

Syrian Trade, Health and Industry in Conflict Time (2011-2021)

A study on the impact of war, public policies and sanctions

Konrad-Adenauer-Stiftung (KAS) Syria/Iraq Office
Geneva Centre for Security Policy (GCSP)

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Abbreviations

bpd	Barrels per day
WDI	World Development Indicators
ABD	Acute Bloody Diarrhea
CBS	Central Bank of Syria
GFTO	General Foreign Trade Organization
GAM	Global Acute Malnutrition
GDP	gross domestic product
GoS	Government of Syria
HCWs	Health Care Workers
HNAP	Humanitarian Needs Assessment Program
IMF	International Monetary Fund
ISIC	International Standard Industrial Classification
MoH	Ministry of Health of the Syrian government
MoHE	Ministry of Higher Education of the Syrian government
MSF	Médecins Sans Frontières
NDF	National Defense Forces
OCHA	UN Office for the Coordination of Humanitarian Affairs
OPV	Oral Polio Vaccine
PHR	Physician for Human Rights
PPP	Public-private partnership
PPP	Public-private partnership
Rev.	Revision
SA	Self-Administration
SCPR	Syrian Center for Policy Research
SHNO	Syrian Humanitarian Needs Overview
SITC	Standard International Trade Classification
SMART	Standardized Monitoring and Assessment of Relief and Transition
SYP	Syrian Pound
USD	United States Dollar
WFP	World Food Program
WHO	World Health Organization

Executive summary

While experts agree on the disastrous economic and humanitarian conditions in Syria, divergence on the combination of factors causing it is wide. Sanctions are the most debated factor for their consequences, but war and public policies are often overlooked for their contribution. This study aimed to fill this gap by reconsidering the collective effects of war, sanctions, and public policies on the Syrian economy during wartime. The report suggests a framework to analyze the impact of the three factors on two distinct yet connected issues: the destruction of the economy and its recovery. To showcase this, three parts of the Syrian economy have been examined in this report: trade institutions, health and human capabilities, and manufacturing. The three chapters showed that the woes of the Syrian economy during wartime cannot be attributed to only one factor, and studying the sequence and domain of effect for each is key to better analyze the situation and provide sound policy advice.

This report offers a framework for a comprehensive analysis that could help produce more balanced assessments on the causes of destruction and determinants of recovery. The lack of accurate and systematic information on the Syrian economy is a challenge for all researchers. However, a robust analytical framework could reduce judgment errors and polarization over these politically charged issues. The Lebanese economic crisis and Covid-19 were two more external shocks to the Syrian economy that took place during the research production (2019-2021). The latter factors were included in the overall analysis, yet they should undergo a more careful assessment in the future.

The three chapters provide four main contributions to the current research and policy debates on the Syrian development. They connect intra-war dynamics to pre-war economic realities; use existing and new data to identify new and old dynamics and trends in the economy; use a multi-factor approach to assess the three aforementioned factors' effects on both destruction and recovery of the sectors under study; and distinguish between the developmental and coercive capacity of the state. The key findings of the study are:

- **Pre-war economic and institutional settings are key to understanding intra-war dynamics.** Many current trends in Syrian trade institutions are a continuation of pre-war dynamics: Informalization and institutional decay, the role of intermediaries in the economy, and the overlap between business, bureaucratic, and political actors internally and externally are known phenomena for the institutional economic structure in Syria pre-2010. Health indicators also were deteriorating in the 2000s: public and private expenditure decreased, which lead to rising rates of chronic diseases and a rise in the mortality of children among many others. Economy was no exception, as oil production lost near half of its capacity, and severe droughts had cross-sectoral impacts on the economy and society.
- **Old trends persisted and new dynamics emerged during the war.** The war accelerated institutional informalization and trade primarization, but also created a fragmentation of territories and brought some governmental efforts for institutionalization and re-formalization. The human development deteriorated during the war: mortality rates spiked, disabilities increased, malnutrition proliferated, trauma became widespread, and the number of medical staff decreased. Manufacturing overall declined by more than 90 percent, with few exceptions. The industrial chemicals, iron and steel, machinery, and textile industries were the most devastated. Yet, the food and beverage industry and pharmaceutical production were less affected. An observation that could give a glimmer of hope for future recovery.
- **War is the major contributor to destruction while public policies and sanctions share more responsibility for any future recovery.** War is the most obvious culprit of the three, being directly and indirectly responsible for the destruction of physical and social infrastructure described above in all sectors. However, public policies and sanctions will together affect the future recovery of the economy along with the war legacy. Military activities could be considered the main driver that led to the majority

of Syrians being killed, injured, displaced, or emigrated since 2011. War also is responsible for the destruction of health facilities and the killing of medical staff. The destruction of production facilities and infrastructure (such as roads, electricity grids, and water networks) is the main reason for limited economic activities in all sectors. War heavily affected all production elements in terms of fuel, production material, spare parts, working forces, finances, and customers. War has also resulted in territorial fragmentation, primarization of production and exports, and dependence on foreign support.

- **Ending military operations will not reverse the damage done without wider political and economic transformation.** Sources of insecurity like arbitrary arrests, inter-city cross points, kidnappings, and all forms of lawlessness are affecting economic recovery. Public economic policies affecting investment, job creation, currency valuation, and the fight against corruption also have an impact on the pace of recovery. The report showed that public authorities can use their power to reverse the course of destruction. Reforms under war and sanctions are possible. That was the case when the Syrian government pushed towards institutionalization and improving the state capacity in taxation and public services provision in 2019. More can be done, even under the worst circumstances.
- **The impact of sanctions on the resumption of activities comes in different forms, primarily by complicating the import of energy and securing inputs for production.** Sanctions on the energy sector in Syria have significantly affected energy imports to the country, though the war has also destroyed local production capacity and reduced the overall demand for energy. The over-compliance of international banks reduces the chances of the import of goods to Syria using international financial channels, thereby affecting human development through the direct hindering of the import of equipment, medicine, and raw materials. Hyperinflation in Syria is the result of war, sanctions, the Lebanese economic crisis, and public policies.
- **There is a need for ways to improve state developmental capacity and constrain coercive capacity.** State capacity is crucial to a sustainable peacebuilding and post-conflict recovery. The dilemma facing Syria is that targeting the regime is undermining the state in all its capacities, with higher effects on its developmental aspects. The deterioration in the humanitarian situation is rapid and the needs gap is increasing faster than the international community's response capacity. Supporting half of the Syrian population in need via temporary measures is unsustainable, especially with decreasing financial contributions of international donors. Apart from the politics of aid in Syria, a technical distinction between state developmental capacity versus coercive capacity could help redesign the current approaches to Syria to become more sustainable and effective.

1. Introduction: Trajectories of destruction and recovery of the Syrian economy in wartime (2011-2021)

Abdulla Ibrahim¹

Amidst the extreme polarization of Syria's politics, we find a rare consensus on the frailty of the prevalent economic and humanitarian situation. Current estimates suggest that the Syrian economy has lost half of its GDP in 2015,² and a staggering two thirds by 2019.³ By the end of 2021 the decline was severely aggravated due to three additional external factors beyond war and international sanctions: the Lebanese economic crisis, the Caesar Syria Civilian Protection Act, and Covid-19.⁴ The significant reduction in GDP is reflected in the meager public budget set for 2021 (USD 2.7 billion), the lowest recorded since 2011.⁵ Expenditure on public services is expected to decrease by 70 percent compared to 2010, and a heavier reduction in investment or reconstruction is expected in 2021.⁶ The exchange rate of the Syrian Pound to the USD stands at around 3,400 per dollar – a 68 fold decrease compared to the 2011 standard.

These macroeconomic indicators not only reflect a deep economic crisis but a calamitous humanitarian one that continues to engulf the country. Nine out of ten Syrians are living in poverty, and 40 percent were at risk of going hungry in 2021.⁷ These numbers set record highs since the start of the conflict in 2011 and, according to the 2021 Syria Humanitarian Needs Overview (HNO), the number of Syrians in need of humanitarian assistance exceeds 13.4 million, with 5.9 million considered in dire need of humanitarian support.⁸ UNICEF estimates that 6 million children and 6.7 million internally displaced are in need of some form of further relief as well.⁹ Food insecurity has also reached critical levels with 60 percent of Syrians (12.4 million) considered as food insecure. According to the World Food Program (WFP), Covid-19 and water shortages, in addition to a decade of war and decades of sanctions, have led to a further 4.5 million of food insecure Syrians in 2020.¹⁰

Numerous studies have reported the destruction of physical and human capital in Syria since 2011. However, few have analyzed the factors affecting its current status and those that will potentially shape its recovery trajectory.¹¹ Despite the agreement on the extent of destruction, the polarization, nonetheless, can be found at the core of debates on the causes of the current crisis, and the necessary steps to recovery. More

¹ Adjunct fellow at the Centre for Strategic and International Studies (CSIS) in Washington DC; and non-resident fellow at the Stimson Centers. The author is grateful to Omar S. Dahi, Rabie Nasser and Howard J. Shatz for their collegiality; Konrad-Adenauer-Stiftung Syria and Iraq office for their patience and collaboration, specially Gregor Jaecke, Lejla Djulancic, David Labude, Michaela Balluff; when this project started the author was a Geneva Centre for Security Policy Geneva Centre for Security Policy, where he is grateful for the support of Christian Buhlmann, Ladina Lange, Zahra Elsagblian, and Constance Dumont. Gratitude is extended to Erica Moret of the Graduate Institute in Geneva for her contribution to the early discussions of the project.

² Gobat, Jeanne and Kostial, Kristina, June 2016, "Syria's Conflict Economy," IMF Working Paper WP/16/123.

³ Syrian Center for Policy Research, May 2020 "Syria: Justice to Transcend Conflict; Impact of Syrian Conflict Report 2016-2019."

⁴ Fitch Solutions, 17 August 2020 "Syrian Economy to Suffer Deep Contraction As Prices Surge," Country Risk.

⁵ Christou, William and Shaar, Karam, December 2020, "2021 budget reveals the depth of Syria's economic woes," Atlantic Council.

⁶ Operations and Policy Centre, 12 April 2021, "Visualizing Syria's 2021 Budget."

⁷ UN, 30 March 2021, "Statement by the Secretary General on Syria."

⁸ Reliefweb, August 2021, "Syria: UNHCR Operational Update, August 2021."

⁹ Reliefweb, July 2021, "UNICEF Whole of Syria Humanitarian Situation Report, July 2021."

¹⁰ World Food Program (WFP), 17 February 2021, "Twelve million Syrians now in the grip of hunger, worn down by conflict and soaring food prices."

¹¹ See: Yaziji, Jihad, 2015, "Syria's War Economy," European Council on Foreign Relations; Gobat, Jeanne and Kristina Kostial, June 2016 "Syria's Conflict Economy," IMF Working Papers, WP/16/123; World Bank, 2017, "The Toll of War: The Economic and Social Consequences of the Conflict in Syria," The World Bank Group.

specifically, there is polarization on the contribution of sanctions to the current worsening conditions and their effects on the chances for revival.¹²

Two objective factors contribute to the confusion on the role of sanctions: the rarity of systematic data on the Syrian economy, and the lack of an analytical framework to account for the exact impact of sanctions on institutions and sectors of the Syrian economy. Sanctions are not the sole factor that affect the Syrian economy, with public policies and war playing a crucial role. This research project started in 2019 with the aim of building a framework of analysis of the underlying factors contributing to the destruction and eventual recovery of the Syrian economy in wartime. The three chapters of this study did not thoroughly account for the impact of the Lebanese economic crisis which began in late 2019, and the Covid-19 pandemic which further devastated the Syrian economy in 2020. Yet the framework does help understand their potential contribution. The main assumption of this study is that assessing the impact of individual factors, without taking others into consideration, on different economic variables hinders clear analysis, and obstructs the ability to make needed decisions by governments, institutions, and individuals concerned with Syria.

Considering all possible factors affecting the Syrian economy is essential for analysis and decision making. Equally paramount is to make a distinction between destruction and recovery of the economy in order to escape the destructive political blame game and to identify the necessary steps to be taken to improve the situation. War seems to provide a specific contribution to the destruction of the physical and social infrastructure during conflict time, while sanctions will potentially provide adverse effects to the recovery of some activities, some of which were probably affected by war in the first place. Ignoring the impact of public policies instituted by the authorities in charge of shaping the current economic and humanitarian situation, either through pure economic tools, or by political or security policy choices, leaves a considerable void in the analysis. With the absence of war and the magnitude of sanctions prior to 2011, the Syrian economy was in such ill condition that it provided the catalyst that, at least partially, sparked the uprising.¹³

The underlying argument across all three chapters of this report is: None of the three factors, i.e., war, public policies, and sanctions, is the sole culprit for the current Syrian economic and humanitarian misery. The combined effects of all three factors have produced the current economic structure, dynamics, and outputs. Those three factors of concern, although specific, contain many sub-components of critical importance that can lead to a more in-depth and accurate analysis. The cost of the war in Syria has not only been the destruction of the physical infrastructure, but it also includes the devastation of human capital and the severe disruption of the economic organization, governance, and unity. The public economic policies, i.e., fiscal, monetary, trade, and investment, have been used in an attempt to accommodate the situation, as well as to enforce specific policy directions. The sanctions are imposed by various sanctioners,¹⁴ with different tools, diverse mechanisms, and degrees of effectiveness over time. This report focuses on identifying nuances of the three factors and incorporating them into the overall analysis.

This framework will be used in the three chapters that focus on different, yet vital, aspects of the Syrian economy: trade institutions, health and human development, and manufacturing. The three chapters will provide unique information and novel analysis of the developments in Syria prior to the outbreak of conflict in 2011 leading all the way to the present time. The attention to pre-war trends in trade institutions, human development, and manufacturing dynamics is paramount as it provides a benchmark to compare to other periods in time. The

¹² See James Dobbins 4 December 2019, "Economic sanctions and carpet bombing are similarly ruinous," The Hill; See Samir Aita "The Unintended Consequences of U.S. and European Unilateral Measures on Syria's Economy and its Small and Medium Enterprises," Carter Center, January 2021; Zaki Mehchy and Rim Turkmani, January 2021, "Understanding the Impact of Sanctions on the Political Dynamics in Syria," Conflict Research Program, London School of Economics (LSE).

¹³ Polk, William R., 10 December 2013, "Understanding Syria: From Pre-Civil War to Post-Assad," The Atlantic.

¹⁴ United States, the European Union, the League of Arab States, Australia, Canada, Japan, Norway, Switzerland, Turkey, United Nations, and the United Kingdom.

three chapters, directly or indirectly, address the question of state capacity and its relevance to sustainable recovery plans for Syria, a challenging exercise considering the blurred structural boundaries between the ruling regime and the institutions of the Syrian state. Future efforts to reduce the ever increasing humanitarian gap requires a discussion into available paths to recovery and the minimal contribution of state institutional capacity. Distinguishing between developmental and the coercive capacity of the state might be useful in the analysis, in addition to shaping future policy.

The report does not promise a definitive answer to the research question on which and how different factors have affected the destruction and are shaping the recovery; but rather provides a useful framework to approach the issues facing recovery in Syria. Cognizant of the unavailability of important data and information for an accurate judgment, the framework is an invitation to open mindedness and innovative approaches to understand the best possible paths to recovery from the current devastation.

The following section will introduce the three chapters' focus, contribution, and approaches. The second section will highlight the various contributions of the report which are: a) pre-war dynamics are important to understand current trends; b) the war cemented old trends and brought new dynamics; c) no single culprit is blamable for the current situation; d) war is more responsible for destruction, while public policies and sanctions have a bigger contribution in shaping future recovery along war legacy; and e) supporting state development capacity and containing its coercive capacity is a possible way forward to avoid the total collapse of Syria.

1.1. Trade institutions, health and human capabilities, and manufacturing in conflict time

The chapter on trade institutions during wartime examines the prevailing trajectories of the trade institutions before and during the war, and shows how they potentially were shaped by the three factors.¹⁵ It explains how the conflict exacerbated pre-existing trends and dynamics like informality, elite capture, and the overlap of public and private entities. The conflict, however, gave rise to new dynamics such as predation and pillaging and also witnessed counter-intuitive dynamics like public policy attempts to improve state capacity in taxation, industry, and agricultural policies. These formalization trends are often unaccounted for within mainstream analysis of the Syrian economy. Both informalization, and re-formalization have been jointly shaped by the war, public policies, and sanctions in a non-linear and complex trajectory. Various combinations of these factors played different roles over time; and, in a dynamic interactive manner, the conflict increased pre-existing problems, with sanctions triggering policy responses that shaped the structure of the economy and trade institutions accordingly.

The health and human development chapter tackles the human capabilities and political economy approaches to the Syrian health sector.¹⁶ The study focuses on one aspect of human development – public health – as a case study that illustrates the impact of conflict and the potential causality relationships between war, public policies, sanctions and the health sector. The health sector is considered vital as it is interconnected to all other socio-economic and political aspects of economic recovery. The health sector includes both the system in terms of institutions, facilities, and policies; and also health outcomes, in terms of the health trends and conditions of the Syrian population. The pre-war neoliberal public policies placed the health sector in a precarious condition prior to 2011. Since 2011, the introduction of war and related government policies resulted in a health catastrophe in terms of the numbers of Syrians killed, injured, or disabled. Syria has witnessed an immense spike in mortality and disability rates, destruction of health facilities and personnel, and a noticeable increase in

¹⁵ For more details, please refer to the second chapter in this report.

¹⁶ For more details, please refer to the third chapter in this report.

communicable and non-communicable diseases. Access to health care, meanwhile, has been severely curtailed throughout Syria due to shortages in both supply and demand. The health situation constitutes a grave infringement on the Syrian populations rights and dignity.

The manufacturing chapter focuses on the Syrian manufacturing sector during war time.¹⁷ The use of mirror trade data in this sector helps to show its development since the outbreak of hostilities in 2011 with public policies and sanctions.¹⁸ Industry is a key factor in the stabilization of post-war Syria as it boosts the economy by providing employment, livelihood, self-sufficiency, and growth. This is crucial to attract refugees for the work force and investors' capital to reconstruct the country and improve its urban profile and income levels. The paper does not aim to provide a comprehensive view on the industry sector, but rather brings new analytical angles to existing information, and makes use of new techniques to integrate existing data in an innovative way. The ultimate objective is to improve the understanding of the factors that shaped the industry sector during war time, and their potential implications for the future of Syria's economic recovery.

1.2. Contributions of the study

The three chapters provide four main contributions: they connect intra-war dynamics to pre-war economic realities; use contemporary and existing data to identify new and old dynamics and trends in the economy; use a multi-factor approach to assess the three aforementioned factors' effects on both destruction and recovery of the sectors under study; and distinguish between developmental and coercive capacity of the state.

Pre-war economic and institutional settings are key to understanding intra-war dynamics

Many current trends in Syrian trade institutions are a continuation of pre-war dynamics. Informalization and institutional decay have dominated Syria incessantly, particularly in the 2000s as a result of the neoliberal market reforms. The intermediaries in economy and trade played a role in facilitating deals between business, bureaucratic, and political actors internally and externally. The current disconnect between investors and politicians, the state and the ruling power is not the result of the war or sanctions; it has been a notable component of the Syrian political economy for decades. The blurred lines between the domains of economy and politics/security in Syria has always existed, and the war has only served to exacerbate the situation. Monopolies in the hands of small, connected groups of cronies over trade and other important economic sectors was the norm prior to 2011, and today follows the same logic, albeit with different players. Neither war nor sanctions created the informality and cronyism in the Syrian economy.

The deterioration in health indicators can be traced back to the 2000s, when public expenditure decreased by 0.5 percentage point between 2000 and 2010 (from 2 percent to 1.5 percent of GDP). Private expenditure also decreased by 1.3 percentage point (from 3 percent to 1.7 percent) in the same period.¹⁹ Prior to the onset of the war, the private sector provided the majority of health services (80 percent to 20 percent private to public).²⁰ The inefficiency of the health system was evident by the increased rates of chronic diseases (2.4 percentage point increase between 2001-2009, from 7.9 percent in 2001 to 10.3 percent in 2009), and in the rise in mortality of

¹⁷ For more details, please refer to the fourth chapter in this report.

¹⁸ The paper used four levels of data: multilateral organizations databases and reports (IMF and WB); Syrian official data from the Central Bureau of Statistics; Collected or estimated data by researchers or private sector organizations; Goods trade data as recorded by the United Nations Comtrade database. For more details, please refer to the third chapter in this report.

¹⁹ World Development Indicators (WDI), 2020.

²⁰ Central Bank of Syria (CBS), Health Expenditure Survey 2010.

children under 5 years of age (1.2 per thousand point between 2001-2009--from 20.2 children per thousand to 21.4 per thousand),²¹ while the overall crude mortality rate increased by 1.7 per thousand from 2000-2010 (from 3.8 per thousand to 4.4 per thousand). According to the human capabilities chapter, health outcome indicators were deteriorating well before the war started as a reflection of the reduction in public and private investment in health due to the neoliberal economic policies.²²

Trends in overall economic deterioration could be traced to the years prior to the conflict, specifically with the decline in oil production and exports being one key indicator. The oil sector lost 42 percent of its production capacity between 2001-2011 as it decreased from 613,000 barrels per day (bpd) in 2001 to 353,000 bpd in 2011.²³ This decline was one of the primary motivations for economic reforms in the early 2000s. A successive round of droughts was the second indicator of looming economic difficulties.²⁴ Wheat production radically declined from 4 million tons in 2007 to only 2.1 million in 2008 and 2010, with a slight recovery to 3.7 million tons in 2009.²⁵ Both oil and wheat production contributed towards serious economic and human cost on the national budget and the Syrian population respectively.

Trade institutions, the health sector, and the overall economic indicators were devoid of any credibility before 2011 with the same trends continuing after 2011 and with new adverse trends emerging.

