Market and competitiveness analysis of the Azerbaijan agricultural sector: an overview

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Contents

1. Introduction

Azerbaijan is a net-importing country of agricultural and food products. In recent years, prices for the country's main foreign currency source – fossil oil and natural gas – dramatically declined. Against this background, the state's government aspires to enhance the business climate for the development of a competitive agricultural and food sector that would contribute, among others, to strengthening the country's food security and enhancing its rural welfare (Strategic Roadmap on Agriculture, 2016). An additional strategic objective is to increase domestic production potential for either import substitution or expansion of exports. This report evaluates market prospects for Azerbaijan's current agricultural and food products. It also assesses the ector's potential to use its production capacity in response to identified market opportunities. The report's objective is to provide a concise overview of the sector's activities, its strengths and what affects its ability to use its development potential. More detailed sector-specific analyses are conducted in sector-specific reports (on dairy/beef, poultry, fisheries & aquaculture, fruits, vegetables and potatoes) that elaborate on this report's evaluations presenting product-specific findings and recommendations for future investment opportunities.

The structure of the report is as follows. Section 2 shows the sector's farm structure. Section 3 presents production trends and production use since the beginning of the 2000s, followed by an analysis of Azerbaijan's current agricultural trade position and main trade partners in Section 4. Section 5 evaluates future demand prospects for agricultural and food products at Azerbaijan's domestic market and at its most important export markets. Section 6 addresses how Azerbaijan could respond to the identified market opportunities, discussing and weighing the main factors determining the sector's competitiveness. Section 7 draws conclusions.

2. The agricultural farm structure in Azerbaijan

According to 2015 SSC[1] data, 1.7 million people have their occupation in agriculture, forestry and fishing. This is 36.4% of the total employed population. The number of employees in agriculture is very low (46,000 in 2015), implying that the status of these 1.7 million people is self-employed/employer and unpaid family workers. The sector's contribution to the country's GDP is only 5-6%, which implies that on average incomes earned in the sector are low compared to non-agricultural activities.[2]

Azerbaijan's agricultural sector is highly fragmented, meaning there are many small farms with on average small plots of land. The registered number of agricultural producers in 2015 is about 1.2 million, together using less than 2.2 million hectares of land (see Table 2.1 below). In Azerbaijan, agricultural producers are classified into three groups: family farms and households, agricultural enterprises, and private owners and entrepreneurs. By far the largest group (99% of total numbers) consists of family farms, which comprise individual farmers that are market oriented, and 'households' with agricultural land producing mainly for home consumption. Family farms have only 2 ha on average, out of which households have plots of 0.5 ha or less. The larger farms with more than 2 ha of land number about 250,000. This group includes about 2,000 public and private agricultural enterprises, and privately owned farms with another legal status. As the figures indicate, farms with over 5 ha agricultural land account for only 5% of all agricultural producers, yet these farms use 48% of all utilised agricultural land (Table 2.1). The smaller farms with 2 ha or less number 900,000 in total. The areas these families use are so small that the production is largely for own use, with only small surplus quantities marketed.

Table 2.1. Agricultural holdings by size classes of utilised agricultural area (2015)

Holding size, in ha	Number		Area	
	Absolute (1,000)	percentage	Absolute (1,000 ha)	Percentage
<0.5	510	44	72	3
0.5<2	406	34	446	21
2<5	199	17	598	28
5<20	44	4	345	16
20<	8	1	686	32
Total	1167	100	2,148	100

Note: the area refers to area used for arable and permanent crops only. Pastures and meadow land are not included.[3]
Source: State Statistical Committee of the Republic Azerbaijan.

[1] State Statistics Committee of the Republic of Azerbaijan, at Stat.gov.az, for all data used in this section (unless indicated otherwise).
[2] The SSC 2015 data on average monthly wages and salary per economic activity estimate earnings as 246 manat per month in the agriculture, forestry and fisheries sector, which is slightly more than half of the country's average (Table 4.2, Labour market). Using April 2017 exchange rates, this average earning per capita is around 135 euro/month.
[3] Pastures are owned by the state. Pastures around villages are free for use. For hiring pastures elsewhere a farmer needs to contact the local government representative. Renting periods of 20 to 50 years are possible. Land renting procedures are not transparent (oral information from Ministry of Agriculture's representatives).

3. Trends in production of Azeri agricultural products

3.1 Introduction

The agricultural sector of Azerbaijan produces a wide variety of products. Most important crops (in terms of volume) are cereals (wheat, barley, maize), potatoes and (other) vegetables, fruits (including melons, grapes and berries), whereas in livestock activities the production of milk, beef, sheep and goat meat, poultry meat and eggs prevail. Depending on the natural climatic conditions in the regions, crop and horticulture products are mainly produced by irrigation or rain-fed.

Figure 3.1 shows the development of the areas under crops and the number of the major types of livestock in Azerbaijan since 2000. Over the last 15 years crop areas have increased by just over 50%. The increase in the numbers of dairy cows and sheep & goats is in the same range. Poultry numbers have increased even by 90%. These numbers show that both the livestock and the crop sector in Azerbaijan have expanded over the period considered. This section continues by detailing and explaining the recent trends by indicating production developments of the sector's main crops and types of animal production.

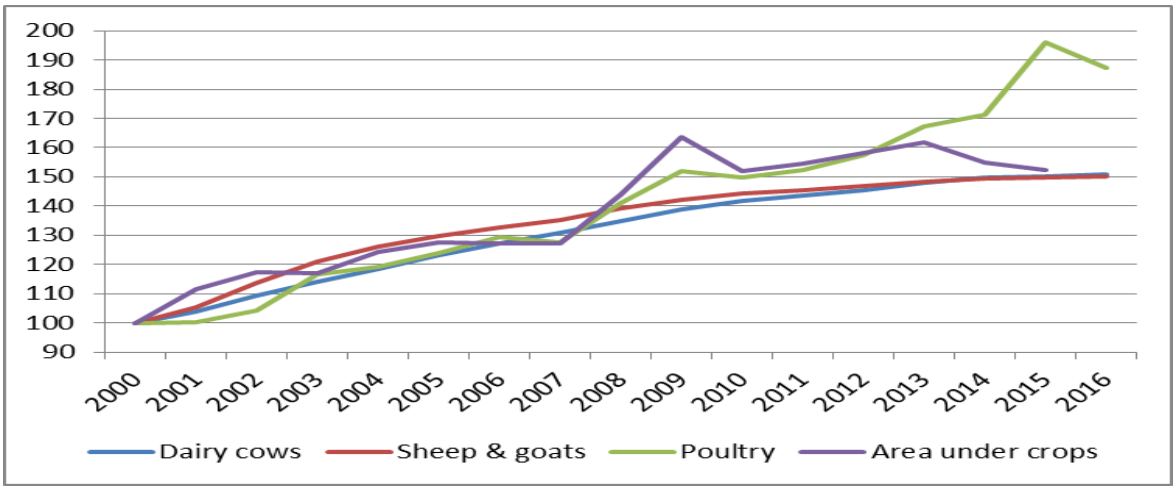

Figure 3.1 Development in number of livestock and area under crops (indices, 2000 = 100). Source: stat.gov.az

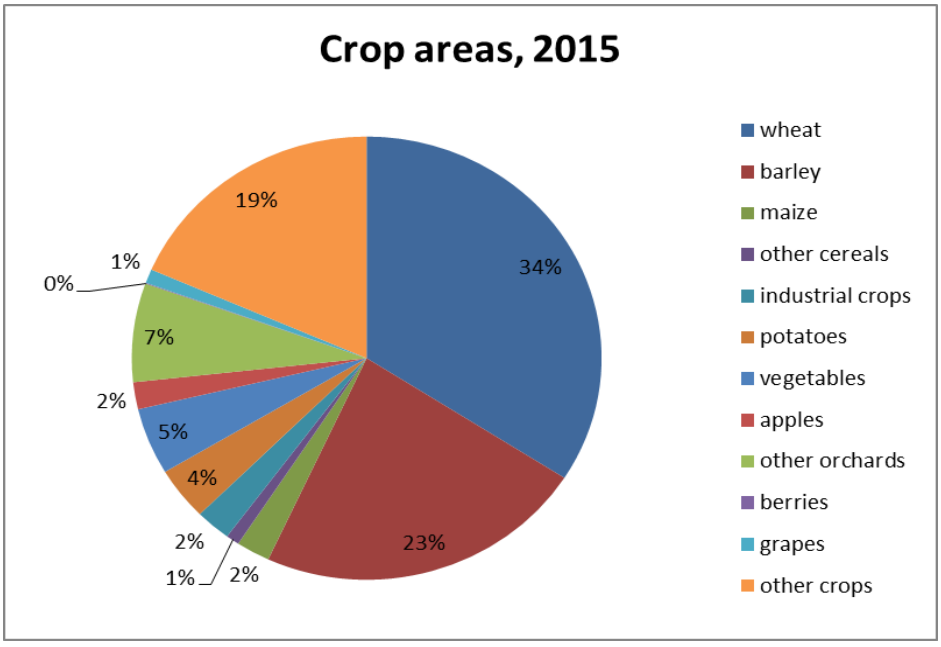

Figure 3.2. Crop areas, 2015. Source: stat.gov.az

3.2 Trends in crop production

As Figure 3.2 shows, cereals are the major crop in terms of areas under crops (60%). Cereal production comprises mainly wheat (55% of total cereal production in 2015), barley (35%) and maize (7%). 2016 production levels of cereals and use of cereals are presented in Table 3.2 together with the trends since 2007 (presented as an index, with 2007=100). Production trends for all three main cereal crops have been positive since 2007, with wheat and maize production about 40% higher than in 2007 and barley production even doubled up to slightly less than 1 million tonnes in 2016. Cereals are mainly used for feed (barley and maize) and food (wheat and maize) consumption. The production of non-food/non-feed (e.g. bioplastic) products is still very low (and not presented here). Production of wheat and maize in Azerbaijan is less than domestic use, implying the country is a net-importer of these two cereal types. Azerbaijan is a small net-exporter of barley.

Table 3.2. cereals: production and domestic use

	2016 volume (1,000 tonnes)	**Indices, 2007 = 100**				
		2010	**2013**	**2014**	**2015**	**2016**
Wheat						
Production	1,800	97.5	137.7	107.8	125.6	137.9
Used for feed production	529	109.0	127.4	122.5	120.8	136.7
Used for production of foodstuffs	2,199	95.8	98.9	105.6	107.6	114.0
Barley						
Production	929	108.1	151.9	143.6	218.4	195.7
Used for feed production	831	135.5	155.8	172.6	218.4	208.0
Used for production of foodstuffs	12	161.6	155.1	180.8	226.3	207.0
Maize						
Production	224	86.0	131.6	128.7	135.3	141.6
Used for feed production	166	126.5	178.7	192.0	210.8	182.3
Used for production of foodstuffs	150	127.5	179.7	192.3	211.0	182.5

Source: stat.gov.az

Domestic use of pulses (a great variety of peas and beans) is much higher than production, indicating the country is a net-importer of pulses. The production of pulses is rather modest in Azerbaijan; only 21,000 tonnes in 2016 (Table 3.3). These products are grown primarily for their seeds, are harvested mature and mainly used for human consumption as unprocessed foods. Production growth over the years has not kept up with consumption increases: the production level in 2016 is back to its 2007 level, whereas the use of pulses has increased by roughly 20% over the same period (Table 3.3).

