

Re- Approaching Food Security of Qatar: Challenges and Possibilities¹

Abstract

Food security has been on the agenda of the Gulf Countries, especially after 2008 global food crisis, and has a new face with the current blockage imposed on Qatar since June 2017. This study aims to discuss the challenges of food security in Qatar and the possible solutions in the context of/given the current Gulf Crisis. Challenges and possibilities for the Qatari state in any condition of food insecurity are discussed in detail under the umbrella of food security literature and dimensions declared in Rome Declaration on World Food Security of 1996. Qatar is quite vulnerable in terms of food security and this chronic problem requires multifaceted strategies and partners to eliminate it and ease the current situation rooted in the embargo conditions. The research elaborates underlying impact of the Gulf crisis on this relatively small oil monarchy's food insecurity and emphasizes the need of further development, despite all achievements done so far by the Qatari policy makers.

Key Words: Food Security, Gulf, Qatar, Gulf Crisis, Blockade

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“KATAR’IN GIDA GÜVENLİĞİNİ YENİDEN ELE ALMAK: ZORLUKLAR VE OLASILIKLAR”

Öz

2008 küresel gıda krizinden bu yana Körfez ülkelerinin gündeminde yer alan gıda güvenliği, 2017 Krizinin Katar’a uyguladığı ambargo ile yeni bir aşamaya geçmiştir. Bu çalışma, Körfez krizi sonrası gıda güvenliğinin zorluklarını ve bu zorluklar karşısında uygulanan muhtemel çözümleri tartışmayı hedeflemektedir. Çalışma, Katar’ın gıda güvenliği inşasını, 1996’da belirlenen Roma Deklarasyonu ilkeleri çerçevesinde ele almıştır. Katar’ın coğrafi ve ekolojik şartlarından kaynaklı olarak kronik bir gıda güvenliği sorunu her dönemde söz konusu olmuştur. Bu özel duruma karşı Katar’ın uyguladığı özenli politikalara ve stratejilere rağmen, Körfez Krizi gıda güvenliği açıklarını tetiklemiş ve derinleştirmiştir. Bu araştırma, hali hazırda uygulanan politikaları, zorlukları ve Körfez krizi ile gelen yeni sorunları muhtemel çözümler çerçevesinde detaylı olarak incelemiştir.

Anahtar Kelimeler: Gıda Güvenliği, Körfez, Katar, Körfez Krizi, Ambargo

إعادة مقارنة الأمن الغذائي في قطر: التحديات والاحتمالات

ملخص

كان الأمن الغذائي على جدول أعمال دول الخليج، وخاصة بعد أزمة الغذاء العالمية عام 2008، ثم أطل علينا الأمن الغذائي بوجه مختلف مع الحصار الحالي المفروض على قطر منذ حزيران/يونيو 2017 بسبب الأزمة الخليجية. تهدف هذه الدراسة إلى مناقشة تحديات الأمن الغذائي في قطر واحتمال الحل في سياق / نظراً للأزمة الخليجية الحالية. نناقش بالتفصيل التحديات والإمكانيات المتاحة للدولة القطرية في أي حالة من حالات انعدام الأمن الغذائي تحت مظلة المواد والأبعاد الخاصة بالأمن الغذائي التي تضمنها إعلان روما بشأن الأمن الغذائي العالمي لعام 1996. إن قطر ضعيفة جداً من ناحية الأمن الغذائي وهذه المشكلة المزمنة تتطلب استراتيجيات وشراكات متعددة الأوجه للقضاء عليها، وتخفيف الوضع الحالي الناتج من ظروف الحظر. تشرح الدراسة التأثير الأساس لأزمة الخليج على انعدام الأمن الغذائي لهذا البلد النفطي الصغير نسبياً، وتشدد الدراسة على الحاجة لمزيد من التطوير، على الرغم من جميع الإنجازات التي حققتها صانعي السياسة القطريين حتى الآن.

كلمات مفتاحية: أمن الغذاء، الخليج، قطر، أزمة الخليج، الحصار

Introduction

Food security has been on the agenda of the Gulf Countries, especially after 2008 global food crisis², and has a new face with the current blockage imposed on Qatar since June 2017. According to Rome Declaration on World Food Security (1996)³, when availability, quality, price and safety of food; and the fundamental right of everyone to be free from hunger are under risk, it becomes a security matter.⁴ Arab states import 60% of their foods, and it is even higher in the GCC States with imports more than 80%.⁵ The two GCC countries Saudi Arabia and Qatar have the most institutionalized policy making to deal with this problem in the Arab world.⁶ However, this study focuses only on Qatar being one of the most food import-dependent countries in the world with more than %80 imports of food and that is currently facing an embargo since June 2017 which includes food products. Qatar is not self-sufficient for any of basic food products (wheat, rice, meat, vegetables, fruit) except fish, which has, for centuries been the main source of nutrition for the society.⁷ This study aims to discuss the challenges of food security in Qatar and the possible solutions in the context of/given the current Gulf Crisis. The main question of the research is what are the possibilities for Qatari state to deal with the challenges in this food insecurity condition? To reach an answer, the research consists of two major parts; challenges and possibilities. The paper starts with a brief introduction of approaches to the food security, and moves to discuss in details the challenges Qatar is facing in this regard. The discussion of possibilities that will follow is divided into four parts. The last part discusses the current situation especially with regards to Gulf crisis and the embargo applied on the food security dilemma in Qatar.

² Eckart Woertz, "The Gulf Food Import Dependence and Trade Restrictions of Agro Exporters in 2008," Protectionism? The 4th GTA Report (2010).

³ "Rome Declaration on World Food Security," http://www.fao.org/wfs/index_en.htm.

⁴ Mari Luomi, *The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability* (Hurst Company, 2012).

⁵ Zahra Babar and Suzi Mirgani, eds., *Food Security in the Middle East* (United Kingdom: Oxford University Press, 2014).

⁶ Ibid.; Eckart Woertz, "Arab Food, Water, and the Big Landgrab That Wasn't," *Brown J. World Aff.* 18 (2011).

⁷ Luomi, *The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability*; Mohamed A Darwish, Hassan K Abdulrahim, and Yasir Mohieldeen, "Qatar and Gcc Water Security," *Desalination and Water Treatment* 55, no. 9 (2015). Tahra ElObeid and Abdelmonem Hassan, "Nutrition Transition and Obesity in Qatar " in *Food Security in the Middle East*, ed. Zahra Babar and Suzi Mirgani (Oxford University Press, 2014).

