Grappling with Hunger: The Effects of Targeted Sanctions on Food Security

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Master Thesis

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Abstract

In this thesis, I examine the effects of targeted sanctions in the form of asset freeze and other financial measures, travel bans, and trade sanctions on food security, which affect the movement of individuals, businesses, and the flow of goods into a country. This research is important, as although targeted sanctions are designed and theorised to have minimal effect on the general population, numerous reports show that they do have a significant negative impact. I present one mechanism explaining the link between targeted sanctions and food insecurity. The mechanism shows how targeted sanctions can be linked to the over-compliance of international firms, which negatively affects the import of vital goods to a country, increases the price of such goods and leads to food insecurity in the general population. The case of Syria between 2019 and 2022, analysed using a qualitative approach, supports the theory that there is a positive correlation between targeted sanctions and over-compliance and as a consequence, higher food prices, and food insecurity. The findings underline the importance of why sender states must present clear guidelines regarding compliance by international firms to targeted sanctions to avoid unintended negative side effects.

Introduction

Food security plays a pivotal role in shaping the overall well-being of human lives and society (Parekh, 2023). It is defined as unlimited access to sufficient, safe, and nutritious food to meet dietary needs (World Food Summit, 1996). Food security is measured by assessing food availability (sufficient quantity of food of appropriate quality), accessibility (access by individuals to sufficient resources for obtaining nutritious food), and utility (achieving nutritional well-being through a balanced diet, clean water, sanitation, and healthcare) to the general population (Afesorgbor, 2021; Food and Agriculture Organisation of the United Nations [FAO]; 2006). When the availability, accessibility and utility of adequate food is lacking, the general population is considered food insecure (FAO, n.d.). Food insecurity has a broad impact not only on a personal level but also on political and socioeconomic stability (Parekh, 2023; World Food Programme, 2023a). Hence, the striving for global food security holds significant importance (United Nations, 2021). In the '2030 Agenda for Sustainable Development', adopted by the United Nations (UN) in 2015, ending hunger in the world by 2030 is one of the key goals (United Nations, 2015). Despite these aspirations, the prevalence of global hunger is still very high (European Commission, 2023; World Food Programme, 2023a). In 2023 more than 333 million people of the world population face food insecurity (The World Bank, 2023a; Sustainable Development Goals, n.d.).

Due to the importance of food security, there is a significant amount of research into the causes of food insecurity and its consequences (i.e., Dureab et al., 2019; Bandara and Cai, 2014; Afesorgbor, 2021). The most prominent causes of food insecurity are identified to be political instability (e.g., Dureab et al., 2019; Kemmerling, Schetter and Wirkus, 2022; Adong et al., 2021), climate change or weather-related shocks (e.g., Bandara and Cai, 2014; Bedasa and Bedemo, 2023), and economic shocks (e.g., Jacobs, 2010; Afesorgbor, 2021). Research focusing on the consequences of food insecurity indicate that it can have grave

impacts on the general population (e.g., Adong et al., 2021; Tamiru and Belachew, 2017; Manap and Ismail, 2019), affecting the health and education of individuals, in particular children (Tamiru and Belachew, 2017, Manap and Ismail, 2019). On a larger scale, food insecurity can hinder economic growth and can lead to political unrest (e.g., Soffiantini, 2020; Koren and Bagozzi, 2016).

Despite an extensive body of research examining the causes of food insecurity, the impact of sanctions on food security remains a relatively understudied area. Research by Afesorgbor (2021) found that economic sanctions contribute to increased food insecurity, but the research lacks a crucial distinction between comprehensive sanctions and targeted sanctions. The surprising omission is particularly relevant as targeted sanctions – coercive tools designed to influence the behaviour of specific individuals and entities (governments, interest groups, or businesses) - represent the predominant form of sanctions in today's international sphere (Mack and Khan, 2000; Drezner, 2011; Gordon, 2019; Hofer, 2020; Mack and Khan, 2000). In theory, targeted sanctions are designed to directly penalise individuals and entities responsible for objectionable behaviour, such as human rights abuses (Eriksson, 2016; Meyer et al., 2023). They are implemented in the forms of asset freezes, financial restrictions, travel bans, arms embargoes, or trade sanctions (Eriksson, 2016) while minimising adverse effects on the general population. Additionally, exceptions are added to the targeted sanctions for certain goods, such as food, medicine, and food production inputs, to further avoid negative effects (Giumelli, 2020). However, reports suggest a different perspective, indicating a potentially significant negative impact of targeted sanctions on the general population. Given this gap in the existing literature, I will address the following research question: How do targeted sanctions affect food security?