Table 3.3. Pulses: production and use

	2016 volume (tonne)	Indices, 2007 = 100				
		2010	2013	2014	2015	2016
Production	21,191	101.3	115.7	114.1	113.6	99.0
Used for seed	1,256	113.0	117.8	112.9	102.1	96.9
Used fodder for cattle and poultries	1,154	118.4	119.0	116.3	125.0	114.3
Production of food products (without processing)	28,850	122.5	121.7	119.6	130.0	118.7

Source: stat.gov.az

Traditionally, potato cultivation is an important part of arable cropping in Azerbaijan. Production levels of potato show, however, a declining trend since 2007/08 (see Table 3.4), although some recovery can be noted since in 2014 production levels reached a for the time being low of 820,000 tonnes. Volumes used for seed potatoes and consumed as food (by far the major part of production) have declined as well, yet less than production, turning the country from a net-exporter into a net-importer of potatoes since 2011. The production and use of onion, officially classified a vegetable yet another crop that is often used in the rotation plans of arable farmers, show similar trends as indicated for potatoes.

Table 3.4. Potato and onions: production and domestic use

	2016 volume (1,000 tonnes)	Indices, 2007=100				
		2010	2013	2014	2015	2016
Potato						
Production	902	91.9	95.7	79.0	81.0	87.0
Used for seed	188	94.7	94.0	88.7	87.8	90.4
Used fodder of cattle and poultries	29	94.7	73.2	58.7	57.3	57.5
consumed as food products (without processing)	722	86.8	92.6	91.4	91.2	96.5
Onion						
Production	178	89.8	82.5	88.5	93.7	93.3
Consumed as food product	168	97.8	85.0	95.2	96.9	94.1

Source: stat.gov.az

Vegetable production levels show rather small increases and decreases while trends in fruits (and berries) production indicate a clear positive development since 2007 (Table 3.5). Vegetables production consists of many different products, including tomatoes, cucumbers, onions, carrots, cabbage and so on (see the Master Plan sector report on vegetables for production and use trends of each of the most important products in this category). The consumption of (fresh) unprocessed vegetables is decreasing, but remains on a relatively high level in terms of consumption per person (an estimated 275 gr/day/capita). Next, the production of vegetable canned food is growing although the volumes are still pretty low (about 5% of total production volume). On the whole, Azerbaijan exports significant volumes of vegetables, largely tomatoes and cucumbers. The production and use of melons or water melons is gradually increasing and the balance shows a small surplus for exports. The statistics on the production of fruits and berries report substantial growth and the produce is increasingly processed: up to about

15% of total production in recent years, whereas total consumption is growing as well. The production of grapes and its uses show positive developments as well.

Table 3.4. Vegetables and fruits: production and domestic use

	2016 volume (1,000 tonnes)	Indices, 2007=100				
		2010	2013	2014	2015	2016
Vegetables, total						
Production	1,271	96.9	100.7	96.8	103.9	103.5
Consumed as food products (without processing)	1,013	94.0	92.9	90.7	93.9	90.4
Watermelons and melons						
Production	465	103.8	102.9	105.6	116.0	111.3
Consumed as food products (without processing)	398	104.6	102.4	104.6	115.3	110.7
Fruits and berries						
Production	883	107.6	126.0	125.5	131.1	130.3
Used for Production of foodstuffs	60	437.7	488.0	536.8	514.9	480.6
- of which for production of juices	16	347.0	369.9	341.3	385.5	261.4
- of which for production of canned fruits	45	519.7	594.6	713.5	631.9	678.7
Consumed as food products (without processing)	678	118.5	126.8	128.1	141.1	138.0
Grapes						
Production	137	125.3	143.7	142.9	152.0	132.1
Used for Production of food products	65	132.5	139.3	137.2	154.5	142.5
Consumed as food products (without processing)	84	124.4	144.9	137.3	152.3	136.7

Source: stat.gov.az

Industrial crops such as sugar beet, oilseeds, cotton and tobacco occupy only limited areas in today's Azerbaijan agricultural activities. Cotton has been an important crop for many years with around 100,000 ha with 80-100,000 ha in the 2000s until 2007, when areas started to decline to around 20,000 ha in 2013-2015. Average areas in the period 2013-2015 have been around 5,000 ha for sugar beet, and the country has 10,000 ha with sunflower seeds (the main type of oilseeds Azerbaijan is producing) and 1,200 ha with tobacco. Consequently, production levels of these crops are rather modest with the effect that for sugar, oilseeds/vegetable oils and tobacco domestic production is less than domestic use. Cotton production covers domestic needs more or less, with little exports of certain type of cotton products (amounting to approximately 15 million in recent years).

3.3 Trends in production of livestock products

Beef is the main meat type produced and consumed in Azerbaijan (see Table 3.6). Production has been gradually increasing over the last ten years. Yet, consumption has grown even more and – traditionally -

exceeds domestic production. This leads to imports, which amounted to about 10,000 tonnes in 2016, which is only half of the imports that entered the country in the years 2011-2014. Mutton and goat meat production and consumption are more or less balanced, both showing a gradual increase over recent years. Pork is a very small sector, with very limited domestic consumption too (not surprisingly in an Islamic country like Azerbaijan). Strong production growth has been achieved in the poultry meat sector, encouraged by a robust growth of domestic poultry meat consumption. As a result, imports of poultry meat have declined strongly in recent years.

Table 3.6. Meat: production and domestic use

	2016 volume (1,000 tonnes)	**Indices, 2007 = 100**				
Beef		**2010**	**2013**	**2014**	**2015**	**2016**
Production	131	114.1	122.7	124.3	131.8	133.1
Consumed as food products	140	113.3	134.6	134.6	138.1	134.9
Mutton and goat meat						
Production	75	120.9	122.5	118.8	122.5	130.0
Consumed as food products	76	118.8	122.8	119.5	122.5	129.2
Pork						
Production	1	57.1	53.0	48.1	50.6	33.7
Consumed as food products	7	79.1	39.4	74.8	76.6	125.9
Poultry						
Production	96	101.3	154.9	163.1	159.5	156.8
Consumed as food products	120	104.2	115.6	122.1	121.3	145.3

Source: stat.gov.az

Milk production in Azerbaijan has increased from 1.3 million tonnes in 2007 to 2.0 million tonnes in 2016, a significant increase in a relatively short period of time (Table 3.7). Consumption of milk products increased quite rapidly in first years after 2007 but the growth has slowed down to reach levels where production almost balances domestic consumption (in milk equivalent terms). Imports of dairy products amounted to roughly a quarter of domestic consumption (in milk equivalents) yet import levels have declined significantly in recent years. Dairy exports are close to zero. Milk has been increasingly processed into cheese and butter, although liquid milk (and sour cream) is still the main category of processed milk in Azerbaijan.

Table 3.7. Milk and dairy products: production and domestic use

	2016 volume (1,000 tonnes)	Indices, 2007 = 100				
		2010	2013	2014	2015	2016
Production of milk	2,010	114.5	134.0	138.4	143.5	149.9
Consumed as food products (including of milk products)	2,277	142.5	153.2	157.6	159.2	154.6
Used for Production of food products[1)]	2,017	107.4	147.4	151.9	153.6	158.8
- Of which for production of cheese	407	126.9	138.5	140.7	142.0	144.7
- Of which for production of milk and sour cream	913	61.7	129.2	130.7	133.5	137.2
- Of which for production of butter	561	145.8	152.5	163.4	166.8	178.4

Source: stat.gov.az. Note 1) included in 'consumed as food products. Source: stat.gov.az

Laying hen egg production is increasing in line with domestic consumption. Azerbaijan is a small net-exporter of eggs (see Table 3.8).

Table 3.8. Eggs production and domestic use

	2016 volume (1,000 tonnes)	Indices, 2007 = 100				
Eggs		2010	2013	2014	2015	2016
Production	1,610	123.6	147.0	163.9	162.8	168.8
Consumed as food products (without processing)	1,504	123.9	142.6	159.4	162.9	167.4

Source: stat.gov.az

The production of fish has shown a revival since 2007 (Table 3.9), yet from a very low level compared to the 1990s and the first part of the 2000s. FAO (2013) reports that the total volume of the fisheries shrank to less than one-tenth of their size between 1990 and 2005, and a similar reduction was recorded in the same period for aquaculture production. Consumption of fish is increasing as well. In recent years Azerbaijan has been a net-importing country of fish.

Table 3.9. Fish: production and domestic use

	2016 volume (1,000 tonnes)	Indices, 2007 = 100				
		2010	2013	2014	2015	2016
Production	63	220.0	247.4	243.1	248.7	306.5
Consumed as food products	73	205.3	242.9	236.6	234.2	255.9

Source: stat.gov.az

Table 3.10 summarises the above-sketched trends in production and use by the self-sufficiency ratios calculated for the main crops and liv stock products, for the year 2016. These figures show that except for vegetables and fruits Azerbaijan's production does not meet domestic consumption needs.

Table 3.10. Self-sufficiency ratios (SSR) for crops, livestock products and basic industrial products, 2016

Crops	SSR	Livestock products	SSR	Industrial products	SSR
Total of grains	63.8	Beef and beef products	93.5	Flour of all kinds	96.1
Wheat	52.9	Mutton and goats meat products	98.7	Pies, sweets and other bakery products with sweet substances	81.6
Barley	101.7	Pork and pork products	7.0	Cracker, cookies and confectionery for long storage	31.5
Maize	71.1	Poultry meat and meat products	79.1	Vegetable oils	36.9
Other grains	32.0	Milk and dairy products	87.7	Margarine	105.7
Leguminous	68.4	Egg, unit	98.8	Juices of fruits and vegetables	110.1
Potato	85.5	Fish and fish products	82.3	Canned fruits and vegetables	92.9
Vegetables	105.4			Milk and cream of 1-6 percent fat content	99.5
Fruit and berries	116.1			Butter	75.6
Grape	89.2			Cheese of all kinds	88.3
				Sugar	114.2

Source: stat.gov.az. Note: Self-sufficiency is defined as % of consumption produced domestically. In formula: production/(production + imports - exports).

4. Azerbaijan trade position at agricultural markets

Azerbaijan is a net-importer of cereals (wheat, rice and maize), potatoes (AZ used to be a net-exporter until 2011), meat (except poultry), dairy products, fish and vegetable oils. The country is a net-exporter of fruits and berries, and all kinds of vegetables. The overall agricultural net-trade position (exports minus imports) of the country is negative (see Figure 4.1).

