current production and export volume of milk products; identify the rational land use pattern assuming a considerable growth in future dairy output and export. Poldaru & Roots (2018) research focuses on food security's physical availability, and the usage of arable land is optimized to define the production capacity of the primary commodities as well as the export capacity of dairy products in the Estonian agriculture and food sector. The method, which authors used is quantitative research method. A summary of the study's linear programming land use optimization methodology, the optimization model has 163 variables separated into seven groups, as well as 178 constraints divided into six groups (Poldaru & Roots, 2018). According

to the study of Poldaru & Roots (2018), 392,105 hectares of arable land is necessary to feed the Estonian population with the basic foodstuffs, and improvements in hog and poultry self-sufficiency are required if Estonia wants to reduce its cereal exports. Analyses show that Estonia's agricultural and food sector possesses the land resources needed to help achieve the objective of guaranteeing food security for the world's population Poldaru & Roots, (2018). The analyzations of the food security in different countries were done in different ways. Firstly, Author would like to explain why these works were chosen for analyzation. Georgia is the neighbour of Azerbaijan, and it would be interesting to see how nebohoud country's situation with food security and which actions were taken for reducing this problem. America and Japan is developed and economically strong countries and it will be also interesting to see how their food security problems analysed. And finally Estonia, this country is prospering from day to day, economically, it is strong country, so the food security analyzation will be interesting to analyse too. All definitions, which were given in these works are somehow same and have connections with each others. Merskhia (2016) claims that food security refers to the situation of a country's economy in which the entire population has physical and economic access to ecologically sound and high-quality food. Also Merskhia (2016) things that at the level of independent countries, defining "food security" requires a more precise, specific, and complex approach, particularly for those countries that fall into the low-income category or that, due to objective and subjective conditions and factors, must rely primarily on imports or humanitarian aid from the international community to achieve food sufficiency. Lama (2017) accepts the definition of food security, which FAO gave "Food security exists when everyone has physical and economic access to enough safe and nutritious food to suit their dietary needs and preferences for an active and healthy living at all times". Chilton, Rabinovich, Woolf (2012) answers to the question what is food security, by explanation term food insecurity- defined as a lack of sufficient food for an active and healthy life as a result of economic hardship. In Estonian work, Poldaru, Viira, Roots (2018) says that food security exists when all people have physical, social, and economic access to enough, safe, and nutritious food to suit their dietary needs and food choices in order to live an active and healthy life. As understandable from the texts, authors are using the meanings, which somehow same with each other, just the use language is different, but all in all, authors connect food security with the population and with the economy of the country. Also, author would like to point out that in works Merskhia (2016), Poldaru, Viira, Roots (2018) there was analyzation of another definition, from another organizations and authors. About the works, author would like to mention the work Chilton, Rabinovich, Woolf (2012), which analyzation

and chosen methods were unusual for these kind of works, using in same way qualitative and quantitative methods. Table 3 was made, for understanding better the works analysis

Table 3
Overview of empirical literature

| Authors | Definition of food security, which they used | Methodology |
|-----------------------------------|---|--|
| Quliyeva (2019) | food security is a vital indicator of human presence since it entails a system of measures to ensure the continuous and long-term satisfaction of the population's demand for food products within the framework of defined quality standards | Descriptive analyses |
| Farzaliyeva (2019) | Food security is a state of the economy in which the country's population has guaranteed access to food, drinking water, and other products necessary for individual physical and social growth. | Descriptive analyses |
| to Huseynov (2019) | Food security is a global concern for every human being; approximately 805 million people are food insecure around the world. | Quantitative research method (ADRL approach) |
| Meskhia(2016) | Food security is a state of national economy in which the entire population has physical and economic access to ecologically pure and quality food. | Descriptive analyses |
| Lama (2017) | Food security exists when everyone has physical and economic access to enough safe and nutritious food to suit their dietary needs and preferences for an active and healthy living at all times. | Descriptive analyses |
| Poldaru & Roots (2018) | Food security exists when all people have physical, social, and economic access to enough, safe, and nutritious food to suit their dietary needs and food choices in order to live an active and healthy life. | quantitative research method |
| Chilton, Rabinowich, Woolf (2012) | lack of sufficient food for an active and healthy life as a result of economic hardship | quantitative and qualitative mix method |

Source: Compiled by author based on works': Quliyeva (2019), Farzaliyeva(2019), Huseynov(2019), Meskhia(2016) Lama (2017) Poldaru & Roots (2018) Chilton, Rabinowich, Woolf (2012).

1.3 Impact of Covid-19 on global food security and another countries

Coronavirus has changed the world life and had caused a lot of serious problems and crisis. Coronavirus affected to the countries with a different consequence. So in this paragraph, author would like to mention how coronavirus affected the food security globally, and then compare introduce the researches on the impact of Coronavirus on two countries: Nigeria (Giroh, Tafida(2021, June)) and Canada (Deaton (2021)). Since these countries are completely different from each other in global terms, it would be nice example to show how Covid-19 affected on developed country such as Canada, and on the poor country Nigeria. But firstly, food security pillars will be introduced.

All four pillars of food security are being impacted by the pandemic: availability, access, utilization, stability (Food and Agriculture Organization of the United Nations, 2009). COVID-19 jeopardizes food access by causing income and asset losses that limit one's ability to purchase food (Laborde, Martin, Vos,2020). Jafri, Mathe, Aglago (2021) observed changes in food accessibility and availability around the world as a result of the COVID-19 pandemic lockdowns, which restricted people and commodities mobility, so that the lockdowns were accompanied by a decrease in food diversity, a shift in where food was purchased, and an increase in cereal and other non-perishable food stockpiling. Snuggs and McGregor (2021) mentioned that in many countries, the Covid-19 lockdown resulted in all but essential establishments closing, affecting food availability and choice immediately. Naja and Hamadeh(2020) claimed that the individual retains the ability to make a few food utilization choice so the restriction of one's lifestyle, including dietary choices, eating habits, and physical activity patterns, has a direct impact on one's lifestyle. In other words, Naja and Humadah (2020) also connect the lockdown results with the impact on food utilization. For the better understanding, author have obtained figure based on. Since analysing some kind of analyses, that is, for example how Covid-19 influenced all this four pillars of food security, it is also necessary to answer the question, what is this term, what do they mean, and why are they so important. After all, it is important to understand what these terms stands for, so that it is understandable how Covid-19 affected it, and most importantly, what consequences can there be, if Covid-19 strongly affects them. So, for better understanding what is Access, availability, utilization and stability mean, author has provided table 4.