To assess my research question, I present a theoretical framework with one mechanism that allows for a comprehensive understanding of the impacts of targeted

sanctions on food security. Countries and International Organisations (sender states), guided by distinct policies, initiate sanctions, prompting international firms to reassess business relations due to legal liabilities (Hofer, 2020; Gordon, 2019). Compliance challenges, including changing lists of sanctioned individuals and entities or multi-jurisdictional complexities, lead many firms to over-comply, terminating all relations with the affected country (Hofer, 2020; Pribyl et al., 2022). Consequently, over-compliance adversely affects important imports to an affected country, hindering the flow of essential goods that shouldn't be affected, like food and medical supplies (Dithmer and Abdulai, 2017; Bernard et al., 2007). This results in increased food prices reduced local food production, and ultimately in increased food insecurity in the affected population (Raynor, 2022; Terenina et al., 2019; Taghisadeh-Hesary, Rasoulinezhad and Yoshino, 2019).

I examine my theoretical framework using Syria as a case study in the timeframe between 2019 and 2022. Syria is a most likely case, as the Syrian regime and its associates have been subjected to several forms of targeted sanctions by the United States (US) and the European Union (EU), due to flagrant human rights abuses (Human Rights Watch, 2023; EU Sanctioning Map, 2023; Office of Foreign Asset Control Sanctions Attorney [OFAC], n.d.a). The targeted sanctions imposed on Syrian individuals and entities come in the form of asset freezes and other financial measures, travel bans, arms embargoes, and trade bans (EU Sanctioning Map, 2023; Office of Foreign Asset Control Sanctions Attorney, n.d.). Because targeted sanctions are theoretically designed to affect specific individuals and entities, they incorporate exceptions and exemptions for significant imports, to further avoid negative effects on the general population (Giumelli, 2020). Despite these measures, the population of Syria is grappling with food insecurity (Human Rights Watch, 2023; World Food Programme, 2023b).

In this research, I first review the relevant literature regarding the causes and consequences of food insecurity. Thereafter, I present my theoretical framework, consisting of one mechanism linking the inaccessibility of food to targeted sanctions. Then, using Syria as a case study, I discuss my research design and present my method, observables, and data sources. Finally, I analyse the Syrian case from 2019 to 2022 and discuss my findings.

Literature review

Several scholars have delved into the multifaceted causes and consequences of food insecurity (e.g. Dureab et al., 2019; Afesorgbor, 2021; Soffiantini, 2020). In reviewing this literature, I will first discuss previous research into the causes of food insecurity. Thereafter, I will discuss the literature regarding the consequences of food insecurity on the general population.

Several authors have researched the causes of food insecurity (e.g., Dureab et al., 2019; Bandara and Cai, 2014; Jacobs, 2010). Three main causes of food insecurity were identified. First, conflict as a cause of food insecurity has been widely reported by scholars (e.g., Dureab et al., 2019; Kemmerling, Schetter and Wirkus, 2022; Adong et al., 2021). For example, Dureab et al. (2019) researched the case of Yemen. They found that conflict significantly increases food insecurity due to a severe decline in agricultural production during the war. In a similar study, Weldegiargis et al. (2023) researched food insecurity in Tigray, Ethiopia, and found that during the conflict in Tigray, food insecurity increased significantly. The authors find that war leads to a loss of income in households and disrupts agricultural production.

Second, climate shocks are considered an important driver of food insecurity, especially in poorer and agrarian countries (United Nations, n.d.). For example, Bandara and Cai (2014) and Bedasa and Bedemo (2023) researched the effects of climate change on food

insecurity in the Horn of Africa and South Africa. They found that increased temperatures negatively affect agricultural production. More specifically, a study by Hameed, Ahmadalipour and Moradkhani (2020), based in the Middle East, found that the increased temperatures in the region had a significant impact not only on livestock and agricultural products but also on population growth.

Last, economic shocks, exemplified by increased food prices due to inflation, also emerge as a main contributor to food insecurity (Haq, 2015). Jacobs (2010) analysed the effects of food price inflation in South Africa during the 2008-2009 economic crisis. He found that increased food prices during the economic crisis increased food insecurity, specifically for women, as they earned less. Furthermore, Afesorgbor (2021) expanded the understanding of economic shocks by highlighting the contribution of economic sanctions to food insecurity in countries, establishing a positive correlation.