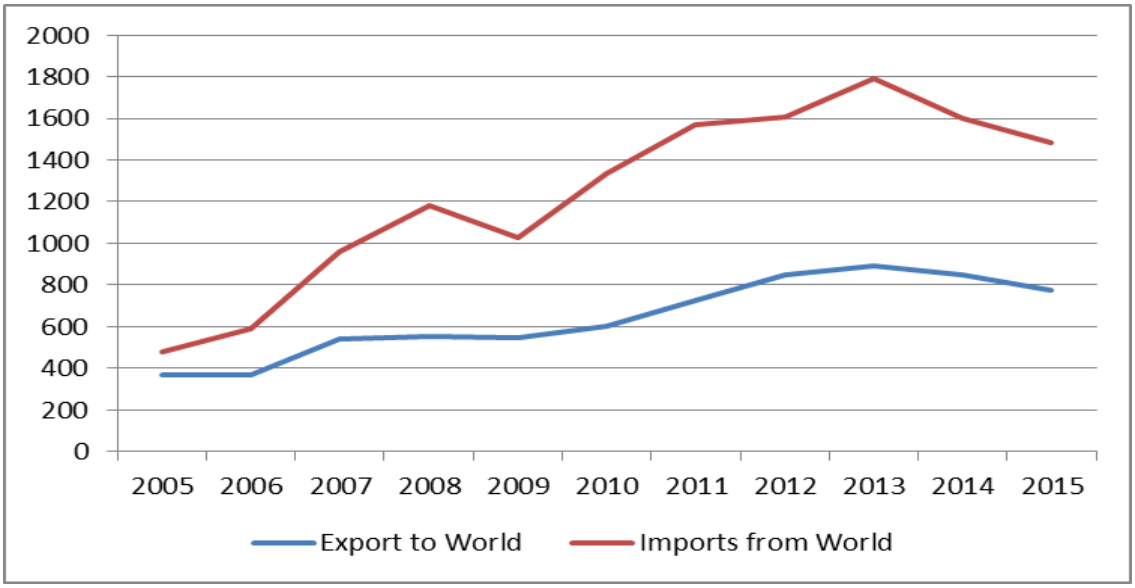

Figure 4.1. Net trade position of Azerbaijan agricultural sector (2005-2015, in million US$). Source: UNCOMTRADE. Note: agricultural products according to WTO definition.

Azerbaijan's major imported products are cereals (23% of total imports in 2015), tobacco (20%) and sugar (10%) (See figure 4.1, right panel). Major countries of origin for cereals are Russian Federation (90%) and Kazakhstan (5% of total in 2015). Sugar is imported in raw form from Brazil and (manufactured) tobacco has its origin mainly from Russian Federation (65%) and Ukraine (30% of total in 2015). The relative position of these three product categories remained rather stable over the period 2005-2015. A product category that notably increased as share of total imports is live animals (mainly cattle), accounting for almost 4% of total imports in 2015 (Figure 4, right panel).

The increase in exports throughout the period is mainly due to increased exports of (unprocessed) vegetables (of which 90% is potatoes and tomatoes), animal or vegetable fats and oils, and sugars and sugar confectionery. These are Azerbaijan's major agricultural export products (Figure 4.2, left panel). Exports of vegetables are almost exclusively to the Russian Federation. That country is also the major destination of Azerbaijan's fruit exports (75% of all fruit exports) yet Germany and Italy are also a major export market for Azeri fruit (which happens to be only fresh or dried hazelnuts, virtually the only agricultural product the EU imports from Azerbaijan). Major export destinations of fats and oils (among others from sunflower and cotton seeds) are Georgia and Iraq.

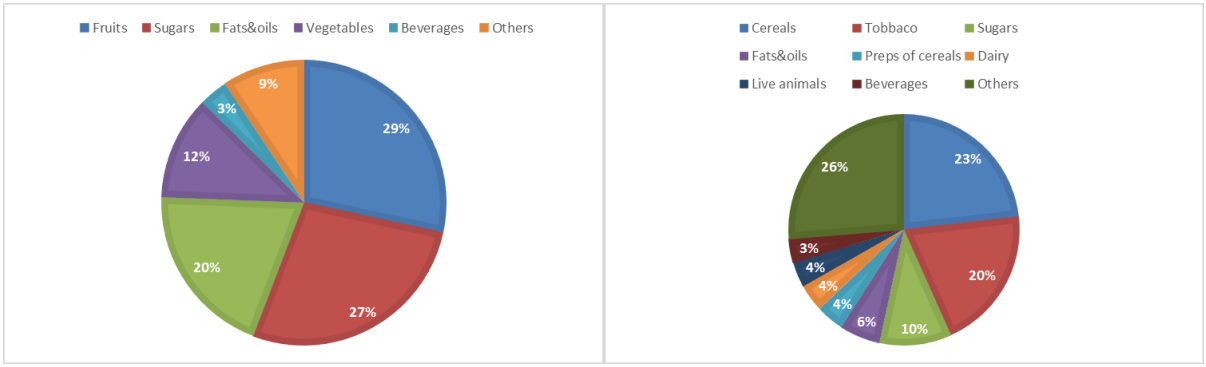

Figure 4.2. Composition of Azerbaijan agricultural and food exports (left panel) and imports (right panel), 2015. Source: UNCOMTRADE

Azerbaijan's export of sugar is noteworthy as the country produces only small volumes of raw sugar from domestically cultivated sugar beets. The total area cultivated was around 5,000 ha in recent years, just about 1% of the area under wheat. Sugar beet production (184,000 tonnes in 2015) brings about 17,000 tonnes of raw sugar, yet the country imports 300,000 to 400,000 tonnes of raw sugar – mainly cane sugar from Brazil - for further processing in Azerbaijan into white sugar and sugar (containing) products. Half of the volume of processed sugar products is exported, causing sugar products to be the main agricultural export product of Azerbaijan. Main export destinations of sugar are Afghanistan (around 85% of total) and Iraq (10% of total).

The Russian Federation is by far the most important trading partner of Azerbaijan, as Figure 4.3 illustrates.

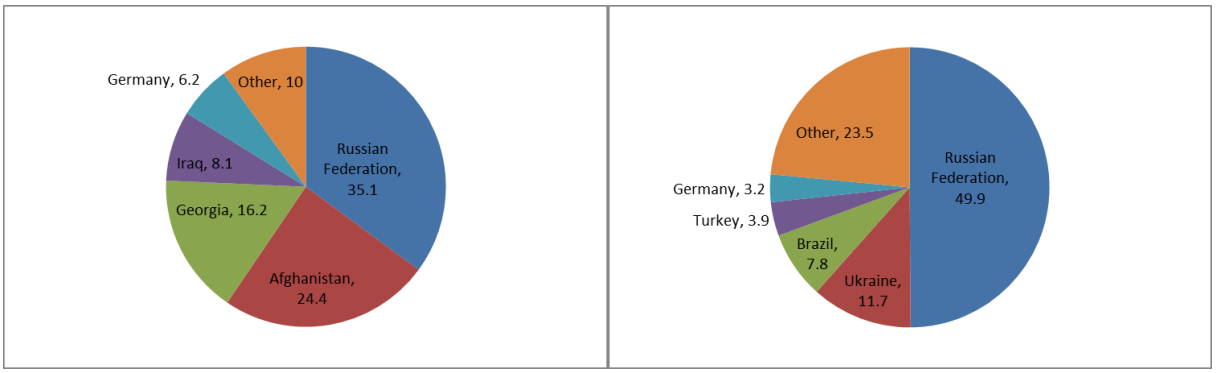

Figure 4.3. Azerbaijan major export destinations (left panel) and major import origins (right panel) of agricultural and food products (Source: UNCOMTRADE, 2015 data).

5. Prospects of demand

5.1 Factors that affect current and future demand for agricultural and food products

As for almost all countries in the world, the main outlet of the Azerbaijan agricultural sector is its domestic market. Foreign markets are important only for a small range of fruit and vegetable products, although Azerbaijan also exports sugars and some other products in a relatively small amount. In this section, we depict some of the main factors mentioned in the literature as drivers of demand for agricultural and food products. The next two subsections evaluate the demand prospects for Azerbaijan products on the domestic and foreign markets.

Generally, trends in population and macroeconomic growth are important drivers of demand for agricultural products. The major drivers in demography are natural population growth (i.e., the ratio of births and deaths) and migration (i.e., the difference of arrivals and departures). Future world population growth is mainly determined by the developments in birth and death rates. At the regional or national level net migration is an additional factor.

In past years, rapid population growth has accounted for the bulk of the increase in food demand for agricultural products, with a smaller effect from income changes and other factors. Future trends, though, indicate that the global demand for food will be determined more and more by the development of incomes per capita and less by the growth in the population (FAO, 2012; OECD-FAO, 2015). GDP growth, though, is divers among countries and regions and in most cases fluctuates from year to year. The global financial and economic crisis that started in 2008 and the slow recovery from it in recent years has a strong impact on the prospects for the coming years whereas expectations on oil price developments are an additional important factor influencing macroeconomic growth to fossil-fuel exporting countries such as Azerbaijan and Russia.

Demand trends of the past indicate current preferences of consumers. Consumer preferences in terms of food cannot be understood or predicted by simple models: food preferences arise from a combination of different factors and drivers, such as growing incomes, reduction in household size, increasing number of women in the workforce, changes in lifestyle (time pressure), food scares, growing concerns for health and well-being and ethics. Projections of food consumption patterns in Azerbaijan and other countries that are potential export markets should build on the evolution of the driving forces and the consequent changes in food consumption over the last decade.

Two other aspects affecting food demand should be mentioned in addition to the above. One is that ongoing urbanisation, especially in regions outside the developed countries, is expected to be an important driver of the composition of food demand. Wealthier, urban populations consume more animal based and processed products, which call for more industrialised and lengthy food supply chains (e.g. UNEP, 2016).

A second aspect is that food consumption is affected by many more factors than only income. Access to food is highly determined by the food environment, which is comprised of the physical and social surroundings that influence what people (especially in urban areas) eat. Food companies, restaurants, food vendors and retailers (such as supermarket chains) are actively influencing this food environment to tempt people to make certain choices. This influencing could be in various ways, ranging from advertising, packaging, location, to creating aromas or presentation in shops or restaurants. The food environment also includes formal rules on labelling, food safety and quality requirements. Consumer concerns about food safety, health and environmental impacts have led in developed countries to more stringent standards on, among others, hygiene, quality and pesticide use.[4] This process of rapidly growing and tightening food standards and regulations has had significant impacts on the food systems in developed countries as compliance with standards involves investments in production and marketing methods, as well as liability agreements among market actors. Through international trade Azerbaijan has become increasingly involved in the quest for managing food safety. A well-functioning national food

[4] Related consequences of environmental concerns are the increasing interest of consumers for locally produced products ('local for local', i.e. short chains with assumed low carbon footprint), increased demand for organics products and more attention to traditional products (flavour essence, nostalgia) especially in developed countries.

safety control system *and* production methods that are in compliance with international standards are a major precondition for expanding the agricultural sector's international market position.

5.2 Future food demand prospects in Azerbaijan

The size of the population in combination with income levels (average and quartiles) indicates the size of the economic potential demand for food. Growth in these two factors may indicate an increase of the domestic food market potential. Population growth in Azerbaijan has been positive although at a relative low rate (1%) over recent years, with 9.973 million inhabitants in (May) 2017.[5] Officially about 25% of all inhabitants of the country have their residence in Baku but an estimated 4 million live in the Baku metropolitan area.[6] Over the last decade the country experienced a rapid economic growth due to large oil reserves and fossil fuel exports. Yet, due to a drop in international oil prices the economy contracted significantly in 2015, with average per capita income in 2015 declining by 30% compared to 2014 levels (see Figure 5.1). Continued weak oil prices helped cause Azerbaijan's GDP to contract by almost 4% in 2016 and with -1% growth forecast for 2017 (adb.org, retrieved 28 June 2017). Economic recovery heavily depends on higher oil prices. Forecasts of Azerbaijan crude oil production for the medium terms point at a continuation of the downward trend (Tradingeconomics.com, August 2017), whereas international oil price forecasts for 2017 and 2018 show only very modest price increases (https://en.trend.az/business/energy, 12 July 2017). These outlooks imply that income per capita increases in Azerbaijan are expected to remain sluggish at best in the years to come.