Old trends persisted and new dynamics emerged during the war

Trade institutions during the war built upon the informal structure they inherited. Yet they managed to conduct some re-formalization to improve the state institutional capacity. Overall, the trade sector shrank by 19 percentage point throughout the war as the share of exports in GDP reached 9 percent in 2017, down from 28 percent in 2011. Trade primarization²⁶ increased as both exports and imports were dominated by raw material, primary products, and commodities such as livestock, vegetables, and other food products.²⁷ Trade flows were re-oriented with Aleppo no longer the industrial hub in Syria, and Gaziantep, Turkey, increasingly gaining more significance. The geography of trade directions has created its own networks between Syrian and Turkish areas. A mix of armed groups and Syrian opposition bureaucrats with various affiliations to Turkey are dominating the trade in the north west. The Autonomous Administration in the north east also has created its own business networks that control trade with Iraq, and with other Syrian control zones: government controlled areas and the north west. Exchange of goods within Syrian fragmented territories is being institutionalized and sinking further into the war economy.

The fragmentation of territories came with informalization of institutions in the three areas. The rise of intermediaries and the blurring of political and economic structures/players are present in the three areas. Intermediaries are needed to compensate for formal institutional absence or incapacitation due to either war, or sanctions, or both. However, a trend of re-formalization can be witnessed in government controlled areas. Two events pushed the government to re-formalize the economy: the relative stability that came with the reduction

²¹ Family Health Survey 2001 and 2009.

²² SCPR, 2016.

²³ BP p.l.c., 2020, "Statistical Review of World Energy 2020, 69th Edition, London.

²⁴ Syria had experienced high growth in the 1990s, but had an annual average growth of only 1.25 percent from 1999-2003. In that period, it also faced declining investment, declining living standards, and rising unemployment (International Monetary Fund, Syrian Arab Republic: October 2005 Article IV Consultation – Staff Report; and Public Information Notice on Executive Board Discussion, IMF Country Report No. 05/356.

²⁵ Central Bureau of Statistics (Syria), "Table 14-4: Production of Cereals and Dry Legumes 2007-2011 (000 Tons),"Chapter Four:" [Agricultural Statistics, 2012.](#)"

²⁶ Primarization takes place "if the exports of primary products dominate their total and it is in process of primarization if this segment tends to increase significantly," for more see: Oviedo, Eduardo Daniel Argentina, 2013 "Facing China: Modernization, Interests and Economic Relations Model," East Asia, 30:7–34. For more details, please refer to the second chapter in this report.

²⁷ For more details, please refer to the second chapter in this report.

of military activities after 2018, and the sharp deterioration of the economic and humanitarian situation. After regaining control over territories and the stabilization of military balances, the government felt secure enough to retake some of the authorities and privileges it had given to the cronies in the beginning of the war. The government wanted to improve its financial capacities to be able to respond to the growing expectations from the public after they claimed victory over the opposition.²⁸

Despite the adverse conditions, several measures were taken to improve the state's capacity, including enhancing tax collection, most notably from large taxpayers, in addition to several decrees on industrial and agricultural policy. Attempts of formalization reached previously defunct official trade institutions like the General Foreign Trade Organization (G.F.T.O.), which was given a more prominent role in the facilitation of trade. The enforcement of these measures meant limiting the freedoms enjoyed by many intermediaries and cronies, often connected to war lords and war economy. Notable regime figures like Rami Makhlouf were challenged and forced to conform to the new roles. The re-formalization of the economy came within the wider context of reconsolidation of power in many aspects and included the unification of the various fragmented pro-government paramilitary units by integrating them into the Syrian Arab army by creating new divisions such as the fifth corps and National Defense Forces.²⁹

The health sector has deteriorated, by all primary indicators, since 2011. Mortality rates were the most notable, with significantly high numbers of direct and indirect conflict related deaths. More than 570,000 direct and 102,000 indirect deaths related to the conflict were recorded, which reflects the adverse environment for good health.³⁰ Disability is another serious outcome of the war, with more than 12.1 percent of the population suffering from difficulties in at least one of the six basic functions.³¹ Malnutrition in children has quadrupled and mental health has deteriorated as more than three quarters of refugees experienced incidence of violence before leaving their homes. In 2021, two thirds of Syrians are traumatized, and 40 percent experienced direct attacks by military forces: a psychological toll that will take long for Syrians to recover from.³²

The destruction of health facilities and deliberate targeting of medical staff complicated the public authorities' responses to communicable disease outbreaks. The prevailing insecurity coupled with the decrease in income have reduced access to health services for half the population of Syria. The various warring factions weaponized the health care system, either through the intentional targeting of health facilities, or by the denial of health services to their opponents. The responses to Covid-19 were affected by the limited number of vaccination centers left undestroyed or minimally functional. Access to medicine was also severely affected during the war with the production of locally produced medicine reduced by 54 percent from 2011 to 2016, in addition to the further reduction caused by the suspension of internationally patented medicines.³³

The reduction of city night lights in Syria by 80 percent in 2017 (compared to 2010) is an indicator of the scale of the drop in economic activities.³⁴ Almost all sectors of economy have collapsed: construction by 70 percent, internal trade by 68 percent, agriculture by 57 percent³⁵ and manufacturing declined by 77 percent from 2010 to 2015 according to IMF reports.³⁶ With the destruction or relocation to Egypt, Turkey, or Jordan, the

²⁸ For more details, please refer to the second chapter in this report.

²⁹ For more details, please refer to the second chapter in this report.

³⁰ Syrian Center for Policy Research, May 2020, "*Syria: Justice to Transcend Conflict*," Impact of Syrian Conflict Report 2016-2019.

³¹ HNAP, 2019.

³² For more details, please refer to the third chapter in this report.

³³ CBS, Statistical Abstract 2011-2017.

³⁴ Ceylan, Elif Semra and Tumen, Semih, 2018, "Measuring economic destruction in Syria from outer space," Economic Research Forum.

³⁵ Gobat and Kostial, 2016.

³⁶ Gobat and Kostial, 2016.

number of industrial entities diminished in 2018 by almost half compared to levels in 2010.³⁷ The monumental capital flight from Syria after 2010 was considerable, and it could be seen as a major factor in the depreciation of the Syrian pound in the first years from 46.8 to 391 SYP per dollar between 2011-2015.³⁸

Judging trends in manufacturing by its share of exports, manufacturing in general crumbled between 2010-2018 by 92 percent, with chemicals and extractive industries shouldering the biggest hit, with the textile and apparel industries also heavily affected.³⁹ The surprisingly relatively good performance was in the food and beverage industry, which declined by only 38 percent by 2015, and recovered rapidly after to reach 65 percent of its pre-war level in 2018.⁴⁰ The pharmaceuticals industry came second best, after food, in terms of decline, where it shrunk by 75 percent, which is above average.⁴¹ These two sectors survived since they have local inputs that could be obtained for cheap prices.⁴²

The Syrian economy is in a critical condition but not all sectors are suffering in the same way. Negative trends of deterioration in general should not blind to the potentially positive trends. Efforts to revamp institutional capacity of state institutions, reform tax collection and service delivery, and improve production in specific sectors such as food and beverages are examples of a basis of future improvement. A good understanding of the factors that led to perpetuating the negative, and building upon the positive is warranted for future reflections.

No single culprit is responsible for the current crisis

The three chapters do not attribute the woes of the Syrian economy to a single factor, but rather to multiple ones: war, public policies, and sanctions. War is the most obvious culprit of the three, being directly and indirectly responsible for the destruction of physical and social infrastructure described above in all sectors. However, public policies and sanctions have their own share depending on the time of their intervention.

The decisions by authorities governing the different control zones in Syria have a substantial impact on the current situation. Economic or non-economic decisions have serious consequences on the structure and outcomes of the economy. A plethora of examples of decisions taken by the Syrian government since 2011 exist: raising salaries, subsidizing fuel prices, freezing electricity prices, reducing subsidies,⁴³ hiring more graduates, establishing new mechanisms to aid the poor, and rescheduling loans to farmers and small and medium-sized enterprises (SMEs) are expected to affect the macroeconomic indicators like growth and unemployment.⁴⁴ Imposing or revoking import bans, changes in tariffs and tax rates, new laws for the rehabilitation of old industrial zones and the establishment of new ones are expected to shape the trade sector.⁴⁵ The Syrian government also

³⁷ Daher, Joseph, May 2019, "Syria's Manufacturing Sector: The Model of Economic Recovery in Question," Wartime and Post-Conflict in Syria Research Project Report 2019/08, Robert Schuman Centre for Advanced Studies, European University Institute.

³⁸ Edris, Magdi and Ghazal, Ahmad, April 2018, "The Velocity of Money in the Syrian Economy," Research Department, Central Bank of Syria.

³⁹ Cossé, Stéphane, August 2006, "Could the Textile Sector be a Main Driver of Non-Oil Export Growth?" Chapter V; in International Monetary Fund, *Syrian Arab Republic: Selected Issues*, IMF Country Report No. 06/295.

⁴⁰ This industry includes food manufacturing, beverage industries, and tobacco manufactures. Food manufacturing includes slaughtering, preparing, and preserving meat; manufacture of dairy products, such as butter and cheese; canning and preserving fruits and vegetables; canning, preserving, and processing of fish; manufacture of vegetable and animal oils and fats; manufacturing of grain mill products; manufacture of bakery products; sugar factories and refineries; manufacture of cocoa, chocolate, and sugar confectionary; manufacture of food products not elsewhere classified; and manufacture of prepared animal feeds (United Nations, 1968).

⁴¹ Daher, Joseph, 2019.

⁴² For more details, please refer to the fourth chapter in this report.

⁴³ Nasser, Rabie, Mehchy, Zaki, and Abu Ismail, Khalid, January 2013, "Socioeconomic Roots and Impact of the Syrian Crisis," Syrian Center for Policy Research.

⁴⁴ Rabinovich, Itamar and Valensi, Carmit, 2021, "Syrian Requiem: The Civil War and Its Aftermath," Princeton and Oxford: Princeton University Press.

⁴⁵ Syrian Center for Policy Research, 2020.

announced the “National Partnership” as a general policy guidance to the reconstruction process.⁴⁶ Housing, land and property laws were notable in the period after 2011 with the Syrian government passing around 50 laws and decrees to organize urban development plans. Of note is that the number of laws issued since 2011 is higher than the number of laws issued since independence until 2011.⁴⁷ Identical decisions by the Autonomous Administration in the northeast, the Syrian Interim Government, or the Salvation Government in Idlib are to have similar effects on the economy.

The heavy and complicated sanctions that were imposed on Syria by more than nine countries and entities also contributed to the damage and will have adverse effects on the recovery.⁴⁸ The sanctions included asset freezes, arms embargoes, and travel restrictions.⁴⁹ The Caesar Syria Civilian Protection Act, which began on 17 June 2020, will have an indirect effect through its secondary targeting nature and places non-Syrian people and entities suspected of aiding sanctioned people or entities in Syria at risk of US sanctions. This discourages Syrian government allies from engaging in any business in Syria, fearing loss of access to the US banking system.⁵⁰

The dynamic interactions between the three factors come in different orders. According to Omar S. Dahi, the public policies of the government prior to the war provided the ground that was affected by both war and later sanctions in a second order while the public policies that were adopted during the war in response to the two factors have had an effect in a third order. All three have been transforming the economic structure and sectors together. Distinguishing between the effect on destruction, and the recovery is also paramount. While war and public policies might be primarily responsible for the destruction of physical and social infrastructure, sanctions are less likely a culprit in many sectors. Sanctions, however, might have an important role along with public policies in determining the pace and scale of recovery.

War is the major contributor to destruction while public policies and sanctions share responsibility for any future recovery

Measuring the scale of human and physical destruction resulting from the war in Syria is an onerous task. However, the military activities could be considered the main driver that led to the majority of Syrians killed, injured, displaced, or emigrated since 2011. The low performance of the health sector in terms of spread of diseases, lack of access to health services, and inability to respond to pandemics is mainly due to the destruction of health facilities and lack of medical staff.⁵¹ The destruction of production facilities and infrastructure (such as roads, electricity grids, and water networks) is the major reason for low economic activities in all sectors.⁵² War heavily affected all production elements in terms of fuel, production material, spare parts, working forces, finances, and customers. War has also resulted in territorial fragmentation, primarization of production and exports, and dependence on foreign support.

War legacy will keep affect the conflicts for years to come. The current reduction of military activities in Syria does not mean a return to normal, as many sources of insecurity for both people and businesses still exist in the country. Under low levels of insecurities, the resumption of economic activities is expected to be shaped by both

⁴⁶ Daher, Joseph, October 2020, “*The Political Economy of Syria: Deepening Pre-War Orientations*,” Arab Reform Initiative.

⁴⁷ Aita, Samir, September 2020, “*Urban Recovery Framework for Post-Conflict Housing in Syria: A First Physical, Social and Economic Approach*,” Paris: Cercle des Economistes Arabes.

⁴⁸ These are: United States, the European Union, the League of Arab States, Australia, Canada, Japan, Norway, Switzerland, Turkey, United Nand the United Kingdom.

⁴⁹ Lund, Aron, 25 April 2019 “*Briefing: Just How ‘Smart’ are Sanctions on Syria?*” *The New Humanitarian*; Alice DeBarre, December 2019, “*Making Sanctions Smarter: Safeguarding Humanitarian Action*, International Peace Institute”.

⁵⁰ Aita, Samir, September 2020, “*Urban Recovery Framework for Post-Conflict Housing in Syria: A First Physical, Social and Economic Approach*,” Paris: Cercle des Economistes Arabes.

⁵¹ Nasser, second chapter.

⁵² Shatz, fourth chapter.

public policies and sanctions. War lords and security apparatuses tend to have a considerable influence on business activities and life in general. Movements of goods and workers are often hindered by check points, with hefty costs paid for passage. The unpredictability and prevalent lawlessness on roads further disrupts expansion of existing economic activities and discourages starting new ones. The spread of crime, in addition to threats to business owners are also factors to increase the overall cost of doing business in Syria for local and international investors alike. The weaponization of health through targeting of health facilities and denying healthcare access to targeted groups is a public policy choice contributing to the deterioration of the health situation.

Reforms under war and sanctions were possible. The redirection of public policies towards institutionalization and improving the state capacity in taxation and public services provision by the Syrian government in 2019 is an example of the inevitability and possibility for reforms in the current conditions. As a result of the anti-corruption campaign against intermediaries, regardless of its potential political motives and consequences, tax revenues increased significantly.⁵³ Due to the lack of data it will be difficult to assess the impact of tax collection revenue on the budget and to measure the exact improvement in services delivered. Notwithstanding, recognizing the traces of reforms and identifying the areas for significant improvements is key to a constructive assessment of the Syrian economy and its potential for recovery.

The impact of sanctions on the resumption of activities comes in different forms, primarily by complicating the energy import and inputs for production. Sanctions on the energy sector in Syria have significantly affected energy imports to the country, though war has also destroyed local production capacity, and reduced the overall demand for energy. The overcompliance of international banks reduces the chances of the import of goods to Syria using international financial channels thereby affecting health through the direct hindering of the import of equipment, medicine and raw materials.

The 2021 exchange rate of the Syrian Pound to the USD sits at around 3,400, tumbling from around 50 SYP in 2011. This dramatic depreciation took place over time and due to multiple factors. The major driver for inflation during the initial stages of the war was the massive destruction of infrastructure, economic networks, and capital flight. The three had depleted the foreign currency reserves with the drop of revenues due to the destruction of the conflict itself. The sanctions imposed on the economy in 2011 and 2012 also had a powerful contribution to the first round of currency depreciation. But as more rounds of depreciation took place from 2019-2021, it is difficult to accurately assign weight to each of the factors due to the lack of data. The exchange rate was stable at around 500 SYP to 1 USD till the end of 2019,⁵⁴ when the Lebanese economic crisis started. Estimations assume that 20-40 billion USD of Syrian businessmen's deposits are lost in Lebanese Banks.⁵⁵ This external shock to the Syrian Pound led to its further decline to around 1,000 SYP in early 2020. And with the outbreak of Covid-19, directly affecting economic activities inside Syria, especially trade movement with neighboring countries, the SYP dropped further to 1,600 in June 2020. With the war, the Lebanese economic crisis, and Covid-19 negative dynamics working in the background, the commencement of the Caesar Act in mid-2020 piled additional pressure to the Syrian currency, which dropped to 2,500 SYP to the dollar. The exact impact of sanctions on the exchange rate is inseparable from that of the war and other external shocks.

The impact of sanctions on informalization of institutions is shared with the war and the public policies, as there is evidence that Syria's economy was already dominated by cronies prior to the outbreak of war, and informalization is a typical outcome of civil wars in general. Sanctions may have helped to expand the circle of informal groups of people dominating trade, but it also helped to force changing them over time as a growing number of these individuals came under new sanctions. The Syrian government is still in charge, and in control, of the intermediaries through various methods.

⁵³ Al-Watan News, 12 December 2017 "[80% increase in tax revenues this year.](#)"

⁵⁴ CEIC Data, "[Syria Foreign Exchange Rates Jan2012-Jan2019.](#)"

⁵⁵ Center for Operational Analysis and Research (COAR), 9 November 2020, "*Assad: Blame the Businessmen*," Syria Update, Vol. 3, No. 42.

Recovery from wars in general is time consuming and relies on the assumption that a political settlement is achieved, reforms are taking place, and sanctions are absent. Multiple studies have suggested that 15-20 years will be required to restore pre-war GDP.⁵⁶ A political settlement is key for a sustainable return of refugees, initiation of an inclusive political and governance reform, and mobilization for reconstruction funding schemes. Lifting sanctions after such measures is expected to reward the positive developments and mobilize the international community in support of the process. On the other hand, some argue that lifting sanctions should come first, as it will help raise funds for reconstruction, incentivize the government to introduce reforms, and that will consequently attract refugees' return.

There are certainly political elements to the debate on the effectiveness of sanctions that are outside of the scope of this study. However, given the interconnectedness of various factors in shaping the Syrian economy structure and its outcome, it will be difficult to imagine the exact impact of lifting sanctions prior to a political settlement and governance reforms.⁵⁷ In this context, it is important to note that Syria's performance on business environment indicators has been below average before the war, and currently maintains that performance, compared to its close allies (e.g., Russia and China) and potential reconstruction contributors such as the Gulf countries. For example, Syria scored 26.0 in 2011 and 25.9 in 2021 on the government integrity index, with a global average of 45.4 points. That is far behind Russia (41.7), China (46.4), Saudi Arabia (53.2), and the UAE (66.0) in 2021.⁵⁸ Private investors from Russia and China in addition to the UAE and Saudi Arabia might find the investment environment in Syria unfavorable, even without the sanctions and residuals of war.

There is a need for ways to improve state developmental capacity and constrain coercive capacity

A subtle line of analysis in the trade institutions' paper is the different trajectories of Syrian state capacity, and the factors that weaken or strengthen it over the course of the conflict. State capacity is crucial to a sustainable peacebuilding and post-conflict recovery. He introduces two types of state capacity: the capacity 'to do' and 'to refrain from doing'. There is also another distinction: desirable developmental capacity and harmful coercive capacity, with most analysis on the Syrian state focusing on war efforts and the coercive policies. Redistributive measures and economic development are often missed, while it is at the core of the uprising motives and state-society relations. A comprehensive approach to Syria should acknowledge the government's efforts to provide basic services and maintain functioning infrastructure. In Syria's case, it is difficult to separate these developmental functions conducted by the state from brute consolidation of power by the regime.

The dilemma facing Syria is that targeting the regime is undermining the state in all its capacities, with higher effects on its developmental aspects. The deterioration in the humanitarian situation is rapid and the needs gap is increasing faster than the international community's response capacity. Supporting half of Syrians is unsustainable for the long term, especially with decreasing financial contributions of international donors. Only 26 percent of the requests of humanitarian support to Syria were met in 2021. The health crisis in Syria cannot be overcome by establishing makeshift hospitals and support of civil society efforts to fill the void left by state capacity collapse.

Given the political impasse, and the solid western position on seeing political reforms before lifting sanctions, a review of its logic might be warranted. Improving the developmental capacity and constraining the coercive capacity could be a goal in designing and assessing future policies on Syria, and any successful and sustainable

⁵⁶ Milionis, Petros, Vonyó, Tamás, 2015, "Reconstruction Dynamics: The Impact of World War II on Post-War Economic Growth," American Economic Association: 2016 Annual Conference.

⁵⁷ Sukhov, Nikolay, January 2020, "Russian Views on the Constitutional Committee and the Political Process in Syria," Discussion Paper 4, Syria Transition Challenges Project, Geneva Centre for Security Policy (GCSP).

⁵⁸ Heritage Foundation, "2021 Index of Economic Freedom," Syria.

political and peacebuilding process must acknowledge the need to address both aspects of state capacity. Consequently, international support and public policy should consider ways to constrain the predatory elements and improve rule of law and good governance.

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2. Informalization and re-formalization of trade institutions in Syria during the war (2011-2021)

Omar S. Dahi

2.1. Introduction

The establishment of warlords, cronyism and corruption are usually all byproducts of civil conflicts and may exasperate the expected degeneration of institutional capacity. This proves to be especially true when the pre-war governmental system has been proven to exhibit traits of elite capture and powerful networks of power and wealth holders. Conflict provides the ideal breeding grounds that allow the blurring of established lines between formality and informality as well as the public and the private. The trajectory of Syrian institutional development during the conflict (2011-2021) has shown adverse signs of the deformation of institutions as a continuation of a pre-war trend. Surprisingly, there were counter dynamics and elements of re-formalization of institutions.

The pressures, constraints as well as the opportunities created by the conflict, and spurred on by international sanctions, war and government policy have played a pivotal role in these paradoxical transformations. On the one hand, the aforementioned factors have provided fertile breeding grounds for an increase in informality, the capture of an even greater share of resources by conflict elites, and the inevitable decline of rule of law in addition to developmental capacity. However, and on the other hand, these factors have also led to increased formalization and institutionalization in some sectors in ways not possible prior to 2011. For example, previously morbid state agencies, such as the General Foreign Trade Organization (G.F.T.O.), has assumed unprecedented power to regulate international trade. Despite the increased predation, the conflict has also provided possibilities for top-level accountability and institutionalization of the G.F.T.O. This re-formalization or re-institutionalization could be explained as a response to declining revenues, external pressure, the rise of multiple pockets of power, and the need for the securing of basic goods and services while preserving loyalty. Institutional arrangements at times veer at times toward the public and others towards the private, with the distinction being unclear or even relevant. These changes are gradual and their subtleties are missed when observers paint with broad strokes or interpret developments in Syria through a static analytical framework.