In addition to the causes of food insecurity, there has been a significant amount of research into its consequences (e.g. Pollard and Booth, 2019; Soffiantini, 2020; Koren and Bagozzi, 2016). Food insecurity can be severe and can impact a country both at a household level and on a state level (FAO, 2019). At a household level, food insecurity can have an impact on health (Pollard and Booth, 2019; Tamiru and Belachew, 2017). For example, children may experience increased developmental problems and become more vulnerable to infectious diseases (Tamiru and Belachew, 2017). This can lead to constraints in educational attainment (Tamiru and Belachew, 2017). Due to the negative impacts of food insecurity on the health and education of children and youths, it can also affect the overall economic growth in an affected country, as limited to no education leads to lower productivity (Manap and Ismail, 2019). A decline in economic growth as a consequence of food insecurity has been found to be especially significant in the global south (Manap and Ismail, 2019).

Limited economic growth and food insecurity can in turn, further intensify public protest and the likelihood of revolution (Soffiantini, 2020). By analysing the cases of Syria, Morocco, and Egypt during the Arab Spring, Suffiantini (2020) found that food insecurity in particular, can intensify frustrations in a country when the government fails to respond. The government's failings to respond are likely to cause civil unrest or even civil war (Suffiantini, 2020). More specifically, Koren and Bagozzi (2016) concluded from their study, that limited access to food and food availability are factors that can contribute to political violence.

Although several causes for food insecurity have been identified, there is surprisingly a limited amount of research that has assessed the effects of sanctions on food security. An important exception is Afesorgbor's (2021) study, which looked at the effects of economic sanctions on food security. Afesorgbor's (2021) research showed that, in general, economic sanctions can exacerbate food insecurity. However, his study failed to differentiate between targeted sanctions and comprehensive sanctions – a critically important distinction when looking at the causes of food insecurity in a population (Meissner, 2023). Furthermore, Afesorbor's (2021) research fails to consider the potential explanatory role of over-compliance of international firms in understanding the impact of limited imports. Over-compliance is an important factor that could explain the effect of targeted sanctions on food security. Targeted sanctions are designed to only affect those specific individuals and entities that commit objectionable behaviour (Eriksson, 2016; Drezner, 2011), and not affect the broader population (Millard, Sabet and Sun, 2020; Eriksson, 2016; Drezner, 2011). However, diverse targeted sanctions, with varying scopes and implemented by different sender states are difficult to comply with and may affect the broader population. This represents a gap in the relevant literature, which is important to address, as negative effects on the general population are exactly what targeted sanctions are supposed to avoid.

Theory

In this section, I present a theoretical framework consisting of a five-step mechanism, which facilitates a comprehensive understanding of how the imposition of targeted sanctions can impact important imports, leading to food insecurity of the general population. First, countries and international organisations (sender states) impose targeted sanctions on individuals and entities in a specific country when they commit objectionable behaviour (Drezner, 2011). Each sender state has different parameters in determining the designation of sanctioned individuals and entities, as well as the scope of the sanctions (Hofer, 2020).

Second, as soon as the sender states impose targeted sanctions on individuals and entities in a country, international companies - banks, shipping firms, and manufacturers - have to reassess their business partnerships in the country (Gordon, 2019; Pribyl et al., 2022). Such a reassessment is necessary because it is a legal liability for international and domestic firms of the sender states to do business with the targeted entities and individuals (Gordon, 2019; Office of Foreign Assets Control, 2022; EU Sanctions Map, 2023). However, complying with the targeted sanctions from various sender states involves a time-consuming process of studying and implementing specific sanction-related procedures (Mallard, Sabet and Sun, 2020). Even when all necessary measures of compliance with a set of targeted sanctions has seemingly been implemented, residual risks may remain (Raynor, 2022; OFAC, 2022). For example, international firms often operate in various sender states or may have employees from diverse nationalities that fall under specific sanctions regimes imposed by their countries of origin (Mallard, Sabet and Sun, 2020).

Furthermore, the sender states frequently changes their lists of targeted individuals and entities or the scope of their sanctions (Mallard, Sabet and Sun, 2020; Verdier, 2023). For example, in contrast to the EU, the U.S. applies so-called secondary sanctions, i.e. sanctions that not only have to be complied with by individuals and entities under the jurisdiction of the

US (primary sanctions) but also by third individuals and entities (Berman et al., 2019; Ruys and Ryngaert, 2020; Han, 2016). In case of non-compliance with such US secondary sanctions, relevant individuals or entities are threatened with loss of access to the lucrative United States market (Ruys and Ryngaert, 2020).