Approaches to the Food Security

While approaching food security, the literature provides variety of conceptual frameworks to analyze keys of this issue, which feed into the research. At the end of 1980s, the security studies in the international relations discipline has started widening with addition of non-military matters. Initially, political, economic, environmental and societal security were new types/areas of security. However, there were also human security discussions which are not state-centered, rather bring human to the center of the security. Hence, regarding comprehensive approaches to security, food security is related to international relations in two ways.

First of all, food security can be understood/theorized under the human security discussions.⁸ This refers to a narrative regarding environmental degradation as a security threat to human beings.⁹ Qatari case validates this approach through combining environmental policies like water and climate change with food security which are all based on the lack of resources.¹⁰ Although this is a common approach to the issue, there is a second approach illustrated by the Copenhagen School, which is more appropriate in analyzing Qatari case.¹¹ Buzan et'al (1998) states that for the environmental types of security, there are scientific and political agendas which overlap sometimes and shape each other.¹² For instance, Qatari policy making process and political agenda involve scientific methods that have clarified the situation of food security for many years. Qatari policy makers have taken this scientific issue and made it political through declaring it under the political agenda by National Food Security Program of 2009; they have taken a step further with securitizing it under Qatar National Vision 2030. This is not abnormal when food security conditions of the country are taken into account. According to Buzan et'al (1998) "security is the move that takes politics beyond the established rules of the game and frames the issue either as a special kind of politics or above politics".¹³

⁸ For further information: Human Security in Theory and Practice (2009) UN Human Security Unit http://www.un.org/humansecurity/sites/www.un.org/humansecurity/files/human_security_in_theory_and_practice_english.pdf

⁹ E. Foster, "Green Security," in *Critical Approaches to Security: An Introduction to Theories and Methods*, ed. Laura J Shepherd (Routledge, 2013).

¹⁰ Zahra Babar and Mehran Kamrava, "Food Security and Food Sovereignty in the Middle East," in *Food Security in the Middle East*, ed. Zahra Babar and Suzi Mirgani (United Kingdom: Oxford University Press, 2014).

¹¹ Barry Buzan, Ole Wæver, and Jaap De Wilde, *Security: A New Framework for Analysis* (Lynne Rienner Publishers, 1998).

¹² Ibid.

¹³ Ibid., 23.

This is exactly what Qatari policy makers have done so far for food because it is not like global warming discussions in the U.S; it is real and in everyday life of people. They can see the food insecurity in the supermarket; hence, the securitization or direction of investments for food has a public support.

In addition to these approaches based on the security studies, initial step for defining food security in practical manner was done by the World Food Summit in 1996 and “aimed at renewing global commitment to the fight against hunger. The Food and Agriculture Organization of the United Nations (FAO) called the Summit in response to widespread under nutrition and growing concern about the capacity of agriculture to meet future food needs”¹⁴. Hence, the hunger and future food needs were two basic issues in the Summit. Food security was defined in the declaration of the Summit and “exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”.¹⁵ This definition, which is a milestone, will be used in following sections to analyze level of achievements and challenges regarding food security of Qatar.

Although food security has been discussed in the literature in the last decades, the concept has increasingly taken a place in the literature since 2007-2008 global food crisis, and redefined in the studies with national food security and sovereignty terms. National food security refers to self-sufficiency of the country to provide enough food to its population as opposed to national food sovereignty, which measures availability of food without considering domestically produced or imported food.¹⁶ Food sovereignty, therefore, provides a more comprehensive and realistic approach, especially for countries like Qatar where food insecurity is not seasonal or periodic but rather chronic. Thus, cases of chronic food insecurities require other strategies than self-sufficiency to eliminate this long-term lack of access to food security for household and individuals.¹⁷ International remittance, state subsidies and other possible explanatory variables are influential on approaching the household food security.¹⁸ Qatar is not a country dependent on international remittance;

¹⁴ “Rome Declaration on World Food Security”.

¹⁵ Ibid.

¹⁶ Per Pinstrup-Andersen, “Food Security: Definition and Measurement,” *Food Security* 1, no. 1 (2009): 5.

¹⁷ Ibid., 6.

¹⁸ Madhav Regmi and Krishna P. Paudel, “Food Security in a Remittance Based Economy,” *ibid.* 9, no. 4 (2017).

however, its distributive social contract as an oil-rich country leads to the state's subsidies for food prices and this cannot be ignored while measuring household food security.¹⁹

Assessment of Qatari Food Security: Challenges and Possibilities

After discussion of theoretical approaches to the food security, it is vital to emphasize Qatari food security dilemma these approaches. Regarding analysis of challenges, Qatari food security is examined through four dimensions in Rome Declaration on Food Security; availability, access, utilization and stability (Table 1). The first element in the Declaration is "availability of sufficient quantities of food of appropriate quality"²⁰. Qatar is not able to provide sufficient quantity and quality of food, domestically. Qatari dilemma for food security is relatively new and has started in the time of Sheikh Hamad. For Qatar, there has not been suffering from domestic energy supply shortages; however, water and food, as other/also requirement for survival, have been limited. When global food crisis happened in 2008, Qatari moves for food security has started simultaneously. Sheikha Mozah and Sheikh Hamad were driving forces behind environmental sustainability and renewable energy ideas. That is why Qatar Foundation has been established with variety of research institutes in these areas. When Sheikh Tamim was heir apparent yet, he was responsible for Qatar National Food Security Program (QNFSP).²¹ There is not updated information by the QNFSP; however, it has been influential on food security not only for availability but also for the rest of dimensions.

Availability of food in Qatari food security context is not necessarily similar to the way how poor or undeveloped countries are dealing with it, it is rather a geographical dilemma. Food security is rooted in the lack of natural resources, which is a matter the country is dealing with being a desert state of the Gulf coast. Thus, although it is mostly an issue that comes with poverty, the case for Arab Gulf coun-

¹⁹ Julian A. Lampietti et al., "A Strategic Framework for Improving Food Security in Arab Countries," *ibid.*3, no. S1 (2011): 11.