Table 4

Definitions of four pillars of food security

| | |
|--------------|--|
| access | The availability of sufficient quantities of high-quality food, whether produced domestically or imported |
| availability | Individuals' access to sufficient money (entitlements) for purchasing appropriate foods for a healthful diet |
| utilization | To achieve a state of nutritional well-being in which all physiological needs are met, food must be utilized through an adequate diet, clean water, sanitation, and health care. |
| stable | A population, household, or individual must have access to sufficient food at all times to be food secure. |

Source: compiled by author based on FAO (2006).

Food security is particularly vulnerable to income shocks for the poorest households, who spend roughly 70% of their income on food and have limited access to financial markets. Because most nations lack up-to-date household surveys, no accurate estimates of the effects on global poverty and food insecurity can be made at this time. Increases in poverty and income declines of this scale would have a significant impact on food security and nutrition. People in extreme poverty do not have the money to buy the food they need to avoid hunger and malnutrition, so both poor and near-poor people will eat less nutritious and cheaper items. The availability and stability of food are both threatened by this pandemic. (Laborde, Martin, Swinnen & Vos, 2020)

Disturbances in food supply networks and disruptions in food production, as well as a drop in wages and remittances, contributed to tensions and food insecurity in nations affected by the COVID-19 pandemic (World Bank, 2020). The majority of farming systems, such as countries, are labour-intensive, and the pandemic will expose production to possible labor shortages, which will be caused by travel restrictions, morbidity, and social distancing rules, which will affect traders, producers, processors, and logistics in the food supply chain – particularly for food products where workers must be close by (Schmidhuber, Pound, Qiao, 2020). The lockdown and closure will cause enormous suffering for the poor and employees in the informal sector, disrupting practically every step of the manufacturing process, but also putting them at risk of starvation and malnutrition due to their strong reliance on farming. Although there may be enough food in the supply chains at the start of the crisis, an imbalance in food supplies is induced by panic-buying by the public, who anticipate supply

shortages during lockdowns, and this imbalance may occur due to agriculturists falling ill or market disruptions caused by virus-containment strategies. (Workie, Mackolil, Nyika & Ramadas, 2020)

The supply-side shocks spread to the demand-side as well. Demand risks, on the other hand, are mostly limited to underdeveloped countries, where consumers lack sufficient savings and access to safety nets, as they are especially vulnerable since they rely heavily on food imports and spend a significant portion of their income on food. COVID-19 will cause a food demand shock by decreasing purchasing power and economic accessibility, resulting in widespread job and income loss for informal sector employees. The eventual income and price implications are unknown at this point of the pandemic. As a result of the increased exposure of labor-intensive foodstuffs like as dairy and vegetables, negative effects from the pandemic occur, resulting in a decline in diet utilization rather than an increase in calorie deficits (Shafiur, Irin, Ashekur & Manzurul, 2019). Because people are spending more money to stock up on food supplies as a result of the COVID-19 stay-at-home directive, there is a larger demand for food. In several countries, regulations to stabilize supply have been imposed, limiting the purchase of vital grocery goods, but the surge in purchases may be followed by a downward trend in demand. (Workie, Mackolil, Nyika & Ramadas, 2020)

Giroh & Tafida (2021, June) made their work on according the hypotheses of how food price in Nigeria affected food security. Mainly, the secondary data was used in this work. The food prices were taken from National Bureau of Statistics. The impact of COVID-19 Cases on food prices was investigated using inferential statistics such as the T-test statistic, while COVID-19 data was analysed using Poisson Regression, Generalized Negative Poisson Regression, and Negative Binomial Regression (Giroh, Tafida, 2021). According to the Giroh & Tafida (2021, June), only six food products, namely beans brown, sold loose; beans: white black eye sold loose; catfish: dried; mudfish (aro) fresh, mudfish: dried, and tilapia (epiya) fresh, saw price reductions throughout the pandemic, whereas the remaining 37 essential food items had price fluctuations, and totally the increase of food prices is 6.60%, which from them 5% are the Covid-19 reason. COVID-19 has impacted Nigeria's ability to achieve food security by raising the cost of basic food items and also the government's recent withdrawal of premium motor spirit subsidies and increase in energy tariffs have exacerbated the country's food security issue (Giroh, Tafida, 2021).

When it comes to the Deaton (2021) work, here author analysing the food security in Canada during Covid-19. There are two hypotheses author brings: COVID-19's income shock is likely to increase the prevalence of household food insecurity, COVID-19 may have posed

a more fundamental threat to Canadian food security by impeding our agricultural system's ability to produce food at reasonable costs. By better anticipating the paper's concluding remarks, which highlight an important general insight: the food system's ability to succeed—for example, by avoiding general food price spikes during a crisis or by delivering ample food at reasonable prices—is a necessary, but not sufficient, condition for addressing food insecurity in Canada(Deaton 2021). According to the Deaton (2021), their Much of the hyperbole observed in popular discussion that conflates food insecurity with a breakdown of our food system can be confusing to the public. Indeed, our analysis of the previous year reveals that the relative efficacy of our food system's response to COVID-19 did not eradicate COVID-19's danger to food poverty. For better understanding the differences between each other works, author has provided table 5.

Table 5
Overview of empirical literature

| Works | Country | Used meanings | Method used |
|----------------------|---------|---|-----------------------|
| Giroh &Tafida (2021) | Nigeria | condition in which all people have physical and economic access to enough, safe, and nutritious food to suit their dietary needs and preferences in order to live an active and healthy life. | Quantitative approach |
| Deaton (2021) | Canada | Food insecurity is complicated, and there have been reports of food insecure households with relatively high incomes and food secure households with low incomes. | Quantitative approach |

Source: Complied by author based on Giroh &Tafida (2021), Deaton (2021)

2.The impact of Covid-19 in a Food Security in Azerbaijan

2.1 Choosing of methodology

The purpose of the empirical part of the bachelor thesis is to show the impact of Covid-19 on the food security in Azerbaijan. Authors, which works were mentioned in the theoretical part of the thesis preferred to use more quantitative approach, such as Huseynov(2019) used