This demonstrates the multi-jurisdictional complexity that occurs when different sender states impose targeted sanctions (Ruys and Ryngaert, 2020; Early and Peterson, 2023). Due to this multi-jurisdictional complexity, many international firms decide to terminate all business relations with a country that is subject to targeted sanctions (Early and Peterson, 2023; De Goede, 2011; Verdier, 2023). This is generally referred to as 'over-compliance' (Early and Peterson, 2023; De Goede, 2011; Verdier, 2023).

Third, the over-compliance of international firms with targeted sanctions negatively affects the imports of goods to the affected country, even those that are excepted from the sanctions, such as food, medical supplies an agricultural inputs (Dithmer and Abdulai, 2017; Bernard et al., 2007; Raynor, 2022). This is because international banks tend to be reluctant to handle financial transactions from and into a country with entities or individuals under sanctions, while many shipping firms avoid transporting goods to and from such countries altogether (Terenina et al., 2019).

Fourth, as a consequence, less food is imported, and also fewer inputs necessary for local food production, such as seeds, fertilisers, machinery, and fuel (Dithmer and Abdulai, 2017; Bernard et al., 2007; Raynor, 2022). This leads to a situation, where imported food becomes more expensive, while at the same time, local production of food is reduced and becomes more costly, which further increases food prices in the local markets (Mihalache-O'Keef and Li, 2011; Taghisadeh-Hesary, Rasoulinezhad and Yoshino, 2019). Fifth, rising food prices make it harder for the general population to access food, leading to reduced food

intake, the skipping of meals, and increasing food insecurity (Mihalache-O'Keef and Li, 2011; Taghisadeh-Hesary, Rasoulinezhad and Yoshino, 2019).

The five-step mechanism presented shows why targeted sanctions might affect food security. Based on the above, I test the following:

Expectation: The imposition of targeted sanctions on individuals and entities is likely to exacerbate food insecurity.

Research Design

This study aims to gain a deeper understanding of how targeted sanctions affect food security, notably due to the over-compliance of international firms. Qualitative research is well-suited to this aim (Bennett and Checkel, 2014; Teherani et al, 2015). More precisely, I will use theory-testing process-tracing as my method to analyse the link between targeted sanctions and food security. Theory-testing process-tracing involves analysing the different steps in a causal mechanism to understand how it unfolds and whether it leads to the desired outcome (Bennett and Checkel, 2014; Beach and Pedersen, 2011).

Observables

For every step of the causal mechanism, there must be observables, i.e. data providing evidence, to determine if my analysis supports the theory (Beach and Pederson, 2011). First, I will present observables linking targeted sanctions and overcompliance. To determine if targeted sanctions have been imposed, I will consulted official government websites. The official websites provide information regarding the types of targeted sanctions used, the scope of the sanctions, and the exemptions of the sanctions (i.e. who and what is affected). Thereafter, it is necessary to verify over-compliance of international firms, by consulting reports providing relevant evidence. For example, NGO reports highlighting delayed or denied imports of goods and services excepted by the sanctions.

Second, to determine if over-compliance results in an overall reduced import of relevant goods, I will consult international reports and interviews with individuals affected in the region. For example, the reports and interviews should highlight that certain excepted goods, such as wheat, are not reaching Syria because shipping companies are opting not to sail to Syria.

Third, to determine if the limited imports are linked to the increase in domestic food prices, I provide observables for the two different steps presented in my theory. Firstly, to determine the link between reduced food imports and increased food prices, I will foremost look at the Consumer Price Index (CPI) for food, which will give me an average change in food prices over a specific time period (Fallis, 2014). Once confirming a general rise in food prices, I will review international reports, analyses, and interviews, linking this increase to limited food imports and higher importation costs.

Next, the observables regarding the link between limited imports of food production inputs and increased domestic food prices. To determine if there are limited imports of food production inputs, I will need to verify for an overall increase in prices of such goods and a generally lower availability. To evidence this link, I require information from interviews, analyses, and international reports explaining farmers' challenges in accessing these goods and the reasons for their limited availability. Next, I need observables to show evidence of the link between scarce and hard-to-access food production inputs and reduced local production. For that, I will first have to verify if the domestic agricultural production was significantly reduced. Interviews and international reports need to provide information regarding the reason behind the reduced agricultural production. Furthermore, to link lower production with higher food prices, international reports and interviews must discuss the reason regarding higher food prices on the domestic market and explain that the lower domestic food production has a direct link with it.