This article seeks to explain the contradictory dynamics of institutional de-formalization and renormalization through a dynamic model that takes into account the joint impact of war, sanctions, and government policies on institutional transformation in Syria over the period 2011-2021 with a particular focus on the trade sector⁵⁹. The objective of the article is twofold; with the first being that the study is challenging the mainstream analysis on de-formalization as the only trend within countries caught in conflicts and/or under sanctions. It will attempt to exhibit that formalization of institutions can also be an effect of conflict and sanction, i.e. when rent availability drops, the government is forced to rationalize and upgrade state capacity. Secondly, it shows that no single factor is responsible for any single trend, but rather a confluence of many factors that provide divergent effects contingent on the timing and composition.

⁵⁹ There are other factors that have been both causes and effects of deteriorating state capacity, such as the international humanitarian response from multinational institutions down to NGOs. However, analysis of those factors is beyond the scope of this paper. See Hallaj, O Aziz, 2021, "Formality and Informality and the Resilience of Syrian Political Economy," Geneva Centre for Security Policy.

The longstanding and, often intentional, blurred lines between the ruling elite and state organizations have given rise to the misconception that the Syrian state institutions are an inseparable part of the Syrian regime. Regardless of their specific effect, war, government policies and sanctions are the three main factors that have been shaping the Syrian institutions during the conflict. State institutions are essential for sustainable post-war peacebuilding, and therefore, a clear distinction between them and the regime is critical. As military operations decline, sanctions remain chief amongst external factors affecting state institutions in addition to various other external factors such as the Lebanese economic crisis. The sanctioning countries' stated goals make no differentiation between the regime and state institutions. In relation to the EU, sanctions aim "to put pressure on the Syrian regime to halt its repression and negotiate a lasting political settlement of the Syrian crisis in line with UN Security Council Resolution 2254 under UN auspices,"⁶⁰ while the US sanctions aim to "reinforce the [US] President's call that Bashar al-Assad step down and to disrupt the Assad regime's ability to finance its campaign of violence against the Syrian people."⁶¹

The broader goal of this paper is to improve the understanding of state capacity and its potential contribution to post-war stabilization. There is widespread evidence that the success or failure of any political or peacebuilding process may hinge on significant improvements in Syrian state capacity.⁶² Yet, in order to bring an end to a conflict which is perpetuated by the state, attempts are often to degrading state capacity for violence. This is a dilemma to be grappled with rather than overlooked. Looking into government actions and seeing predatory behavior or authoritarian resilience is not incorrect, yet it imposes analytical blinkers to other processes taking place.

We can observe the analytical puzzle in the contradictory coverage of Syrian institutions as either hegemonic and all-powerful drivers of everything taking place in Syria or constantly on the verge of collapse. On the one hand, given the immense destruction, territorial fragmentation, and predation that has marked the conflict it is not surprising that Syria is referred to as a fragile or failed state⁶³. In 2016 one analyst even claimed that the Syrian government is no different than the militias opposing it.⁶⁴ On the other hand, despite almost a decade of war, multiple theatres of conflict on the northern, eastern and southern geographic fronts, and significant sanctions, neither the central government nor the country's central security, bureaucratic and civil service institutions have reached the state of collapse that was expected. This has led to the analysis of Syria's institutional resilience within frameworks of authoritarian upgrading.⁶⁵ Such an approach acknowledges the Syrian government's attention to questions of economic governance but largely views it as an instrument to reassert authority and national sovereignty while maintaining its networks of privilege.

Various schools of thought emphasize different aspects of what constitutes desirable state capacity. In the Syrian case, the extreme politicization implies that analysis and advocacy are often conflated. As a result, this

⁶⁰ European Union, 2020, "[Factsheet-EU Sanctions on the situation in Syria.](#)"

⁶¹ United States Department of Treasury, 2020, "[Financial Sanctions-Frequently Asked Questions](#)"; US Sanctions in the Bashar Al Assad era include Executive Order 13338 of 2004, E.O. 13399 of 2006, E.O. 13460 of 2008, in addition to the post-2011 E.O.s 13572(2011), 13573(2011), 13582(2011), 13606(2012), 13608(2012). US sanctions (13338 (2004), 13399 (2006), 13460 (2008) were geopolitical in nature rather than due to human rights abuses, relating to alleged Syrian government support for terrorism including Hezbollah and Palestinian groups, undermining the security of Iraq and so on.

⁶² On the connections between peacebuilding and state capacity see Boyce, James K., and Madalene O'Donnell, eds. 2007. "*Peace and the public purse: economic policies for postwar state building.*" Boulder, CO: Lynne Rienner Publishers; Boyce, James K. 2007, "*Public finance, aid, and post-conflict recovery*", Economics Department Working Paper Series, 42.

⁶³ Lynch, M. 2016, "*Failed states and ungoverned spaces.*" *The Annals of the American Academy of Political and Social Science*, 668(1), 24-35.

⁶⁴ Schneider, T. 2016, "*The Decay of the Syrian Regime is Much Worse Than you Think.*" *War On The Rocks*.

⁶⁵ Heydemann, S. 2018, "[Beyond fragility: Syria and the challenges of reconstruction in fierce states.](#)" *Foreign Policy at Brookings: The New Geopolitics: Middle East*; Heydemann classifies Syria as a 'fierce state' whereby its ruling elite prioritize survival above all else. Contrary to other notions, Heydemann's classification allows for significant resilience and adaptation. "governance in fierce states is managed as an expression of a zero-sum struggle in which conflict reinforces the determination of a ruling elite to defend existing institutional arrangements by force" (page 5).

analytical confusion is heightened due to competing master narratives about the behavior of the Syrian state. When the legitimacy of the competing actors is questioned, the actions of all actors tend to be de-legitimized by their rivals or interpreted through pre-defined analytical frames that do not distinguish predation from state strength and sovereignty.

Among the reasons for ambiguity in state capacity discussions is the lack of distinction between the capacity to do and the capacity to refrain from doing⁶⁶. The first notion comes from a tradition focusing on the success or failure of developmentalist states and tends to focus on the military, security, extractive (in the form of resource mobilization through taxation) and transformative capacities of the state, or the ability to create, design and implement policy. In terms of the economics of peacebuilding, there is substantial evidence that sustainable peacebuilding requires a state that can “collect and manage public resources” which implies success in revenue mobilization through taxation (internal and through tariffs), in addition to conceiving and implementing successful policies that eventually wean the state off of external dependence and aid which is likely to decline in the years after the end of conflict.⁶⁷ The ‘refrain from doing’ aspect of state capacity generally focuses on rule of law, independent judiciary, and property rights. These are all issues that although interconnected with other aspects of state capacity, do not always move in the same direction and may at times be contradictory.

In the case of Syria, which is neither a purely civil or international conflict, straightforward analysis and decoupling of the different factors is not possible, and is specifically why developing a framework for understanding the interaction of the different variables is crucial. The support of the developmental elements of the Syrian institutions versus the coercive elements could be a constructive way to avoid total collapse of order and not reward the regime elite which in turn is a difficult yet unavoidable task.

The paper will have Four sections. The first section will focus on the dynamic model of confluence effects of war, government policies, and sanctions while the second analyzes in-formalization trends before the war. A third chapter focuses on the re-formalization trends during the war and its context and concludes with the fourth on the policy implications for this model.

2.2. Institutional transformation: a dynamic framework

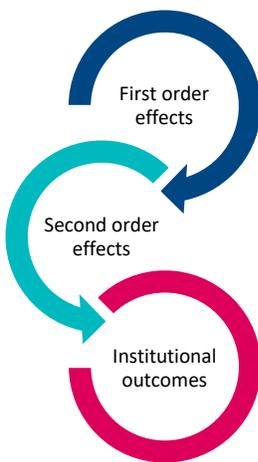
The emphasis of this chapter lies in the factors driving institutional change and how they have become endogenous over time, while simultaneously moving in unpredictable ways. As discussed in the introduction, one approach to the institutional impact of the conflict in Syria is that it has led to more informality, deterioration of the performance of state institutions and thus less state capacity, more cronyism and reliance on feudalism, and the rise of war profiteers. This story does not tell the full picture however as, alongside these points, we also see examples of increased state capacity, increased formalization, and increased institutionalization while, concurrently, the lines between the public and the private sector are indistinct and vague. It may be that ‘cronyism’ is appropriate as a catch-all-term, but the term camouflages that the state, as before the conflict, periodically attempts to recalibrate, check the power of individual businessmen and profiteers, prevent the formation of alternative independent groups outside its purview, and maintain the upper hand in the public-

⁶⁶ Schmidt, S. 2007, December, “*The Role of the State in Development in the Middle East: Lessons from Syria*,” Forum for Development Studies (Vol. 34, No. 2, pp. 257-270). Taylor & Francis Group; Cingolani, L. 2013. *The State of State Capacity: a review of concepts, evidence and measures*, United Nations University UNU-MERIT Working Paper Series on Institutions and Economic Growth: IPD WP13. See Cingolani page 37.

⁶⁷ Boyce, James K., and Madalene O'Donnell, eds. 2007, “*Peace and the public purse: economic policies for postwar statebuilding*,” Boulder, CO: Lynne Rienner.

private divide. In this case, this has happened primarily in response to the dramatic decline in revenue as well as evolving patterns of conflict, and external pressures including the sanctions.

“Sanctions” like blockades, boycotts and embargoes are a form of economic coercion and punishment that represent an aspect of external intervention into the war in Syria to be considered alongside other forms of direct external intervention that range from transfer of weapons, fighters, humanitarian aid, to direct military intervention⁶⁸. While “government policies” refer to policies pursued by the Syrian regime since the start of the conflict in managing its affairs, which include economic, political and social as well as military or security policies. While most analysis of Syrian government policies focuses on the war effort and coercive policies, redistributive measures and economic development have always been at the core of state-society relations in Syria and, hence, government policies not only include pursuit of the war effort but also the need to provide a basic level of goods, services, and functioning infrastructure that provide the maintenance of loyalty and security in areas under its control. However the oil embargo, in particular, proved a key ‘hard’ boundary that among other factors decisively shaped the remainder of the conflict.



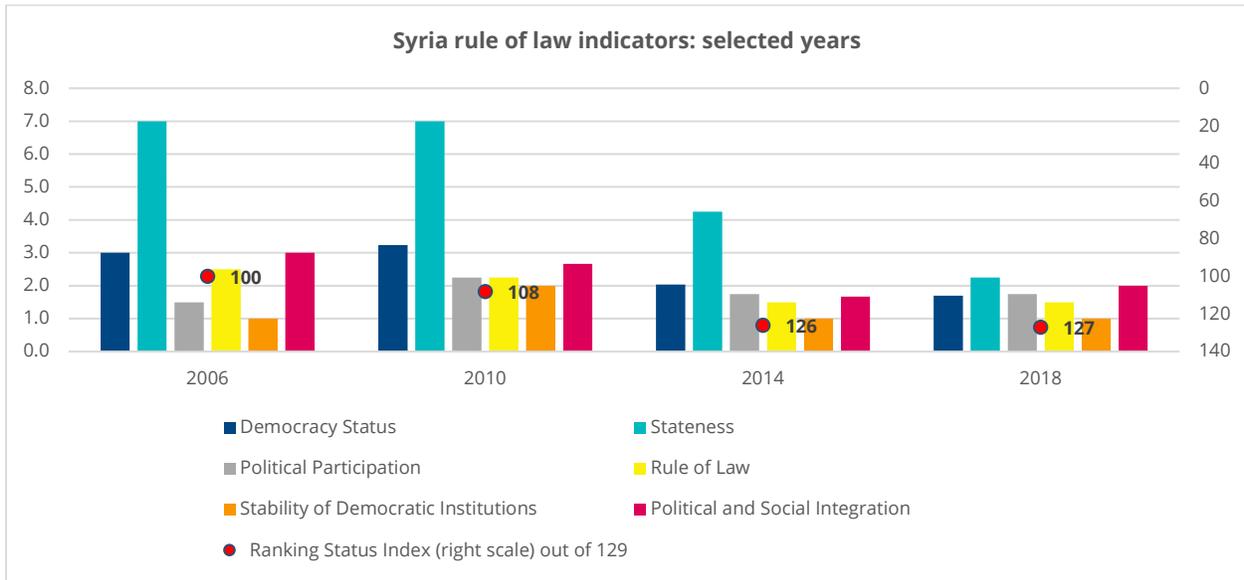
Therefore, an alternative approach to understanding the three factors would view them as co-constituting one another as part of a dynamic evolution of the conflict and to trace their impact on institutional change. In this view both government policies and sanctions are drivers of conflict in addition to the reactions to the outcomes generated by the war itself. Economic sanctions can be considered as directly intertwined with the war effort by external actors and have resulted in new outcomes reflected in institutional change. At the same time government policies, while a driver of the war itself, have also responded to its consequences in addition to that of the sanctions. Having seen its revenue sources squeezed or cut off the regime, out of necessity began to reverse course. As one of our key informants stated in an interview in 2020: *“Government policies [in the trade sector] have fluctuated over the years of the conflict. In the first five years it was haphazard and led to depletion of foreign exchange reserves and corruption in granting import licenses. However, the picture has changed in the past three years due to organization, rationalization of import policy and focusing on basic goods and inputs”*⁶⁹.

This case will be illustrated further through the example of the G.F.T.O., to be discussed later, however a key issue is that these policies were in large part shaped by the developments of the conflict itself, or what we refer to as second order effects.

⁶⁸ Galtung, J., 1967, *“On the effects of international economic sanctions: With examples from the case of Rhodesia,”* World Politics: A Quarterly Journal of International Relations, pp.378-416.; In as much as they are an attempt to force the enemy to comply with one’s demands. Alternatively, sanctions are viewed as an intermediary step between no action and full military force, i.e. as a point somewhere on the spectrum of pursuit of international political goals that range from “gentle persuasion” to warfare, or alternatively, as the last step before military force is used. See Tostensen, A. and B. Bull. 2002. Are Smart Sanctions Feasible? *World Politics* 54: 373-403; Drezner, D.W., 2011, *“Sanctions sometimes smart: targeted sanctions in theory and practice,”* International Studies Review, 13(1), pp. 96-108. Galtung (1967) defines sanctions as “actions initiated by one or more international actors (the “senders”) against one or more others (the “receivers”) with either or both of two purposes: to punish the receivers by depriving them of some value and/or to make the receivers comply with certain norms the senders deem important.”

⁶⁹ Key Informant # 2 interview.

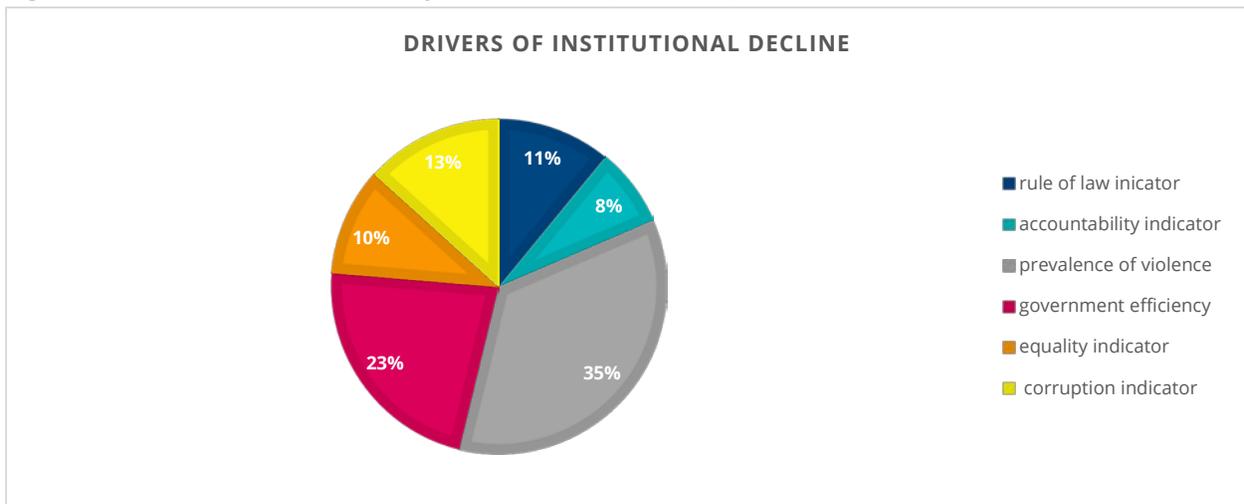
Figure 1: Rule of Law Index and indicators and Syria's ranking according to the Bertelsmann Index (2008-2018)



Source: Bertelsmann Stiftung, BTI 2019

The onset of the uprising saw significant destruction, territorial fragmentation, loss of territory and significantly increasing sanctions. As the war evolved the Syrian government undertook policies that prioritized the war effort while also allowing its military and paramilitary forces greater impunity not just in warfare but also in control of legal and illicit sources of income. While similar processes were occurring elsewhere in the country as armed groups took de facto control of various areas, and controlled borders and checkpoints. The control over checkpoints and borders within and outside the country became a source of revenue for armed groups and militias of all stripes and pro-governmental groups, on the other hand, alike. Paramilitary forces such as the National Defense Forces (NDF), and others proliferated often emanating from pro-government groups seeking to defend local territory.

Figure 2: Structure of INSI decline by its indicators (2011-2019)



Source: Population Survey 2014 and update, SCPR estimations, 2019

The net impact, in addition to loss of export revenue due to sanctions, were wreaking havoc on the economic base as a whole, and leading to the dismantling and destruction of the manufacturing industry, fragmentation of internal markets, increasing expenditure of production due to either the complete loss or increased costs of intermediate inputs. As a whole, the 'business climate' deteriorated sharply, investment spending was slashed, and a survival economy prevailed.

Table 1: War, Government Policy, Sanctions and their first and second order outcomes			
Factor & main goals	Actions to achieve goals	First order policies & outcomes	Second order policies & outcomes
<p>War</p> <ul style="list-style-type: none"> • Territorial control • Regime Change • Undermining enemy's capacity to govern • Destruction, surrender, removal of enemy 	<ul style="list-style-type: none"> • Armed warfare • Bombing enemy infrastructure and economic resources • Siege warfare • Imprisonment & torture 	<ul style="list-style-type: none"> • Loss of life & injury • Infrastructure destruction • Loss of sources of economic wealth • Territorial Fragmentation • Loss of productive capacity • Capital destruction & flight • Incapacity of main internal parties to pursue conflict independently 	<ul style="list-style-type: none"> • Control & access to economic resources (minerals, agriculture) a driver of conflict • Battles over checkpoints, key roads, trade routes • New trading routes form • New formal and informal economies • More direct involvement of regional & international allies
<p>Government Policy</p> <ul style="list-style-type: none"> • Pursuit of war effort • Provision of goods and services • Maintenance of loyalty • Maintenance of sovereignty 	<ul style="list-style-type: none"> • Shifting to military spending • Slashing investment spending • Deficit spending • Maintenance of wages, salary, and basic social services spending • Lifting some subsidies • Rewarding loyalists • Currency devaluation 	<ul style="list-style-type: none"> • Incentivizing military activities • Increased impoverishment • Predatory behavior/looting by military and paramilitary forces • Tax/revenue exemptions for allies leading to reduced government revenue • Capital flight • Increased costs of production • Relying on parallel sources of revenue/humanitarian aid 	<ul style="list-style-type: none"> • Promotion of new business elite to circumvent sanctions • Increase reliance on external allies for resources & indebtedness • Adaptation to loss of revenue through fiscal and monetary policy • Increased extractivist policies • Increased reliance on intermediaries and informal institutions for revenue • Formalization of informal relationships • New laws privileging war elite • Need to respond to loyalist public pressures regarding corruption, deteriorating living standards • Increased capacity of some public administrative units for revenue generation

<p>Sanctions</p> <ul style="list-style-type: none"> • Accountability for crimes • Political transition/ regime change • Deterrence • Undermining capacity to pursue war effort 	<ul style="list-style-type: none"> • Targeted sanctions against individuals & entities (Asad; Mamluk; Najib; Sharaa; Syriatel; Datak Telecom) • Sectoral Sanctions (EU ban on oil imports; US ban on any new investments or transactions) • Humanitarian exemptions 	<ol style="list-style-type: none"> 1. Decreased export revenue 2. Individuals and entities unable to conduct business 3. Increased costs of doing business domestically 4. Smuggling of subsidized goods to neighboring countries 5. Lack of inputs availability 6. Lack of credit lines 7. Foreign exchange bottlenecks 8. Loss of markets 9. Increase imports from Asian countries (Iran, India, China) 10. Increasing humanitarianism 11. Unbalanced investment 12. Capital flight 	<ol style="list-style-type: none"> 13. Sanctions on elite emerging conflict (Samer Foz; Muhammad Hamsho; Adel Olabi-Mayor of Damascus) 14. Sanctions on entities emerging during conflict (Damascus Cham Holding; Rawafed LLC; Ramak LLC) 15. Secondary sanctions (Caesar's Law)
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Second order effects are therefore those policies that are endogenous to the conflict itself, i.e. necessitated or driven by the previous interactions of the three policies. Table 1 presents a list of first and second order effects by each of three factors. Accommodating, and attempts to evade sanctions, drove a series of second order effects. For example, in the health and pharmaceutical sectors, despite exemptions, the sanctions had both direct and indirect implications which included a rise in shipping as well as the overall costs of imports. In addition, there has been the cancellation of the licenses of about 58 Syrian medicine manufacturers by their Western counterparts, the inability of Syria to import critical advanced laboratory and quality control equipment, the insistence of several Western companies to deliver their products to nearby countries to avoid sanctions among various other factors.⁷⁰ Government policies attempting to accommodate or evade the impact of the sanctions on government revenue led to the rise of new figures, trading partners, and reliance on regional countries for purposes of trade and credit lines.