²⁰ <http://www.fao.org/forestry/13128-0e6f36f27e0091055bec28ebe830f46b3.pdf>

²¹ Luomi, *The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability*; ELObeid and Hassan, "Nutrition Transition and Obesity in Qatar".

tries is completely diverse and based on their geographical condition, scarcity of water and arable land.²²

Although structural factors such as population and income growth are discussed in the studies regarding food insecurities of the Arab countries, what challenges the availability of food in Qatar goes beyond this, especially with addition of the embargo imposed on Qatar.²³ Food insecurity in Qatar is closely related to the market volatility, which refers to the lack of adequate food in the market, whether it is imported or locally produced. Demand for food has increased rapidly in Qatar with the change of socio-economic structure of the society affected by population growth and urbanization with oil discovery. However, the domestic supply was not enough to handle this increase. While food consumption per capita is rising, the gap between consumed and produced products is also expanded.²⁴ Hence, availability challenge for Qatar starts with intersection of supply and demand.²⁵

Access (physical and economic) to food for a nutritious diet is the second dynamic in the Declaration.²⁶ The price of agricultural products in Qatar is expensive but basic nutrition items (milk, bread... etc.) are subsidized by the State.²⁷ For instance, Qatar is in the category of low price risk and high quantity risk in cereal import dependency similar to Bahrain, Saudi Arabia, Kuwait, Emirates and Oman, due to its wealth and its subsidy policies.²⁸ This is quite important for residence of Qatar because food items are mostly expensive proving “availability does not assure access” and not only availability but also “distribution of the available food is critical”.²⁹ Hence, international agro-investments can bring cheaper products and even lead to economic benefit for Qatar as Hassad Australia’s chief executive John McKillop emphasized in Financial Review potential gain of the company in coming years.³⁰

²² Zahra Babar and Mehran Kamrava, “Food Security and Food Sovereignty in the Middle East,” *ibid.* (United Kingdom); Lampietti et al., “A Strategic Framework for Improving Food Security in Arab Countries,” 9.

²³ “A Strategic Framework for Improving Food Security in Arab Countries.”

²⁴ Darwish, Abdulrahim, and Mohieldeen, “Qatar and Gcc Water Security.”

²⁵ Lampietti et al., “A Strategic Framework for Improving Food Security in Arab Countries,” 9-13.

²⁶ <http://www.fao.org/forestry/13128-0e6f36f27e0091055bec28ebe830f46b3.pdf>

²⁷ Luomi, *The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability.*

²⁸ Lampietti et al., “A Strategic Framework for Improving Food Security in Arab Countries,” 13.

²⁹ Per Pinstrup-Andersen, “Food Security: Definition and Measurement,” *ibid.*1, no. 1 (2009): 5.

³⁰ Matthew Cranston, “Qatar’s Hassad Defends Australian Agriculture Investment Results,” *Financial Review*, <http://www.afr.com/>.

The third dimension is utilization of food through adequate diet for a healthy and productive life.³¹ This is not directly related to import of good quality products from Australia or any other state, but it is more of a domestic habit that can be shaped by a long term social campaign. QNFSP is not only for bringing food to the state, but also to produce research on nutrition and diet analysis of Qatar.³² This is prominent because diseases backed by overweight and over food consumption are common in Qatar. According to research by Al Obeid and Hassan (2014) the level of diabetes and obesity is quite high, especially obesity that is a public illness in the country.³³ Hence, it is visible that food security issue in Qatar is not only about bringing food to the state but also maintaining nutrition and diet at the national level.

The last dimension refers to a core challenge for food security in Qatar and combines previous ones as well; stability of food resources.³⁴ When there is not availability or access of food, sustainability is also not possible. Qatar lacks control over food sources which are highly dependent on imports, even if the country's wealth provides assurance.³⁵ These four food security dimensions (availability, access, utilization and stability) are inter-connected and refer to the country's import and self-sufficiency challenges.

Table 1: Food Security in Qatar with Four Dimensions of Rome Declaration on Food Security

Food Security Dimensions	Qatari Situation
<i>Availability of sufficient quantities of food of appropriate quality</i>	*Not self sufficient *Quality is not sustainable
<i>Access (Physical and Economic) to food for a nutritious diet</i>	* Expensive but state-subsidy supports
<i>Utilization of food through adequate diet for a healthy and productive life</i>	* Obesity and Diabetic are public health problems
<i>Stability of food resources</i>	* Not stable in any food crisis * No Food storage

Source: Own Elaboration

³¹ <http://www.fao.org/forestry/13128-0e6f36f27e0091055bec28ebe830f46b3.pdf>

³² Luomi, The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability.

³³ ElObeid and Hassan, "Nutrition Transition and Obesity in Qatar ".

³⁴ <http://www.fao.org/forestry/13128-0e6f36f27e0091055bec28ebe830f46b3.pdf>

³⁵ Babar and Kamrava, "Food Security and Food Sovereignty in the Middle East."

Food Security Strategies: Possibilities

Qatar has four main strategies to handle these challenges defined through Rome Declaration, shown in the Table 2; self-sufficiency, import, land acquisition and foreign agro-investment. First of all, local production of food is one of the mainstream resources for a country. When Self-Sufficiency Ratio (S.S.R.) of Qatar is taken into consideration (Table 2), it is clear that Qatar needs a strategy to enhance its capacity for food security in more than ten types of items including cereals, wheat, flour, rice, meat, barley, potatoes, vegetables, sugar etc. According to Table 1, Qatar is self-sufficient only in fish, which has decreased after 2008 rapidly.

Table 2: Food Self-Sufficiency Ratio (S.S.R) of Qatar

Items	S.S.R. % by Years		
	2004-2008	2010	2011
Cereals (Total)	1.20	0.52	0.37
Wheat and Flour	0.02	0.02	0.02
Maize	8.28	7.32	7.62
Rice	0.00	0.00	0.00
Barley	3.80	0.76	0.42
Potatoes	0.68	0.13	0.05
Pulses (Total)	0.00	0.00	0.00
Vegetables (Total)	24.15	17.79	22.89
Fruits (Total)	21.72	14.08	13.67
Sugar (Refined)	0.00	0.00	0.00
Fats and oils (Total)	0.00	0.00	0.00
Meat (Total)	20.06	10.03	10.77
Red Meat	32.26	8.33	8.68
Poultry Meat	13.18	10.63	11.60
Fish	92.88	39.07	37.30
Eggs	35.50	16.31	16.59
Milk and Dairy Prod.	8.38	21.62	22.85

Source: Own Elaboration of the Arab Agricultural Statistics YearBook of 2008-2010-2011, Retrieved from http://www.aoad.org/priod_en.htm

This is why Qatari state has started a local production process in meat, chicken, milk and dairy products, and vegetables. This self-sufficiency is one of the four national strategies of Qatar to deal with food insecurity. When National Food Security program was launched, it was declared that Qatari state aims to reach self-sufficiency in food security by 2020s.³⁶ Also Qatar National vision states that Qatar is planning to be independent from food import by 2030.³⁷ QNFSP has supported local farms to overcome self-sufficiency issue at the first level and the number of local farms jumped to 1600 by 2010s from 453 in 1975.³⁸

However, Qatar does not have enough ecological capacity to produce food without over-consuming energy as other Gulf States have quite less arable land and ground water.³⁹ There is already limited amount of clean water (underground water) while the agriculture spends up to %74 of fresh water with contributing GDP only %1.⁴⁰ Consumption of underground water leads to soil salinization which brings saltwater intrusion into the remaining fossil water resources. Darwish *et al* (2015) argue that it is better to not engage in agriculture with local farms, which even does not produce enough food, to prevent more consumption of fresh water.⁴¹ On the other side, it is valid to say that product quality is really high in local farms and not expensive compared to the imported ones in supermarkets. However, as it is presented in Table 3, elaboration of the literature, there is a gap between leverages and challenges of local production.