Having presented observables for the two ways through which restricted imports impact local food prices, I will present observables for the fifth step that connects elevated food prices to food insecurity in the affected country. To determine this link, I will first consult interviews and international reports of household budget constraints regarding food. The household budget constraint provides evidence for coping strategies of families and individuals regarding the higher food prices. For example, how much food a family can afford and if they skip or repeatedly eat the same meals. Thereafter, international reports and non-governmental organisations report need to present information on why the general population cannot access food, and if there is any limited availability of important foods.

Case selection

To examine the observables, I will analyse the case of Syria during the period spanning from 2019 to 2022. Syria is a most likely case, as multiple targeted sanctions have been imposed by the US and EU on individuals and entities in the country – most notably the Syrian regime and its associates - since 2011 (European Council, n.d.; Office of Foreign Assets Control Sanctions Attorney, n.d.). It is important to mention that the US and the EU only imposed targeted sanctions on Syria and not comprehensive sanctions (i.e., EU Sanctions Map, n.d.; Office of Foreign Assets Control, n.d.a). Syria is home to a significant number of individuals and entities subjected to extensive targeted sanctions (Think Tank European Parliament, 2023). Due to the broad scope of the targeted sanctions from the US and EU, there appears to be an unintended negative impact on the general population, despite the intended avoidance of such consequences (Think Tank European Parliament, 2023). About 12.1 million people in Syria are food insecure today, which is more than half of the population (Food Security Information Network, 2023; Laub, 2023). Food insecurity increased since 2019, even though conflict had subsided by that time, which explains why the period between 2019 and 2022 has been chosen. In 2019 the US imposed additional sanctions in the form of the Caesar

Syrian Civilian Protection Act (Caesar Act), which legally allows the United States to impose sanctions on individuals and entities outside of its jurisdiction (U.S. Department of State, 2020a). Since then, the supply of food in Syria has decreased significantly (Tabler and Zweig, 2023).

Data sources

For the qualitative data collection, it is important to mention that it is likely that there will be some bias regarding some of the data that I intend to collect, especially regarding the sources from Syria, as the regime mostly controls national data and media outlets (BBC, n.d.; Reporters without Borders, n.d.). To avoid such bias, I have included neutral data sources to avoid this bias. I will use various sources, such as international and non-governmental organisations reports (such as those written by the United Nations, EU, and Amnesty International), government documents (mainly from the US and member states of the EU), academic journals and media (such as the Economist, the New York Times, and the Frankfurter Allgemeine Zeitung).

Analysis

In this section, I analyse my theory step-by-step on the case of Syria between 2019 and 2022. I first address the imposition of targeted sanctions by the US and the EU, and if these have led international firms to over-comply. The US and the EU imposed targeted sanctions against the Syrian regime and associates, led by Bashir Al Assad, shortly after the onset of the civil war in 2011 (Official Journal of the European Union, 2011; U.S. Department of State, n.d.; Yacoubian, 2021). The sanctions that were triggered by the brutal repression of public protests demanding regime change (Marsh, 2011), were primary targeted sanctions (European Parliament, 2023; The Carter Center, 2020). Their imposition meant that the US and the EU prohibited individuals and entities under their jurisdiction from engaging with the Syrian

government (U.S. Department of State, n.d.; EUR-Lex, n.d.; The Carter Center, 2020a). This restriction also applied to Syrian entities that were benefiting from the Syrian government, as listed by the sanctions list (U.S. Department of State, n.d.; EUR-Lex, n.d.). The list of Syrian individuals or entities subject to sanctions evolved over time, as individuals and entities were added or omitted frequently (European Council, n.d.). In January 2019, 270 individuals and 72 entities in Syria were sanctioned by the EU (European Council, n.d.). The full list of sanctioned individuals and entities by the US contains 664 individuals and entities (OFAC, 2024). In December 2019, in addition to the previously adopted primary sanctions, the US adopted secondary targeted sanctions in the form of the Caesar Act (U.S. Department of State, 2020a; U.S. Department of State, 2020b), which is also applicable to non-US individuals and entities (Gordon, 2019; Berman et al., 2019; Ruys and Ryngaert, 2020; Han, 2016). The sanctions imposed by the US and the EU include provisions for exceptions related to humanitarian assistance – including as concerns food and agricultural inputs (OFAC, n.d.b; European Civil Protection and Humanitarian Aid Operation [ECHO], n.d.; Walker, 2020). Exceptions permit specific activities that are normally prohibited in the scope of the general sanctions (ECHO, n.d.; OFAC, n.d.a).