⁷⁰ Interview Key Informant # 3

Table 2: Institutional outcomes		
Factor	2 nd Order Effects	Trade Institutional Outcomes
War	16. Loss of human life and human capital 17. Extreme destruction of economic infrastructure and resource base 18. Deterioration of business environment	19. Rise of new and informal actors and institutions to manage trade 20. Predation and extractives further leading to economic decline 21. Blurring of public and private sector
Sanctions	Revenue squeeze Revolving door of targeting of new businesspeople and entities Increased evasion	22. Necessity, sanction evasion, leading to revival of some state capacity, re-formalization, institutionalization 23. Destruction of economic base leading to increased dependency on allies
Government Policy	Free hand to cronies resulting in extreme predation & extractives Increased discontent leading to attempts at recalibration Attempts to reign in, re-integrate new and informal power centers	24. New trading partners and dependencies 25. Revival of industrial policy and import substitution 26. Rationalization of trade policy

2.3. Informalization of the trade sector prior to the conflict

Numerous studies have attempted to understand the structure of the Syrian state and the role of the army, the ruling Ba'ath Party, security services and other state institutions as well as state-society relations. All have in various ways attempted to explain the paradox of state authoritarianism and high coercive power with the relative developmental weakness of the Syrian state.⁷¹ Following Waldner (1999), Soren Schmidt analyzed shifts in the developmental state and drew on the state capacity literature distinguished between state capacity 'to do' and 'to refrain from doing.' The key takeaways from Schmidt's analysis lies in the interaction of the three variables of state capacity, rent availability, and agency (including ideology and preferences) have shaped state legitimacy and acceptance among the population and developmental outcomes⁷². Declining rent availability, however, prior to the conflict did not prompt an upgrading of state capacity but that the *"foreign-trade-oriented commercial private business sector was invited as a partner to share spoils of oil revenue"* and accelerated the drift towards deindustrialization⁷³. As we will show later, during the conflict the sharp decline in rent availability due to blockade of oil did prompt rationalization and state capacity upgrading, i.e. 'capacity to do', though not addressing the 'capacity to refrain from doing.'

⁷¹ Heydemann, S. 1999, *Authoritarianism in Syria: Institutions and Social Conflict 1946-1970*, Ithaca, NY, Cornell University Press; Waldner, D. 2018. *State building and late development*. Cornell University Press.; Haddad, B. 2012, *Syria, the Arab uprisings, and the political economy of authoritarian resilience*, The Arab Spring (pp. 211-226), Palgrave Macmillan, New York; Perthes, V. 1997, *The political economy of Syria under Assad*, Ib Tauris; Hinnebusch, R. 2011, "The Ba'ath Party in Post-Ba'athist Syria: President, Party and the Struggle for 'Reform'," Middle East Critique, 20(2), 109-125.

⁷² Schmidt, S. 2007, December, *"The Role of the State in Development in the Middle East: Lessons from Syria"*, In Forum for Development Studies (Vol. 34, No. 2, pp. 257-270).

⁷³ Schmidt, S. 2007.

Notwithstanding, comprehending the prior path is imperative to discerning continuity and change in government policies. Government policies prior to the conflict had led to structural shifts in the Syrian economy which saw both the rise and consolidation of business networks, increasing informality, and overall institutional decay. The geopolitical battles confronting the country in addition to a history of isolation, saw the constant presence and importance of the role of intermediaries between the country and the outside world. Informal business networks characterized Syria's economic landscape well before the uprising, driven by its domestic politics, state-society relations, and regional conditions. In the decades preceding the uprising, most notably since the late 1980s when vastly significant economic reform took place and business opportunities expanded, economic and business networks would bring together bureaucracy (state officials, ministries, planning committees) capital (private businesspeople; Chambers of Commerce members) and power (senior regime elite, military and the security apparatus), with the first two taking an active role in advancing network interest and the latter taking on a behind the scenes passive role guaranteeing access and protection.⁷⁴ These networks facilitated wealth accumulation in an environment characterized by low trust between the state and private sector, resulting in sub-optimal national economic outcomes.

Economic elites within these networks would come to hold significant power and influence over policy-making. In many cases, and what Haddad describes as a 'fusion', took place between the role of public officials and capitalists, whereby the *"decision-maker and the most powerful investor are often the same person (or belong to the same family)."*⁷⁵ Some of the key names before the onset of the uprising included not only the Makhloufs, but included the Tarif al-Akhras, Hamsho (Hamcho), Nizar al-As'aad, and others⁷⁶. Compared to the 1970s this allowed private sector businesspeople more access and influence over policy. Liberalization policies pursued by the Syrian government, and promoted by these networks, in part to solve growth bottlenecks for the economy, as well as to expand rent opportunities, were accompanied by major changes in Syria's policies regarding trade and financial flows.⁷⁷

Despite the proliferation of Chambers of Commerce and their memberships, the private sector community never collectively organized as an independent force, and business networks remained limited and dominated by few major actors, and resulting in the exclusion of the majority of the business sector, particularly when rent opportunities narrowed. Over the decade leading up to the March 2011 uprising the government significantly liberalized trade (e.g. Legislative Decree 61 in 2009) while ending government monopolies on imports, and extended to agricultural exports through lowering or removal of export duties. Domestically, this also meant moving towards a free market by the deregulation of prices for most commodities (through the "Competition and Anti-Monopoly Law" of 2008). Economic networks were mutually beneficial to those involved however, and within the context of lack of trust and overall domestic and international climate, generated short-term, speculative and commercial endeavors. As a result, the private gain of these networks came at the expense of economic development and growth in the wider economy.

⁷⁴ Haddad. 2012.

⁷⁵ Haddad. 2012.

⁷⁶ Haddad. 2012.

⁷⁷ For discussion of new elites see: Jihad Yazigi, 2014 "[Syria's War Economy](#)," European Council on Foreign Relations; For more information on Samir Hassan [see](#); Joseph Daher, 21 December 2017 "[Assad Regime Still Reliant on Fractions of the Sunni Bourgeoisie](#)," Syria Untold.

2.4. External trade during the conflict

2.4.1. Deepening Informalization

With the onset of Syrian conflict, and particularly beginning in late 2010, three interconnected dynamics emerged and took precedence: the fragmentation of the country into competing territories, prioritization of trade, and the rise of the role of intermediaries in the economy.

The complexity of the war in Syria is evident. In 2013 The Carter Center chronicled approximately “4390-unit formations representing between 68639 and 85150 fighters”⁷⁸ ranging in size from small groups to companies, battalions, brigades, and councils. Pro-government paramilitary groups also became widespread and fragmented until recent efforts to reintegrate them back into the regular Syrian Army. The establishment of the conflict economy in Syria was driven by an interconnected matrix of actors and factors that drove conflict through direct and indirect policy actions and also responded to the impact of those actions through policies that sought to mitigate their impact on these actors’ own interests. The evolving strategies of the various players, coupled with their multiplicity and lack of desire or willingness to seriously come to a political settlement, created and sustained the ongoing cycle of violence.

With border areas falling outside government control, the de facto powers in control set up new institutional arrangements concerning trade. The result being these areas providing a crucial source of wealth to these armed groups and powers. The decline, and subsequent loss, of contiguity within Syria was a major blow to the central government, and together with sanctions, represented a dramatic freefall in export revenues. The war itself had a direct and devastating impact on the trade sector. The sheer amount of destruction of public and private firms, shopping and commercial centers, and transport vehicles in addition to the looting of factories and commercial merchandise was immense.⁷⁹

The transformations in the trade sector directly mirror the shifting changes taking place inside Syrian territory. Given the precipitous decline in exports, Syria’s trade deficits skyrocketed in 2011. Trade indicators show that exports, as a share of GDP, decreased dramatically since the beginning of the crisis from 28 percent in 2011 to 9 percent in the year 2017, and with exports at 14.7 percent in 2016 and 12.4 percent in 2017, the economy remains in a state of severe recession.

⁷⁸ The Carter Center August 20th, 2013, “[Syria Countrywide Conflict Report](#),” # 1.

⁷⁹ Interview Key informant # 2

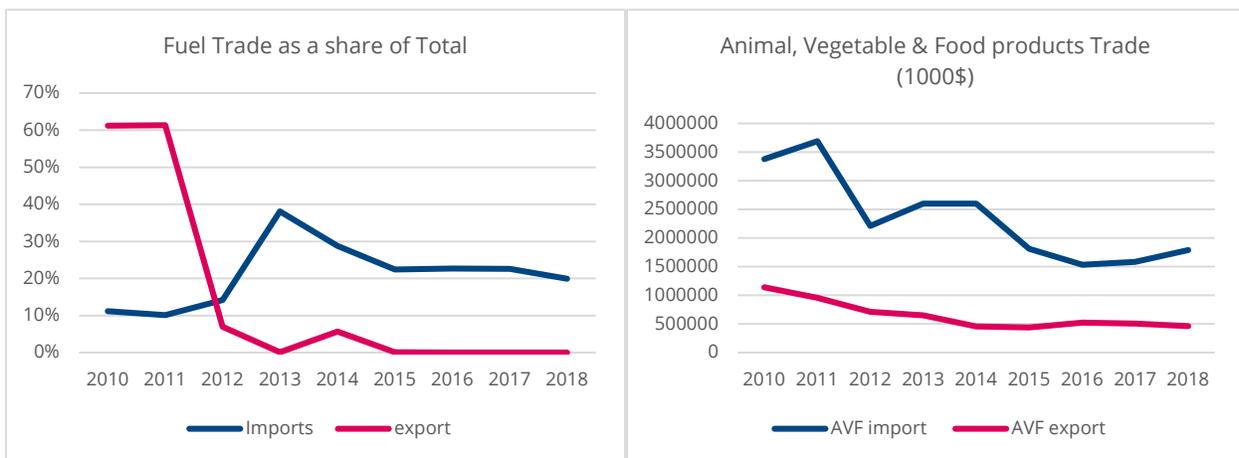
Figure 3: Exports and Imports Shares of GDP (2011-2017)



The import share of GDP has increased from 37 percent in 2016 to 39 percent in 2017. Furthermore, the imports contracted by 11 percent while in 2016 it grew by 5 percent in 2017. The trade deficit is still huge as it constituted 25.6 percent of GDP in 2015 and increased to 27.2 percent and 29.9 percent in 2016 and 2017 respectively.

Another direct outcome of the wholesale industrial destruction is trade primarization, i.e. an increase in the share of trade that is dominated by raw materials, primarily products and commodities. That this, in the case of Syria, is happening with both imports as well as exports is particularly worrying. For Syria, the blockade of Syrian oil exports, discussed in the previous section, further complicates the analysis given that crude petroleum made up almost half of the value of Syrian exports up until 2011. Therefore, it is worth looking at the actual trade volumes.

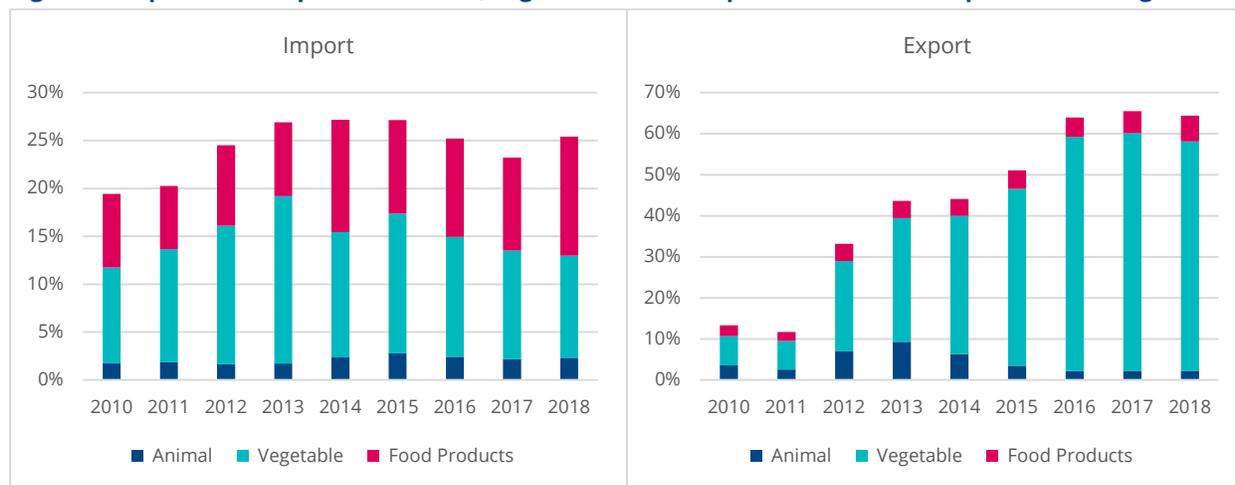
Figure 4: Imports and exports of Fuel, animal, vegetable and food products shares (2010-2018)



Source: WITS and SCPR estimation

Exports of animals, vegetables and other food products formed 64 percent of total exports in 2018, 56 percent out of which were vegetables, an exorbitant percentage given food scarcity during war time. The fuel share of export formed 60 percent in 2011 yet, as a result of the sanctions, was reduced to practically zero in 2018. Animals, vegetables and other food products formed about 25 percent of total imports in 2018, which was in line with the nature of the conflict to achieve the minimum humanitarian requirement.

Figure 5: Imports and exports of animal, vegetable and food product shares as a production stage



Source: WITS and SCPR estimation

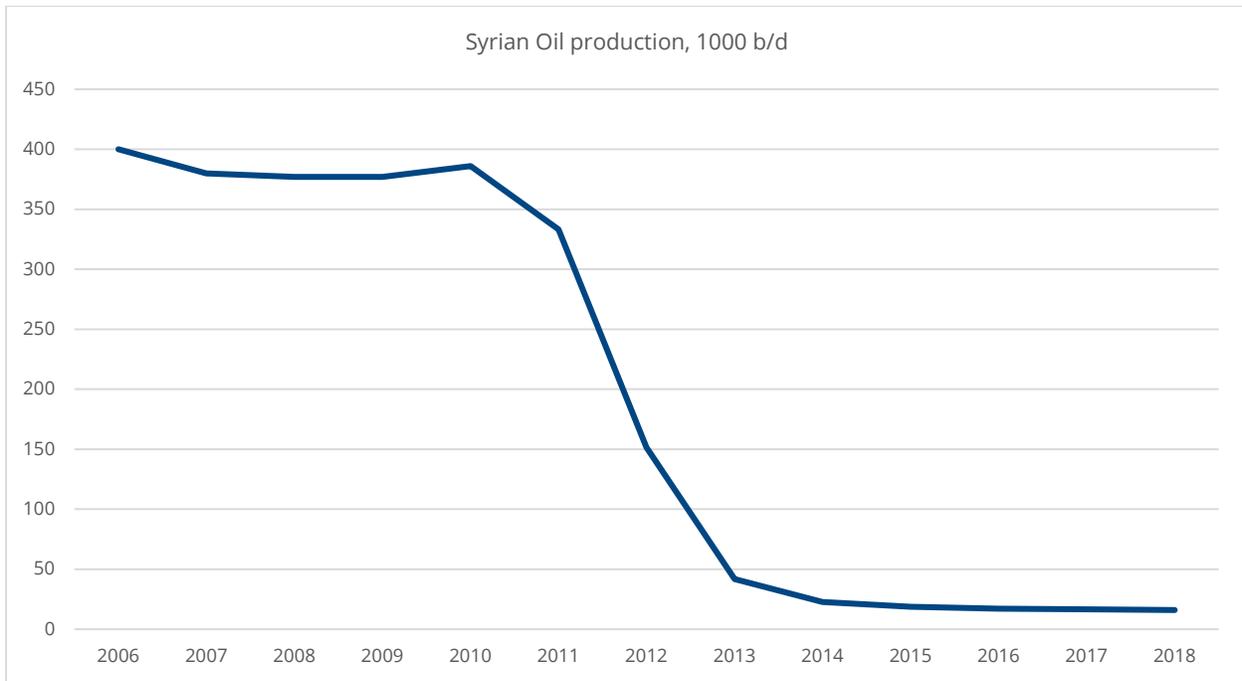
In terms of product type (raw materials, intermediate, and capital goods), the structure of export and import has not transformed significantly; however the structure of each type has changed with the majority of exports being raw materials and reached 38 percent in 2018, while most of the imports (47 percent) were intermediate goods.

Most importantly however was the decline in oil revenue, primarily as a result of the sanctions, with territorial control playing a significant role. The state all but lost its major source of export revenue after major oil fields in the East and Northeast fell outside its control. With sanctions and loss of territorial control, there was a rise in the use of intermediaries to acquire vital goods. The Autonomous Administration of North and East Syria barter crude oil with the Syrian government in return for refined diesel and other fuels from Homs and Banyas along with electricity and other services⁸⁰.

As can be seen in Figure 6, though oil production was in decline, the onset of the conflict and the subsequent unilateral coercive measures (sanctions) ushered in a freefall. This decline was a decisive constraint on the government and significantly shaped subsequent responses both in terms of revenue decline as well as being interpreted as economic warfare that accompanied military support for the opposition.

⁸⁰ Enab Baladi, June 15, 2020, "[Jazira's Oil to Homs While US Forces Look On, How SDF Exchange Petroleum with the Regime.](#)"

Figure 6: Syrian Oil Production



Source: OPEC Statistical Bulletins

The Syrian government as well as all other de facto power groups relied on intermediaries, and exchange across 'enemy' lines was frequent. For example, the Qaterji brothers rose from relative obscurity to serve as intermediaries between the Syrian government and the Islamic State (ISIS) as well as Democratic Autonomous Administration (DAA) territories, and facilitating trade in grain and oil. Alongside Qaterji, a number of prominent businessmen either increased their power, such as Mohammad Hamcho or witnessed a substantial rise, such as Samer Foz. Trade between areas of territorial control become routine notwithstanding the additional costs of bribes, checkpoint taxes and other wartime tariffs increased the final prices of goods.⁸¹

Along the same lines, trade flows were re-oriented such as that of the relationship between Aleppo, Syria and Gaziantep, Turkey. Aleppo was the leading industrial center in Syria, accounting for a quarter of Syrian GDP and containing 50 percent of total labor force and industrial exports, and 30 percent of national industrial facilities⁸². Aleppo also had extensive links with its direct surrounding areas and small cities such as Manbij, A'zaz, 'Afrin, al-Bab, Mari', Atarib, all of which were linked in mutual relations of labor, goods, capital, raw materials, and other material and immaterial exchange. After opposition armed groups gained control of border crossings in Summer 2012, and due to destruction, theft and the movement of industrialists and skilled labor to Turkey, Gaziantep's industrial production rose significantly. However, Gaziantep based traders activated similar networks as before, alongside new ones and as a result the city's trade with Syria "increased by 411 percent between 2012 and 2013."⁸³ In 2017 an estimated one in six companies in Gaziantep were Syrian and a third in Killis and Sianlurfa were also Syrian owned.⁸⁴

⁸¹ Interview Key informant # 2

⁸² Al-Dassouky. 2019.

⁸³ Al-Dassouky. 2019.

⁸⁴ Abboud, S. 2017, "The economics of war and peace in Syria: Stratification and factionalization in the business community," The Century Foundation.

The networks of exchange between northern Syrian areas and Turkey occurs regularly under the auspices of the “Syrian Provisional government” or armed groups affiliated with Turkey. In some cases these occur through semi-official ‘export’ contracts either through the STG or through Turkish appointed local councils, while in others involved outright acquisition by force.⁸⁵ Coupled with the introduction of the Turkish Lira alongside calls for complete abandonment of the Syrian Lira, these economic circuits further tied the economy of Northern Syria with Turkey⁸⁶. As an example of this, on the 22nd of June 2016, the University of Idlib announced that it will accept tuition payments in Turkish Lira instead of US Dollars.⁸⁷ A variety of goods ranging from bread to propane tanks, in addition to wages of the “Salvation” government are now routinely paid in Turkish Liras.⁸⁸ Similar networks have increased between DAA areas and Iraqi Kurdistan, though there are serious efforts exerted by DAA authorities to prevent illicit smuggling.⁸⁹

Hence this fragmentation of territory created new connections and markets and, in parallel, informal institutions for managing trade that intersected the real with the underground economy, the formal and the informal sectors.

As Abboud states “Transport of goods from Turkey to Syria involves multiple forms of agency. The process begins with wholesalers or traders who secure the supply of goods and their delivery to the Syrian-Turkish border, the next major link in the chain of Syria’s war economies. When armed groups took control of the border early in the conflict, they imposed arbitrary fees and taxes on individuals and vehicles. This source of income quickly drew other armed groups to the border areas. It was, in fact, conflict over control of these crossings that was the first spark of rebel-versus-rebel conflict.”⁹⁰

Though Abboud is describing the Turkish-Syrian border, these intersections existed throughout Syrian territory. Even in the DAA areas under the left-leaning administration, informal traders and businessmen capable of serving as intermediaries with the outside world came to occupy significant positions of power and privilege.

In parallel to the intermediaries traditional, regime connected businessmen along with a set of new cronies and warlords exercised significant influence, including on the nature and scope of legislations, with this recent extreme cronyism blurring the public-private distinction. State economic tasks were managed by private individual who either remained in or entered as public officials or elected Members of Parliament. Such a revolving door was further enabled through legislation such as the National Partnership Law No. 5 of 2016, Decree 66 of 2012, Decree 19 of 2015, Law No. 10 and 42 of 2018. Starting late 2015, the Syrian government passed a ‘frenzy’ of laws to attract investment.⁹¹ These laws were contradictory and their drivers ambiguous, nevertheless, they clearly reflected a need to either encourage, revive or prevent the further deterioration of economic activity.⁹²

⁸⁵ For recent examples see here for accusations of theft of wheat produce from Tal Abyad and Ras Al ‘Ayn Hal.Net (7al.net), January 11, 2020. Through Arrangements by Local Council, Turkey Steals 20,000 tons of Wheat in Tal Abyad; Violations Documentation Center. June 17, 2020, “Accusations Against National Army of Sequestering Syrians’ Wheat and Moving it To Turkish Territory; Pro-Turkish media claim purchases are a form of local farmer support through purchases that are “no less than market prices” Anadolu Ajansi Arabic, June 21, 2020. Syria: Turkey Supports ‘Peace Spring’ Farmers by Purchasing Their Crops; See also Syrian Observatory For Human Rights, January 10, 2020. An Example of Its Repeated Violations: Turkey Steals 20, 000 Tons of Wheat Storage in Tal Abyad. See this report for comparison by Enab Baladi on prices offered per kilogram of wheat by DAA, Syrian Government and Syrian Provisional Government: Enab Baladi, April 20, 2020, “Three-Tiered Pricing for Wheat Purchases from Syrian Farmers.”