ARDL approach in his work, Giroh and Tafida(2021) used the Poisson Regression, Generalized Negative Poisson Regression, and Negative Binomial Regression, and also T-test, but all this works didn't have deep analyzation of the food security problem and which events can lead to the food security problem. Because of this reason, author will use qualitative approach, for deeply analysing the Covid-19 impact on the food security in Azerbaijan, and minimize the risks, that may recur in similar situations. Exactly saying, author will use semi-structured interview for mapping out the impact of Covid-19 on food security in Azerbaijan. This strategy is commonly used to comprehend people's perspectives and perceptions, it provides perspectives on many issues and aids in the development of concepts or hypotheses for quantitative research, and the qualitative approach aids in the discovery of fresh ideas and individual perspectives by using analysis to delve deeper into difficulties (Carol, 2016). Qualitative research method allow author to deeply analyse the problems. Deductive approach will be preferable. By doing semi-structured interviews, author believe, that it will help to conduct the exact answers of the Covid-19 impact on food security in Azerbaijan. Because most authors, who did analyzation regarding the food security topic, most of them prefer using the quantitative research method, but unfortunately, it didn't give the deep understanding and solving of the problem. By semi-structured interview, author desire not only to understand the Covid-19 impact on food security in Azerbaijan, but also find the solve of the problem, by analysing the answers of the questions. Author plan to do interview 4 people, which were found by social media platforms, such as google and Facebook, and by appealing to various government agencies that deal with food problems. Also, author will appeal to the universities, exactly saying to professors, who teach in the field of agriculture. Unfortunately, author cannot say where these experts works, in which organization, or government structure, or university they introduce, as the answers, which they gave are based on their point of view. These people know exactly all problems of food security of Azerbaijan before Covid-19, and which changes were obtained during the Covid-19. Firstly, there will be consisting of the interview of experts, who work in agriculture sector long time and who have knowledge in this sphere. These people know exactly all problems of food security of Azerbaijan before Covid-19, and which changes were obtained during the Covid-19. By gathering their answers and analysing them, author think that it will help to understand the influence of Covid-19 on food security. Exactly saying, it will help to understand some questions, for example, there were in 2020 year, there were 2 lockdowns, where people couldn't go out and work, what happened to the food imports and exports while the borders were closed. After obtaining this information, there will be

analysis of the answers, exactly saying, analysing the differences and similarity of the point of view of specialist. The questions will be done, according on the 1.2 chapter and 1.3 chapter. The questionnaire list will be in 6 theme block: Introduction, food security problem in Azerbaijan, impact on four pillars, food demand, food supply and conclusion. Author will analyse expert's answers in 2.2 section.

In table 6 author will demonstrate 4 interviewed specialists, their gender, their occupation, their experiences.

Table 6

Respondents' information

| Interviewer | Experience | Occupation |
|-------------|-------------|--|
| A | 19 year | Agriculture expert, working in government organization |
| B | 26 years | Economical expert, working in government organization |
| C | 10-15 years | Agriculture expert, working in international expert |
| D | 30 years | Economical expert, working in one of the universities of Azerbaijan. |

Source: Compiled by author.

The list of professionals who were interviewed turned out to be quite wide, as the author wanted to analyse food security in a term of agricultural and economic sphere. At first, the task was to find experts, and this was one of the difficult tasks, because if you look, food security has so many different explanations and food security is not such a popular thing, as many people don't even know what is it. All experts were found from the internet sources, mostly author tried to find their Gmail addresses and write down there the invite to the interview. If the author couldn't reach their Gmail, author tried to find them in social programs, such as Facebook. If there was no reach here, then the author went to the place of work and spoke with them face to face, explaining his goals and the topic on which the questions would be based on. Respondent A is the agricultural expert, who is working in government organization. He has a long study and a lot of experience in the term of food security. He is author of some works, which are based on food security and food security in Azerbaijan, and there is analyzation on this term. He has a long year experience in this field, exactly saying 15 years. Respondent B is a person, who has experience in the field of

economic analysis and forecasting them. He is a macro-economist, that is, all areas that are related to macroeconomic sphere in Azerbaijan have been analysed and he have written works on these topics. In more than 1200 different information sources were presented expert's b works, and also 6 scientific works were written by him. He is also working in the government organization. Respondent C is a worker of international organization. His current work consists of supporting the production groups, exactly saying farmers. Supporting mean to instruct them, exactly saying, to teach them how to produce their goods and sell them at a professional level. Respondent D is an associated professor in one of the universities of Azerbaijan and his experience time is 30 years.

As it was mentioned before, the deductive method approach was preferable and the questions were based on the subchapter's 1.2 and 1.3 of the theoretical part. In Appendix, there is introduced the questionnaire list and instructions, which author asked from the experts, and thanks to which author received the necessary information.

When author was starting to the interview, firstly he explained the purpose of the work and also explained why this methodology were chosen. Firstly, the introduction part came. Here, author wanted from experts to introduce themselves, how many experience do they have. After obtaining this information, author asked from them, what from their point of view the food security mean for them, because as author mentioned in previous subchapters, food security has a lot of definitions and it was important to understand, on which definitions experts are rely mostly. Also author wanted to know, in expert's point of view, what causes food security and which problems can it lead and is food security global problem for them. Second theme was about food security in Azerbaijan. Based on previous works of authors about Azerbaijan: Farzaliyeva (2019), Quliyeva (2021), Huseynov (2019), the Azerbaijan food security problems were analysed by author in subchapter 1.2 and information, which was gain in analysation were used to make a questions based on food security in Azerbaijan. Third theme block was about the food security pillars: Food access, Food availability, utilization, and the stability, and how does Covid-19 affected on them. Laborde, Martin, Vos (2020), Jafri, Mathle, Aglago (2021), and Naja &Hamedeh (2020) international works were analysed and it was understandable the degree of importance of these four pillars, so author decided to ask questions based on them and based on the works, which were named before. Theme 4 and Theme 5 were based on the food supply and food demand. Both of this sections' questions were based on the work of Workie, Mackolil, Nyika& Ramadas (2020), where they analysed the Covid-19 impact on food supply and food demand, based on international examples and author of this thesis analysed it and pointed out several important

questions, which were asked to the experts. Theme block 6 was conclusion. Author asked to generalize the Covid-19 impact of food security to Azerbaijan and bring some examples of which actions were done for reducing food insecurity, and which actions they would take for minimizing food security problem.

Despite the fact, that author of this thesis was in Azerbaijan, only one interview was taken face to face, another interviews were taken by using the online approach, the programs, such as Zoom and Skype were helpful. The reasons of it were: Covid-19 problem, one expert wasn't in Baku (capital of Azerbaijan). Besides that, mostly all interviews were taken in Azerbaijan languages, so the experts could 100% explain their answers and author of this thesis analysed them. In table 7, author show the date, the language, and method of the interview (online, face to face).