The sanctions had a significant impact on the country's economy already before 2019 (Lyme, 2012). Between 2010 and 2020, Syria's Gross Domestic Product (GDP) shrank by more than half, and there was a dramatic decline in the Gross National Income per capita (The World Bank, 2022). Since 2018, the World Bank classified Syria as a low-income country, while before 2011 Syria had a relatively strong economy (The World Bank, 2022; Polk, 2013). Poverty was rising, and the number of people considered food insecure and in need of humanitarian assistance was growing (UN Office for the Coordination of Humanitarian Affairs, 2019; World Food Programme, 2022a). The civil war in Syria played a role in the deteriorating economic situation (Yacoubian, 2021; Laub, 2023). However, the key

role played by the sanctions in the continued economic downturn and rising humanitarian needs, including food insecurity, can be determined specifically by analysing the period as of 2019. By that time an estimated 60% of the Syrian territory (see Figure 1.) was again firmly under the control of the Syrian regime (Laub, 2023). While armed confrontation continued at a lower scale in the frontline areas, the regime-controlled areas experienced a relatively peaceful period (still ongoing today), which under normal circumstances would have allowed regular economic activity and reconstruction (Stiftung Wissenschaft und Politik, 2020; Mross, Charlotte and Grävingholt, 2022). However, despite the reconstitution of a stable governance system with a functioning administration in a relatively peaceful environment the economic downturn and rise in humanitarian needs, including food security, continued after 2019 (ECHO, 2022a).