⁸⁶ See for example Hal.Net (7al.net), January 20, 2020, “Recommendations to Stop Using Syrian Lira in Northern Syria”; see also: Enab Baladi, June 14, 2020, “New Pricing for Petroleum Products in Idlib in Turkish Lira.”

⁸⁷ Enab Baladi, June 22, 2020, “Idlib University Adopts Turkish Lira for Student Tuition Payment.”

⁸⁸ Enab Baladi, June 15, 2020, “Syrian Salvation Government Determines Price of Bread In Turkish Liras in Areas Under its Control.”

⁸⁹ Hal.Net(7al.Net) January 16, 2020, “Autonomous Authority Bans Export of Sheep and Increases Punishment for Smuggling Livestock.”

⁹⁰ Abboud. 2017. p. 99.

⁹¹ Jihad Yazaji, Jihad Yazaji website, “Syrian legislations.”

⁹² Sayigh, Y. 2016, “Clausewitz in Syria,” *Carnegie Middle East Center*. Sayigh states “These include forgiving companies in arrears on tax, VAT, and social security payments; establishing new agencies to develop small-and-medium enterprises and to promote local production and export; imposing hikes in income and property taxes; changing urban planning codes to allow replacement of informal housing in rebellious

The Governorate of Damascus, as an example, launched the Damascus Cham Holding Company to develop various zones which includes the glitzy Marota City project. Among a slew of other privileges, this private holding company would control land owned by the Governorate. The Governor of Damascus at the time, Bishr al-Sabban was also the head of Damascus Cham, as well as a private shareholder in the Marota City project.⁹³ A similar example could be found in the appointment of Mohammad Hamsho, a notorious war profiteer, key intermediary and owner of Syria Metal Industries, and trader in scrap and other metals extracted from rubble, to the short-lived Council for Metals and Steel which was founded in 2015 but scrapped in August 2016.

As sanctions take an ever increasing toll, there was another revolving door of new faces and intermediaries and, as Abboud states, *“In 2012, every single member of Cham Holding’s board was under US sanctions, so they resigned and were replaced by an entirely new crop of people outside of the sanctions regime.”*⁹⁴ In response, new lists of sanctions were released with names of newly rising figures, leading finally to the Caesar’s Act, which attempts to short circuit any attempts at bypassing the sanctions through punishment of third parties.

2.5. Re-formalization: signs of increased state capacity

The decline and deterioration of living standards over the years of conflict led to, within government controlled areas, increased public resentment of corruption, high prices, shortage of goods, and resentment of the war profiteers and elite. In a new precedent, pro-government newspapers, online and in print, in addition to social media, routinely criticize previously untouchable entities and individuals.

In part due to the public pressure and severe overall deterioration, along with the precipitous fall of large numbers of Syrians into poverty, the government responded in ways that imply state capacity upgrading ‘capacity to do’. This took place through agricultural and industrial policies and efforts at enhanced tax collection. In regards to the trading sector, the Prime Minister, the Ministry of Economy and Foreign Trade, the Ministry of Internal Trade and the Ministry of Transport, often took the lead in this response.⁹⁵ To counter the increased costs of production, Decree 172 (2017) lowered tariffs in primary and intermediate inputs in production by 50 percent.⁹⁶

The anti-corruption activities pursuing previously ‘untouchable elites’, like Ghraoui, Ghreiwati, and Al-Akhras and, more recently and significantly, the highly visible spat with Rami Makhlouf, poses multiple interpretations. An important factor has been a response to declining revenues in the face of rampant corruption coupled with attempts at independent power base creation, both of which elements of the state attempted to control.

One aspect of this reassessment was to increase tax revenue, particularly starting around 2016 and 2017 onwards, both in terms of direct and indirect taxes as well as customs revenues. Actions included a series of measures such as crackdowns on exemptions and non-compliance, targeting of ‘large taxpayers’, alongside encouraging measures which waived penalty fees. In 2017, according to the head of the Damascus Finance

neighborhoods with high-value real estate projects; legislating for public-private partnerships to offer businessmen a major stake in government-funded projects and equity in state-owned land; and creating an “iron and steel council” in anticipation of the construction boom.” As we discuss in this paper, these laws emanate from different drivers and result in differing outcomes at the institutional level.

⁹³ Al-Lababidi, Mahmoud, 2019 “Damascus Businessmen: The Phantoms of Marota City,” European University Institute, Robert Schuman Centre for Advanced Studies.

⁹⁴ Abboud, Samer. 2019, “From the Social Market Economy to the National Partnership,” Blog, London School of Economics.

⁹⁵ Interview Key Informant # 2

⁹⁶ Syrian Parliament, “Legislative Decree No. 172 of 2017.”

Department this resulted in a claimed increase of tax revenue of 80 percent from 2016 in Damascus Governorate⁹⁷. Customs revenue for the country as a whole increased about 43 percent that same year from 2016.⁹⁸

The re-formalization has taken other forms, for example the integration of paramilitary groups into the national army (e.g. the Fifth Corps). In terms of economic institutions, we have seen increased clamp down on some prominent business people and eventually reaching Rami Makhlouf, a previously unthinkable action. In 2019 it involved freezing the assets of Akram Hourieh, Ibrahim Sheikh Dib, the very prominent Tarif Al-Akhras, in addition to Samer Al-Dibs, Issam Anbouba, Mohammad Burhan Al-Bardan, Mohammad Ammar Al-Bardan and Mohammad Mufleh Al-Jandali.⁹⁹ This emerged as part of the so called "Private Sector Initiative to Support the Syrian Pound," and was an attempt to encourage or compel business people to deposit foreign exchange in the Central Bank later to be sold in the market¹⁰⁰. Increasingly it has taken the form of blatant extortion of businessmen.

The immense destruction caused by the war, the colossal impact of the sanctions, and the decline in living standards has seen more calls for self-sufficiency, and calls to increase the power, reach and efficiency of the public sector as well as attempts to revive import substitution, at least for a range of domestically viable products, alongside over SYP 3.9 billion spent on support for exports.¹⁰¹

While the war has seen deterioration of Syrian government state capacity at various levels, the revival of the General Foreign Trade Organization (G.F.T.O.) provides an important counterexample of how administrative and regulatory capacity may increase during conflict driven by the unfolding dynamics of war and sanctions.

The G.F.T.O. was established in 2003 as part of a consolidation of several other 1960-era public sector organizations. At the time there was an attempt to rationalize, and increase, the overall efficiency of the public sector. These foreign trade organizations dealt in pharmaceuticals, foodstuffs, metals, chemicals, heavy manufactures, textiles, and a wide variety of agricultural inputs and equipment.¹⁰² Nonetheless, by 2011, the aforementioned trade liberalization and proliferation of private sector trading outside official channels has seen the G.F.T.O. become somewhat moribund, which saw it surpassed by the private sector as well as other public sector companies conducting international trade independently.

Since then the reach and scope of G.F.T.O. activities have grown spurred by an emphasis on securing basic goods and services as well as serving as the main international trading arm of the Syrian public sector. Its goals range from price competition to implicit industrial policy prompted by a mandate of the Ministry of Economy and Trade for increased import substitution. In regards to exports, it is tasked with serving to facilitate export of cotton lint, surplus grains, cement, crafts and artisan products, porcelain and other simple manufactures.¹⁰³

⁹⁷ Al-Watan Newspaper, 17 December 2017 "Eid: 80% Increase in Tax Revenue this Year."

⁹⁸ Syria Report, 09 January 2018, "Tax Revenues Rise As Economic Activity Improves."

⁹⁹ Syria Report, 9 January 2019, "More Pressure on Business Community: Central Bank Freezes Bank Accounts of Prominent Investors."

¹⁰⁰ Syria Report, 02 October 2019, "Attempts to Extract Dollars from Local Investors Fail for Now."

¹⁰¹ Interview Key Informant # 2; In addition, KI2 states that over 67 imported products have been studied as potentially viable for domestic production; for statements on support for domestic manufacturing see also Syrian Arab Republic Presidency of the Council of Ministers; March 7, 2020. Economic Commission of Prime Ministry; and Syrian Prime Ministry.

¹⁰² The six are the General Foreign Trade Organization (GFTO) for Chemicals & Foodstuffs (GEZA), the GFTO for Metals and Building material (MAADEN), the GFTO for Machinery and Equipment (SAYARAT), the GFTO for Textile Industries NASIJ, the General Organization for pharmaceutical trade (SAYDALAYA) and the General Organization for Trade & Distribution (GOTA)

¹⁰³ Al-Iqtisadi, 28 July, 2019 "To Expand Exports, SYP 50 Billion for Syria Trading."

Overall, it has been empowered to play a sweeping role, importantly drawing on expertise and personnel cultivated in the 'prior era', before significant liberalization reduced the role of the state.¹⁰⁴

In 2018, the Prime Ministry authorized the G.F.T.O. to resume importation of heavy machinery as well as commercial vehicles and cars¹⁰⁵. In 2019, the Prime Ministry, then under Prime Minister Imad Khamis, authorized a SYP 50 billion loan to the G.F.T.O. to enable its expansion of operations and a general directive for widespread interventions into the market. The morbidity of the organization was evident in the fact that between 2003 and 2011 it did not hire a single new employee yet 1400 employees being recruited during the crisis. The Prime Ministry also authorized the implementation of a system of wage incentives to attract and retain high-skilled workers and technocrats, including doctors and engineers, who can oversee quality control in line with the expanded purview of the organization¹⁰⁶. According to its Director Shadi Jawhara, the G.F.T.O.'s mandate is profit, social welfare, and price control in a return to its past (before the time period preceding 2011 when its mandate was narrowed considerably) and using its international connections. In theory, at least, social welfare can include expanding employment through secondary and tertiary markets and linkages. This justification was given by Jawhara for repeated auctioned sales of used cars to revive linkages for downstream secondary activities (repair, paint, etc.).¹⁰⁷

The war's destruction has seen an increase in the visibility of public sector institutions providing basic goods and as such, the G.F.T.O. coordinates with the Syrian Establishment for Trade, another public sector institution that emerged during the conflict. The Syrian Establishment for Trade (المؤسسة السورية للتجارة) was created in 2017 as a merger of three establishments dealing with securing foodstuffs and basic goods, including textiles. As noted by OECD, state owned supermarkets gained in popularity due to lower prices after the onset of the conflict.¹⁰⁸ However, this was not merely a spontaneous process but driven by deliberate policy to expand the reach and scope of public sector activities. In fact, accommodation and response to the sanctions is an implicit mandate of the organization, as its director states "*who remembers the 1980s and who participated in that era recalls how Syria coped*" in response to another era of severe pressure on the Syrian government.¹⁰⁹ The throwback to the 1980s has become a common statement among public officials, and in this case specifically, drawing from the 'tacit knowledge' of previous public sector experiences is being operationalized.

The director of the G.F.T.O. claims that the success of the organization allowed it to raise its pre-tax profits from SYP 3 billion in 2017 (equal to its entire profits from 2003 to 2011) to SYP 8 billion in 2018 after dipping in the early years post-2011 and averaging SYP 500 million annually. G.F.T.O. activities in recent years have been wide ranging, often in explicit coordination with the Syrian Establishment for Trade, in attempting to use its significant purchasing power to try and decrease purchase price, as opposed to individual price hiking traders in the market. These include exclusive rights to import pharmaceuticals and blood products, in addition to imports of agricultural inputs, fertilizers, pesticides, phosphates, veterinary vaccines, chemicals, car tires and batteries and paper products. The close collaboration with the Syrian Establishment for Trade provides the G.F.T.O. considerable scope and leeway to intervene in merchandise trade and domestic markets.

The crippling economic conditions alongside increasing interference of security-business elites may not allow such capacity to be sustained or the ambitious scope to be realized. Nevertheless, together with the rise of

¹⁰⁴ In several interviews, its director Shadi Jawhara emphasizes the G.F.T.O.'s long-standing expertise and international relations cultivated when Syria was more autarkic and subjected to sanctions. This implies retention of public sector workers with long experience in the field. See this interview as an example.

¹⁰⁵ B2B-SY.com, November 22, 2017, "Approval of Mechanism to Purchase New Cars and Government Vehicles"; Industry News Syria, no date, "Allowing Sale of 2100 Cars in the Free Zone in Adra."

¹⁰⁶ SANA July 27, 2019. During Prime Ministerial Meeting: Approval of Widening Import and Export Purview of GFTO; see also AlMashhad TV interview with G.F.T.O. director Shadi Jawhara.

¹⁰⁷ See interview on this with Syria TV on 11 February 2019 .

¹⁰⁸ OECD 2013. State Owned Enterprises in the Middle East and North Africa: Engines of Development and Competitiveness? OECD Publishing.

¹⁰⁹ Syria TV interview on 3 July 2019, minute 52.

the Syrian Establishment of Trade, the case of the G.F.T.O. indicates attempted increases at public sector capacity as a result of second-order outcomes due to the conflict.

2.6. Policy implications

As debated in the analysis of state capacity, we can think of a dual face of the state's ability 'to do', i.e. its capacity to extract revenue, conceive, design and implement rational economic policy, and on the other hand the state's capacity to 'refrain from doing' which involves good governance, rule of law and independent judiciary.

The paper, and in relation to the case of Syria, has shown deterioration in both notions as a result of the coupled effects of the impact of war, government policy and sanctions. Though the focus was on sanctions, humanitarian assistance has also played a significant role as it created parallel fiscal processes. There were indications of 'positive' policy attempts in upgrading state capacity that include attempts at improving taxation mechanisms, industrial policy including import substitution, among others. However, all these efforts have taken a back seat in the face of multiple theaters of conflict, catastrophic decline in revenue, and governmental policies aimed solely at political survival and, therefore, were overwhelmed with the counter-processes of informality and predation.

As the armed conflict winds down the lessons drawn from the analysis in this paper suggests that several aspects of Syria's institutional development in the past decade do not lend themselves to blanket generalizations. Predatory behavior and networks of privilege have been unleashed both as part of an evolving war strategy. Government policies placing survival and military victory above all has had catastrophic consequences on all aspects of Syrian society, while at a micro institutional level it exacerbated pre-conflict tendencies of cronyism and neoliberal accumulation while human development in Syria was in absolute freefall. Policies were also counterproductive as they shifted public expenditures to military destruction, rather than potentially productive investment, at a time when the state was also being starved of external funds. The government, however, has also been able to react to conflict induced downturns through significant attempts at institutional upgrading, particularly as they anticipate a drawn-out economic battle.

By 2021, Syria will have been under some form of economic sanctions, of increasing levels of severity, for almost 42 years. As the paper suggests, the sanctions have had unexpected outcomes with the anticipated expectation of a grave negative impact on Syrian society through depriving the Syrian state of revenue, but have clearly not affected its capacity to pursue warfare, adapt, and even recapture most of Syrian territory. In that sense, the sanctions have exacerbated the conflict rather than mitigated it, since they signaled and initiated yet another form of warfare against Syria. Secondly, the sanctions have pushed the Syrian government closer to its allies, and in terms of the geography of its trade, closer to the East. Third, the extreme revenue impact of the sanctions has seen the government adapt in unexpected ways, drawing on its deep experience with sanctions and relative autarky, and even pursue some upgrading of state capacity and primitive import substitution.

Moving forward, there has to be a recognition of the various dimensions of state capacity in the international response. Continuing to target all aspects of state capacity in the name of confronting 'regime' behavior will likely continue the negative trends discussed in this paper and that have become widely known. A more positive response will explicitly differentiate between the developmental and the coercive responses. Although there are no easy ways to confront this, the starting point is to reframe the debate.

This is an absolute necessity as any political or peacebuilding process will likely not hold, particularly if it is imagined as elite bargains. A state incapable of mobilizing revenue and implementing economic policies will be

permanently weak and fragile, which in turn will translate into deep economic precarity as well as political and military insecurity.

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3. Syrian Conflict and Health Capabilities

Rabie Nasser and Amr Dukmak

3.1. Introduction

The aim of this paper is to provide an in-depth analysis of the relating dynamics of the Syrian conflict (Box 1) and the public health of the Syrian population. By using a hybrid framework based on capabilities and political economy approaches it endeavors to distinguish between three examples of overlapping policies and their impact on general health of the population. The first policies and interventions we examine are related to direct armed conflict and are, primarily, designed to fuel, sustain and enable the continuation of the conflict. The second are the administrative policies that are indirectly connected to the conflict yet attempt to sustain basic and core services. Lastly, the third are the sanctions and their direct relation and impact on human development. The paper delves into the details of these policies and their direct impact on health as pertaining to the perspectives of rights, equity and justice.

The conflict in Syria critically and literally affected general population health as mortality rates surged from 4.4 per thousand in 2010 to 10.9 per thousand in 2014 while witnessing a slight decline to 7.0 per thousand in 2019; this was associated with the tremendous number of injuries and disabilities inflicted as direct result of the armed conflict. The morbidity in terms of communicable and non-communicable diseases, such as poliovirus, measles, influenza-like illness, acute diarrhea, typhoid, leishmaniasis, disability, and trauma also witnessed a catastrophic increase.¹¹⁰

The uncompromising armed conflict deeply fragmented Syria between several local, regional and international actors, as it became apparent that none of the key players could gain control of the whole country. The result of this fragmentation was witnessed in the creation of distorted government institutions that became highly dependent on violence. These crippled institutions adversely affected the overall health system; including hampering access to services and medications, perpetuating pervasive discrimination, weakening healthcare capacity, causing the destruction of health infrastructure including the targeting of hospitals and Health Care Workers (HCWs) and triggering the deterioration of the pharmaceutical industry.¹¹¹

COVID-19 emerged as new and devastating factor that damaged public health directly as confirmed cases and related deaths increased substantially initiating a relentless deterioration of the socioeconomic situation for Syrians across the country.

This paper summarizes the disastrous health situation of Syria and identifies the key actors, and the policies that affected the health capabilities of the country, within an understanding of social determinants to health within the context of the conflict. Additionally, it provides recommendations to counter the conflict dynamics and mitigate the negative impact on public health.

The uncompromising and catastrophic conflict in Syria reflects a critical failure of international, regional, national, and local mechanisms to provide protection to civilians and non-players as millions of Syrians have been killed, injured, kidnapped, tortured, displaced, and deprived of even the most basic of needs. People's human

¹¹⁰ SCPR, 2020

¹¹¹ SCPR, 2020

rights, capabilities and options have been ignored and even trampled on during the conflict and led to the distortion of institutions, social relations, the economy and the environment. The conflict also has had dangerous repercussions on the region, specifically, and globally, generally, by the aggravation of transnational conflict economies, identity politics, extremism, oppression, unaccountable political powers, normalization of grave human rights violations and a divided security council.

Box 1: Brief Context of the Conflict in Syria

The conflict in Syria has multidimensional socioeconomic, political, environmental, and geopolitical roots, however the core root can be labeled as “institutional suffocation” as political oppression was the main factor. This suffocation led to abuse by public authorities, prevented power sharing, marginalized the vast majority of Syrians and divided the public with the hegemony of military and economic elite.

The social movement in 2011 called the “Arab Spring” demanded freedom and social justice and represented an accumulated political and developmental grievances that the ruling authorities failed to address or mitigate. The authorities’ decision to suppress the movement using violence, triggered a vicious cycle of armed conflict which created new and unrepresented levels of injustice, violations, and deprivations.

Various global and regional powers played a major role in the conflict leading to the internationalization of the strife and leading directly to the expansion and availability of resources and means available to fuel the battle with the brutality and intensity of the conflict resulting in a failed state where political power has been divided between state and non-state actors. Public institutions and resources are reallocated to destructive war policies and activities while the social fabric has been degraded based on identities, political affiliations, and economic interests. The human and economic resources have been all but destroyed while, concurrently, enormous humanitarian efforts and interventions have been initiated to support Syria which has become almost totally dependent on international aid.

3.2. Methodology

In this paper the capability approach within a political economy framework is used to highlight the effects of armed conflict, public policies, and sanctions on human capabilities and functions. Public health has been chosen as a case study to illustrate the impact of diverging policies on health outcomes and systems; in addition to the role of different actors in destroying the population health.

Many academic institutions and international agencies value the human capital approach which concentrates on the investment in health, education and living conditions to maximize economic returns including growth and productivity.¹¹² However, this approach has multiple shortcomings:

- Instrumentalization of human capital as a means to achieve a more competitive economy
- Neglects health, education, and living conditions as human rights regardless of its economic return
- Minimal emphasis on the equity aspect
- Lacks the understanding of health, education and living conditions as part of building people’s capabilities as their freedom to do or to be what they consider worthwhile.¹¹³

Therefore, and to overcome these frailties, this research will rely on the capabilities approach.

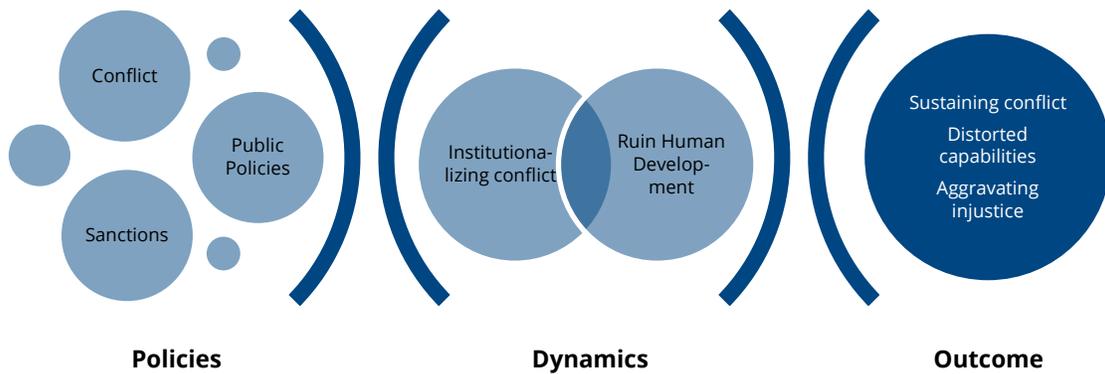
¹¹² Justino 2011

¹¹³ Sen, 1997

Enhancing people’s capabilities and functions is crucial in achieving development in its broadest sense, that is expanding people’s choices, and ensuring justice and sustainability. According to Amartya Sen, the capability approach expands this concept by understanding the goal as freedom and what people consider as worthwhile, in addition to the role of capabilities in social change. It also enhances social capital and active engagement in developing institutions,¹¹⁴ and increases the scope of basic needs to include political freedom, human rights, self-respect, and participation .¹¹⁵

In association with the capability approach, this paper uses the political economy method to deepen the understanding of power relations in conflicts through analyzing the context of war, mapping key actors, analyzing policies and interventions and assessing the impact of different factors on capabilities. It integrates the political, social and economic spheres during the time of war to diagnose the complex dynamics of the conflict.