The second national strategy for food security is import of good quality and halal foods, which are suitable for dietary needs and food preferences of Qatar. Import is a common strategy of countries that have issues with food self-sufficiency because "in order to get food they do not necessarily need to grow it".⁴² When

³⁶ Kim Wyatt, "Where Does Our Food Come From? An Insight into Qatar's Food Industry," <http://www.dohafamily.com/Winter-2015/Where-does-our-food-come-from-An-insight-into-Qatars-food-industry/>; Luomi, *The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability*; ElObeid and Hassan, "Nutrition Transition and Obesity in Qatar".

³⁷ "Qatar National Vision 2030," ed. General Secretariat For Development Planning (Doha2008).

³⁸ Luomi, *The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability*, 177.

³⁹ Eckart Woertz and Martin Keulertz, "Food Trade Relations of the Middle East and North Africa with Tropical Countries," *Food Security* 7, no. 6 (2015): 1101.

⁴⁰ Luomi, *The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability*.

⁴¹ Darwish, Abdulrahim, and Mohieldeen, "Qatar and Gcc Water Security."

⁴² Woertz, "The Gulf Food Import Dependence and Trade Restrictions of Agro Exporters in 2008," 43.

Qatari food import is examined via data extracted from the Observatory of Economic Complexity (OEC), there is absolutely a diversification of import countries all around the world from Asia to America⁴³. Diversification of imports is positive especially if there is not a geographic limitation over imports, due to wars or a border issue.⁴⁴ However, as it is raised by literature, food import can easily be affected by political problems/conflicts and global crisis. For instance, global food crisis in 2008 has clearly affected Arab countries; hence, national food security program of Qatar had been launched right after the crisis.⁴⁵

The third strategy of Qatar is land acquisition.⁴⁶ This policy along with foreign-agro-investments have attracted a lot of critics- as types of international agricultural investments-from host countries and researchers, due to its influence in long term ecological and economic implications for the host countries.⁴⁷ 40.000 hectares from Kenya ,100.000 hectares from Sudan, Latin America land purchase, rice farm purchase from Asia and sheep rearing and grain cultivation in Turkey are some examples of Qatari foreign-agro investments. The first challenge is that land grabbing leads to a social-political tension in host countries. This is not something new. Land acquisition is always a controversial issue, when it comes to selling lands to a foreigner. Brazil and Thailand have banned foreign land acquisition.⁴⁸ It is also stated in the literature that running a land is completely demanding process and requires hard-work, which makes it a difficult investment option.⁴⁹ It is also risky because host countries are not safe most of the times and in any violent situation, farm lands can easily be destroyed. Loumi (2012) emphasizes that Qatari foreign

⁴³ "What Does Australia Export to Qatar? (2014)," in The Observatory of Economic Complexity (OEC) (MIT University, 2014).

⁴⁴ Haweya Ismail, "Food and Water Security in Qatar: Part 1 – Food Production," in Strategic Analysis Paper (Future Directions International, 2015); Alpen Capital, "Gcc Food Industry " (2015). acquisition (fter the crisis (ndicated that there is not guring outs. ficant alteration on depressionackign

⁴⁵ Luomi, The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability.

⁴⁶ Rami Zurayk, Jad Chaaban, and Alia Sabra, "Ensuring That Potential Gulf Farmland Investments in Developing Countries Are Pro-Poor and Sustainable," Food Security 3, no. S1 (2011).

⁴⁷ Ayşen Tanyeri-Abur and Nasredin Hag Elamin, "International Investments in Agriculture in Arab Countries: An Overview and Implications for Policy," *ibid.*: 116.

⁴⁸ Luomi, The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability; Woertz and Keulertz, "Food Trade Relations of the Middle East and North Africa with Tropical Countries," 1102; Rami Zurayk, Jad Chaaban, and Alia Sabra, "Ensuring That Potential Gulf Farmland Investments in Developing Countries Are Pro-Poor and Sustainable," *ibid.*3, no. S1 (2011).

⁴⁹ Sarah Ruth Sippel, "Food Security or Commercial Business? Gulf State Investments in Australian Agriculture," The Journal of Peasant Studies 42, no. 5 (2015).

land acquisition in Sudan, Ethiopia, and Kenya is problematic for the lack of safety.⁵⁰ If the land is not safe for this long-term demanding investment, it is not logical to construct farms.⁵¹

Table 3: Food Security Strategies of Qatar

Methods	Challenges	Leverages
Self-sufficiency	<ul style="list-style-type: none"> * Consuming groundwater (already limited) * Soil salinization * Land degradation * Only %5 percent of Qatari territory is arable * Not enough for the entire population 	<ul style="list-style-type: none"> * good product quality * not expensive
Import	<ul style="list-style-type: none"> * Not Sustainable * Expensive or not affordable for every item * It can easily be affected by global crisis and diplomatic relations 	<ul style="list-style-type: none"> * diversification of options
Land Acquisition	<ul style="list-style-type: none"> * Social tension in hosts countries * Difficult to run a farm * Risky investment * Host countries have already food security issues of their own (Ethiopia, Sudan) 	<ul style="list-style-type: none"> *long-term solution
Foreign Agro-investment	<ul style="list-style-type: none"> * potential of domestic unrest in host country 	<ul style="list-style-type: none"> *less risky *economically beneficial

Source: Table is a revised version of the Table 12 in Dogan, Betul. "Securitization: Conceptualizing Qatari Foreign Policy." Qatar University, 2017, 102.

⁵⁰ Luomi, The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability.

⁵¹ Ibid.

Qatari agro-investments abroad in terms of land grabbing raise question marks because of the reasons mentioned above. However, beyond international agricultural investments of Qatar, intra-Arab agricultural investments are one of the central discussions in the literature on food security.⁵² When global food crisis affected food insecurity in the Arab region catastrophically, critical approaches to these agro-investments and land acquisition were intensified.⁵³ Therefore, the last/fourth food security strategy of Qatar, which is foreign agro-investment, is a polished version of land grabbing with addition of more trade centered policies.