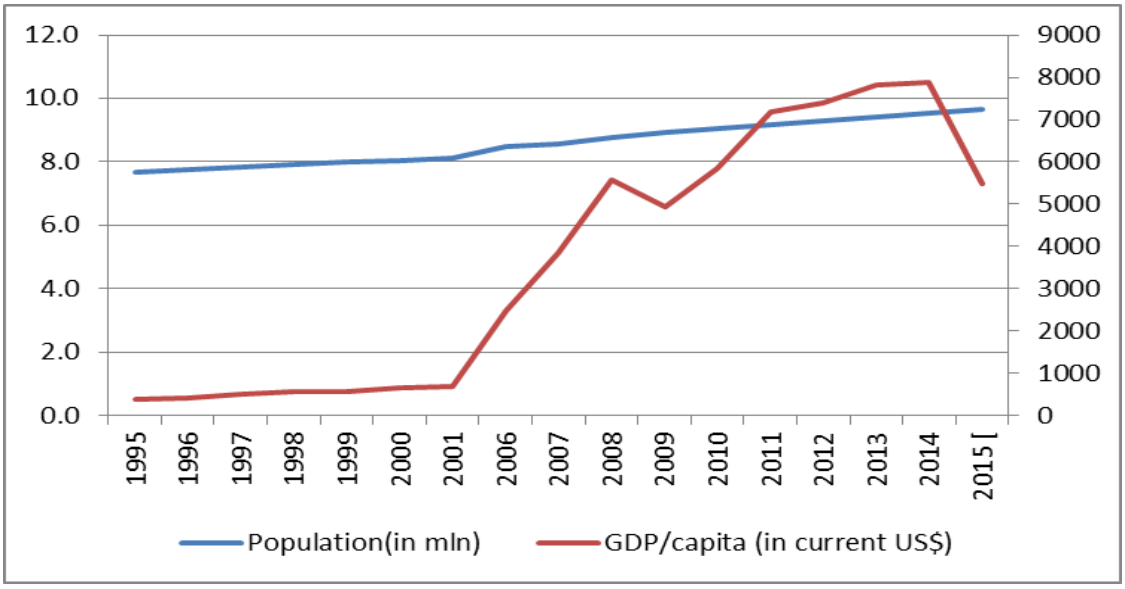

Figure 5.1. Population (left-hand axis) and GDP/capita (right-hand axis) developments in Azerbaijan. Source: World Bank WDI. Data for 2002-2005 are missing.

Statistical data covering the past 15 years shows that the Azerbaijani population has begun to consume more potatoes, vegetables and fruits, while preferring to eat less bread (Table 5.1). The consumption of milk and dairy products first shows an upward and then a downward pattern over the period considered with 2015 levels more or less equal to those in the early 2000s. At the same time, consumption of

[5] Azerbaijan has a low population growth rate of approximately 1% per annum, in part due to a high rate of migration (there is significant diaspora, with Azerbaijani living in 42 countries). Projections point at 10.7 million people in 2030 and a peak of 11.0 million in 2045 after which growth rates become negative. Unless the current outflow of people is going to change in a positive net-migration balance, the population growth will remain low (probably as low as projected in the last version of UN's Population Prospects, see https://esa.un.org/unpd/wpp). Population growth, therefore, is unlikely to have much impact on consumer patterns.

[6] http://worldpopulationreview.com/countries/azerbaijan-population/

protein-rich products like meat, fish and eggs has increased. Figure 5.2 shows consumption trends of all these products for all years since 2001.

Table 5.1. Consumption of food products by main products groups, annual, kg (pieces for eggs) per capita, selected years.

	2001	2005	2010	2011	2012	2013	2014	2015
Bread & bakery products	141.2	156.5	153.4	147.7	144.3	141.6	139.8	138.4
Potatoes	35.5	48.5	54.6	59.3	63.1	64.2	71.3	71.8
Vegetables & market gardens	63.2	77.9	84.1	90.9	98.5	103.8	106.4	106.5
Meat & meat products	21	29.4	31.5	32.4	33.5	33.8	33.8	33.9
Fish & fishery	4.5	6.6	6.9	6.9	7.1	7.1	7.2	7.3
Milk & dairy products	178.3	274.8	301	312.8	294.4	285	274.2	272.1
Eggs, piece	117	125.6	131.4	141.4	155	155.4	157	158
Fruit & berries	37.3	54.5	65	68.5	74.8	75.2	77.2	78
Sugar & confectionery	28.7	30.8	31.5	32	31.7	31.5	30.6	30.2
Veg. oil & margarine	5.8	8.3	8.8	9.3	9.9	9.9	10.3	10.4

Source: stat.gov.az

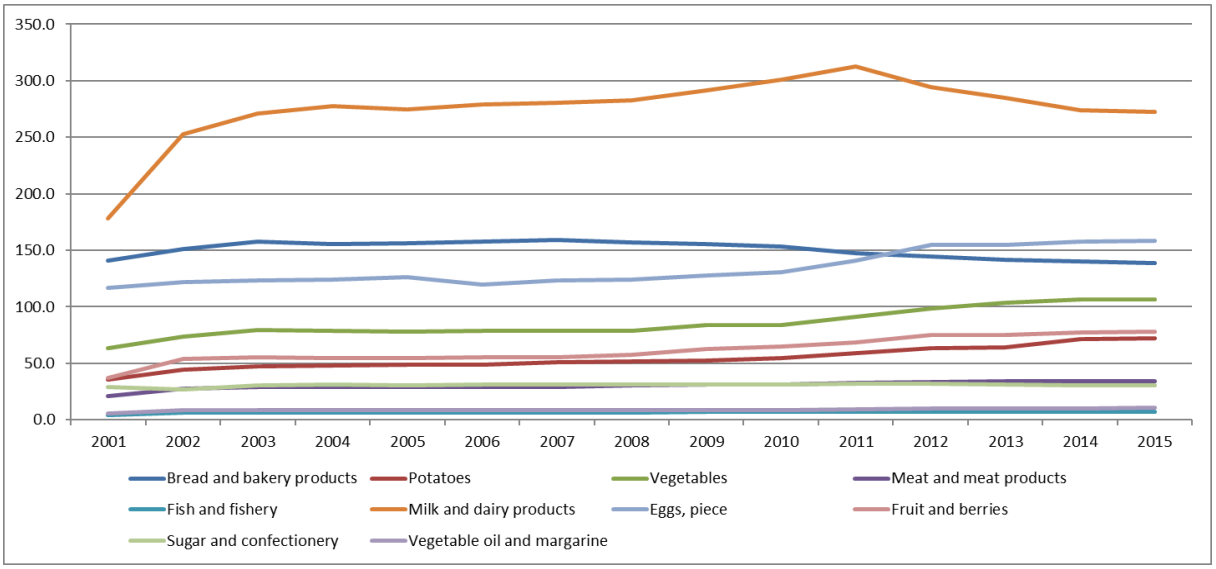

Figure 5.2. Trends in consumption of food categories, all households, 2001-2015 (in kg/capita). Source: SSC, Budget of households, table e004 (retrieved 26-04-2017).

Consumer preferences may change over time as a result of two factors: income growth assuming that consumers with higher incomes demand more differentiated (processed, convenience) and quality food products (insert REFs), and changing lifestyles linked to urbanisation and increasing participation of women in the workforce. As indicated above, income growth is expected to be slow in the next few years, and hence may not be considered an important driver of diet change in the medium term. Figures show the process of urbanisation continues although growth rates were much higher in the 1990s and early 2000s when Baku expanded rapidly. Still, the country's urbanisation rate (almost 55% in 2015) is relatively modest compared to Russia, Belarus and Ukraine (with rates between 70 and 75%) or developing countries in Africa.[7] Yet, urban consumer preferences seem to slightly change towards more convenience products - processed, pre-cut, pre-packed, readymade - and to become more discerning on quality and taste (see e.g Euromonitor reports at euromonitor.com/azerbaijan). The strong income growth in earlier years drove the opening of modern grocery retails shops such as supermarkets and

[7] Share of Azerbaijan's total population lived in urban areas and cities were 52.4% in 2005 and 54.6% in 2015. Sources: www.statistica.com and www.cia.gov/library/publications/the-world-factbook).

convenience stores in Azerbaijan (e.g. Azeretail, Spar, Bravo), with new concepts and offering new brands, both foreign and local. Although traditional food outlets such as small groceries and open markets still dominate the food market, modern grocery retail concepts are growing in importance. The changing shape of food retailing in Azerbaijan is expected to continue, with chains of supermarkets, hypermarkets and convenience stores expanding (Euromonitor.com/Azerbaijan). This means that local agriculture and food processing companies increasingly have to comply with the terms modern food retailers set. Experiences around the globe demonstrate that in order to supply supermarket formats successfully international quality and food safety standards apply.[8]

Concerns for health, wellbeing and the environment may be a factor that changes people's diets in Azerbaijan, too.[9] However, based on interviews with food retail shop managers and visits to open (street) markets, the general public seems to be price-conscious in the first place when it comes to food shopping, with only a small percentage of the consumers looking for products that are promoted for being healthy and environmentally-friendly produced. Still, this might be an interesting niche for products that could relatively easily exploit such opportunities, such as vitamin-rich fruits and vegetables.

Conclusion
Increasing domestic demand for potatoes, fruit, vegetables, meat, fish and eggs are largely driven by income growth and urbanisation trends (changing lifestyles). These trends will provide opportunities for domestic production to respond to. The real challenge for the domestic agricultural supply chain is to comply with quality, food safety and environmental standards of modern food retail channels, and with international standards. In this area and with help of FAO, the government has initiated the plan to establish a Food Safety Agency: once in force, it will support getting international certificates on quality and other standards for domestic products.

5.3 Food consumption developments in Azerbaijan's major export markets

Current major foreign markets for Azeri products are Russia (especially for a wide range of vegetables and fruits),[10] Georgia and Iraq (for oils and fats) and Afghanistan (sugars). When main drivers of (increasing) food demand are taken into account (income per capita and population growth), prospects for increasing sales on these markets may not be excessive as these economies have contracted in recent years and their economic outlook is expected to improve only under the assumption of higher oil prices (Russia, Iraq) and a more favourable security environment (Iraq, Afghanistan). For instance, the OECD (2017) expects a slow recovery of economic growth from recession in Russia in 2017 and 2018 with a continuation of modest growth over the medium term (1-1.5% annually). Over the next ten years population growth is negative in Russia, with an expected decline of 2.7 million people. In three years' time the ruble devaluated dramatically against the dollar (down from 27 ruble to US$1 in 1/1/2014 to 60 ruble to US$1 on 1/1/2017).[11] For the next years some further yet limited depreciation is expected, implying that exchange rate developments may act as a brake on imports as imports paid in dollars will be more expensive in the national currency. Yet, what is important for Azerbaijan products for its position on the Russian market is the manat-ruble exchange rate. In 2015 and 2016 the manat depreciated more than the ruble to the US dollar (OESD, 2017), which in fact has had a positive effect on Azerbaijan's price competitiveness at the Russian market in these years. Whether this situation continues, is highly uncertain, though.