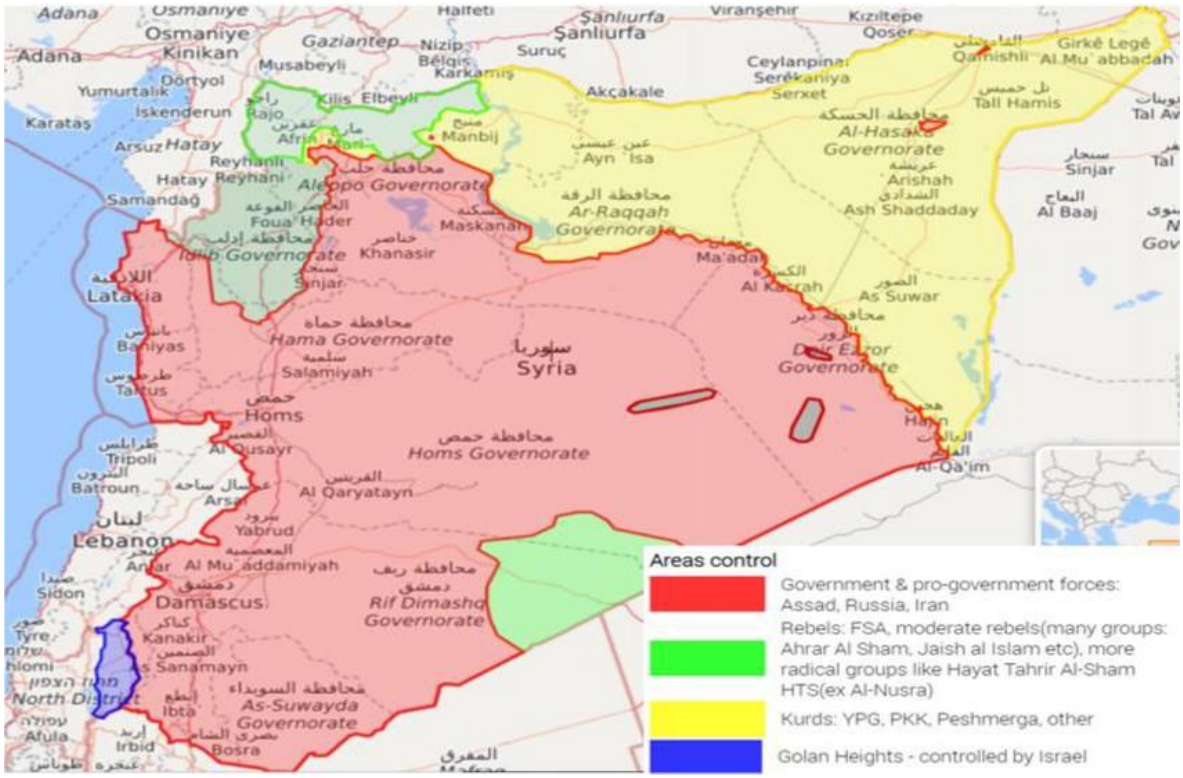

Figure 1. Map showing divided Syria in 2019 (from: Health aid displacement during a decade of conflict (2011–19) in Syria: an exploratory analysis. Alkhalil et al. 2023 BMC Public Health)

Despite the targeted nature of the sanctions imposed by the EU and the US, it has been difficult for international firms to determine the types of business interactions permitted under the different sanction regimes (The Carter Center, 2020b). For exceptions to US and EU sanctions, it is necessary to apply for licenses (European Commission, 2017; OFAC, n.d.a). The licenses are formal authorisations granted by relevant authorities, in this case, the US and any member states of the EU (The Carter Center, 2020b). The application for licenses to allow exports to Syria of otherwise sanctioned items within the context of humanitarian work is very cumbersome (The Carter Center, 2023; Human Rights Watch, 2023; European Parliament, 2023). This is because the US and the EU apply different procedures to obtain such licenses (The Carter Center, 2023; European Parliament, 2023). For these reasons, as well as the perceived risk that the goods or finances could be diverted to sanctioned individuals and entities, international firms developed the tendency to go further than required and to simply cut all business relations with Syria – over-complying with the sanctions (The Carter Center, 2023; European Parliament, 2023). Consequently, in 2021, approximately 62% of Damascus-based INGOs and NGOs reported instances where banks denied or delayed funds, creating challenges for the organisations in procuring food and delivering humanitarian aid (European Parliament, 2023)

According to reports (United Nations Human Rights, 2022), the 2019 US Caesar Act strongly reinforced the tendency for international firms to over-comply (Tabler and Zweig, 2023; Azhari, 2020; Diakonia International Humanitarian Law Centre, 2021). This is because the Act covered third countries, such as Lebanon or Turkey, that were previously still engaged with Syrian individuals and entities under sanctions (Tabler and Zweig, 2023; Azhari, 2020; Daher, Moret and Al-Omar, 2020). In the six months after the Caesar Act was implemented, the United States, sanctioned 113 more individuals and entities considered Syrian regime facilitators (Tabler and Zweig, 2023; Shatz, 2021). As an intermediate conclusion, and as set

out in the first two steps of my theoretical framework, the targeted sanctions by the US and the EU led to a problem of over-compliance by international firms, which was significantly amplified by the extra-territorial scope of the 2019 US Ceasar Act (United Nations Human Rights, 2022; Daher, Moret and Al-Omar, 2020).

In the following, I analyse how decreased imports affected the food prices in Syria. Due to over-compliance, the difficulties associated with securing imports of goods into Syria also extended to the area of food, even though food products were excepted from all EU and US targeted sanctions (Syria Justice and Accountability Centre, 2022; Kanfash, 2022). Moreover, over-compliance also prevented the import of sufficient quantities of agricultural inputs, such as seeds or fertilisers (Agency for Technical Cooperation and Development, 2022; World Food Programme, 2019; Aita, 2020). Such agricultural inputs were necessary to revive the local food production that had greatly suffered from the civil war, with some 934,000 hectares of agricultural lands rendered unusable (Mohamed, Anders and Schneider, 2020). Consequently, local food production remained at a sharply reduced level (Agency for Technical Cooperation and Development, 2022; FAO, 2021a). Farmers voiced their concerns regarding the high production and transportation costs, and that fertilizers and seeds of good quality were rarely available (FAO, 2021a). In 2020/21, wheat production in Syria went down by 75% compared to the previous period (FAO, 2021a; Human Rights Watch, 2021). This information supports the third step of my theoretical framework.