Foreign agro-investments refer to a business deal between Hassad Food and a local farm which is in the company's investment portfolio. This is a mutual interest in which Qatari SWFs company Hassad Food invests on the farm and receive agricultural products in return.⁵⁴ Hence, the State basically focuses on "sizeable investments in agricultural and livestock sectors in international food companies".⁵⁵ This strategy is applied in Australia by Hassad Australia Company, and this is one of the success stories for Qatari food security that requires special attention especially with providing accessibility of food in the blockade time.

When relationship between Qatar and Australia is examined through help of Australian Government Department of Foreign Affairs and Trade website, trade-based ties attracted the attention. Although the exchange of ambassadors was quite late, in 2012, the amount of trade between states is high; Australian good trade with Qatar was \$1.2 billion while services trade was \$518 million in 2015.⁵⁶ Meat, motor vehicles and live animals are three main export materials of Australia to Qatar. Hassad Australia is the main element in the agricultural trade between states and under the umbrella of Hassad Food SWFs company. Hassad Australia was

⁵² Tanyeri-Abur and Hag Elamin, "International Investments in Agriculture in Arab Countries: An Overview and Implications for Policy."

⁵³ Per Pinstrup-Andersen, "Food Security: Definition and Measurement," *ibid.* 1, no. 1 (2009); Philip McMichael, "Land Grabbing as Security Mercantilism in International Relations," *Globalizations* 10, no. 1 (2013); Tanyeri-Abur and Hag Elamin, "International Investments in Agriculture in Arab Countries: An Overview and Implications for Policy."; Timothy B. Sulser et al., "The Future Role of Agriculture in the Arab Region's Food Security," *ibid.*; Julian A. Lampietti et al., "A Strategic Framework for Improving Food Security in Arab Countries," *ibid.*; Eckart Woertz and Martin Keulertz, "Food Trade Relations of the Middle East and North Africa with Tropical Countries," *ibid.* 7, no. 6 (2015).

⁵⁴ Sippel, "Food Security or Commercial Business? Gulf State Investments in Australian Agriculture."; Woertz, "Arab Food, Water, and the Big Landgrab That Wasn't."

⁵⁵ Babar and Kamrava, "Food Security and Food Sovereignty in the Middle East," 4.

⁵⁶ Australian Government Department of Foreign Affairs and Trade, "Country Brief," <http://dfat.gov.au/geo/qatar/Pages/qatar-country-brief.aspx>.

founded in 2009 as Hassad Food's first international investment that mainly aims at exporting grain and livestock. "Currently, Hassad Australia owns and operates 300,000 hectares of land that produces 190,000 tons of grains and 290,000 heads of sheep on yearly basis".⁵⁷ The company owns 14 properties around Australia.

Although commercial cooperation between parties is vital for both of them, there are not many studies on cooperation to achieve food security except those research/data found on official websites, databases and a couple of academic research. The major contribution of Australia towards Qatar's agro-investments is linked to its investment-promotion policy with open market to international participants. Another leverage in cooperation with Australia for food security is coming from developed agricultural sector. Australia provides a stable political environment with qualified labor force and infrastructure in agriculture which will not possess risk for Hassad Australia's investments.⁵⁸

Australia is already a food exporter country because it possesses a large and fertile agricultural land. The country is "highly self-sufficient in terms of food production: 93% of domestically consumed food is produced in Australia; furthermore, around 60% of agricultural production – mainly wheat, sugar, beef, wine and processed dairy products – is exported and estimated to feed another 40 million people abroad"⁵⁹ In addition to that, Australia has been exporting meat to the Middle East for 45 years and has a good reputation of quality products.⁶⁰ Although the main export materials of Australia in 2014 were machines, transportation, metals, technological and chemical products, the role of agricultural products in country's trade is also vital.⁶¹

Hassad Australia is a successful example of/for Qatar's food security strategies with taking policy making from the context of security to 'commercial business'.⁶² As it is stated "by 2009 Hassad food started investing in stakes agriculture rather than purchasing land; the company did not 'want to be in a situation where the

⁵⁷ Hassad Food, "Hassad Australia.," <http://www.hassad.com/English/Pages/Hassad-Australia.aspx>.

⁵⁸ Sippel, "Food Security or Commercial Business? Gulf State Investments in Australian Agriculture."

⁵⁹ Lawrence, Richards, and Lyons 2013, p.3 quoted in *ibid*.

⁶⁰ Matthew Cranston, "Qatar's Farmland Investment Hassad Australia yet to Make Profit," <https://www.farmland-grab.org/post/view/25863>.

⁶¹ "What Does Australia Export to Qatar? (2014),"

⁶² Sippel, "Food Security or Commercial Business? Gulf State Investments in Australian Agriculture."

rich are taking away food and land of poor”⁶³. Hassad Food’s chairman Nasser al-Hajri similarly states that “buying agricultural land isn’t a goal for the company” but “to produce and improve the production from different parts of the world”.⁶⁴ According to information in Hassad Australia website, the vision of the company is “to be a leader in Australian Food production”⁶⁵ Which emphasizes that Hassad Australia moves away from focusing only on Qatari food security to shaping itself for commercial business to eliminate challenges and to gain economic benefit out of investments.

As it is illustrated in the previous part of this study, Qatari food security is not conducted anymore through land grabbing, which leads to criticism from the host countries and brings less economic return. Therefore/Hence, foreign agro-investments are differentiated from land acquisition in the study. What is clear/apparent in Hassad Australia case is that the company conducts more business oriented agro-investments and hires Australian farmers in their farms to produce agricultural products rather than buying land. However, this also is not an easy deal as it is raised by Matthew Cranston in Australian Financial Times, Hassad Australia did not start gaining out of its investments yet.⁶⁶ Cranston states that “the company has made a loss with combined worth of more than \$27 million”.⁶⁷ Hassad Australia’s chief executive John McKillop commented on Cranston’s critics arguing that agricultural investments take time to re-gain and that the overall success of Hassad so far was a major achievement from/for them already beside the future economic gains.⁶⁸

The Observatory of Economic Complexity (OEC) has four main item groups referring to agricultural trade between Australia and Qatar; animal and vegetable bi-products, vegetable products, animal products and foodstuffs.⁶⁹ It is clear that sheep and goat meat with 76.5M export value in 2014 is the biggest share in the

⁶³ Luomi, *The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability*, 180.