Table 7

Interview details

| Interviewer | Interview date | Interview Language | Length | Interview Approach |
|-------------|----------------|--------------------|------------|--------------------|
| A | 07.04.2022 | Azerbaijan | 51 minutes | Face to face |
| B | 08.04.2022 | Azerbaijan | 58 minutes | Skype |
| C | 11.04.2022 | Azerbaijan | 36 minutes | Zoom |
| D | 12.04.2022 | English | 34 minutes | Zoom |

Source: compiled by author

All interviews were recorded and then written in the transcript. The size of audio is 2 hours and 59 minutes and transcript has 28 pages. All answers were translated in English language. All in all the interview process took 1 month, in which author was finding experts, arranged with them meeting, and getting their agreement for recording our conversation.

2.2 Covid-19 impact on food security, experts' opinion

The interview started with introduction part. The author introduced himself and asked the questions, regarding experts' experience of their work and their analysis of food security. After knowing their experience years, author wanted from them to identify, what is food security and how can they explain this term. This was the main question for the author, as a lot of time mentioned in this work that food security hasn't exact definition, on which all authors would rely in their works. For author, it was important aspect to know with what did experts connect the food security problem. Author also asked questions about food security

problem, which problem can lead to food security, is food security is global problem of the world. Based on the experts' answers, author has made table 8.

Table 8

Expert's food security understandings

| Interviewers | General thoughts about food security |
|--------------|---|
| A | Food security is the component which appoints to sustainable development, there should be as many food products in markets, as people want. If the society develop unequally, it might lead to food security problems. |
| B | Food security is important aspect for all countries, the solve of food security problem is the first important issue for all countries. If there are some fors major situations, which can be external and internal problems, country must face this problems |
| C | Food security is when a person has access to food so that obtaining enough calories, and has free access and buying this food and quality of this food is good. Food's price increase lead to food security problem |
| D | Food security problem correlated with the protection population from some problems, correlated with the food, first of all, the problems security from the different kind of the illness then the problems correlated with the low quality of the food. There are two main problems, first is that needed enough science of the needed food and second not enough quality of the food |

Source: Compiled by author based on interview answers.

The answers that were received during the questionnaire of the first theme block showed to the author, that the experts associate food security with the population, exactly saying there should be enough food for the entire population for their equal development, but the explanations were in different languages. Expert C and expert D have same opinion on the definition of term what is food security, but answered in different languages, but about the problems which can lead to the food security, in the term of quality of the food, expert C and Expert D agree with each other, that bad quality can lead to the food security problem. Expert C also connects problem of food security with the food prices, that they are increasing, whereas Expert D says that there is no enough scientific work on topic “needed food products for people”. Expert A explain food security, connecting it with the sustainable development of the person. Food security plays important role in sustainable development of a person. And the main problem which lead to food security is unequal development of

population. Expert B connected food security with the main goal of the country, if there is Force major situation, the population won't be hungry. Author would like also to mention that all experts said that food security is the global problem, whereas expert A said that it is not right to say like this, the global problem, which is related food security is hungry problem. For example, if you eat chicken, not meat, there won't be any consequences, but if human doesn't eat anything, then it is a global problem, named hungry.

The analyzation of this section show that the experts know what is food security, but they give their explanations on their opinions, the essence is one, but the method of explanation is different. But, it can be understandable that food security term is more connected with the population. The problems, which can lead to the food securities are totally different from each other. Experts bring an example of food price increase, society develop unequally and there is no enough science in the food, which are needed and quality of food is bad, all this may lead to food security from the opinion of the experts. Author new about food prices consequences, but for example the society develop unequal is something new. When it comes to talk about food security in terms of global problem, all experts answered positively to it, but expert A has interesting position, saying that hungry is the global problem, not food security.

Theme 2 food security in Azerbaijan

Theme 2 was about the food security problems, which were existing in Azerbaijan before Covid-19. The first question, which came in this section was about agro industrial complexes. Exactly saying that agro industrial complexes are not fully utilized. All experts concluded that, Azerbaijan agro industrial complexes are prospering, but it doesn't fully prosper. Expert A and Expert C has same opinion about the competitions in agro sphere of Azerbaijan. They stated that if before there was monopolization of the market, nowadays there are a lot of competitors and competition increased in this term. Expert B and expert D in the term of dependence from world market of food agree with each other.

In Azerbaijan, the percentage of local wheat production is 60% for Azerbaijan's reserve, 40% of wheat Azerbaijan imports from another countries, which makes Azerbaijan dependence in this term. Expert B

Expert D also says that 50% of all food, which utilize in Azerbaijan, Azerbaijan buy from other countries. Agro-industrial complexes in Azerbaijan is not fully utilized, but it prospers every year. As from experts 'point of view, agro industrial complexes in Azerbaijan is not in a high level, but already there are some changes in this fields. As it was mentioned before, there is no monopolization of the market, the number of farmers increased and there

is a high level of completion. Regarding the questions about food production, author would like to introduce next question.

Next question was about nutrition value production of Azerbaijan comparing with other countries. All experts agree with that, Azerbaijan produces less nutrition values than other countries, for example meat or wheat and etc. Expert A point out that Azerbaijan has strong expert of fruits and vegetable spheres, but in another spheres, all experts agree with this term, but the reasons of experts are different with each other. Expert A says about wheat that it is because climate in Azerbaijan, the climate for Azerbaijan is not appropriate for wheat, that's why Azerbaijan has such a low produce of wheat. Also experts A mentioned that in Cattle breeding sector, there is no professional commerce and it should be prospered. Expert B mentioned about wheat too, and as an example he said that he cannot understand how Baltic countries produces more wheat than Azerbaijan and can expert them. But the main point, which expert B point out in his answer is competence. The expert B notes that the production of food productions is not important, it is important how to compete not even in local level, but on the world market, even if the competition is high, there will be still bring goods abroad in term of good prices and good quality. So the Expert B believes that the ability to introduce competition is very important.

Yes, of course it's the situation and the exist, the present situation, yes right know It's much more less than in contest with the advance economy like UK Israel like the Australia, for example united states and the main reason of that's, how low performance it's a, I think the maybe three reasons. First we have not enough equipment tools, second we have not enough knowledge in this field, I mean technologies and the third reason you know right know in our economy we have the high level of monopolization, agriculture sector also.

Expert D

Expert D brought example of 3 reasons, which weren't said by others experts. As it visible from the answer, expert D concludes that there still a big problem of monopolization of market. Even though experts A and C noted that monopolization has decreased, for expert D, it still plays a significant role in terms of less production of nutrition values in Azerbaijan. So answer on this questions, expert gave same opinion regarding production of nutrition values, that Azerbaijan should prosper in this field and brought different reasons of why it happens.