Moreover, access to Russian market is affected by the interests of the Russian food processors and farmers to protect their domestic market. For many food products Russia is a net-importer. Import dependency has declined in recent years due to production increases that are stimulated by government support measures (as part of its Food security policy), whereas consumption levels declined due to a fall in real incomes.[12] Significant growth of production in the Russian agricultural sector is observed for

[8] For example, Global Gap and HAACP are a precondition for exporting to the European market.
[9] In the Strategic road map on agricultural development one of the planned policy actions is to promote healthy diets.
[10] Russia happens to be the only foreign market for Azerbaijan's main fruit and vegetable exports which are potatoes, tomatoes, cucumber, apples, cherries (other than source cherries) and persimmons (UNCOMTRADE, 2015 figures).
[11] See Appendix A1 for developments of the manat against the euro over the last 5 years.
[12] According to data from Rosstat, in 2015 the consumption of fruits, milk and dairy products, meat and sugar was lower than in 2013 (the last full year without the import embargo on dairy, meat, fruits and

poultry meat, pork and vegetables (e.g. greenhouse production of cucumbers and tomatoes increased rapidly in 2014-2016). However, also for these products, domestic production does not satisfy domestic demand and imports are still needed. Still, exporting to Russia will be challenging as poor prospects in terms of income development may make consumers (even) more price-sensitive. This would imply increasing competition for all Azerbaijan products that target the Russian market.

Another factor is Russian foreign policy that has used trade in goods as a political instrument in recent years (as some other countries sometimes also do). Examples are the ban on meat, dairy, fruit and vegetables imports from the EU and several others countries implemented from August 2014 onwards, followed by an import ban on 21 Turkish fruit and vegetable products in November 2015. The latter has been lifted except for Turkish tomatoes. Turkey was the major exporter of tomatoes to Russia before the ban; now China has a much greater part and also tomato exports from Azerbaijan benefitted much from this situation. However, when the ban on Turkeys tomatoes will be lifted, exports of Azerbaijani tomatoes to Russia will face strong competition from Turkey, with declining exports as likely result. That may even be more the case when Russia would open its market again for EU fruit and vegetable products. It is impossible to predict when such changes in the Russian import policies may happen, as it is a political decision. History shows, though, that such changes may happen, with rather dramatic effects, especially for countries that depend very much on Russia as export market. And this is the case for Azerbaijan.

Opportunities for expanding exports of Azeri products to neighbouring countries in the region (e.g. Georgia, Iraq, Afghanistan) will depend on economic development in these countries which is also related to oil prices and security. Moreover, these countries' agricultural production structures are very similar to Azerbaijan. Given their income levels, opportunities for Azerbaijan products may most probably be limited to those commodities and food products that cannot be produced by their own primary sector or food industry, or for which countries at hand have (temporary) shortages. It is a good sign that in the Strategic Roadmap, diversification of export markets is identified as an important factor supporting the development of the agricultural industry. Promotion activities (e.g. by Azprom) and investments in logistical services (e.g. a logistical centre in Actau, Kazakhstan) are some instruments already used for this purpose.[13]

Trade in agricultural products with the EU is quite small. Main imports from the EU (total: 231 million euro in 2015, according to Eurostat data) are live animals, dairy products, live plants, seeds, food preparations and mineral waters. Azeri exports (65 million euro) are by and large only hazelnuts (mainly to Germany and Italy). Whether this low performance at the EU market is due to non-compliance with quality or food safety requirements or is caused by commercial reasons would be subject of further research.

Prospects for expanding sales of Azeri agrifood products are, therefore, most favourable on the domestic market, as major neighbouring export markets are unlikely to show much increasing demand in the coming years. The latter is due to expected slow income growth in the region, whereas exchange rate developments and Russia's policy to become more food self-sufficient will challenge Azerbaijan's exports to its main foreign market. Sweeping new export markets depend on the sector's ability to adapt and meet international quality and food safety standards. The adaptability of the sector depends to a large extend on the knowledge, skills and technology levels in all links of the supply chain (private industry) and in the public sector's institutions (education, government bodies including control agencies) as well.

vegetables from the EU, the US and several other countries), while an increase was recorded in the consumption of vegetables and potatoes. See http://financialobserver.eu/cse-and-cis/russia/the-embargo-has-transformed-the-russian-food-market)

[13] The Roadmap claims export opportunities, especially in Russia and Iran, for "products such as tomato, cornichons, fresh fruit (date, pomegranate, apple, sweet cherry, peach), green tea leaf, sunflower oil, sugar and sugar products and sunflowers." These assessments are based on recent import growth of these products in Russia and/or Iran, recent trends in Azeri exports of these products and the expectation that production and productivity in the Azerbaijan agricultural sector can be increased. Unclear, though, is whether the analysts have evaluated factors such as oil prices developments and internal food policies that may interfere with a projected increase of Russian food imports.

6. Factors determining agricultural industry competitiveness and development opportunities

6.1 Introduction

Given the evaluation of future demand prospects in the previous section, to what extent would the Azerbaijan agricultural industry benefit from increasing demand for its agri-food products? Answering this question requires an assessment of how efficient the industry is using its available resources. In this section we review the country's natural and human capital resources as well as the physical infrastructures available to the industry. Next to these factor conditions, economic literature[14] also points at the strengths of supply chain linkages as an important factor that determines the agricultural industry's competitiveness: without an efficient trading and processing stage of the commodities, efficient farming will not result in increasing sales. Next, as government policies often alter the industry's production and market conditions, policy interventions affect competiveness of the agricultural industry. Therefore, the role of government will be included in our evaluation as well, discussed in the section on resources (6.2), on supply chain relationships (6.3) and as a separate section (6.4) where in addition to a summary of current support and trade policies, suggestions are made for government actions that could further help to reduce obstacles for agricultural development.

6.2 Factor conditions

6.2.1 Natural conditions (climate, temperature, precipitation, water, soil)

Located in the Southern Caucasus, on the western coast of the Caspian Sea, Azerbaijan has different climatic conditions. The Kura-Araz lowland and Absheron peninsula (including Baku city), located in Central and Southern Azerbaijan, have a semi-arid subtropical climate (see Figure 6.1). The foothills of the Talish mountain and Lenkoran lowland in the Southeast of the country are characterised by a humid subtropical climate. A temperate climate dominates on the slopes of the Greater and Lesser Caucasus, covered with forests, with arid, warm humid and cold areas. Cold climate dominates in the high ridges and peaks of the Greater and Lesser Caucasus.

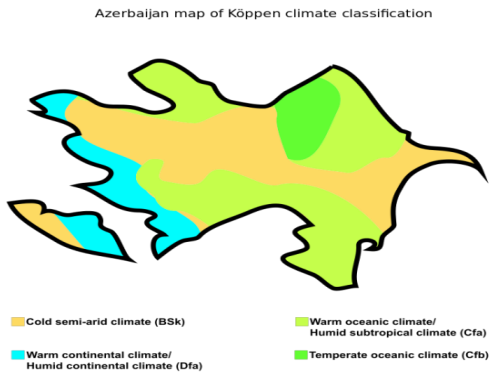

Figure 6.1. Climate classification of Azerbaijan. Source: World Koppen Classification.svg.

Water availability is extremely important for agricultural activities. Atmospheric precipitation is, however, distributed unevenly over the country. During the year, precipitation amounts to less than 200 mm on

[14] The economic literature on this subject illustrates various approaches that can be followed to indicate competitiveness (see Wijnands, Van Berkum and Verhoog, 2015 for an overview) and offers no general theory about competition. Consequently, there is no single indicator of competitiveness. Therefore, an eclectic approach based on a match of the most important characteristics of the sector with various elements from theories to assess competitiveness is considered appropriate.

the Absheron coast. On foothills and the middle mountainous belt, precipitation is 300-900 mm, with 1,000-1,300 mm on the southern slope of the Greater Caucasus and 1,200-1,400 mm in the Lenkoran-Astara zone. Due to modest rainfall, in-land water resources (including rivers and lakes) are relatively low. The Caspian sea, the greatest enclosed water basin in the world with an area of 400 thousand km^2, has a high salt content, which limits its potential use for irrigation of agricultural land. Water resources are unevenly distributed across Azerbaijan. The Kura-Araz lowland, Gobustan-Absheron and Nakhchivan have particularly low access to permanently running rivers. Natural water resources are declining and therefore water shortages are becoming more frequent. Most water shortages are due to leaks in the distribution systems (World Bank, 2012).[15] The problem of adequate water availability is a potential threat to agricultural yield improvement efforts.

Top soil and vegetation of Azerbaijan are peculiarly varied, with fertile areas in main parts of the country. Yet, according to Tarana (2005), an estimated half of the cultivated land is affected by erosion, which is seriously damaging mountain and foothill lands. An additional factor limiting crop development is salinity, which affects about a third of the country's area, mainly in the south-east part of Azerbaijan.

Natural conditions are quite varied with many regions attractive to a range of different agricultural crops. High temperatures and water availability in summer, though, are a major problem in a large part of the country if not managed by irrigation infrastructures.

6.2.2 Labour and human capital

Knowledge about, appropriate skills and practical experiences with modern agricultural techniques and methods are essential for improving agricultural performances in Azerbaijan. However, these are very limited both in government bodies as well as in the private sector. Azerbaijan lacks a properly working agricultural vocational schools system, something that is indispensable for implementing modern technologies and management principles at farm level. This subsection elaborates on government investments in agricultural education.

Total population is 9.6 million (2015, WDI) out of which 4.7 million are labour force (people age 15 and older). Over 36% of this labour force find employment in agriculture, forestry and fisheries. The general education level is relatively good, with 98.5% of the population over 25 years completed primary school, of which 95.6% finished secondary school and a significant part (30%) completed post-secondary school (see Table 6.1). However, government expenditures on education is an estimated 7.4% of total government expenditures in Azerbaijan in 2015, which is significantly less than world's average of 14% (World Bank, WDI data).

Table 6.1. Education in Azerbaijan: key indicators

Indicator	2014-2015 (average)
Adjusted net enrollment rate, primary (% of primary school age children)	94.5%
Primary education, duration (years)	4
Preprimary education, duration (years)	3
Compulsory education, duration (years)	9
Educational attainment, at least completed primary, population 25+ years, total (%) (cumulative)	98.5
Educational attainment, at least completed lower secondary, population 25+, total (%) (cumulative)	95.6
Educational attainment, at least completed post-secondary, population 25+, total (%) (cumulative)	30.0
Lower secondary completion rate, total (% of relevant age group)	86.3
Educational attainment, at least Bachelor's or equivalent, population 25+, total (%) (cumulative)	15.7
Government expenditure on education, total (% of GDP)	2.6
Government expenditure on education, total (% of government expenditure)	7.4

Source: World Bank, World Development Indicators, retrieved from www.data.worldbank.org on 5 June 2017.

[15] World Bank, 2012. Climate change and agriculture, country note, June. www.worldbank.org/eca/climateandagriculture.

Agricultural specialists at university level are trained at the Azerbaijan State Agrarian University (located in Ganja), Azerbaijan State University of Economics, Baku State University, Nakhchivan State University and recently at ADA University as well. In line with these there are also agrarian-oriented colleges and vocational schools (high schools). However, while acknowledging that science and education is key to gain competitiveness the Roadmap is very critical in its assessment of Azerbaijan's current (16) scientific research institutions dealing with agricultural issues and which are under the Ministry of Agriculture, National Academy of Sciences, Ministry of Ecology and Natural Resources and the Amelioration and Water Management OJSC, by stating that these institutions are

> *"significantly incompatible with the demands of a market economy. Knowledge of the majority of leading experts of the relevant research institutions about modern agrarian technology is not at the desired level. Furthermore, the institutions are in need of modern laboratories, devices and equipment, highly effective agricultural machinery appropriate to their line of activity and other modern logistical means in order to achieve scientific results that meet the requirements of the market economy and international standards"* (p. 27).

The Roadmap's analysis continues by reporting that, based on a selective survey, only 3.4% of the population working in agriculture has completed vocational education. This confirms complaints expressed in interviews during our field surveys that Azerbaijan lacks a properly working agricultural vocational schools system, something that is indispensable for implementing modern technologies and management principles at farm level.