⁶⁴ “Qatar’s Hassad Eyes \$625m Spend on Food Supplies”, *Arabian Business Bloomberg* <http://www.arabianbusiness.com/qatar-s-hassad-eyes-625m-spend-on-food-supplies-459435.html>.

⁶⁵ Hassad Australia, “About Us,” <https://hassad.com.au/vision-and-mission/>.

⁶⁶ Cranston, “Qatar’s Farmland Investment Hassad Australia yet to Make Profit».

⁶⁷ *Ibid.*

⁶⁸ “Qatar’s Hassad Defends Australian Agriculture Investment Results,” <https://www.farmlandgrab.org/post/view/25886>.

⁶⁹ “What Does Australia Export to Qatar? (2014).»

agriculture-related import of Qatar from Australia. Sheep and goat meat, sheep and goat, bovine meat and cheese are four items under the animal products. When the rapid increase in sheep and goat (from 9.93M to 56 M), sheep and goat meat (from 9.68M to 76.5M) and bovine meat (from 1.53M to 15.2M) is taken into consideration, it is valid to say that the biggest share is in animal products. In the other three categories, there is still a remarkable trade share; however, it is not like animal product category but decreases and fluctuates time to time. Widam Food is an example of an increase in animal products trade between Qatar and Australia because it is “a shareholding company...exclusively handling the government subsidization of Australian meat to Qatari market, and it also support the market by importing other type of meat on non-exclusive basis.”⁷⁰

If Hassad Australia is able to conduct investments in the long term as a main driver of Qatar's agro-investments, there will always be a certain amount of agricultural products guaranteed in the market. This would be one of the best options to stabilize certain types of food imports and to not risk sustainability, availability and access.

Gulf Crisis: Re-emphasize of food security

Food crisis and embargo pose high risks for countries whose agricultural sustainability is mostly based on import. The gap between supply and demand is a crucial detail especially at the times of food crisis or embargo, which triggers the lack of food storage in the country. Hence, the food embargo applied on Qatar since June 2017 has underlined three major problems for Qatari food security; necessity of food and water storage, diversification of supply and sustainability in the market.

When the media campaign regarding Saudi-led embargo on Qatar started, the cabinet underlined on June 5 that “marine and air spaces will remain open for import and movement” to emphasize that there is no need to panic.⁷¹ Similarly, Ministry of Foreign Affairs stated on the same day that “these measures taken against the State of Qatar will not affect the normal course of life of the citizens and residents of the State and that the Qatari government will take all necessary measures

⁷⁰ Widam Food, “About Us,” Widam Food, <http://www.widam.com.qa/about-us-c1sof>.

⁷¹ Pramod Prabhakaran, “No Need to Stock up; Necessary Steps Taken to Ensure Normal Life: Qatar Cabinet,” The Peninsula Qatar, <https://thepeninsulaqatar.com/article/05/06/2017/No-need-to-stock-up-necessary-steps-taken-to-ensure-normal-life-Qatar-cabinet>.

to ensure this and to thwart attempts to influence and harm the Qatari society and economy".⁷² Although officials stated from the very first minute of the blockade that necessary precautions are taken, a panic buying was visible with multiple long queues in supermarkets just five hours after the diplomatic crisis has erupted.⁷³

Official releases for the influence of the embargo on Qatar's food security challenge are limited to calming and self-confident statements. There is not any information on how much the state increased subsidies for domestic production or imported foods and which product types were more difficult to provide. These are important in order to assess the role of embargo on food insecurity and to analyze state's policy making in the process, when huge number of local products released to the market and the subsidies on them are considered. For instance, price for Baladna milk was more than 15 Qatari riyals before the embargo and decreased to 6 Qatari riyals in a couple of months. This huge drop of the prices is visible in many other local products including cucumber, tomato and eggplants; however, according to Consumer Price Index (CPI) announced by Ministry of Development Planning and Statistics, food and beverage prices increased 4.2% from June to July 2017.⁷⁴ When CPI for August 2017 was checked, there was a drop of 0.6% from July to August in food and beverage prices.⁷⁵ Although there is not any official release or information to deepen in the policy making and state subsidies for the food prices, it is possible to say that food prices, which affect access and availability dimensions of food security, were highly controlled by the government and are stabilized with more state subsidies. Otherwise, this decrease in local food prices cannot be explained. In addition to price issue, the speedy production and promotion of local products framing them as national proud in the supermarkets can be interpreted as a way of constructing food security in a national narrative. "Yes to Qatari Products and Friendly Countries" and "Together We Support National Products" are

⁷² "Qatar Regrets the Decision by Saudi Arabia, the United Arab Emirates and Bahrain to Sever Relations," news release, 2017, <https://mofa.gov.qa/en/all-mofa-news/details/2017/06/04/qatar-regrets-the-decision-by-saudi-arabia-the-united-arab-emirates-and-bahrain-to-sever-relations>.

⁷³ the SUNDAILY, "Panic Buying in Qatar," the SUNDAILY, <http://www.thesundaily.my/news/2017/06/06/panic-buying-qatar>.

⁷⁴ Ministry of Development Planning and Statistics, "Consumer Price Index (Cpi) July, 2017 (Base Year 2013=100)," news release, 2017, <https://www.mdps.gov.qa/en/statistics1/pages/lateststats/16082017.aspx>.

⁷⁵ "Consumer Price Index (Cpi) August 2017 (Base Year 2013=100)," news release, 2017, <https://www.mdps.gov.qa/en/statistics1/pages/lateststats/17092017.aspx>.

two most common labels in supermarkets and the Souq to see how food insecurity jumped with the embargo to be framed in a national discourse.