Author also wanted to understand how does the economy of the country impact on food security. From the work of Farzaliyeva(2019), economy of the country plays a huge role in food security. For understanding it, author decided to do a question based on 2015

devaluation of Manat, which impacted on Azerbaijan economy negatively, and also this happened recently, that's why author decided to ask about 2015 devaluation of Manat on food security in Azerbaijan. Here, also expert opinions matched, in the term that it affected on food security somehow. Generally, experts' opinion was that it affected on food prices, because as mentioned before Expert D noted that 50% of food products Azerbaijan brings from abroad, and prices increased in Azerbaijan due to increase of food products' prices in world market, expert B also mentioned that import process faced some problems too. But Expert A consider that devaluation of Manat had also positive effect.

“This helped the import of Azerbaijani products to acquire a very strong competitiveness, because the Manat was stronger than the dollar, and when we import this product, we import it in dollars, and since the dollar is now higher than the manat, and the cost of our capital in dollars was higher than internationally market. That is, although it produces cheaper products compared to foreign ones, of course there is price competition, and there our products gain a competitive advantage” Expert A

Regarding the next question about climate change impact on food security, all experts gave same answers, and all of them agree with that, climate change has effects on food security. Expert B is concerned in the water reserves of Azerbaijan. He says that, Azerbaijan is one of the countries, which can have a problem with water in the future. Expert A says that as because of increasing the temperature, it is hard to produce product, which grow in the land.

Government policy has helped to the food security. A lot of programs were written and made, there were made organizations, regarding food problems', so in this mind, all experts are agreeing that government policy has helped to food security a lot.

In the next question, author asked from experts to choose, which is better for them: supporting national agricultural producers is a top priority, or equal support for both agricultural producers and food consumers. Here, the opinion of experts differed. Expert B and Expert D support the first one: “supporting national agricultural producers is a top priority”, because it is best way to support Azerbaijan domestic farmers, producers and expert B claims that is better to produce food productions in Azerbaijan and sell them abroad, thereby bringing currency of Dollar and Euro. Expert C decided to choose equal support for both agricultural producers and food consumers, describing his choose. Expert A bring his own choice, rejecting both of them. For him, it is better to use mechanisms related to import promotion than supporting agriculture producers and food consumers.

When it comes to speak about general problems of food security in Azerbaijan, Expert A, B, C, and D see that the main problem is that the manufacturing process of food productions are weak and the ability of competence is also weak for Expert B. Expert D claims also that there are needed to further supporting, financial supporting, technical and technological supporting. Expert A also see main problem in the climate change and because of agriculture depends from climate, the changes of climate may lead serious problems.

Overviewing this section, author understood that the opinions of the experts were same in mostly all questions. The conversations that went on these questions were the same, the experts agreed with each other. The only place, where their opinion differed that on what the support more. supporting national agricultural producers is a top priority, Equal support for both agricultural producers and food consumers. But the new knowledge for author was that, food security problems of Azerbaijan mainly lead on weak manufacturing process of food products.

Theme 3 Impact Covid-19 on four pillars of food security in Azerbaijan

Lockdowns, that were provided in Azerbaijan didn't effect so much on agriculture sector, from the words of the expert. Even Expert A says that government made indulgence for agriculture sector, their worker and their movement, and all in all the food chain processes wasn't restricted from government and they could move freely without any restrictions. Expert C answered to this question, saying that at first it strict and people didn't know what would happen, and how processes will go.

Food accessibility and availability was affected by Covid-19, but based on the words of experts, the impact was minimum and in Azerbaijan, the absence of any goods was not recorded. Expert C says that there might be some problems of decreasing the food products, which people were buying for guard from Covid-19, such as products, which had Vitamin C and D, but a huge reduction of these products weren't recorded in Azerbaijan. Expert A says that the only impact was on this group of people, who were working not monthly, but daily, such as waitress in restaurant or in celebration house, or worker, who were working for some hours and were taking money, these people had difficulties.

“The poor stratum of the population, whose earnings were based on daily wages, it was hard for these people, but the government provided them with all kind of support, allocating social assistance” Expert A

Number of grocery shops and markets in Azerbaijan didn't decreased and there wasn't any force majeure situation regarding this, all expert say same thing about it. In Azerbaijan, there was no decrease in grocery stores and markets, yes malls were closed, but

the market inside them were working. Even Expert C claims that the number of supermarkets and hyper markets increased in Azerbaijan, because the malls were closed, and people needed to buy goods, which they buy from malls, from somewhere, that's why number of supermarket and hyper market increased.

In changes of food utilization, because of Covid-19, this was a place, where expert opinion differs with each other. Since there are no statistics on food use, Expert A and Expert B took an example from themselves and said that nothing has changed in this regard. Expert C stated that people began to be more detailed, to devote more time to washing and cleaning the product, rinsing all sorts of food products, and also some products were cleaned by spirit too. Expert D said that the food intake has changed as people have become more at home and their activities have been limited and utilization of food has increased.

In the last question of this section, experts same answered to the question about stability of food prices in Azerbaijan. Expert B mentioned that government was able to keep the same prices, that were before the quarantine and no price increase observed. Expert C said also there wasn't huge changes in prices, only products, which people were buying for guard themselves from Covid-19, on this products, the price increased little and even not in all areas, mostly all areas had same prices on products, which they had before quarantine.

Concluding this section, author would like to say that based on the words of experts, four pillars of food security weren't affected because of Covid-19, and even if affected, in minimum size. There weren't any problems with accessibility and availability of the products and there was also stability of price during lockdowns, only utilization somehow changed, and even not all experts agree with it.

Theme 4 Impact Covid-19 on food demand

Regarding restrictions about purchasing food product, that was forbidden or limited from the government, all experts are saying same things, that there weren't any restrictions on the food products, and people could buy the food product without any limitations. This showed that in Azerbaijan there was no sharp decrease in any products, all products were bought in the norm, even, as expert c says, people bought the products, that contained vitamin C and D most of all, but these products were not limited.