The Ministry of Agriculture is responsible for providing agricultural extension. Whatever extension and advisory support institutions in the Ministry and in the field are seen today in Azerbaijan were established under various donor driven projects (among others financed by World Bank and GIZ). The Ministry of Agriculture has a number of regional offices that are supposed to work on adapting and demonstrating technologies released by research institutes. In addition to the regional offices, non-public organisations are like private advisory centres and NGOs perform a variety of extension advisory services. Also (many) private international and local companies provide extension advice to the farmers during the sale and promotion of their respective products. Technical soundness and objectivity of such advice, however, remain doubtful as the main objective of the companies is to expand their business and enhance profits. Own survey impressions confirm the GFAR (Global Forum for Rural Advisory services, 2013) assessment stating that the present situation of Azerbaijan's extension advisory services, both public and private, is far from satisfactory.[16]

The generally low level of education of those working in agriculture and the unsatisfactory state of institutions that should provide the sector with scientific and applied knowledge may be a serious bottleneck for using modern technologies that can help to expand agricultural production and improve the quality of the produce.

6.2.3. Capital and land

Availability and costs of capital are of major importance as factors of production. The World Bank's indicator 'getting credit' measures whether certain features that facilitate lending exist within the applicable collateral and bankruptcy laws and the coverage, scope and accessibility of credit information (World Bank, 2017). Azerbaijan's score on the ease of getting credit is 118 out of the 190 countries listed in the ranking. This means that access to credit is rather problematic in general, which is also reflected by high lending interest rates (depending on the period 12-14% in May 2017).[17] Conversely, the agricultural production and processing industry credit may benefit from discounted credits through several channels (see Appendix B and Government policy section below). However, despite those discounts, the levels of loans taken by the agricultural and food processing industry for investments have declined significantly over the last few years, from 847 million manats in 2014 to 441 million manats in 2016 (see Appendix Table B.3.).

[16] Source: https://www.g-fras.org/en/world-wide-extension-study/130-world-wide-extension-study/asia/western-asia/283-azerbaijan.html#extension-providers
[17] Source: https://www.cbar.az/assets/3590/Bulleten-2017_aprel.pdf

The country's total agricultural land used is estimated to be 4.77 million ha of which 2.2 million ha is currently used for arable and permanent crops, and 2.6 million ha for hayfields and pastures (mainly owned by state but which can be leased by private individuals and companies). Oral sources suggest there is quite some unused land, which may indicate a rather easily achievable expansion of land use for agricultural purposes. However, reality may be more complex. Reasons for not using (former) agricultural land might be multiple, such as bad quality (e.g. salinized, unfertile soil),[18] difficult access to land located far away from paved roads, or urban owners of land uncaring about using the plots far away from their residence. Lands not used for agricultural purposes as they were in previous times might have turned into woody areas as well, making it difficult to regain the areas for agricultural production. A land market with transparent procedures may help match demand and supply of agricultural land, and bring back former agricultural land into the production process. The Roadmap proposes measures for improving the functioning of a land market in order to encourage the sale of used and unused land to those farmers/growers who see opportunities in using it (Strategic Roadmap, 2016:82). This process may result in land consolidation and increasing scale of production, both assumed to contribute to more efficient use of land.

Conclusion
Getting credit is a problem and hinders agricultural expansion. Measures to improve the functioning of a land market may contribute to an increasing scale of production and more efficient use of agricultural land.

6.2.4 Infrastructure and transport distances

Type, quality and cost of infrastructure affects competitiveness of the agricultural sector, as smooth and rapid transport of products to the trader/consumer add to the quality of the product, in terms of freshness and appearance. Infrastructure includes transport systems and communication systems. Recent investments in road networks have importantly improved logistic efficiency of agricultural and food products in Azerbaijan. However, roads in rural areas are in poor condition, especially in the more remote parts of the country, and transportation service providers charge relatively high fees for transportation in these regions (Strategic RoadMap, 2016:30). Moreover, the local vehicle park specialising in cargo transport to export markets is weak, and the exporters depend on the vehicle parks of foreign countries, which cause problems for ensuring stable transportation on favourable terms (Strategic Roadmap, 2016:30). Hence, food and agricultural logistics need further investments both in the hardware (roads) and software (services).

A positive development in this area is that a new and ambitious railway line is currently built in the Caucasus - from Azerbaijan through Georgia - and on into Turkey. The Baku-Tblisi-Kars line is part of an international ambitious project namely to connect the railways of Azerbaijan and Turkey through Georgia with the so-called Iron Silk Road or Trans-Asian Railway (TAR), which is an integrated freight railway network across Europe and Asia. The TAR will consist of four main railway routes. Azerbaijan's export opportunities for agricultural and food products could benefit importantly from being connected to this transport corridor from Central Asia through the South Caucasus to Europe. The Baku-Tblisi-Kars railway is expected to be completed by the end of 2017.

Infrastructure, such as roads and water supply, is sometimes (co)financed by large private companies to accelerate development for their businesses. Examples have been observed for high-tech greenhouse and field vegetable farms near Baku and in the Bilasuvar region.

Communications infrastructure is related to ICT. Two indicators for which high(er) levels (compared to other countries) indicate better competitiveness are mobile phone subscriptions and internet use. On both indicators, Azerbaijan has a reasonable to good score when compared to neighbouring countries (see Table 6.2).

An additional factor in terms of infrastructure is the supply of energy such as electricity, natural oil and gas. According to *World Bank Doing Business* estimates that getting electricity is not easy and has high costs. The reliability of supply and transparency of tariff index is 4 on the scale of 0-8, pointing at rather

[18] According to Tarana (2005), an estimated half of the cultivated land is affected by erosion, which is seriously damaging mountain and foothills lands. A additional factor limiting crop development is salinity, which is affecting about a third of the country's area.

modest service. Therefore, power distribution network needs to be upgraded especially in the rural areas; the Asian Development Bank and the government of Azerbaijan are planning to implement programmes for rehabilitation and expansion of the country's power distribution network.[19]

Table 6.2. Indicators of communications infrastructure

	Mobile cellular subscriptions per 100 people	Secure internet servers per million people	Individuals using the internet (% of total population)
Azerbaijan	111	20	77
Armenia	116	53	58
Georgia	129	63	48
Iran	93	14	45
Kazakhstan	157	31	71
Russia	160	215	70
World average	98	216	44

Source: World Bank, World Development Indicators (ww.worldbank.org)

6.3 Value chain structure and strengths

An efficient organisation of the interactions between the food supply chain segments (input suppliers-farmers-traders-processors-retail) is an important condition for being competitive. The structure of the food supply chain in Azerbaijan is featured by many mostly small-scale actors. This is especially true for farming whereas a few hundred processing units are operating in the food manufacturing industry. With the exception of a pesticide factory that is under construction (Azernews, 15 June 2016) no input industries producing fertilizers, machineries and other agricultural equipment are active in the country. Imports take place by dealers/importers (representing foreign firms). Next, the food retail sector is dominated by rather small-scale food shops and open markets, while large scale supermarket formats are slowly gaining market shares especially in Baku and other cities in the country.

The food processing industry is an important part of the manufacturing industry of Azerbaijan, accounting for 32% of the total production value of the manufacturing industry (a more or less similar share the manufacturing of refined petroleum products has). The number of enterprises active in the food industry shows a declining trend since 2005 and counts 382 in 2015, with almost 19,000 people employed (10% of all employees engaged in manufacturing industries)[20] (www.stat.gov.az, Table 21.1). At the same time, individual entrepreneurs are increasingly active in the food industry as its number has doubled since 2010 to just over 4,000 in 2015.

Largest food industries in terms of turnover and/or employments are the meat and dairy processing industry. Both have expanded significantly in the last decade. Also, and in line with primary production trends, the processing of cereals (into flour and cereal products), fruit and vegetables (mainly into canned products) and vegetable oils show positive developments, whereas the production and processing of cotton and tobacco has declined (see stat.gov.az, table 4.6, Industry of Azerbaijan).

The food supply chain organisation in Azerbaijan is relative weak with little collaboration among chain actors, including farmers, traders and processors. Institutional arrangements such as producer organisations (for jointly delivering produce to clients) and contract farming are hardly applied in the Azerbaijan agri-food sector. Contract farming reduces uncertainty for both sides: prices, volumes and quality are predefined in contracts, and this form is generally also used to provide small-scale farmers with credits, other inputs and production services that help to deliver the quality and volumes of the produce requested. However, most sales of agricultural commodities appear to flow through the wholesale market network throughout the country and has a spot market nature; evidence shows this is mainly how fruit and vegetables, live animals and meats are traded. As a result, for these products supply chain linkages are rather loosely and depend essentially on the ad-hoc circumstances (what is

[19] See https://www.adb.org/news/adb-azerbaijan-sign-1-billion-mou-upgrade-power-distribution-network

[20] Average monthly wages in the food industry are about 50% of the overall average wages in the manufacturing industry: 353 manat/month versus 809manat/month (Table 15.2, in 'Industry of Azerbaijan', stat.gov.az). The mining industry is paying much higher salaries to its employees as does its related (refined petroleum products and chemical) industries and several others.

available where and supplied by whom, at what prices and for what quality?) instead of using pre-defined contracts determining price, volumes and quality specifications. This also implies that processing firms may face fluctuating supplies of varied quality levels against volatile prices. This makes their deliveries to retail challenging.

Transaction costs of exchanging agricultural raw material are generally rather high in Azerbaijan due to poor physical infrastructures and related lack of (proper) logistical services at the country side (suitable transport means, cooled storage facilities, etc.). Moreover, transaction costs are high due to the prevailing structure of small-scale farming: traders/processors have to make agreements with numerous suppliers and collect from many farmers small quantities, which all adds up to the costs of purchasing the raw material. A new positive development is the establishment of the Shamkir Agropark near the city Ganja. The Shamkir Agropark is considered as an "international hub for fruit and vegetable products, where modern production, logistics, storage (CA) and sales technologies come together" (http://shamkiragropark.az). The park was opened in autumn 2017 (see for more details also the sector report Protected vegetables).

Small-scale farmers generally do not use modern technology aiming at improving the quality of the product (hygiene, cooling, storage, etc.) and/or increasing production (productivity enhancing methods by using modern equipment, fertilizers, seeds, etc.). They simply cannot afford the investment in these inputs. For bulk production and low-value agricultural commodities, present farming methods may be appropriate. Yet, as demand for high-value food commodities increases driven by rising income, urbanisation and changing preferences, a transition towards using more up-to-date quality enhancing technologies is necessary.

6.4 Role of government

In its goal to diversify its economy and pay particular attention to agricultural development, the government is supporting the agricultural sector in many different ways. Policies have taken shape lately in the framework of the Strategic roadmap for agricultural development. This section briefly summarises the main points of current policies that stimulate production and promote trade by direct (product-related) and indirect (production means related) interventions.

6.4.1 Agricultural policy

To date (autumn 2017) the government policies to support agriculture include a number of elements, such as hectare payments, payments per kg produce, input subsidies and tax exemptions. Farmers get a premium of 40 manats per hectare, no matter what they crop on their land. Wheat and rice producing farmers get an additional 40 manats per ha, hence receiving 80 manats/ha. According to 2017 proclaimed Orders of the President, the production of cotton, tobacco and sugar beets shall be promoted by a payment per kg (0.1 manat, 0.05 manat[21] and 4 manat per ton), respectively), which is about 190, 125 and 196 manat per hectare when average yields are taken into account.