Nevertheless, changes in the country's food security profile with the influence of embargo are also visible in the findings of Global Food Security Index. According to the index, Qatar has moved nine steps back in 2017 as the 29th country, globally, with 6.0 deterioration in overall score for the sum of three dimensions; affordability, availability, quality and safety. Country's score on affordability, which is defined as "food consumption as a share of household expenditure, proportion of population under global poverty line, gross domestic product per capita, agricultural import tariffs, presence of food system net programmes and access to financing for farmers" is the top with ranking 93.3 points in 2017 as it was in 2016.⁷⁶ Interestingly and although there is a highly influential siege on food security, Qatar's affordability score is higher than the rest of GCC countries; UAE (84.4.), Kuwait (83.1), Bahrain (77.9), Saudi Arabia (75.9), and Oman (72.8) and moved only 0.3 scores back compare to 2016 (93.6). Availability is the main challenge for Qatar, as previously discussed in the paper. Scores for availability in 2017 is the lowest in the GCC with ranking 54.8, later than Ghana, Peru, Paraguay. Qatar's score for availability in 2017 was deteriorated (11.7) compare to 2016. For the third dimension, quality and safety, Qatar is ranked the highest among the GCC countries in 2016 and 2017; however, the score was deteriorated by 4.7 in 2017 (74.1).⁷⁷

Qatari residents have been forced to leave under this siege, with the closure of Qatar's only land border shares with Saudi Arabia. Challenges and changes are mentioned in the above; however, Qatar quickly adopted strategies to ease these conditions for its residence. The State has rapidly tended to deal with alternative trading partners via air and marine transportation with higher costs of supply. Iran was one of the early supporters of Qatar and possibilities for Qatar's food security. According to Fars News Agency chairman of the union of exporters of agricultural products, Reza Nourani on June 5, Iran can export food products to Qatar from ports of Bandar Abbas, Bandar Lengeh and Bushehr and the shipment can reach in 12 hours.⁷⁸ Iran started sending fruits and vegetables everyday (100 tonnes)

⁷⁶ The Global Food Security Index, "User Guide for the Global Food Security Index;" (The Economist Intelligence Unit, 2017), 6.

⁷⁷ "Country Rankings," (The Economist Intelligence Unit, 2016-2017).

⁷⁸ J. Saul and M. El-Dahan, "Qatar Food Imports Hit after Arab Nations Cut Ties: Trade Sources," Reuters, <https://www.reuters.com/article/us-gulf-qatar-food/qatar-food-imports-hit-after-arab-nations-cut-ties-trade-sources-idUSKBN18W24N>.

with cargo planes. Qatari entrepreneurs also initiated deals and projects to secure food and water in the country. Bloomberg quoted one of these initiatives by Moutaz Al Khayyat, chairman of Power International Holding, bringing 4000 cows that cost US \$8 million and building up milk production.⁷⁹ It must be stated that due to this extra-territorial food security initiatives and Hassad Food's import programme which evolved into a commercial business, Qatar did not face any problem to provide meat products during the embargo.

Turkey has been another trade partner which boosted economic relations since the beginning of the crisis. Vulnerability of Qatar for daily food products such as milk, yogurt, chicken, fresh fruits and vegetables have been underlined and led Turkey to cooperate for transfer of tons of foodstuff to Qatar. Although sustainability of food shipments was even questioned by Turkey's Economy Minister Nihat Zeybekci, Turkey has been a partner for Qatar in providing food security with food and water transportation through airlift, trucks and ships.⁸⁰ In addition to food import from alternative partners and the increase of local production, Qatar National Research Fund (QNFR) raised its support for projects aiming at sustainable food supply with innovative solutions.⁸¹ The embargo has forced Qatar to experience its vulnerabilities and challenges in regard to food security. The challenge of sustainability of food and water products has been witnessed by all residence since June 5, although variety of policies were undertaken to minimize negative influences of the siege.

⁷⁹ M. Sergie and D. Abu-Nasr, "Flying Cows to Qatar Is One Man's Way to Beat the Saudis," Bloomberg, <https://www.bloomberg.com/news/articles/2017-06-12/flying-cows-to-qatar-is-one-man-s-way-to-beat-the-saudis>.

⁸⁰ D. Butler and T. Karadeniz, "Turkey Sends Qatar Food and Soldiers, Discusses Gulf Tensions with Saudi," Reuters, <https://www.reuters.com/article/us-gulf-qatar-turkey-saudi/turkey-sends-qatar-food-and-soldiers-discusses-gulf-tensions-with-saudi-idUSKBN19D0CX>.

⁸¹ Marhaba, "Qnrf: Projects Designed to Tackle Qatar's Food Security Challenges," Marhaba, <https://www.marhaba.qa/qnrf-projects-designed-tackle-qatars-food-security-challenges/>.

Conclusion

Food insecurities witnessed in Qatar have been illustrated through assessment of the country's challenges under four dimensions of Rome Declaration; availability, access, utilization and stability. Qatar faces challenges in these four categories; however, introduced four main strategies composed of self-sufficiency, import, land acquisition and foreign agro-investment since Qatar National Food Security Program was launched in 2009. Among these possibilities, Qatari policy makers structured self-sufficiency with support of local initiatives and foreign-agro investments to guarantee sustainability of food and water product. In this case, the role of Hassad Food cannot be ignored. As a result of this extra-territorial food security initiative which evolved commercial business, Qatar did not face any issue in providing meat products even during the current embargo. The siege led Qatar to experience food and water products embargo since June 2017, underlined market volatility, necessity of the food and water storage, diversification of suppliers and sustainability of food security. The case of embargo has added a seasonal or periodical food insecurity to the country's already vulnerable situation. Nevertheless, Qatari policy makers have rapidly increased their trade relations with countries that are not part of the siege, mostly Iran and Turkey, while speeding up the production and promotion of local products. Despite all achievements done so far by the Qatari policy makers, this relatively small oil monarchy is quite vulnerable in terms of food security. This chronic problem requires multifaceted strategies and partners to eliminate it and ease the current situation rooted in the embargo conditions.

Bibliography

- Australia, Hassad. "About Us." <https://hassad.com.au/vision-and-mission/>.
- Babar, Zahra, and Mehran Kamrava. "Food Security and Food Sovereignty in the Middle East." In *Food Security in the Middle East*, edited by Zahra Babar and Suzi Mirgani. United Kingdom: Oxford University Press, 2014.
- Babar, Zahra, and Suzi Mirgani, eds. *Food Security in the Middle East*. United Kingdom: Oxford University Press, 2014.
- Butler, D., and T. Karadeniz. "Turkey Sends Qatar Food and Soldiers, Discusses Gulf Tensions with Saudi." Reuters, <https://www.reuters.com/article/us-gulf-qatar-turkey-saudi/turkey-sends-qatar-food-and-soldiers-discusses-gulf-tensions-with-saudi-idUSKBN19D0CX>.
- Buzan, Barry, Ole Wæver, and Jaap De Wilde. *Security: A New Framework for Analysis*. Lynne Rienner Publishers, 1998.
- Capital, Alpen. "Gcc Food Industry ", 2015.
- Cranston, Matthew. "Qatar's Farmland Investment Hassad Australia yet to Make Profit ." <https://www.farmlandgrab.org/post/view/25863>.
- . "Qatar's Hassad Defends Australian Agriculture Investment Results ." Financial Review, <http://www.afr.com/>.
- . "Qatar's Hassad Defends Australian Agriculture Investment Results ." <https://www.farmlandgrab.org/post/view/25886>.
- Darwish, Mohamed A, Hassan K Abdulrahim, and Yasir Mohieldeen. "Qatar and Gcc Water Security." *Desalination and Water Treatment* 55, no. 9 (2015): 2302-25.
- Dogan, Betül. "Securitization: Conceptualizing Qatari Foreign Policy." Qatar University, 2017.
- ElObeid, Tahra, and Abdelmonem Hassan. "Nutrition Transition and Obesity in Qatar ". In *Food Security in the Middle East*, edited by Zahra Babar and Suzi Mirgani: Oxford University Press, 2014.
- Food, Hassad. "Hassad Australia. ." <http://www.hassad.com/English/Pages/Hassad-Australia.aspx>.
- Food, Widam. "About Us." Widam Food, <http://www.widam.com.qa/about-us-c1sof>.
- Foster, E. "Green Security." In *Critical Approaches to Security: An Introduction to Theories and Methods*, edited by Laura J Shepherd: Routledge, 2013.
- Index, The Global Food Security. "Country Rankings." The Economist Intelligence Unit, 2016-2017.
- . "User Guide for the Global Food Security Index:." The Economist Intelligence Unit, 2017.