Figure 7: Policies, dynamics and outcome of conflict



Source: SCPR, 2021.

The paper focuses on one aspect of human development, public health, as a case study that explains the impact of conflict and the potential relations between war and health. The same framework can be used in future research to assess the relations between conflict and various other sectors such as education, living conditions, social capital, displacement, and participation.

This study has reviewed relevant literature and uses recent figures and analysis from the Syrian Center for Policy Research and Development Policy Dialogue. In addition to the available sources of evidence as secondary sources, it also conducted 12 semi-structured interviews with experts to diagnose the impact of the conflict on health.

¹¹⁴ SCPR, 2017

¹¹⁵ Alkire, Sabine, no date, [“The Capabilities Approach and Human Development,”](#) Oxford Poverty and Human Development Initiative (OPHI), presentation.

3.3. The Syrian Health Sector prior to the Conflict

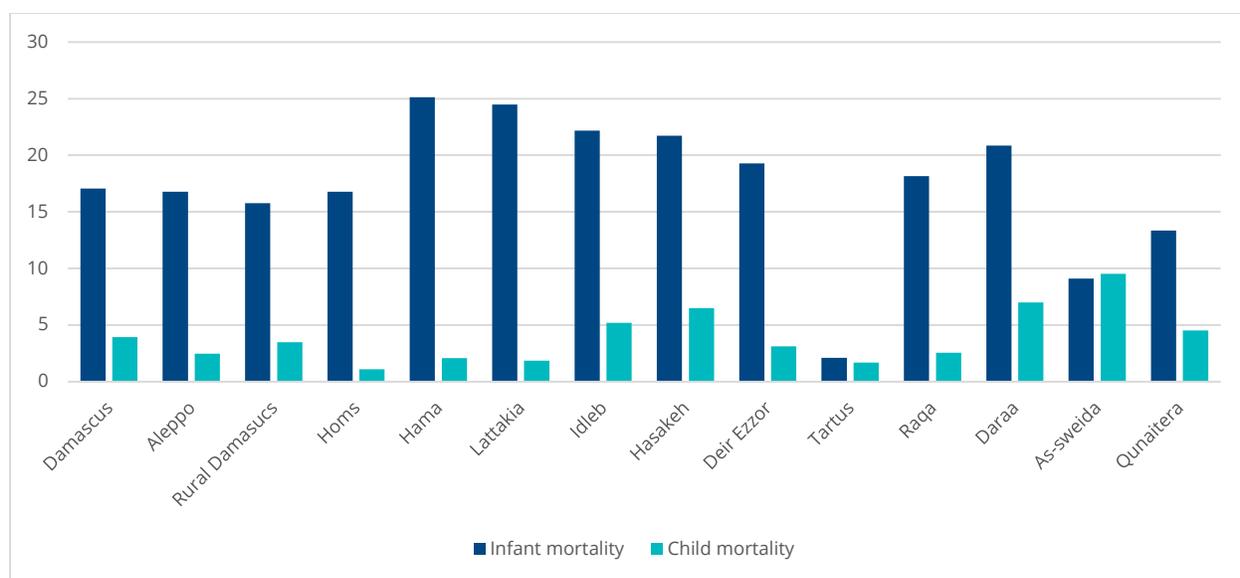
The health sector is a pillar of every political, social, and economic system that governs a country and possesses two major interlinked components, the health system and the health outcome or population health. A healthy and productively able population, in addition to an efficient, just, and accountable health system are vital goals of the sustainable development paradigm and the cornerstone to empowering the population's capabilities and functions. In addition to external factors such as the geopolitical situation, the health system and its results are outputs of key determinants which include power structure, the political system, social relations, norms, economic performance, environmental conditions, demographics and living conditions.

Prior to the conflict in Syria, the health sector witnessed several developmental stages, the first of which transpired in the 1960s and early 1970s and was marked by a horizontal expansion in infrastructure, services and personnel, particularly in the public sector. This juncture ended in the late 1970s when the country witnessed a drastic escalation of internal and external conflicts that led to a severe distortion within the institutional performance that continued during the 1980s. These conflicts, particularly the internal, and the dominance of military and security-based governance led to the second stage which produced a reversed socioeconomic transformation in Syria. The political power's use of excessive violence and gradual withdrawal from providing adequate health services and led directly to the expansion of the private health sector in order to fill the gaps in providing health services and participate as a producer in the pharmaceutical industry. The quality of services dropped substantially and governance of the sector was severely damaged.

Beginning in the early 1990s, the third phase was ushered in by the dissolution of the Soviet Union and witnessed radical change during which the political gradually shifted towards neoliberal market-oriented policies that were directly associated with severe inequality and gave rise to new alliances between the military/security apparatus and the private elite. The allocated resources dropped substantially and the cost perilously accumulated at the expense of the ordinary citizen. This economic "reform" was associated with the continuation and survival of the authoritarian political regime. The neoliberal policies expanded in the first decade of the new millennium, and the public sector declined in relation to the health sector while the cost of health services increased.¹¹⁶ Several external donors, particularly the EU, supported the health sector "reform" which aimed at changing the role of the public sector towards regulation, and the gradual implementation of the principle of cost recovery, in addition to replacing free services with an insurance system. The opening of, deregulation, and privatization of the health system expanded the role of external and internal private elites in shaping public policy and increasing inequalities between regions, population groups, and classes. Figure 8 shows the extensive disparity between Syrian governorates in relation to infant and child (1-5 years old) mortality rates in 2009.

Figure 8: Infant and Child Mortality Rates in 2009 across Syrian governorates

¹¹⁶ Sen, 2012



Source: Central Bureau of Statistics of Syria: "Health Household Survey- Papfam", 2009.

The marginalization of a majority of Syrians, in addition to the absence of political participation, blocked and prevented any reform to public health policies. Additionally, the corrupt and inefficient institutions were detrimental to the health system's performance which directly reflected upon the general public health. The severe decline in oil production during the new millennium negatively impacted public revenue, structure of trade, and available rent for the elite leading to a dire drop in public investments and services and a reduction of subsidies for basic commodities including oil derivatives and basic food items. These socioeconomic "reform" policies radically increased the cost of living, created limited job opportunities, expanded the informal labor market and reduced the labor force participation rate for men and women.¹¹⁷ Therefore, the determinants of a flailing health system had led to a rapidly deteriorating overall system well before the start of the Syrian conflict.

General health indicators in the first decade of the millennium reflect the severity of the health sector deterioration. The public expenditure on health dropped from 2 percent of GDP in 2000 to 1.5 percent in 2010, while the private expenditure on health plummeted dramatically from almost 3 percent of GDP to 1.7 percent between 2000 and 2010 respectively.¹¹⁸ Exasperating the dilemma, medical care was primarily being addressed by the private sector, with the extensive public health infrastructure, including equipment and subsidies, providing only 18% of public medical services.¹¹⁹

Additional health outcome indicators reflect the inefficiency of the health system, such as high rates of chronic diseases, which increased from 7.9 percent in 2001 to 10.3 percent in 2009, and the mortality of children under the age of 5 increasing from 20.2 children per thousand to 21.4 per thousand in 2001 and 2009 respectively.¹²⁰ Compounding the issue, the crude mortality rate increased from 3.8 per thousand in 2000 to 4.4 per thousand in 2010. The increase of the mortality rate indicates the status of inequality and ineffectiveness of the health system and the public health policies in Syria prior to the conflict.¹²¹

¹¹⁷ SCPR, 2016

¹¹⁸ WDI, 2020

¹¹⁹ CBS, Health Expenditure Survey 2010

¹²⁰ Family Health Survey 2001 and 2009

¹²¹ SCPR, 2016

3.4. Conflict and Health

Human capabilities were squandered during the armed conflict in Syria as the priorities of public policies and interventions were diverted towards fueling and sustaining the violence and military battles and/or mitigating the impact of the war on allied institutions and communities. The conflict led to a radical reformation of the roles of the subjugating political actors, each of whom adopted conflict-centered policies that supported their priorities to “achieve” victory. Nevertheless, humanitarian and/or pro-peace actors expanded their roles to mitigate the impact of the conflict and facilitate reconciliations or peace building initiatives in addition to their developmental contributions to plant new foundations leading to sustainable development in the future. However due to the absolute domination of the controlling powers over military, economic and institutional activities, those pro-peace actors lacked the ability and capacity to mitigate the effects of the war, let alone stop it. The shrinking space available to civil societies, humanitarian and development actors forced them to adapt their strategies and conform to the rules of the oppressors.

The conflict led to a substantial and direct deterioration of human liberties including some of the most basic human rights such as the right to life, dignity, equity, security, protection, work, decent living conditions, health and education among others. The conflict prevented people from being or doing what they value and, more dangerously, it might force them to alienate themselves from their public and private interests leading them to the identification with the oppressors or war lords.

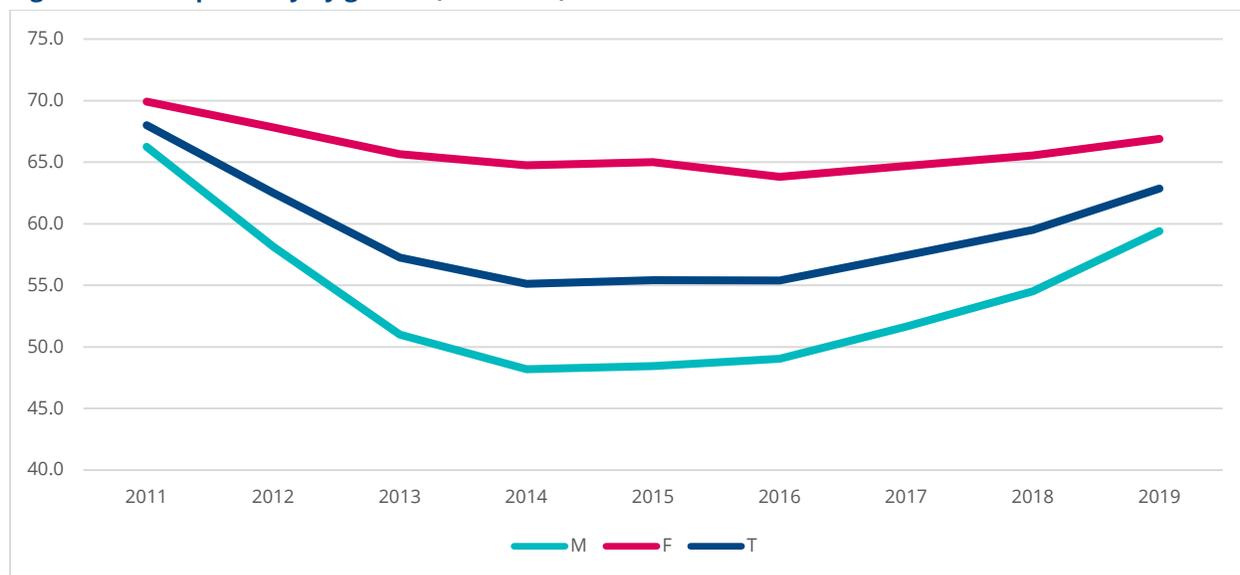
3.4.1. Health Outcome

The sheer violence unleashed during wartime has had a profound and immediate impact on the very fabric of life in Syria. This section investigates the destruction of Syria’s health system and the enormous health burden caused as a direct result of the conflict while providing key health status indicators during the conflict including mortality rates, life expectancy, disability, malnutrition, communicable and non-communicable diseases. It attempts to convey the complete collapse of the public health sector that was accompanied with grievances, violations and inequalities.

Mortality rates, the most catastrophic impact of the conflict, proliferated with crude death rate rose from 4.4 per thousand in 2010 to 10.9 per thousand in 2014, following which it witnessed a gradual decline to 7 per thousand in 2019 as hostilities abated. Although the period between 2016 and 2019 witnessed a decline of conflict-related deaths, the projected conflict-related deaths up until 2019 are approximately 570,000 deaths, while the projected indirect conflict-related deaths are approximately 102,000 and are associated with food insecurity, lack of health services and poor living conditions in addition to various other factors. The tremendous number of lives lost directly reflect the brutality and intensity of the Syrian conflict.¹²² Males of working age were severely and disproportionately affected by this, widening the gap in life expectancy between men and women to around 17 years in 2014 before its rebound to 7 years in 2019 (Figure, 9). However, the mortality rates of women, elderly and children exposed the grave violations conducted by the subjugating powers that targeted civilians.

¹²² SCPR, 2020

Figure 9: Life expectancy by gender (2010-2019)



Source: Population survey 2014 and SCPR estimations, 2019

The conflict caused direct damages to the health of the Syrian population and made them vulnerable to diseases. Disability was one of the main conflict-related non-communicable diseases. Based on a HNAP survey, 12.1 percent of the population suffer from difficulties in at least one of the six functional domains: seeing, hearing, walking, cognition, self-care, and communication.¹²³ **Disability** affects individuals, households, communities and countries for years to come. People with disabilities have a lower lifetime earning potential and may require additional support from both family and public services. Owing to the prevalence of disability in Syria as a result of the conflict, these issues will place additional strains on health services and propagate vulnerability in the future.¹²⁴

Mental health issues are another burden of the conflict. A survey conducted and evaluated by the AOK's Scientific Service in Germany with Syrian, Afghan and Iraqi refugees reported that 74.7 percent of refugees experienced personal violence before or during their migration. More than 60 percent of people were traumatized by war experiences, with more than 40 percent being directly attacked by military forces. More than one in three people have had to cope with the disappearance or murder of relatives and people close to them. One in five was tortured and nearly 16 percent were held in camps or in solitary confinement, or witnessed killings, ill-treatment and sexual violence. More than six percent were raped.¹²⁵

Children, as the most vulnerable group, suffer persistent feelings of fear of being surrounded by violence, experience frequent nightmares and have difficulty sleeping. Additionally, children's behavior has become more aggressive. Children expressed how their high levels of stress manifest in physical symptoms such as headaches, chest pain, and difficulty breathing.¹²⁶

Many **communicable diseases** outbreaks occurred during the conflict. In 2013, 37 cases of wild poliovirus type 1 (WPV1) were detected in Deir-ezzor, one of the most deprived governorates in Syria before the conflict. A coordinated, multi-country response of OPV (Oral Polio Vaccine) was initiated in Syria, among Syrian refugees

¹²³ Humanitarian Needs Assessment Program (HNAP), 2019, the UN.

¹²⁴ SCPR, 2020

¹²⁵ Schröder et al, 2018

¹²⁶ Save The Children, 2017

and host country populations to compensate for the slump in vaccination coverage. 1.6 million children in Syria were vaccinated against polio, measles, mumps and rubella. Combined with low immunization coverage, the weakening of the health system led to 74 cases of circulating mutated poliovirus type-2 (cVDPV2) confirmed in Syria in 2017, 71 in Deir-ezzor governorate, 2 in Ar-Raqqa and 1 in Homs. The outbreak was officially declared over in November 2018 following a review by a specialized joint mission from WHO and UNICEF.¹²⁷ With public health infrastructure still compromised, low immunization rates, and poor living conditions, the threat of future outbreaks and an export of WPV and cVDPV2 to other areas remains high (SCPR, 2020). Furthermore, cases of measles have increased since 2011, with 594 reported cases in 2014 and 738 cases in 2017. A total of 329 cases of measles were reported in 2018, dropping significantly to only 27 cases in 2019.¹²⁸ The reported cases are defined as laboratory confirmed, epidemiologically linked, and clinical cases as reported to the WHO.

During 2012 to 2019, the most prevalent **communicable diseases** were influenza-like illnesses (ILI) followed by acute diarrhea (WHO, EWARS, 2012-2019). During November 2018, a total of 845 new cases of Acute Bloody Diarrhea (ABD) were reported, of which 171 were reported in Ar-Raqqa, 410 in Al-Hasakeh and 264 in Deir-ezzor. The number of incident cases recorded continues to show an overall decline.

In the Northeast region, the number of new typhoid cases reported across the three governorates has also reduced, from approximately 3,430 in October to 2,595 in November 2018. This outbreak is thought to be due to the consumption of unsafe water and follows the ABD outbreak in Deir-ezzor governorate.¹²⁹ Conditions across many IDP sites are already dire and poor weather and heavy rains represent an increased risk of outbreaks of water-borne diseases including typhoid and ABD.

In January 2018 approximately 1,700 new cases of leishmaniasis were reported on average each week across Northeastern governorates. By October 2018 this had decreased to approximately 500 new cases. During November 2018, however, caseloads increased to an average of 1,135 new cases per week, 70 percent of which were reported in Deir-ezzor governorate, marking a dramatic increase in cases since October.¹³⁰ In the first half of December 2018, 2,004 leishmaniasis cases were reported by WHO EWARS, mostly from Deir-ezzor and Aleppo.¹³¹ In the last three weeks of December 2019, Deir-ezzor governorate reported 3,900 cases of suspected cutaneous leishmaniasis, and the trend remains upward.¹³²

First **COVID-19** cases appeared in March 2020 and thereafter the government of Syria imposed precautionary measures including curfews, as well as closing schools, public institutions and private firms with the exceptions of vital public services and the productive firms such as manufacturing and agricultural companies. Internal trade almost stopped and external trade with Iraq, Lebanon and Jordan dropped by almost 80 percent.¹³³ Economic activities reduced sharply and many people lost their jobs and sources of income. Poverty rates surged and the health system was not able to deal with the catastrophe. The Self-Administration (SA) and Opposition-held areas imposed a curfew as well in March and the suffering of people aggravated in their areas. However, with the low spread of the virus in Syria, the government, SA, and the opposition decided to remove most the measures in May 2020. The commitment of people to the measures in most regions almost disappeared. The second outbreak of COVID-19 during the summer months July to September 2020 created a huge impact on the health system and many infected people chose to stay at home. In the northeast cases increased substantially since September 2020 and the SA imposed a lockdown from October 2020 to February

¹²⁷ Relief web, 2017, "[Syria: Polio Outbreak.](#)"

¹²⁸ WHO, 2020

¹²⁹ OCHA, 2018

¹³⁰ OCHA, 2018

¹³¹ WHO, EWARS week#50, 2018

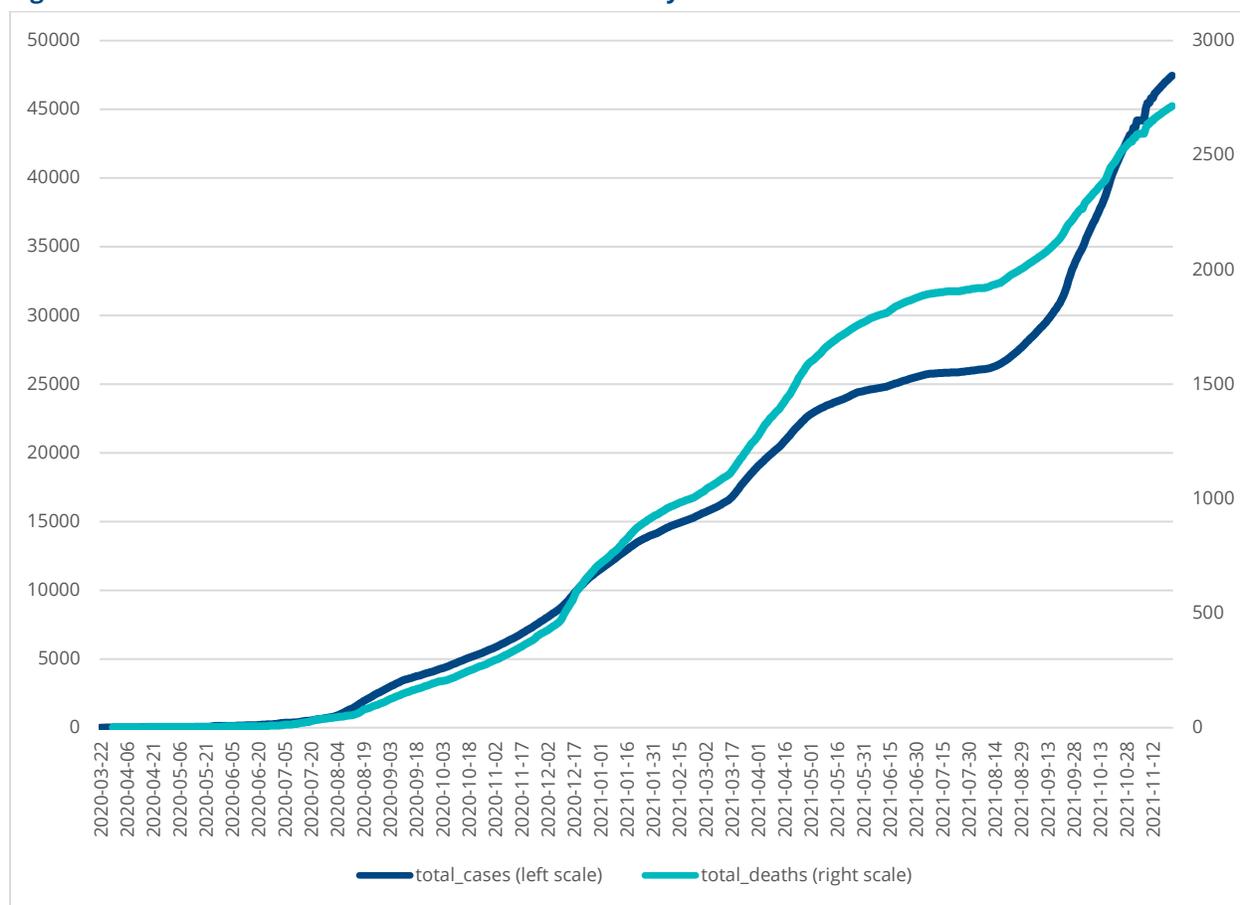
¹³² WHO, EWARS week#52, 2019

¹³³ SCPR, 2020

2021. While the northwest witnessed a rising number of cases since May 2021,¹³⁴ the most dangerous wave occurred mainly in the northeast and GoS controlled areas during September and October 2021, the Doctors Without Borders (MSF, in French for Médecins Sans Frontières) estimated that the cases in this region doubled between August and September 2021.¹³⁵

The lack of transparency of institutions responsible for reporting COVID-19 cases, in addition to the poor health system led to the conclusion that the burden of the Coronavirus on the Syrian population is underestimated¹³⁶. Moreover, the fragmented and damaged health system cannot provide infected people with the necessary care due to the lack of infrastructure as well as medical staff and the inefficient and corrupt management. The civil society played an important role at this stage in providing treatments in their facilities or supporting the patients at their homes.