In terms of input support, the government provides irrigation water, elite seeds, fuel and fertilizers at a discount (50 manats/ha for all crops and perennials) (wheat and rice producers are offered an extra 40 manats per ha), and sells machinery and (imported) animals (especially heifers) to farmers at preferential terms through the state-owned company Agroleasing.[22] Another 2017 order that urges considering possibilities of establishing a Credit Guarantee Fund and the creation of an Agricultural Insurance Fund has been signed in April 2017 in order to reduce risks of commercial lending and improve access of agricultural producers to finance. Moreover, government provides soft loans to agricultural processors (e.g of milk or poultry) to help them investing in increasing processing capacities (See Appendix A1, on ANFES).

Next, the government invested in the construction of artificial insemination centre and the restoration of a silkworm breeding station. Moreover, investments have been made in improving water supply on

[21] In case of tobacco 0.05 – for 1 kg of dry tobacco and 10 kg of wet tobacco.
[22] 50 AZN/ha for fuel and motor oil; 70% discount on costs of mineral fertilisers and herbicides, with a maximum of 80AZN/ha and 10 AZN/ha respectively; costs incurred for original and elite seed is paid from state budget; imported cattle sold by Agroleasing at 50% discount, and machinery and other equipment at 40% discount if 20% of the initial costs is paid; 100 AZN per head of calf through artificial insemination (see www.agro.gov.en, state support, retrieved on 22 June 2017.

arable lands and seed production; the latter establishing companies specialised in production and storage of seeds of different crops.

The establishment of Open Joint Stock Company of "Procurement and supply of food products" is another tool to support the local producers. This company will buy food products from local producers on the bases of contracts and the farmers will be paid 25% of total amount of contract in advance. The OJSC will be the main body providing the state bodies such as the army and hospitals with food.

Another instrument in agricultural policy is the granting of tax exemptions. Farmers are free from paying taxes - also no value added tax is charged on agricultural products sold by farmers. An important change has been implemented per January 1, 2017 when the tax code was changed indicating that land owners will have to pay 2 manats per 0.01 ha (200 manats per ha) of agricultural land which is not used for agricultural purposes. The argument behind this measure is that a tax penalty will promote owners to use agricultural land, not leaving it idle, or to decide to sell it.

Another change in the tax code is related to the point when the farmers/grower make even a small change in his agricultural product (for example drying fresh fruits like persimmon) then he/she automatically becomes a tax payer and pays taxes according to the rules. The consequence may be that this measure will keep the farmers away from further steps on values chain.

Other measures ordered in 2017 and relevant to agriculture and food products are to simplify and digitalize trade (import and export) procedures by introducing a one-window principle, to support the branding of Azeri products ('Made in Azerbaijan') and create a platform for Azeri products to be sold on foreign and domestic markets (AZexport). These measures are on the edge of trade policy.

Providing estimates of support (for instance in terms of share of the sector's production value, the 'producer subsidy equivalent' a measure the OECD is presenting in agricultural policy evaluations) is complicated, yet it is very likely that all support instruments together result in reducing production costs (e.g. through input subsidies, soft loans and tax exemptions) and increasing revenues (e.g. direct payment per hectare). The extent support effects production decisions and is efficient (meaning: gives best value for money) is unknown due to a lack of (publicly available) evaluation studies.

6.4.2 Trade policy

In 1997 Azerbaijan applied for membership of the World Trade organisation (WTO). The WTO is a body designed to promote free trade through organising trade negotiations and act as an independent arbiter in settling trade disputes. To some extent the WTO has been successful in promoting greater free trade.[23] However, even after 20 years of negotiating Azerbaijan is not a WTO member yet and hence has not been able to benefit from the WTO's achievements. As a non-WTO member, all trade relations are subject to bilateral agreements.

Relationship with the EU

Azerbaijan's bilateral trade relation with the EU is currently regulated under the Partnership and Cooperation Agreement (PCA) in force since 1999. The agreement does not include tariff preferences but prohibits quantitative restrictions in bilateral trade and envisages selective regulatory approximation of Azerbaijan's legislation to the EU acquis. Negotiations to enhance the provisions of the PCA are ongoing. The EU supports closer trade and economic integration with Azerbaijan through the European Neighbourhood Policy (ENP) and its eastern partnership dimensions.[24] To date, Azerbaijan's exports to the EU are subject of the standard 'most favoured nation' treatment', hence without any tariff preference granted to Azerbaijan.

Relationship with Russia and other former Soviet-Union (FSU) republics

[23] Benefits of free trade include: 1) free trade enables countries to specialise in goods in which they have a comparative advance (lower opportunity costs); 2) reducing trade barriers leads to trade creation; 3) increased exports; 4) specialisation allows benefitting from economies of scale and lower average costs; 5) increased competition will be an incentive to more efficiency; 6) trade is an engine of economic growth.
[24] See for more detail about EU-Azerbaijan relations EU's DG Trade website, www.europa.eu/trade/policy

Azerbaijan has strong trade relations with the Russian Federation, which is the country major export market for agricultural products. Azerbaijan is not a member of the Eurasian Economic Union, established by Belarus, Kazakhstan and Russia in 2014 to which Armenia and Kyrgyzstan joined in 2015. Instead, Azerbaijan has bilateral trade agreements with seven former FSU countries: Russian Federation (September 30, 1992); Moldova (May 26, 1995); Ukraine (July 28, 1995); Turkmenistan (March 18, 1996); Uzbekistan (May 27, 1996); Georgia (June 10, 1996); Kazakhstan (June 10, 1997); and Tajikistan (July 13, 2007) (www.export.gov). The imports from these former FSU countries are free from paying duties, only 18% VAT is charged. Azerbaijan exports, at the same time, have free access to the countries involved.

Tariff rates applied in trade outside bilateral agreements.

In its trade relations with other partners than those of the former FSU republics, Azerbaijan applies the following types of custom duties and taxes for the imports of agriculture and food products:

1) Seed and breeding animals - custom duty- 0,5%; VAT - 18% (for more information: http://c2b.customs.gov.az/tnved_public.aspx)

2) All agricultural and food products for consumer consumption - custom duty- 15%; VAT - 18% (For more information: http://c2b.customs.gov.az/tnved_public.aspx)

3) Applied specific import custom duties for chicken meats (1USD/kg), eggs (100USD/1000 pieces), tomatoes (0.4USD/kg), onions (0.2USD/kg), cucumber and gherkins (0.4USD/kg), hazelnuts (1.5USD/kg), fresh grapes (0.4USD/kg), fresh apples, pears and dates (0.3USD/kg). The lists of these products can be found on: http://www.e-qanun.az/framework/33848).[25]

The specific import duties mentioned under point 3 above provide quite some import protection of each of the respective products against foreign competitors. For instance, compared to retail prices of chicken meat (3-3.5 manat/kg) or tomatoes (1.40 manats/kg; prices observed during May 2017 field surveys, see respective sector reports) import tariffs are around 50% of consumer prices, meaning that foreign suppliers have to sell their produce at significantly lower prices than domestic produce in order to be price competitive. Undercutting domestic prices seems very unlikely with these high import tariffs currently applied.

The protective policy shelters these products against foreign competition and through this the government interventions stimulate domestic production. For instance, the poultry meat processors are reported to benefit from the country's trade policy that adds importantly to import substitution, which helps the country's balance of payments – a specific government policy goal. The other products on the list mentioned under regime 3 above are among Azerbaijan's main agricultural exports. Yet domestic production has a seasonal character. Import tariffs discourage imports and encouraging domestic production beyond the traditional season of production and act as a revenue for the government as well.

6.4.3 Possible government contributions to enhancing the sector's competitiveness

In its Strategic roadmap for agricultural development, the government plans to undertake a series of measures that would help to improve the sector's competitiveness. Although backed by thorough analyses, the document fails to provide any prioritisation in the long list of measures it suggests. During our surveys we encountered many of the bottlenecks for agrifood business development also addressed by the Strategic roadmap. However, we evaluate the most important constraints using the sector's opportunities are the lack of access to markets and inputs (like credits and knowledge/information), and insecure ownership rights. Solving these issues is fundamental for enhancing the sector's competitive position. A priority list of measures might therefore be set to address these essential conditions for agricultural development. This leads to the following topics as priority fields:

- Increase human capital by training, extension and education;
- Ensure land ownership, establish land market and allow land to be used for collateral for loans;

[25] See the Decree of Cabinet of Ministers on 23 of September 2016, No:367, Changes and amendments to Decree of Cabinet of Ministers of the Azerbaijan Republic "On rates of customs duties for export-import operations in the Azerbaijan Republic".

- Promote the establishment of farmers associations, stimulate cooperation in marketing and input purchases, avoid administrative obstacles, build trust among farmers;
- Expand information base of the sector: data collection and analysis; for the purpose of feeding the policy cycle (policy design, implementation, monitoring and evaluation) and for indicating business opportunities;

These topics are further explained in the paragraphs below.

As a consequence of the land privatisation process people with little agricultural background and experiences have got agricultural land. Next, the agricultural science and educational base has had little attention of the government since the country's independence. Consequently, only a very small part of the farming community appears to have an educational background in agricultural farm management (either technical or economical). As a result agriculture is practised using traditional methods, with little knowledge of today's technical opportunities and insights in economic conditions of using up-to-date technologies. Agriculture with future perspectives needs farmers that apply the latest scientific and practical insights to their daily labour. Government investments in schooling, training and extension are critical to an enhanced knowledge base of the farming community.

Currently, land ownership laid down in documents does not always represent reality in terms of ownership and coordinates of the plots used. An electronic cadastre system is under development, yet faces practical problems due to this issue mentioned. A complete, realistic and representitive and well-operating cadastre system is essential for agricultural development. Clear land ownerships rights are vital for creating a land market that can be an instrument to increase efficient use of the land, as the more entrepreneurial farmers will be able to buy land from those who may want to sell it. Examples from other countries (among others in central Europe)[26] show that establishing institutions that help operating a cadastre system and land market boosts an agricultural land restructuring process. At present, the sector is dominated by small-scale production units; a restructuring towards larger scale farms will lead to more efficient production.

Due to their small-scale of production many small farmers (over 90% of the agricultural sector in Azerbaijan) have little access to markets, other than their local village: processors and traders connected to urban and/or international market have a preference for suppliers (farmers) that can guarantee constant volumes of a constant quality. Moreover, small producers are general price takers as traders exercise market power. A way to enhance the small-scale farmers' position in the supply chain is the establishment of farmers' associations or cooperatives acting as a market organisation, which is that such a collective aims at the purchase of inputs (for instance fertilisers or feed) and/or selling of products to a buyer/trader. This could result in paying less for inputs and getting higher prices for produce. The strategic roadmap observes that initiatives in this area have not been successful so far. Reasons why associations have not been established might be the lack of insights into the possible gains for farmers, administrative obstacles (laws and/or rules) including tax measures, and trust among farmers. A public campaign plus public measures to promote forms of working together among the smaller farmers may help to take away the bottlenecks the farming community currently experiences in this area.

For providing effective and efficient support to the sector's development, the government needs to have insights in the sector's current economic situation. The Farm Data Monitoring System (FDMS) has been established recently, by which economic indicators of a large pool of farmers are collected and analysed, and which can act as a tool to evaluate policy impacts and efficiency of agricultural production. Despite a reasonable coverage to date, the sector and regional representation of the system can be improved as well as the scope of indicators included. Most importantly, the system shall increasingly be used for analyses and policy evaluation in order to become a useful tool for identifying the needs of the sector. Moreover, reliable data and information on economic trends are vital to the private sector (farmers, traders, processors) in their quest for opportunities to improve efficiency of their activities.