- Ismail, Haweya. "Food and Water Security in Qatar: Part 1 – Food Production." In *Strategic Analysis Paper*: Future Directions International, 2015.
- Lampietti, Julian A., Sean Michaels, Nicholas Magnan, Alex F. McCalla, Maurice Saade, and Nadim Khouri. "A Strategic Framework for Improving Food Security in Arab Countries." *Food Security* 3, no. S1 (2011): 7-22.
- Luomi, Mari. *The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability*. Hurst Company, 2012.
- Marhaba. "Qnrf: Projects Designed to Tackle Qatar's Food Security Challenges." Marhaba, <https://www.marhaba.qa/qnrf-projects-designed-tackle-qatars-food-security-challenges/>.
- McMichael, Philip. "Land Grabbing as Security Mercantilism in International Relations." *Globalizations* 10, no. 1 (2013): 47-64.
- Pinstrup-Andersen, Per. "Food Security: Definition and Measurement." *Food Security* 1, no. 1 (2009): 5-7.
- Prabhakaran, Pramod. "No Need to Stock up; Necessary Steps Taken to Ensure Normal Life: Qatar Cabinet." The Peninsula Qatar, <https://thepeninsulaqatar.com/article/05/06/2017/No-need-to-stock-up-necessary-steps-taken-to-ensure-normal-life-Qatar-cabinet>.
- "Qatar National Vision 2030." edited by General Secretariat For Development Planning. Doha, 2008.
- "Qatar Regrets the Decision by Saudi Arabia, the United Arab Emirates and Bahrain to Sever Relations." news release., 2017, <https://mofa.gov.qa/en/all-mofa-news/details/2017/06/04/qatar-regrets-the-decision-by-saudi-arabia-the-united-arab-emirates-and-bahrain-to-sever-relations>.
- "Qatar's Hassad Eyes \$625m Spend on Food Supplies ". Arabian Business Bloomberg <http://www.arabianbusiness.com/qatar-s-hassad-eyes-625m-spend-on-food-supplies-459435.html>.
- Regmi, Madhav, and Krishna P. Paudel. "Food Security in a Remittance Based Economy." *Food Security* 9, no. 4 (2017): 831-48.
- "Rome Declaration on World Food Security." http://www.fao.org/wfs/index_en.htm.
- Saul, J., and M. El-Dahan. "Qatar Food Imports Hit after Arab Nations Cut Ties: Trade Sources." Reuters, <https://www.reuters.com/article/us-gulf-qatar-food/qatar-food-imports-hit-after-arab-nations-cut-ties-trade-sources-idUSKBN18W24N>.
- Sergie, M., and D. Abu-Nasr. "Flying Cows to Qatar Is One Man's Way to Beat the Saudis." Bloomberg, <https://www.bloomberg.com/news/articles/2017-06-12/flying-cows-to-qatar-is-one-man-s-way-to-beat-the-saudis>.
- Sippel, Sarah Ruth. "Food Security or Commercial Business? Gulf State Investments in Australian Agriculture." *The Journal of Peasant Studies* 42, no. 5 (2015): 981-1001.

- Statistics, Ministry of Development Planning and. "Consumer Price Index (Cpi) August 2017 (Base Year 2013=100)." news release, 2017,
<https://www.mdps.gov.qa/en/statistics1/pages/lateststats/17092017.aspx>.
- . "Consumer Price Index (Cpi) July, 2017 (Base Year 2013=100)." news release, 2017,
<https://www.mdps.gov.qa/en/statistics1/pages/lateststats/16082017.aspx>.
- Sulser, Timothy B., Bella Nestorova, Mark W. Rosegrant, and Teunis van Rheenen. "The Future Role of Agriculture in the Arab Region's Food Security." *Food Security* 3, no. S1 (2011): 23-48.
- Sundaily, the. "Panic Buying in Qatar." the Sundaily,
<http://www.thesundaily.my/news/2017/06/06/panic-buying-qatar>.
- Tanyeri-Abur, Aysen, and Nasredin Hag Elamin. "International Investments in Agriculture in Arab Countries: An Overview and Implications for Policy." *Food Security* 3, no. S1 (2011): 115-27.
- Trade, Australian Government Department of Foreign Affairs and. "Country Brief." <http://dfat.gov.au/geo/qatar/Pages/qatar-country-brief.aspx>.
- "What Does Australia Export to Qatar? (2014)." In *The Observatory of Economic Complexity (OEC)* MIT University, 2014.
- Woertz, Eckart. "Arab Food, Water, and the Big Landgrab That Wasn't." *Brown J. World Aff.* 18 (2011): 119.
- . "The Gulf Food Import Dependence and Trade Restrictions of Agro Exporters in 2008." *Protectionism? The 4th GTA Report* (2010): 43.
- Woertz, Eckart, and Martin Keulertz. "Food Trade Relations of the Middle East and North Africa with Tropical Countries." *Food Security* 7, no. 6 (2015): 1101-11.
- Wyatt, KIm. "Where Does Our Food Come From? An Insight into Qatar's Food Industry." <http://www.dohafamily.com/Winter-2015/Where-does-our-food-come-from-An-insight-into-Qatars-food-industry/>.
- Zurayk, Rami, Jad Chaaban, and Alia Sabra. "Ensuring That Potential Gulf Farmland Investments in Developing Countries Are Pro-Poor and Sustainable." *Food Security* 3, no. S1 (2011): 129-37.