Figure 10: COVID-19 accumulated Cases and Deaths in Syria March 2020 to November 2021



Source: <https://ourworldindata.org/coronavirus-source-data>

¹³⁴ iMMAP, 2021

¹³⁵ MSF, 2021

¹³⁶ MSF estimated the number of confirmed cases in northeast alone reached 73000 by October 2021, while the official data referred to 47448 cases in the whole of Syria by 23-11-2021.

In conflict-affected areas such as Idlib, acute **malnutrition** amongst children aged 6-59 months has increased rapidly in a space of 6 months (from 1.5 percent in January to 4 percent in June 2018), and in Ar-Raqqa it nearly tripled in 2018 (from 4.6 percent to 11.9 percent) (Nutrition sector, 2018). Since 2017, data from non-government-controlled areas include a variety of Standardized Monitoring and Assessment of Relief and Transition (SMART) surveys conducted in localized levels. A SMART survey in non-government-controlled areas in Eastern Ghouta identified a Global Acute Malnutrition (GAM) prevalence rate of 11.9 percent and a Severe Acute Malnutrition (SAM) prevalence rate of 1.6 percent.¹³⁷ This is relative to the 2.3 percent GAM and 0.8 percent SAM prevalence rates identified in government controlled rural Damascus in 2016. At that time, in the opposition-held areas of Dara'a governorate 7.8 percent of children under 5 years of age were found to be acutely malnourished.¹³⁸ As with wasting, stunting rates are significantly higher in non-government held areas. For instance, in 2017 the stunting rate in Tell Abiad in Ar-Raqqah governorate was 32.4 percent.¹³⁹ Similarly, the prevalence in Eastern Ghouta reached 36 percent,¹⁴⁰ 27.5 percent in eastern Dara'a and 25.6 percent in Aleppo.¹⁴¹ The malnutrition situation severely deteriorated during 2020-2021, a recent estimation indicated that 26 percent of the children under the age of five are chronically malnourished, in addition to 4 percent who are acutely malnourished.¹⁴²

One of the primary drivers of malnutrition is food insecurity. An estimated 12.4 million people (60 percent of the population) in Syria are food insecure, of whom 1.3 million are severely food insecure.¹⁴³ The World Food Program (WFP) national standard reference food basket price was 251 percent higher in November 2020 compared to November 2019, and people struggle to meet their needs for basic items.¹⁴⁴

3.4.2. Health System

The conflict has significantly damaged the Syrian health system through the destruction of healthcare infrastructure, emigration or targeting of healthcare professionals, lack of adequate maintenance and spare parts for medical equipment and the collapse of the pharmaceutical industry. One of the most visible impacts has been the fragmentation of a central authority within the country with different fighting parties have created their own institutions which are often overlooked and take a backseat to the economy of war. At the same time, the role of the civil society has greatly increased in the field of health services and reproductive health, where hundreds of associations and initiatives concerned with health and humanitarian services have contributed to providing essential health services to people in multiple regions, especially those threatened by siege. Civil organizations, however, suffer from a lack of resources, poor coordination and governance, but at the same time they are privileged with resourceful initiatives and flexibility in their work.¹⁴⁵

The ability to access health services has witnessed a sharp decline during the conflict with more than half of the Syrian population unable to access appropriate health services. Moreover, the pre-conflict results highlight the huge disparities across regions in terms of accessing health services; particularly in the northern and eastern regions including Ar-Raqqa, Al-Hasakeh, Aleppo, Idlib, and Deir-ez-Zor. The functionality of public hospitals has been assessed at three levels: fully functioning, partially functioning, or non-functioning. By the end of December 2020, and out of the 113 assessed public hospitals (MoH and MoHE), only 48 percent were reported fully

¹³⁷ PAC, 2017

¹³⁸ UNICEF, 2017

¹³⁹ ACU, 2018

¹⁴⁰ PAC, 2017

¹⁴¹ UNICEF, 2017

¹⁴² HNO, 2021

¹⁴³ HNO, 2021

¹⁴⁴ HNO, 2021

¹⁴⁵ SCPR, 2019

functioning, 28 percent partially functioning, in part due to staff shortages, lack of equipment and medicine or infrastructure damage, while 24 percent were reported non-functioning. In terms of PHCs' functionality, by the end of 2020 a total of 1,790 centers were assessed of which 48 percent were reported fully functioning, 21 percent partially functioning, and 31 percent were non-functioning (completely out of service).¹⁴⁶

The weaponization of healthcare made the Syrian population adversely vulnerable to diseases. Vaccination cold rooms were targeted and destroyed (WHO, 2017), while children in many opposition-controlled areas were completely deprived of immunization. Low immunization rates, poor sanitation, environmental conditions, and high population densities are key risk factors for poor health outcomes (Sami et al, 2014). According to the WHO, the vaccination coverage for polio in 2010 was estimated to be 83 percent with the rate dropping to 47 percent in 2012 and witnessed a slight increase in 2018 to 53 percent (WHO, 2020). In 2018, DPT3 (diphtheria-tetanus-pertussis) coverage was 47 percent, Measles 1 at 63 percent, and Hib3 (haemophilus influenza type B) at only 48 percent (WHO, 2018).

The availability of medicine has witnessed a dramatic decline during the crisis, directly reflecting a deterioration in the quality and effectiveness of health services. The pharmaceutical industry survey shows that the proportion of locally produced medicine fell from 93 percent in 2011 to 38 percent in 2016 (CBS, Statistical Abstract 2011-2017), highlighting the partial unavailability of medicine in the relatively stable governorates (during the conflict). This in turn, can be explained by the sharp decline in purchasing power for the majority of people on the demand side and, the destruction of the local pharmaceutical industries and necessary infrastructure in addition to sanctions that prevented the import of equipment and materials required to produce pharmaceuticals. This lack of medicine has had severe and adverse implications for people with chronic diseases including diabetes, high blood pressure, and kidney disease.¹⁴⁷

The availability of professional and trained medical staff is crucial to providing appropriate health services, particularly in time of armed or unarmed strife. The conflict has led to a colossal loss of health care professionals and reduced mobility between institutions, with WHO estimating a medical staff drop of up to 66% during the conflict¹⁴⁸. The availability of medical staff has varied notably between governorates. In 2020, based on the number of medical doctors in public hospitals and public health center,¹⁴⁹ and the estimation of population in 2020 per governorate,¹⁵⁰ the paper estimates the countrywide ratio of public medical doctors per 10,000 inhabitants at 8. In Damascus, Lattakia and Tartous the ratio reached 24, 22 and 20 per 10,000 respectively, compared to only 6, 5, and 2 medical doctors in Aleppo, rural Damascus, and Daraa. The governorates outside of GoS control severely lack public (under the supervision of GoS) medical doctors and are dependent on the health systems that were developed by the opposition in the northwest and by the self-administration in the north east.

Various factors are driving the emigration of medical personnel from cities and areas under government-control such as Damascus and Lattakia and include financial security, education, security and avoiding military draft, while in previously besieged areas such as Eastern Ghouta, few doctors remain. In areas previously under the control of ISIS, doctors were exposed to assaults by the fighting parties, such as Al-Boukamal in Deir-ez-Zor, with all hospitals prioritizing combatants.

Turkish-Backed Opposition Areas: Northwestern Syria includes the areas falling under Turkish military operations "Euphrates Shield", "Olive Branch" and "Spring of Peace" (Jarablus, Afrin, Al-Bab, Azaz, Ras Al-Ain, and

¹⁴⁶ WHO, HeRAMS 2020

¹⁴⁷ SCPR, 2019

¹⁴⁸ Health care a casualty of 6 years of war in the Syrian Arab Republic (who.int)

¹⁴⁹ WHO, HeRAMS 2021

¹⁵⁰ SCPR, 2021

Tal Abyad), which follow the structure of the Turkish health system and consequently developed their public facilities and infrastructure accordingly. Prior to these operations, health NGOs played a pivotal role in providing healthcare services in these areas, however, and with the direct involvement of Turkey, this has severely limited the role of civil society in providing public services.

Idleb: In Idleb, as in many previously opposition-held areas throughout the conflict, the Syrian civil society has become vital in providing fundamental health services; primary health care and reproductive health. Hundreds of associations and initiatives concerned with health and humanitarian assistance have contributed to providing basic health services to people in many areas, especially those threatened by besiegement. As of 2015, health structures in the opposition-held regions continue to rely on the structure of the Syrian public health system but continuously and gradually expand it primarily through the active involvement of the health directorates, civil society, UN agencies and donors in the design and planning of the health sector in the region. Among these initiatives were the development of a health information system, that includes a referral system and a system for the management and circumvention of the negative long-term effects of medical waste (KI-1).

Following the domination and control of Idleb by Al-Nusra a Ministry of Health was established, an authority characterized by fragility and limited capacity to influence the sector, coupled with numerous restrictions on any support to sustain the health initiatives in this region. However, the health NGOs and health directorate continued to provide services in Idleb, but suffered from the severe attacks on health facilities, sanctions, a lack of resources, poor coordination and governance (KI-1).

Self-Administration controlled areas: The SA adopted a different approach to the governance of the health service system compared to the opposition-held areas, as they established a health commission to supervise the health facilities and pay salaries to health employees. However, the government of Syria continues to operate in the region, which suffers from an unstable security situation and the ongoing displacement of civilians in addition to a limited number of implementing partners.

3.5. Health policies during the conflict

Health in Syria is deeply tangled in a complex socio-political web. The extraordinary health disparities which emerged due to war strategies, in addition to distorted and violent forms of governance in certain communities, have radically disrupted and transformed the social determinants of health in Syria. Social determinants of health are known to shift in conflict settings as structural elements of society have profound impacts on health.¹⁵¹ During the conflict, the key structural drivers of health status have been institutional discrimination, social capital degradation, deterioration of living conditions, and conflict economies. These findings indicate that the breakdown in institutions created life-threatening forms of institutional discrimination and societal fragmentation. The transformation of power has produced new institutions where discrimination is the norm and the redistribution of resources and power favors special interest groups such as the regime military, economic elite, military opposition groups, and extremist militias.¹⁵²

3.5.1. War strategies

The brutal realities of war including military operations, killings, torture, brutal attacks on civilians, targeting of health workers, destruction of infrastructure, siege of regions, suppression of communities, forced displacement of the population, exploitation of tangible and non-tangible resources, and the pillaging of public

¹⁵¹ Marmot and Wilkinson, 2006

¹⁵² SCPR, 2019

and private wealth, assets, and savings, are among the dominant factors that led to the catastrophic status of the public health with warring parties continuing these policies that are a grave violations of the people's most basic rights and liberties. Each of the key local warring parties is supported by regional and international actors who provide political, military and economic support, which hinder the possibilities of countering the conflict centered policies that damaged the health system in the first place.

This paper identifies the key war strategies that have directly damaged the public health:

Collective punishment is a core policy used during the conflict which inflicted stricter punishments on certain groups, communities and regions. Since areas outside of governmental control are the most affected by the destruction of health services, they therefore have far more neglected health systems and infrastructure. Addressing the roots of Syria's health inequalities will enable a more comprehensive dialogue on the conflict's future impact on population health.¹⁵³

With the subjugating powers responsible for the indiscriminate killing of hundreds of thousands of combatants and civilians to the point of resorting to internationally prohibited weapons, such as chemical and biological, millions of Syrians have suffered varying degrees of injuries with many becoming disabled or are suffering from chronic disease.

Torture, kidnappings, arbitrary arrests, and sexual abuse are part of the arsenal of suppression that have been used by all sides to subordinate and terrorize their adversaries and civilians.

Besieging communities, sometimes for up to seven years, and depriving the population of the minimum conditions of decent living including access to health services, medicine, food, water, and energy. More than 2 millions of Syrians suffered from sieges at different stages of the conflict.

The **forced displacement** of entire communities and populations has been the main factor behind more than 6.6 million people to flee the country to seeking refuge in Lebanon, Turkey, Jordan, and other hosting countries, while the number of internally displaced people has reached 6.7 million,¹⁵⁴ which is the world's largest number of internally displaced people (IDPs). Furthermore, refugees have experienced multiple forms of injustice in host countries which can be categorized into three categories: Entry and movement; human development; status, voice, and representation. Though these three are interconnected and overlapping, examining each allows for understanding the numerous and increasing deprivations which refugees suffer.¹⁵⁵

Health workers have suffered intended and indiscriminate attacks during the conflict. The **Targeting of health workers** include the killing, kidnapping, torturing among a vast number of other violations. They have been a direct target during the war.¹⁵⁶ At least 914 medical professional personnel have been killed in Syria during the war until November 2019, 265 of whom were doctors and almost 55 percent were killed in aerial attacks or shelling, while 141 were either kidnapped or detained and subsequently killed.¹⁵⁷

Destruction of health facilities and infrastructure. The targeting of public hospitals and HCWs became a defining feature in the Syrian war strategy. According to Physician for Human Rights (PHR), between March 2011 and March 2020, PHR has corroborated 595 attacks on at least 350 separate medical facilities.¹⁵⁸ These

¹⁵³ SCPR, 2020

¹⁵⁴ UNHCR, 2021

¹⁵⁵ SCPR, 2020

¹⁵⁶ Ascheim, 2015; and Blamchet et al., 2016

¹⁵⁷ Physicians for Human Rights, "[Operations in Syria](#)."

¹⁵⁸ PHR, 2020

systematic attacks on health facilities are described as the weaponization of healthcare, with people's need and right to health being intentionally deprived.¹⁵⁹

3.6. Public policies and public health

The “public” policies that were not a direct military strategy, and adopted by the key dominant warring parties, contributed to the deterioration of population health through multiple channels among which are: The distortion of governance in terms of efficiency, accountability, human resources and funding; the dominance of military power over all civil services; the reallocation of resources to serve conflict priorities; the spread of conflict economies and abusing of resources; the discrimination in providing services and goods across regional, religious, political and cultural affiliations; the reallocation of resources from productive fields towards conflict-related activities. These channels are not limited to health services, but encompasses other vital services that affect the determinants of health. This paper highlights below key policies that have diversely affected public health:

- **Changing the function of the health system** from providing health care to service of war and “loyal communities” and therefore breaching the ethical code of the healthcare sector.
- **Adopting discriminative policies** that prevent the access of healthcare facilities and medicine to certain segments of society based on political, regional, religious, or culture affiliation.
- **Reallocation of resources** from the health and social protection sectors to conflict-related activities.
- **Transforming the responsibility of health care** from the state to civil societies, the private sector and humanitarian organizations. With government reduction, or at times the complete removal, of subsidies for many basic goods increasing the cost to producers and consumers further aggravating an already dire situation.
- **Expansion of conflict economies:** The collapse of real income and expenditure have not been homogenous across Syria; inequalities surged across regions as well as between political affiliations, gender, age, displacement status, cultural identities, religious and socioeconomic backgrounds. For instance, populations of sieged cities and regions suffered years of severe hardship and deprivation leading them to subordination to the war lords who controlled smuggling routes and channels. The subjugating powers played a direct role in depriving the society and facilitating in the direct creation of the conflict elite.
- **Distorting access and quality of education:** The Syrian population lost insurmountable years of schooling as children (5-17 years of age) who were out of school in 2019 number 2.4 million. The current outcome is just as disastrous as those very children will suffer from a lack of skills and knowledge to assist in contribution to their personal lives and the betterment of society, in addition to the impact of the conflict. The conflict created a lack of curriculum consistency across Syria with different education systems established in different regions depending on the ruling power.¹⁶⁰
- Expanding **Gender Based Violence** and inequality: Women are among the main victims of the conflict in Syria. They have faced severe violations including killing, detention, kidnapping, sexual violence, labor in harsh conditions and increased economic responsibility. Women have also been affected by more frequent incidents of underage marriage, customary marriage, trafficking, and other forms of exploitation and have consistently suffered from political, social, and economic exclusion.
- Increased **food insecurity:** The inability to access nutritious food due to high levels of poverty and deprivation, unjust public policies, discriminatory institutions, and the prevalence of a violent economy.

¹⁵⁹ Fouad, et al., 2017

¹⁶⁰ SCPR, 2020

The results of a SCPR study on food security in Syria in 2019¹⁶¹ revealed a sharp decline in food security during the conflict by 42 percent between 2010 and 2018. In 2021, the WFP highlighted that 60 percent of Syrians suffer from food insecurity.

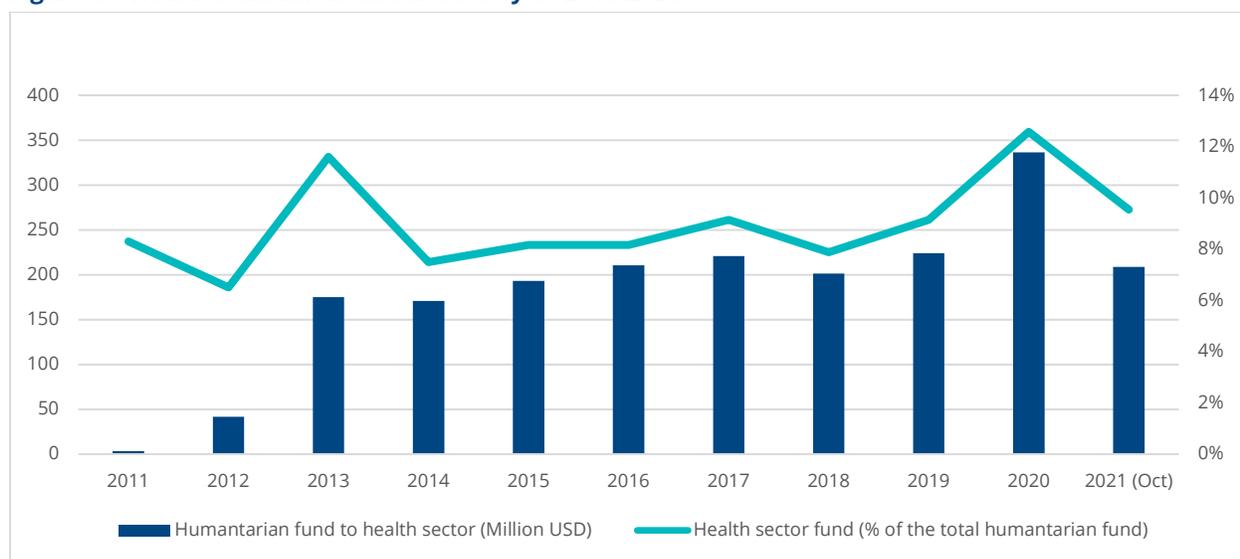
- The surge of overall **poverty**: SCPR estimated that the overall poverty rate reached its peak at 89.4 percent by the end of 2016. The poverty rate slightly dropped in 2019 to 86 percent due to positive economic growth, yet since the last quarter of 2019 Syria has witnessed further economic deterioration, aggravated by the COVID-19 pandemic, which has led to a surge in unemployment rates and cost of living. The overall poverty rate exceeds 93 percent in 2021 and the poverty gap doubled between 2019 and 2021 (SCPR, 2021).
- **Damaging social relations**: The social capital deteriorated during the conflict, reflecting a substantial aggravation of social injustice as it deteriorated the wealth of social relations, negated common values, harmed social solidarity, and diminished people's capabilities. Moreover, the conflict damaged relations based on hate and rejection of the other, lack of sympathy, cooperation, and trust.
- **Degrading environment**: The conflict, and the quantity and type of weapons used, poses a serious environmental threat to arable land as toxic substances have caused soil contamination, which adversely affects the quality of agricultural land and therefore its cultivability and productivity. The conflict has led to the waste of vast natural resources such as forests and water as a result of destruction, vandalism or misuse, such as deforestation for heating or drilling of artesian wells in unsustainable ways. Waste and pollution factors affect the long-term potential of environmental sustainability and create intergenerational future injustice.¹⁶²
- **Dependency on humanitarian support**: The conflict caused a severe deterioration of public health services and funds, as an illustration, the public health expenditure dropped by 68 percent in real terms between 2010 and 2020.¹⁶³ This deterioration was associated with a substantial surge in the health needs as a result of the brutal conflict increasing the needs for international humanitarian support for the health sector. In this regard, and based on the UNOCHA financial tracking service, around two billion US dollars were directed to the health sector between 2011 and October 2021, which accounted for 9.2 percent of the total humanitarian fund that was directed to Syria through the humanitarian response plans 2011 to 2021 (Figure 5). Almost 50 percent of health sector funds received by UN organizations were allocated to the WHO (29 percent), UNICEF (11 percent), UNFPA (5 percent), and UNHCR (1 percent). The other half of the health fund were distributed by INGOs and NGOs led by SAMS (4 percent), Islamic Relief Fund (3 percent), and UOSSM (2 percent) (UNHCR, 2021). Additionally, the health sector also benefited from funds that were directed to mutual sectors. The conflict changed the role of actors in the health system with a significantly declining role of the public sector and the parallel expansion of the international sector (UN agencies and INGOs) in addition to the growing role of local NGOs and the private sector.