[26] There is a library with publications analysing the land restructuring process in Central and Eastern countries in the 1990s. See for instance Z. Lerman (1999). Land Reform and Farm Restructuring: What Has Been Accomplished to Date?. The American Economic Review, Vol. 89, no.2, or Macey, D.A.J, W. Pyle and S.K. Wegren (eds.) (2004). Building market institutions in post-communist agriculture: land, credit and assistance. Lexington Books, Oxford.

Of course there are many more pressing issues to be mentioned as important obstacles for agricultural development. In addition to the four areas already mentioned we add two additional issues. One is transparent legislation and practical implementation of regulations, in all areas but especially with respect to taxation of agricultural trade and customs rules. Traders as well as producers complain about public services acting discretionary where rules should be generally binding. Second is the need to create institutional infrastructures necessary to improve the quality of agricultural produce – a product attribute of increasing importance on domestic *and* international markets. Examples of the latter are (independently operating and internationally accredited) laboratories analysing products on food safety requirements, and government bodies controlling businesses involved with food that must meet national safety and hygiene requirements in order to safeguard consumer health. The establishment of a food safety agency is planned, with help of the FAO and other foreign support, and is expected to become operational soon.

7. Summary of findings and concluding remarks

The agricultural sector is dominated by small-scale farming, the majority of which produces for self-consumption and local ('village') markets. Only a small part of the sector is commercially-oriented.

Over the last decade agricultural production shows an increasing trend, except for potatoes (declining) and total vegetable production (constant). Domestic consumption of protein-rich products like meat, fish and eggs has increased in addition to fruits and vegetables, while wheat (bread) consumption declined. Self-sufficiency rates indicate that except for fruits and vegetables Azerbaijan's agricultural production does not meet domestic consumption needs. Moreover, for wheat, potatoes, but also milk, meat and fish, self-sufficiency rates are rather low (less than 85%).

The country is a net-importer of agricultural products, with its main export products within the fruits (among others apples, hazelnuts, cherries, persimmons) and vegetables (tomatoes, onions, cucumbers) category. For its major export products, Azerbaijan is highly dependent on the Russian market.

Future prospects for increasing exports to the Russian market depend on that country's general economic situation in the coming years (which again depends highly on international oil price developments) and its food security policy that tends to protect domestic production against foreign competitors. Azerbaijan's strong dependency on the Russian market calls for diversification of export markets (and diversification of export products, see Section 5.3).

Given the country's net-import position for most agricultural products, the domestic market may offer the sector opportunities to expand. However, using these opportunities requires the sector to respond to the dynamics of food market demand in Azerbaijan. Domestic food consumption patterns are slowly changing, influenced by increasing incomes and urbanisation, and leads to more variety and convenience products. A changing food environment also affects how people make food consumption choices. The rising attendance of supermarkets in the country and the related increasing weight of complying with quality and food safety requirements importantly shape this food environment.

Primary agriculture faces a number of bottlenecks in using its production means efficiently. High summer temperatures, water scarcity, land erosion and salinity are important biophysical limitations to production, whereas low level of skilled labour/educated farmers and expensive credit hinders the implementation of modern technologies and management principles.

The food supply chain is poorly organised, transactions are mainly on ad-hoc basis and costly due to the prevailing small-scale nature of farming. The latter clearly is an obstacle for integrating in modern supply chains in which supermarkets play an import role. Their sourcing from farmers and food processors is led by principles of constant supply of high quality products that comply with international food safety standards. The majority of Azerbaijan's farming community is not ready for investments necessary for integrating in modern food retailing, while the country's institutional framework to monitor the sector's compliance with international standard is not in place.[27]

The above leads to a number of recommendations for government actions that will support agricultural development. Priorities shall be given to improving farmers' access to production means (e.g. land, finance, other inputs) and markets, while enhancing knowledge, skills and expertise to farm most efficiently. Vital elements of government policies are therefore improvements in

- agricultural education and extension services;
- the establishment of a land market (backed by a well-operating cadastre system);
- the promotion of farmers' associations next to support farmers' initiatives (bottom-approach) aiming at collectively market their produce and/or purchase inputs;

[27] From Roadmap document: "The system of ensuring food safety in Azerbaijan is significantly different from international standards and best practices, and it cannot fully ensure the safety of food products. There is a need to bring the food safety system into line with the standards of the European Union and the relevant international organizations and to increase the safety and quality of products. Despite Azerbaijan being a party to the conventions and organizations defining international standards on food safety, the level of application of these standards in the country is very low."

- improvement of the data and information base from which policies as well as business opportunities can be deducted.

Moreover, as a follow-up to investment opportunities indicated by the Master Plan, the government should support initiatives of farmers (bottom-up approach) to invest in efficient production methods, quality standards, post-harvest processes and/or marketing of their produce in order to improved their livelihood and strengthen their competitiveness in the value chain. Quick wins can be achieved by backing selecting pilots for different agricultural industries in the most promising regions (see investments opportunities per sector and per region). Other areas of attention are legal transparency (especially related to taxing and customs rules) and the institutional infrastructure that backs food safety and product quality policies that conform global standards.

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Appendix

A. Currency developments

Devaluation of the national currency manat has made imports more expensive. Figure A1 shows the developments of the euro to manat over the last 5 years. Sharp devaluations took place in February and December 2015. The manat lost value over the whole 2016 and only regained some from February 2017 up to March/April, when the currency lost value against the euro again. Currency devaluations cause inflation and real incomes under pressure, making people feel insecure. On the other hand, exports is encouraged by a currency that devaluates against the currency of the country of destination.

Figure A1. Exchange rate developments euro to AZN manat (www,xe.com, June 4, 2017)

B. Loans to the agricultural sector

There are two types of loans to the agricultural sector:

1. General commercial loans by various banks
2. Soft loans by
    - the State Agency on Agricultural Credits (under the Ministry of Agriculture)
    - Azerbaijan National Fund for Entrepreneurship Support (ANFES)
    -

1. General commercial loans by various banks

This loans are available in various terms and conditions and not specified any concession for agricultural sector. Commercial loans are provided by 32 commercial banks and 47 non-bank credit institutions operating in Azerbaijan, by the end of May 2017. (Source: http://fimsa.az/pages/353 and http://fimsa.az/pages/74). Models of the microcredit issue of other institutions (banks, credit unions, credit institutions financed by international humanitarian organisations), are not the same but similar enough. The annual interest rates are generally around 12%-17% in 2017 (up to and including May). Banks and credit institutions generally demand real estates as collateral.

2a Soft loans, provided by the State Agency on Agricultural Credits under the Azerbaijan Ministry of Agriculture

Loans are given for:
1. Production and processing;
2. Reclamation of irrigated lands;
3. Modernisation and development of the food industry (including storage);
4. Agricultural machinery and chemicals;
5. Pilot projects;
6. Breeding farms etc.

Table B.1 Loan types

Type	Amount (manats)	Period	Grace period of loan repayment (in this period only interest is paid), month
Micro	<1000	up to 2 years	12
Small	1000-20 000	up to 3 years	18
Medium	20 000 -50 000	up to 3 years	18
Large	50 000 -200 000	up to 5 years	24

Loans are issuing by agent banks. Agency issues loans for agent banks under the annual 2%. Agent banks have the right to add no more than 5 percent. Thus, entrepreneurs and farmers get loans at annual interest rate of not more than 7 percent (Source: http://agrocredit.gov.az/az/pages/view/183)

2b. Soft loans, provided by Azerbaijan National Fund for Entrepreneurship Support (ANFES)

Loans are given for:
- livestock complexes for the production of meat and milk;
- green supermarkets (farm shops);
- agro-parks;
- enterprises for processing of fruits and vegetables;
- large farms;
- an enterprise feed production;
- greenhouses.;
- farms gardening (different kinds of fruit) and cultivation of seedlings;

Table B.2 Loan types

Type	Amount (manats)	Period	Grace period of loan repayment (in this period only interest is paid),
Small sized loans	5 000 - 50 000	up to 3 years	max 18 months
Medum sized loans	50 001 - 500 000	up to 5 years	max 30 months
Large sized loans	500 001- 100 000 000	up to 10 years	max 60 months

Source: https://www.turanbank.az/en/korporativ-bankchiliq/k-nd-t-s-rrufat-ucun-layih-kreditl-ri/

Interest rates of ANFES loans are 1%. Loans are issuing by agent banks. Agent banks have the right to add no more than 5 percent. Source: https://www.turanbank.az/en/korporativ-bankchiliq/k-nd-t-s-rrufat-ucun-layih-kreditl-ri/

Table B.3 Sectoral breakdown of loans (end of period)

Years	Loans to Agriculture and processing industry, million manats	Share in total loans (%)
2005	97.6	6.8
2006	136.5	5.8
2007	197.2	4.2
2008	261.5	3.6
2009	394.8	4.7
2010	441.3	4.8
2011	466.7	4.7
2012	546.2	4.5
2013	733.3	4.8
2014	847.3	4.6
2015	508.1	2.3
2016	441.3	2.7

Source:CBAR, https://www.cbar.az/assets/3579/Bulleten-2017_aprel.pdf

Table B.4 Soft loans provided by State Agency on Agricultural Credits under the Azerbaijan Ministry of Agriculture (in manats)

Year	Number of projects	Amount of loans
2011	205	16,548,650
2012	227	15,007,000
2013	302	17,730,000
2014	426	14,785,000
2015	540	15,720,000
2016	233	11,432,900

Source: State Agency on Agricultural Credits under the Azerbaijan MoA

Information on Loans provided by the National Fund for Entrepreneurship Support (Source: ANFES (National Fund for Entrepreneurship Support)

Table B.5 Classification of the loan demand of investment projects considered as positive by the Fund by the fields of economy (Accepted project (the amount of loan needs), million manats

Years	Agricultural sector	Various industrial and other fields	Total
2011	101	51	152
2012	164	79	243
2013	170	81	250
2014	253	57	309
2015	252	54	305
2016	151	39	190

Table B.6 Classification of investment projects financed at low interest loans by the fields of economy (loans allocated to business entities), million manats

Years	Agricultural sector	Various industrial and other fields	Total
2011	87.22	50.78	138
2012	148.5	69.5	218
2013	189.2	85.8	275
2014	244.0	51.0	295
2015	212.7	35.8	248.5
2016	155.9	33.5	189.4

Table B.7 Classification of the loan demand of investment projects considered as positive by the Fund (accepted) by the economic districts (million manats)

Years	2011	2012	2013	2014	2015	2016
Aran	47.78	82.75	48.08	93.53	70.05	49.97
Absheron	16.16	36.39	18.91	33.03	21.43	12.08
Yukhari-Karabakh	9.11	0.96	8.22	5.65	1.82	7.58
Sheki-Zagatala	4.84	24.27	18.86	3.48	18.16	1.72
Baku settlements	39.52	41.45	75.23	72.04	107.33	65.81
Daglig-Shirvan	2.85	4.19	16.47	14.06	8.96	3.69
Ganja-Gazakh	11.58	15.87	37.52	37.31	43.26	20.65
Guba-Khachmaz	12.97	29.64	4.46	20.57	27.86	14.88
Lankaran	7.38	7.45	22.54	29.79	6.51	13.85