The decreased availability of food led to a considerable increase in food prices in local markets in the regime-controlled area (World Food Programme, 2019). In 2019, the national food basket price increased by 57% (World Food Programme, 2019), and in 2020 by 100% (World Food Programme, 2020; Christou and Al Nofal, 2020). This abrupt and substantial surge can be directly attributed to the Caesar Act, which prompted firms from neighbouring countries that were previously still engaged with Syria, to also sever ties

(Kanfash, 2022; Christou and Al Nofal; World Food Programme, 2020). Most affected were basic goods such as cooking oil, rice, and sugar which increased by over 350% in 2020 (European Asylum Support Office, 2021; Christou and Al Nofal, 2020). In 2021, food prices increased by 222% (FAO, 2021b), and in 2022, food prices again almost doubled (World Food Programme, 2022b). Overall, between 2019 and 2022 food prices increased by 532% (ECHO, 2022b). These increased prices can be directly linked to the targeted sanctions imposed by the US and the EU (Aita, 2020; Agency for Technical Cooperation and Development, 2022; FAO, 2021b).

Given the fact that due to the sanctions, the Syrian regime was not able to revive the economy (Reuters, 2023; Tür, 2023) despite the overall peaceful conditions in the territory controlled by it as of 2019, higher food prices met an increasingly impoverished population (World Food Programme, 2022c; Makki, 2021; The World Bank, 2023b). The poverty rate in Syria steadily increased from 83% in 2019 (United Nations High Commissioner for Refugees, 2019) to 90% in 2022 (Human Rights Watch, 2023c). Consequently, an increasingly large part of the general population was unable to afford even the most basic food items (Insecurity Insight, 2023). Female-led households, in particular, struggled to secure sufficient food for their children, with many reporting not eating fruits or vegetables or skipping meals to feed the children (World Food Programme, 2022c). Overall, food insecurity rose in Syria from an estimated 6.5 million people in 2019 to an estimated 12 million in 2022 (FAO and World Food Programme, 2019; World Food Programme, 2023b; World Food Programme, 2023c). The last two paragraphs support the fourth and fifth steps of my theoretical framework, demonstrating how the increased food prices exacerbated food insecurity in Syria between 2019 and 2022.

Conclusion

In conclusion, I briefly revisit my theory and my findings, followed by suggestions for future research and future policy considerations. My theoretical framework consisted of one mechanism that links targeted sanctions to the over-compliance of international firms (e.g., Gordon, 2019; Mallard, Sabet and Sun, 2020; Early and Peterson, 2023), generally reducing imports of also of goods excepted by the sanctions, including food as well as agricultural inputs necessary for local food production (e.g., Dithmer and Abdulai, 2017; Raynor, 2022; Bernard et al., 2007). This leads to higher prices for both, imported food and locally produced food (e.g., Bernard et al., 2007; Raynor, 2022; Mihalache-O'Keef and Li, 2011), consequently increasing food insecurity in the general population (e.g., Mihalache-O'Keef and Li, 2011; Taghisadeh-Hesary, Rasoulinezhad and Yoshino, 2019).

The analysis of the Syrian case between 2019 and 2022 supports this theory. I found evidence of strong over-compliance, especially after the imposition of the US Caesar Act in late 2019 (The Carter Center, 2023; European Parliament, 2023). Third countries that before the imposition of the Act, still maintained strong connections to Syria, started to limit their business connections (Tabler and Zweig, 2023; Azhari, 2020). The increased prices of imports of agricultural inputs made it more difficult and costly for Syrian farmers to produce food (FAO, 2021a). The limited food production further reduced the availability of food in the regime-controlled areas and further increased the costs of basic food stables such as bread (World Food Programme, 2019; Aita, 2020). These rising prices could no longer be afforded by an increasingly impoverished population, leading to increasing food insecurity (FAO and World Food Programme, 2019; World Food Programme, 2023).

Although my theory found resonance in the case of Syria, it is important to mention that other factors might have played a role in the rising food insecurity in Syria. One potential relevant factor is the drought in Syria starting in 2021/22 (International Rescue Committee,

2022) In this context, it is also important to note that the failure of the Syrian regime to maintain or repair water systems and electricity lines, using relevant funds for personal enrichment, further negatively affected local food production (Daher, 2022). Future research should therefore focus on how autocratic regimes compensate for the effects of targeted sanctions against them by reducing public goods supplies.

Regarding policy changes, targeted sanctions are without a doubt strong coercive tools that have the potential to effectively change the behaviour of an individual or entity (Dreyer and Luengo-Cabrera, 2015). However, to adhere to the theoretical stance that targeted sanctions have a minimal impact on the general population, the problem of over-compliance of international firms must be addressed. To avoid this effect, the sender states of targeted sanctions must ensure that clear guidelines and procedures for international firms are in place.

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