When it comes to say about losing the loss of work and income of workers in the agriculture sphere in Azerbaijan, here the opinions of the experts are both similar and slightly different in this issue. Expert A believe that there were no reductions, and even if there were, it was minimal. Expert B thinks the same thing, adding that the government helped the enterprises in agriculture sphere, and also set conditions for the entrepreneur, so that they

would not fire their workers. The government is ready to help entrepreneurs, provided that they do not fire their employees. But the most interesting position was expressed by expert C. He said the same thing as expert B, but he added:

“Not all employees were registered in the system and not all employees had “VOEN”. For example, there is a driver, who took products to the city, sold them there and returned. Since they did not have registration, they were forced to observe 2 options. Either wait until the quarantine ends, or their entrepreneurs had to register them legally, and this was not beneficial for them, since they were losing income and plus in such difficult time” Expert C

Expert D said that there is no detailed statistics, but from his point of view, some shops didn't reduce the number of employees, they even attracted more men, as all people have crossed to the online form, they couldn't come and buy the products themselves because of restrictions, so shop attracted more people for courier work. But for author it is not understandable for author, were they legal working or no. All in all, this question has two side, first side is that there wasn't decrease of number of employees, who had registrations in the system, and government were helping to them. But from another side, the difficulties felt people, who didn't have registrations in the system, and government didn't know about them.

If there is a generalization of how does Covid-19 impact on food demand in Azerbaijan, some Experts believe that this had positive effect, some that it has negative effect. Expert C says that Covid-19 has not affected food demand very much. Expert D believes that demand has increased as people started to stay at home and more utilize food. Expert A, on the contrary, expressed his opinion as follows:

“Since the restaurants, the house of celebrations and domestic markets were closed, and as they were the main places where the demand for food was, and since they closed, the demand for food decreased” Expert A

Expert B said that he can answer this question after the end of the pandemic situation in the world. So regarding the Covid-19 impact on food security, author found out that the demand of the food increased, as people started buying more food products, but at the same time, the main places, which needed food demand, were closed and here author can say that there is positive and negative effect.

Analyzing this section, it can be understandable that food demand had two sides of impact of Covid-19. From one side, Expert C and Expert D claims that the demand increase, as a lot of people stayed at home, the actions were limited, and that's why it lead to increase of food demand. But from the point of view of expert A, the main places, which had a huge demand of food products were closed, for example restaurants, celebrity house, and because

of that the food demand decreased. So this demand process had increased because of the people were stayed at home, and at the time it decreased as the restaurants were closed mostly.

Theme block 5 Impact covid-19 on food supply

To the first question, the experts all gave a single answer, no stocks were used, as said earlier, no products were drastically reduced, and there was no need to take some products from the stock.

As well as the question of how the disease and travel restrictions affected the food supply chain, the experts gave unanimous answers, but with different explanations. Expert A explains his position as follows:

“The FAO conducted a study and found out that when products were brought to big cities, there were always some problems due to prohibitions, since it was not the producers themselves who brought them to city, but for example, some transport companies, and that’s why there were some problems, because they didn’t have appropriate permission, or even didn’t have permission at all” Expert A

Expert C also agrees that Covid-19 affected this, but he gave an example of the fact that manpower was not enough for work, or rather it was, but they couldn’t work, since there were limits set by the government, that’s why it make difficulties in food supply chain, but this was an obligatory step to reduce the number of sick people from the government. Expert B and Expert D also agreed that there was negative effect because of travel restrictions and limitations, which were given by government.

About panic buying that was observed in other major countries, experts say that nothing like this was observed in Azerbaijan. People did not panic and did not buy up everything, so there was no panic among the population.

And finally, author asked to give opinion on how does Covid-19 generally effected to the food supply chain. Experts have different opinions on this points. Expert A says that impact was negative, since there were no certain resistors and it also necessary that those who bring food products to large cities have good logistic system, so based on this agriculture sphere of Azerbaijan need prospered logistic system. Expert C said that this was a good experience and lesson for us. Expert D said that since we are located near Ukraine, Kazakhstan, Russia, which such countries that are producing majority food products, and since Azerbaijan had the financial ability to buy them, there were no difficulties. Expert B couldn’t clearly answer to this question.

In this section, expert gave same opinion about supply chain and that Covid-19 negatively affected to supply chain of the products, because of some reason that were given above.

Theme block 6 conclusion

In this section author asked to generalize the impact of Covid-19 on food security in Azerbaijan. Author would like to show detailed information about general effect of Covid-19 on food security in Azerbaijan by table

Table 9

Covid-19 impact on food security of Azerbaijan

| | |
|----------|--|
| Expert A | There were identified problems in food security schemes, how much Azerbaijan depend from import of the food products. Just as the government allowed the free movement of workers in the agriculture sector, the production of food products were not reduced, but their delivery to their destinations was problematic, as the logistic system were weak. |
| Expert B | Some restrictions were introduced that caused a serious blow to reduction, which caused inflation to rise and commodity prices to increase after quarantine regime was eased. |
| Expert C | It was difficult to produce products, because it was difficult to find ingredients for products, but there were, it was difficult to bring them to their destination. Similarly, it was difficult to deliver finished products to the venue. |
| Expert D | Of course it's a given additional inputs to our alterity, state alterity, so our farmers that in direction that we can should to increase the production process in agriculture, products raw materials and also to decrease the rate of the products which we are buying from abroad. |

Source: Compiled by author based on interview answers

Generally, the Covid-19 showed that, how Azerbaijan dependence from expert, and it was good lesson for future experience in such a situation. Opinions of the experts are not as different as it shown in the table 9. All of them are agree about that term, that it show that how Azerbaijan dependence from the import of food products, and how it is important to minimize this dependence. Also expert C showed that it was difficult for these farmers, which didn't have registration in the system and couldn't produce their food products freely, as there were travel restrictions, and they needed to buy ingredients for growing their products and selling them. Expert B see this situation from the economy angle and demonstrates that

because of Covid-19 inflation increased, which made to rise price of the products even know. Expert D again point out, how is it important to increase production process in Azerbaijan and not to depend from import. Also government took an actions with the food security, such as funds were seen to help the producers, so to speak, micro credits were given, also the fact that the workers of the agriculture sector could move freely was a big plus.

Finally, author asked from experts, which actions would they take also for reducing food security problem. Expert A said that since that segment of the population whose salary depends from daily work, and who get their salary at the end of the date, they suffered the most and it would be good if the mayor's office had a list of those people who are very poor financially, and in such situations, the government can help them. Also due to recent events, no one knows whether Russia will be able to import wheat or not, so it is important to have a supply of products that are important for humans. Expert C said that it would be good to increase the information resources. Since it was devoted most time of information system to saying how to deal with Covid-19, there was no talk of how to get registrations, for example, so information system activities needed. Expert D repeated again, it is important to produce food products and not to depend from import. Expert B claimed that it would be nice to not put these restrictions, but the situation was another and this step was required for reducing Covid-19 disease.

Author asked from the experts, who were interviewed in this work, some of the causes of the food security problem in general and in our country. The author also asked to confirm some of the reasons named during the survey, but the most of the reasons that was named during the survey and which will be written in table 10, belong to experts' opinion. Concluding this paragraph, author would like to demonstrate the reasons of food security and their categories and also in the conclusion part, the positive and negative side of Covid-19 impact in the table 10. Theme block 3 is not presented in the table, as in Azerbaijan, there wasn't any problem with the food availability and accessibility. Because of that, author decided not to include theme block 3

Table 10

Categorization of the reasons, which were mentioned by experts

| Theme blocks | interview answers | Categories |
|--|--|-----------------------------|
| Theme block 1 Introduction | Not equal prosper of society Not enough science of food Not enough quality of food War Covid-19 disease Price rise | Internal reasons |
| | | External reasons |
| Theme block 2 Food security problem in Azerbaijan before Covid-19 | Climate change Reducing of water supply Weak manufacturing process Market economy relations not established Needed financial, technical supporting | Nature reasons |
| | | Local reasons |
| Theme block 4 Impact covid-19 on food demand | People stayed at home Restaurants, celebrity house were closed | Lockdown's reason |
| Theme block 5 Impact covid-19 on food supply | Logistic system weak A weak information system Low forces | Internal reasons |
| | | Lockdown reason |
| Theme block 6 Conclusion | Blow to manufacturing process Difficulty in buying ingredients Showing the importance of manufacturing process Showing the empty places in food security scheme | Negatively affected reasons |
| | | Positively affected reasons |

Source: Compiled by author.

Table 10 showed the reasons, which were said by experts regarding the food security. Theme block 1, experts brought the reasons of what can lead to food security, and author divided it in internal and external reasons. Theme block 2 showed the reasons of the food

security problem in Azerbaijan and were divided in natural and local reasons. In the situation of the demand of food, as mentioned before, there are two sides. From one side people stayed at home and their actions were limited, and because of that the demand increased. From other side, main consumers (restaurants, celebrity houses) were closed and demand decreased. All these reasons are going to lockdown category, as it was because of quarantine. The reasons which impacted on food supply chain is in 2 categories. There was also lockdown reason too in food supply chain, because of low forces, since there were limitations, but there was also low information system and low logistic system. These two reasons are more preferable to local reasons. And in the conclusion, author brought the reasons of the covid-19 impact on Food security in Azerbaijan, which can positively and negatively effect on food security situation in Azerbaijan.

Covid-19 showed to Azerbaijan importance of the prospering manufacture process system. As in different countries were panic attack of buying food products and make limit for buying some food products, such actions weren't notice in Azerbaijan. It means that there were no major food shortages. The availability and accessibility of the food products didn't impact at all. Food supply and food demand effected a little, because of the problems and reasons, which were mentioned above. The inflation on the prices of food product were after the relaxation of the quarantine regime. People, which budget was based on the daily work suffered a lot from this situation. Despite the fact that government provided financial assistance in every possible way, many people didn't know how to get this financial assistance, because lack of information. Generally, Covid-19 was a challengeable for all countries and Azerbaijan was able to cope with this situation, and problems that have been identified now will help Azerbaijan in the such future situations.

Conclusion

This study conducted for understanding the impact of Covid-19 on food security in Azerbaijan. Food security plays important role in country safety and economy. Since the thinking and development of a person depends in the greater case on food, it should be noted that without proper control of food security, it can lead to sad consequences, such as starvation, which can lead to the destruction of even an entire country. Since the economy depends on the individual too, it can be said that food security plays an important role in the development of the country's economy (World Bank Organization, 1986).

The theoretical part of this thesis shows that there already a problem of definition of the food security. As it understandable from the paragraph 1.1, there is no an exact definition

of the food security and it is already makes the work challengeable. By analyzing the works of the Azerbaijan authors, it is understandable for author, which problems did Azerbaijan faced in term of food security and analyzation of them helped author to ask some questions from the experts, regarding the challenges, which Azerbaijan had before Covid-19.

The qualitative method, exactly saying the interview method helped author to research this problem deeply. The new details were found out by the author. Food security connected with the population and with the economy of the country. It is important to give a daily important product for people, so there won't be hungry and economically people we have a big energy for working and economic of the country won't decrease as mentioned World Bank Organization (1986). But also author would like to point out that the food security is important not only in aspect of the population, because population impact on food security. Food security make country to manufacture more daily products and not depend from the import, such in this situation, Azerbaijan depends from wheat import, as there is no enough wheat production. As expert B said, the manufacturing of the products is important also from the side of prospering the brand of "Made in Azerbaijan. Manufacturers sell their productions abroad and bring in their country foreign currency, this is a big plus for the country's economy. But unfortunately Azerbaijan's manufacturing process is not in high level, and competitions of local manufactures is low. Covid-19 has caused many problems for humanity and for the country's economy. It was important to understand how Covid-19 affects the world. Based on the work that was noted in paragraph 1.3, we can say that Covid-19 causes problems for both a developed country and a poor country, it affected on food demand and food supply, which plays a big role in food security and the four pillars of food security also affected by Covid-19. Based on the analyzation, which were done by the author in paragraph 1.3, the author's questions were based on these analyzations.

Author would like to say thank every expert, who took part in this scientific work and helped to author answer the question, how does Covid-19 impacted on food security of Azerbaijan. There were challengeable situations in the world, for example people were buying everything in the panic, which lead to the emptying of the shelves, which lead to restriction of buying some products. Based on the answer of the experts, such problems weren't revealed in Azerbaijan. There were no situations, where people could not buy any product or they had to buy it in limited quantities, only expert C point out that there might be minimum problem with the products, which people thought that it heals from Covid-19, such products, which has Vitamin C and D, but it was minor problem. This shows that there was no acute shortage of food products in Azerbaijan. Regarding the increasing the price on the

food products, during lock downs, the government did everything to minimize this problem, when there was inflation in all over the world, prices on daily products increased after relaxation of the quarantine regime.

Covid-19 affected not directly on food security. In Azerbaijan, there are a lot of people, whose salary based not in monthly work, but on daily work, and after restrictions and lockdowns, these people have suffered the most, as it was difficult for them to buy food products and usually such people do not have the money, that they put aside. And food security is the term which people must simultaneously develop in terms of food consumption, and this should not depend on whether they are rich or poor. The Covid-19 made these people in Azerbaijan feel the hardship. The government helped for these people, but of course not all for them, and this brings out new problem, the information system is not prospered yet. As it was said before, the agriculture sectors workers could travel around the country without any restrictions, but they needed to do registrations in the system and not all people understood how to it. The information system was based on to show people, how they should protect themselves from the coronavirus, but how, for example, to get registration, people didn't know that and did not understand, so the manufacture system decreased because of it too. The logistic system was in trouble too. As it was mentioned before, agriculture sectors workers could travel without any restrictions, it was not these workers, who were delivering food products to big cities, it was employees of transportation companies, and since they did not belong to agriculture sphere, and in most cases they did not have permission, there were also problems in this direction.

Author would like also to point out that Covid-19 helped to realize how is it dangerous to depend on import and it is important to prosper local manufacturing system. Covid-19 also helped to notice empty places in the manufacturing process, which will be analyzed and minimize them, and if this situation will happen again, Azerbaijan will be more prepared. Author would like also note out that the war, which began between Ukraine and Russia will effect on food security not only in Azerbaijan (the main wheat supply for Azerbaijan is Ukraine and Russia), it will also effect on the food security of the world, but because the thesis analyzations were started before war, there is a small information about it, but it will effect on food security of the world and Azerbaijan food security too.

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Appendix

Questionnaire of the survey, which was introduced to the experts

Questions, which were used to understand the Covid-19 impact on food security in Azerbaijan by student of the Tartu university. As most of the interviews were taken in Azerbaijan language, the questions were translated in Azerbaijan language too. In this section, only English version is presented.

| | | |
|--|---|--|
| <p>Theme block 1 introduction</p> | <p>What is food security for you? How long are you working in agriculture sector of Azerbaijan? What is the main problems, which lead to food security? In your opinion, can we call food security one of the most global problems in the world?</p> | <p>Introduction part consist of collecting information about general thoughts of respondent, their experience in agriculture sector.</p> |
| <p>Theme block 2 Food security problem in Azerbaijan before Covid-19</p> | <p>What do you think, is agro industrial complexes are prospered in our Country? Can you say that we produce much less nutrition values than other countries, if yes can you please bring reasons of that? Do you think that events in 2015(devaluation of Azerbaijani Manat) somehow affected on food security? In your opinion, can the climate change affect on food security of the country, if yes, how did it affected on our country? Does government policy made food security better? What do you think, which of these two methods are good? supporting national agricultural producers is a top priority, Equal support for both agricultural producers and food consumers. Or none of them are good?</p> | <p>Quliyeva(2019) thinks that agro industrial complex's are not fully utilized. As she mentioned, the most important problem of Azerbaijan sphere food is consuming less nutritional value than other countries. Farzaliyeva(2019) relied more to external factors, such as world economy, volatility of the exchange rate, reduction of world food supplies. Huseynov(2019) brought a reason of climate change, as climatic variability will act as a multiplier, amplifying the current food security threats.</p> |

| | | |
|--|--|--|
| | <p>What is the main reasons of food security in Azerbaijan in your opinion?</p> | |
| <p>Theme block 3 Impact Covid-19 on foud pilliars of food security in Azerbaijan</p> | <p>What do you think about lockdowns in Azerbaijan, are they were strict? Lockdowns in Azerbaijan affected on food accessibility and availability? During Covid-19, Did the number of markets or grocery shops decrease in Azerbaijan? How does utilization of food changed in Azerbaijan during Covid-19 Is there was food stability in Azerbaijan during Covid-19?</p> | <p>Covid-19 impacted on all four pilliars of food security (Availability, accessibility, utilization, stability). Laborde, Martin, Vos (2020) mentioned that COVID-19 jeopardizes food access by causing income and asset losses that limit one's ability to purchase food, whereas Jafri, Mathle, Aglago (2021), Naja and Hamadeh connected changes in food access, availability and utilization with lockdown.</p> |
| <p>Theme block 4 Impact covid 19 on food demand</p> | <p>Can we say that Azerbaijan is underdeveloped country? Were there any restrictions on the purchase of some product in Azerbaijan? Whether there was a loss of work and income of workers in the agriculture sphere in Azerbaijan? Generally, can you answer to the question, how does covid 19 affected food demand in Azerbaijan?</p> | <p>Workie, Mackolil, Nyika & Ramadas (2020) mentioned that there are a lot of demand riss for underdeveloped countries too, and Covid-19 will impact on food demand by decreasing purchasing power and economic accessibility, resulting in widspread job and income loss for informal sector employees</p> |
| <p>Theme block 5 Impact covid-19 on food supply</p> | <p>Did our country used up its food supply at the beginning of the pandemic? Does the travel restriction rules, social distancing rule, morbidity affected on to food supply chain? Has there been a panic buying of certain products in Azerbaijan during the quarantine?</p> | <p>Workie, Mackolil, Nyika & Ramadas (2020) stated that travel restrictions, morbidity, and social distancing rules will affect on the traders, producers, processors, and logistics in the food supply chain.</p> |

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|-------------------------------------|---|----------------------------|
| | <p>What is your point of view, how does Covid 19 impacted on food supply chain in Azerbaijan?</p> | |
| <p>Theme block 6 Conclusion</p> | <p>Can you please generalize how Covid-19 impacted on food security in our country? Which actions were taken during Covid-19? In your opinion, what could be done for reducing food security problem during Covid-19?</p> | <p>Summing up results.</p> |

Source: Compiled by author

COVID-19 mõju toiduga varustatusele Aserbaidžaanis

Toiduga kindlustatus on riigi toimise seisukohaltoluline näitaja. Toiduga kindlustatus mängib olulist rolli mitmes aspektis, alustades majandusest ja lõpetades riigi poliitilise stabiilsusega. Käesolevas bakalaureusetöös analüüsitakse, kuidas koroonaviirus on mõjutanud toiduga kindlustatust Aserbaidžaanis. Erinevalt mitmetest varsematest uurimustest kasutati siin kvalitatiivset meetodit. Uurimismeetodina kasutati ekspertide intervjuerimist. Kokkuvõttes ei olnud Covid-19 mõju Aserbaidžaanis toiduga kindlustatusele oluline. Covid-19 näitas Aserbaidžaanile, et oluline on tootmisprotsesside arendamine ja impordisõltuvuse vähendamine. Samuti tuli esile probleem, et madala sissetulekuga inimestel oli probleeme, mistäiendavale aspektile seoses toiduga varustatusega.

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