¹⁶¹ SCPR, 2019

¹⁶² SCPR, 2020

¹⁶³ SCPR, 2021

Figure 11: Health Humanitarian Fund for Syria 2011-2021



Source: OCHA 2021, "Financial Tracking Service", <https://fts.unocha.org/countries/218/summary/2021>

3.7. Sanctions and the Health Sector

Sanctions further negatively affected public health and its determinants, particularly through sectoral measures, which hindered imports of equipment, medicines, and raw materials. Furthermore, they had a negative impact on financial transactions, transportation, and the availability of basic goods, such as fuel derivatives, and encouraged the expansion of transnational conflict economy networks.

BOX 2: Brief of Sanctions on Syria

The unilateral measures imposed on Syria outside the security council since the 1970s, particularly by the USA and, in the late 1980s, by European countries, aimed at changing "regime behavior". The history of sanctions did not provide strong evidence on their effectiveness in Syria, neither in terms of changing the policies of the country, nor did the welfare and living conditions of people in Syria increase, but rather worsen.

In response to the uprisings in Syria in 2011, the US, the EU, the Arab League, Turkey, Australia, and Canada, among other countries, imposed sanctions on the GoS and its allies that aimed at "encouraging the Government of Syria to refrain from actions, policies or activities which repress the civilian population in Syria, and to participate in negotiations in good faith to reach a negotiated political settlement to bring about a peaceful solution to the conflict in Syria". The countries also attempted to use diplomatic and coercive economic means to compel the Syrian Regime to stop targeting civilians and to support a transition towards a governance system that respects human rights and ensures the rule of law, according to the US Defense Ministry (SCPR, 2020).

The sanctions were gradually expanded during the period between 2011-2019 and can be categorized as follows. First, sanctions on persons and entities, who are part of or engaged with the GoS, and have been involved in the violence against civilians and violated human rights. Measures include the freezing of assets, travel bans, restrictions on financial transactions and investment activities. Second, the embargo on weapon

trade and all goods that have “dual use,” as well as equipment and technology that could be used for internal repression or for interception. Third, the ban on investment, technical support, trade of petroleum and energy industry including the imports of oil derivatives. Fourth, the halt of all trade and financial agreements and prohibition of business with the public banking and insurance sector. Fifth, the exemptions of the humanitarian assistance and trade of food and medical goods (SCPR, 2020).

Following Russia’s direct military intervention in 2015 and the expansion of government-controlled areas, a new level of sanctions was introduced, specifically linked to “reconstruction efforts”. The EU bans any support or contribution to the GoS’s reconstruction plans as long as a meaningful negotiated political settlement is not achieved. The US issued the Caesar Syria Civilian Protection Act of 2019 which imposed more comprehensive and stricter measures against the GoS and its allies. The Act classifies the Central Bank of Syria as a financial institution of primary money laundering concern, requiring the imposition of special measures. The Act also expanded sanctions against foreign persons who engage in any of the following:

1. Providing significant financial, material, or technological support to, or a significant transaction with the GoS; a military contractor, mercenary, or a paramilitary force inside Syria for or on behalf of the GoS, Russia, or Iran; or supporting sanctioned foreign persons;
2. Knowingly selling or providing significant goods, services, technology, information, or other support that significantly facilitates the maintenance or expansion of the GoS’s domestic production of natural gas, petroleum, or petroleum products;
3. Knowingly selling or providing aircraft or aircraft spare parts or supporting the operation of aircrafts that are used for military purposes in Syria;
4. Knowingly, directly or indirectly, providing significant construction or engineering services to the GoS.

The Act aims to deter foreign persons from entering into contracts related to reconstruction in connection or relationship with the GoS, Russia or Iran. The Act stipulates that the US President “shall brief the Congress on the potential effectiveness, risks, and operational requirements of military and non-military means to enhance the protection of civilians inside Syria, especially civilians who are in besieged areas, trapped at borders, or internally displaced.” Moreover, the humanitarian assistance and related entities will be exempted, and the US President can waive the sanctions as a tool to achieve progress in the peace process. The Caesar Act includes general sanctions that potentially affect all goods, services and transactions with the GoS, including Russia and Iran and all related entities and persons. This can expand the impact of the sanctions on the political actors and on the economy.

The sanctions had a direct and adverse effect on the health sector through different channels. The direct impact of the sanctions hindered the import of health equipment, raw materials, and medicines due to the financial, insurance and transportation restrictions, while contributing to the cancellation of patents from European and US companies for Syrian companies to produce medicines. Additionally, the technical and financial support, as well as visiting experts supporting the health and pharmaceutical sectors in Syria were cut off. These effects led to an immense drop in the production and an adverse deterioration of the quality of health-related goods and services. There were further indirect effects, as the sanctions impeded energy production and trade leading to an increase the cost of many essential goods and services leading to an increase in costs for trade and production. As a direct result, poverty and unemployment rates increased and further exasperated inequalities.¹⁶⁴ Poverty, living conditions, and social protection are vitally important determinants of the public health.

¹⁶⁴ SCPR, 2013, 2020

The Syrian regime have, so far, managed to withstand the sanctions and placed the resulting burden on the Syrian population, especially considering many countries that support the regime, and therefore have not adopted the sanctions, have offered economic, financial and political alternatives. Furthermore, to avoid the sanctions, informal channels have been created allowing conflict economies and conflict-related economic elites and networks to flourish.

It is worth mentioning, that the impact of the sanctions on Syria that has been described above is far less significant compared to the impact of armed conflict, conflict economies, social degradation and military interventions of regional and global actors on the Syrian people and the Syrian health sector.

3.8. Conclusion

This paper prioritizes public health as a core human capability within the political, social and economic context during the time of armed conflict in Syria, analyzing the impact of conflict dynamics on health capabilities through the assessment of health outcome, health system, health related policies in the time of conflict, and the determinants of health. It further identified the direct and adverse impact of sanctions on the health sector in Syria.

This paper endeavors to highlight the intentional targeting of public health, distorting the health system and reallocation tangible and intangible resources away from health care to fuel the war by warring parties. The conflict-centered institutions destroyed the foundations of health such as governance, social capital, welfare, living conditions, food security, and environmental sustainability. The political authority is fragmented between several state and non-state actors and has been labeled the “enemy of public health”. Further complicating and aggravating the matter, several regional and international actors involved, directly and indirectly, in the armed conflict were complicit in the deterioration of the public health sector, with sanctions further contributing, yet to a lesser extent, in negatively affecting the health system and public health.

The burden of conflict placed on public health included direct and indirect death, injuries, and disability in addition to serious morbidity cases such as mental diseases, malnutrition and infectious diseases. The health system has witnessed a severe distortion in governance. The destruction and lack of maintenance and investment have negatively affected infrastructure, commercial businesses, industrial factories, residential buildings, and transportation networks, power and water stations and networks. The loss of human capital was substantial as health workers have been directly and indiscriminately targeted by the warring actors leading to an exodus from the country. The health system further suffered an acute shortage of public and humanitarian funding and suffered from a lack of adequate and up to date statistics.

Damaging of the health capabilities of the population directly impacts the future of development in Syria for generations as the vast majority of Syrians disproportionately lost substantial elements of their health wellbeing which will adversely affect their future contributions to society. Therefore, recovering population health needs to diagnose the actual health losses and nictitates provisions to the most affected segments of the population with the means to reconstruct their capabilities and expand their free choices.

All health capability policies and programs should be linked to a long-term strategy that addresses the root causes of the conflict. Exclusive and inefficient institutions, social injustice, economic exploitations, absence of the rule of law and accountability can lead to reigniting the conflict.

The conflict created mechanisms that have, and continue to, enable violence, injustice, and violations, further highlighting that the needed institutional strategy should dismantle violent foundations and invest in

peace building policies. The future of health in Syria will depend on the fair engagement of disadvantaged communities and the responsibility of the state, civil society and private sector. Public dialogue between people and policy makers is critical for inclusive reconstruction projects.

The following should be considered corner-stones for building a health system that transcends the conflict:

- Accountable and inclusive institutions that engage and fairly treat citizens.
- The rebuilding of social capital and cohesion needs to be rooted in all policies and initiatives to counter inequalities and identity politics.
- Reconstructing a productive and inclusive economy with equal opportunities that paves the way for healthy and decent living conditions and counter the conflict economy dynamics.
- Social security in terms of public service provision and social protection is essential in protecting children's rights and development.
- Integrating health with other sectors and prioritizing the most affected people during the conflict.

The health system priorities:

- Reinvesting in an efficient and just health system.
- Investing in human capital for the health sector.
- Addressing the underlying causes of the conflict including injustice, poverty and social exclusions.
- Integrating of programs: Protection, Health Nutrition, Education & Health.
- Concentrating on primary and secondary health care and recovering the health system; the role of government will increase but the role of the civil society will remain.
- Adopting universal health coverage.
- Restoration of infrastructure and services: health facilities, including hardware, software and best practices.
- Exchange experiences and knowledge across the world to counter health challenges such as mental health and disabilities.
- Improving data and information system is essential across sectors.
- Enhancing water, sanitation and hygiene.
- Advocating for reduced violence and the protection of children and health facilities and staff.
- Decreasing dependency on humanitarian/emergency support with a focus on people in need.
- Enhance coordination between all actors: Government and international community and civil society.
- Increasing the outreach and advocacy efforts on best practices.
- Targeting the most deprived regions and communities.

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Annex A: Questionnaire guide

Researcher name

Date Interview

Duration

Key Informants: Age, sex, experience in the context of the paper.

Interview result

1. What is the nature of your work and its connection to the health sector?
2. How would you assess the state of health system today? How do you describe and evaluate the governance reality of the health sector? (Health System - Readiness - Effectiveness - Justice and Governance - Evidence)
3. How do you assess the health status of the population? In terms of the increase in deaths and injuries, and the spread of communicable and non-communicable diseases?
4. Who are the main actors in this health sector? (Public, private, civil, international)
5. How have war and conflict conditions affected the health sector? (Infrastructure, staff, equipment, medicines, provision of services, management) through (destruction, killing and injury, siege, war economy...)
6. How have government health policies changed? (Availability of free treatment - discrimination between regions - health spending - pricing and availability of medicines - salaries - travel (migration) of doctors - source of medicines - availability of medical equipment).
7. How have the economic sanctions imposed on the health sector? (Equipment - manufacture and costs of medicines - Quality and quality of available medicines - equitable distribution of services between local communities)
8. How has the health sector adapted to these changes and effects? (with sanctions, for example) (external markets, financing, transport)
9. What are the main challenges for health sector in the coming period?
10. Who do you think are the main actors who will have the ability to play an important role in facing these challenges in the future? and how?
11. What are the most important priorities in the next stage?
12. What are your suggestions for possible policy options or initiatives in the near future?
13. Do you have any topic or note you would like to add?

4. The Syrian Economy and Manufacturing in Wartime

Howard J. Shatz¹⁶⁵

4.1. Introduction

The Syrian civil war has been a stunning economic and demographic disaster. Assembling estimates from different sources, one set of analysts reported that cumulative losses of gross domestic product (GDP) had amounted to \$226 billion by 2016, and about \$120 billion in physical capital had been destroyed by 2017.¹⁶⁶ Nominal GDP in 2010 has been estimated at \$60 billion, indicating the magnitude of the wartime destruction.¹⁶⁷ A more recent estimate held that 2019 GDP amounted to only 36 percent of that in 2010, with cumulative losses of \$420.9 billion by the end of 2019, and that absent war, GDP would have been 1.62 times above the 2010 mark.¹⁶⁸

In human terms, the war had resulted in an estimated 606,000 dead by June 2021, and an estimated 6.6 million refugees and 6.7 million internally displaced people by March 2021.¹⁶⁹ This also has economic consequences. The deceased represent an irreplaceable source of human capital – workers, knowledge, and skills that have been expunged from the economy. Refugees may have the ability to send capital back to their families in Syria and maintain their skills, but more likely most have faced significant income and capital losses and loss of skills.¹⁷⁰ Likewise, the internally displaced have lost their homes, perhaps their workplaces, and many of their social connections and so will be unable to participate in economic activity as they would have before the war.

The number of reports on the war, and its consequences, is voluminous. With a denied and violent environment as a backdrop, organizations have mobilized networks to provide on-the-ground reporting.¹⁷¹ New methods of analysis have been applied, such as creative and sophisticated use of satellite imagery.¹⁷²

¹⁶⁵ I thank Abdulla Ibrahim, adjunct fellow at CSIS, and non-resident fellow at Stimson Center, and formerly of the Geneva Centre for Security Policy, for conceiving of this project, *The Impact of War, Sanctions, and Government Policies on the Syrian Economy*, and assembling the overall project team, and Rabie Nasser and Omar S. Dahi for valuable discussions at the beginning of the project. At the Konrad-Adenauer-Stiftung Syria/Iraq Office, I thank Lejla Djulancic for managing the project with extreme patience, Jessy Wajdi Daccache for seeing the project through to completion, and Michaela Balluff and David Labude for additional input. Comments from Salam Said, Omar Abdulaziz Hallaj, Samir Aita, and Eric Robinson strengthened the manuscript, and discussion at a June 2021 workshop of the Geneva Centre for Security Policy's Syria Transition Challenges Project raised important issues for incorporation in this report. All errors of fact and analysis are mine alone. This work is not a RAND research product and does not reflect the opinions of RAND's research sponsors, officers, and Board of Trustees.

¹⁶⁶ Sharmila Devadas, Ibrahim Elbadawi, and Norman V. Loayza, "Growth After War in Syria," Policy Research Working Paper 8967, The World Bank, August 2019, p. 2.

¹⁶⁷ Jeanne Gobat and Kristina Kostial, "Syria's Conflict Economy," IMF Working Paper WP/16/123, June 2016.

¹⁶⁸ Syrian Center for Policy Research, May 2020a "Syria: Justice to Transcend Conflict; Impact of Syrian Conflict Report 2016-2019," p. 35.

¹⁶⁹ The estimate of deaths is from Syrian Observatory for Human Rights, "Total Death Toll | Over 606,000 People Killed Across Syria Since the Beginning of the 'Syrian Revolution', Including 495,000 Documented by SOHR," June 1, 2021. The estimate of refugees and displaced persons is from United Nations High Commissioner for Refugees, "Syria Emergency," Updated March 15, 2021.

¹⁷⁰ Krishna B. Kumar, Shelly Culbertson, Louay Constant, Shanthi Nataraj, Fatih Unlu, Kathryn E. Bouskill, Joy S. Moini, Katherine Costello, Gursel Rafiq oglu Aliyev, Fadia Afashe, "Opportunities for All: Mutually Beneficial Opportunities for Syrians and Host Countries in Middle East Labor Markets," Santa Monica, Calif.: RAND Corporation, RR-2653-QFFD, 2018; Shanthi Nataraj and Louay Constant, 13 February 2019, "Syrian Skills: A Missed Opportunity," RealClearWorld; Shelly Culbertson, 24 November 2020 "The Syrian Forever War Has Created Forever Refugees," The National Interest.

¹⁷¹ Two such examples are Center for Operational Analysis and Reporting – COAR (Center for Operational Analysis and Reporting – COAR, Home Webpage, COAR Global, 2020a), and Syrian Center for Policy Research (Syrian Center for Policy Research, Home Webpage, 2020b).

¹⁷² Eric Robinson, Daniel Egel, Patrick B. Johnston, Sean Mann, Alexander D. Rothenberg, and David Stebbins, 2017 "When the Islamic State Comes to Town: The Economic Impact of Islamic State Governance in Iraq and Syria," Santa Monica, Calif.: RAND Corporation.

This chapter adds to this research by conducting a more in-depth analysis of the evolution of the Syrian wartime economy with a focus on manufacturing. A functioning economy will be necessary for stabilizing a post-war Syria and to contributing to the nation's recovery by providing employment and livelihoods to the people, as well as goods and services to serve as inputs for business activity and consumption by the population. A functioning economy will be one element that will help attract returns by the millions of refugees and resettlement within the country by the millions of internally displaced people.

Focusing on manufacturing is a vital and pivotal focus since it has continuously served as an engine of economic development and has played a prominent role in the transition of countries from predominantly rural to predominantly urban, and from lower income to middle income and above. Manufacturing traditionally provides reliable productivity growth and technological innovation; employment generation, especially in the private sector provided the right policies are undertaken; and international trade links as manufactured goods are easily tradable across borders. Recent evidence suggests that, despite some doubts, manufacturing remains an important component of development.¹⁷³ The advantages of manufacturing will be a significant contributing factor to the future of Syria, especially with a constrained government budget and a broken economy.

Beyond the manufacturing core of the analysis, this chapter presents other aspects of the evolution of the Syrian economy. The chapter does not attempt to be comprehensive; rather, it endeavors to include information that has not otherwise been highlighted elsewhere or integrate existing information in new ways. The goal is to provide new details on how the war has affected the economy, with additional details on how sanctions and Syrian wartime policy have exacerbated the effects of war, and what this might mean for the future of Syria.

4.1.1. Data and Methods

To overcome data challenges, this chapter uses a novel method to understand the Syrian economy. Specifically, it utilizes *mirror trade* data – Syrian trade as recorded by other countries around the world, and translates that into proxies for commodity and industry output trends. Appendix A provides background on why this method might be valid and how the data was assembled and transformed.

To the furthest extent possible, this chapter is based on non-Syrian, externally available data. There are several reasons for this. First, external data will be more comparable to data for other countries. Second, as noted above, for the period after 2010, data collection in Syria has been problematic. Data collection in a war zone is always fraught with obstacles, from the inability to collect due to violence, to misreporting by businesses to shield themselves from authorities or warring groups, to the reduction of market transactions from which values can be collected. Notably, despite these problems, there are organizations such as the Syrian Center for Policy Research, creating useful time series. However, these data are generally not publicly available in the same manner as data assembled by international organizations and national governments. Third, even before the war, official Syrian data had accuracy problems. For example, according to one International Monetary Fund (IMF) report, government finance statistics had “unresolved methodological problems,” with discrepancies in financing requirements of the budget and “the unorthodox treatment by the Central Bank of Syria (CBS) of some transactions with the government.”¹⁷⁴ Undercoverage of imports, meaning the lack of reporting regarding the true value of all imports, was also among the problems.¹⁷⁵

¹⁷³ Nobuya Haraguchi, Charles Fang Chin Chang, and Eveline Smeets, May 2017, “*The Importance of Manufacturing in Economic Development: Has This Changed?*” World Development, Vol. 93, pp. 293-315; Dan Su and Yang Yao, May 2016, “*Manufacturing as the Key Engine of Economic Growth for Middle-Income Economies*,” ADBI Working Paper No. 573, ADB Institute.

¹⁷⁴ International Monetary Fund, *Syrian Arab Republic*: March 2010, “*2009 Article IV Consultation – Staff Report; and Public Information Notice*,” IMF Country Report No. 10/86, pp. 30-31.

¹⁷⁵ International Monetary Fund, 2010, pp. 33.

Accordingly, this chapter makes use of four levels of data sources. The first is data as reported by multilateral organizations, specifically the IMF and the World Bank, from within their databases, country reports, and research papers. The second is Syrian official data, largely drawn from the Central Bureau of Statistics. The third is data collected or estimated independently by researchers or private sector organizations. Finally, for the heart of the analysis, the report uses goods trade data as recorded by the United Nations Comtrade database.

4.1.2. The Plan for The Chapter

This chapter proceeds as follows. Section 4.2 presents an overview of the Syrian economy in the run-up to the civil war. Section 4.3 provides the analysis of the Syrian economy throughout the war, including a discussion of economic policy and sanctions. Section 4.4 focuses specifically on manufacturing trends. Section 4.5 concludes with current challenges and prospects. An appendix presents a more detailed data discussion.

4.2. The Syrian Economy Before the War

In the early 2000s, Syria embarked on a series of economic reforms designed to promote the private sector and diversify their economy.¹⁷⁶ Reforms showed some successes. Although oil GDP had fallen by 21 percent in real terms between 2003 and 2007, overall GDP rose by 22 percent, and non-oil GDP rose by almost 34 percent.¹⁷⁷ Syria then weathered the global financial crisis relatively well but still faced a series of challenges going into 2011. Chief among these were continuing declines in oil production – one of the reasons for the economic reforms – and a succession of droughts, particularly in the northeast.¹⁷⁸

4.2.1. Challenges on the Eve of the War

Declining Oil Production

Syria has been a small player in global energy markets, but oil constituted a large share of its exports, with oil revenues constituting an important component of its national budget. Accordingly, one of its biggest pre-war challenges was declining oil production. From a peak of 613,000 barrels per day (bpd) in 2001, production fell steadily through 2011, to 353,000 bpd, a 42 percent decline.¹⁷⁹ Natural gas production provided a small, but growing counterweight, but it peaked in 2010 at 0.82 billion cubic feet per day. In that 2001 peak year for oil, oil constituted 76.6 percent of all goods exports. Syria had a high level of services exports, the majority of which stemmed from travel and tourism. But even accounting for services exports, oil constituted 57.3 percent of all Syrian exports and 49.4 percent of all current account receipts.¹⁸⁰ By 2010, oil accounted for 44.7 percent of all

¹⁷⁶ International Monetary Fund, 2010.

¹⁷⁷ "Table 2. Syrian Arab Republic. National Income and Prices, 2003-07," in International Monetary Fund, *Syrian Arab Republic: Statistical Appendix*, IMF Country Report No. 09/56, February 2009b, p. 4. Figures for 2007 were preliminary figures at the time the document was published.

¹⁷⁸ Syria had experienced high growth in the 1990s, but had an annual average growth of only 1.25 percent from 1999-2003. In that period, it also faced declining investment, declining living standards, and rising unemployment (International Monetary Fund, *Syrian Arab Republic: 2005 Article IV Consultation – Staff Report; and Public Information Notice on Executive Board Discussion*, IMF Country Report No. 05/356, October 2005b, p. 5).

¹⁷⁹ BP p.l.c., *Statistical Review of World Energy 2020*, 69th Edition, London, 2020. Production registered at 385,000 bpd in 2010, that last full year before the outbreak of violence.

¹⁸⁰ 2005b "Table 7. Syrian Arab Republic: Balance of Payments, 2000-06," in International Monetary Fund, p. 35.

goods exports.¹⁸¹ In 2011, this had risen modestly to 46.4 percent, but only because overall goods exports in nominal terms fell more (-11.2 percent) than oil (-7.9 percent).¹⁸²

This decline in oil production and revenues had consequences for the national budget. In 2001, the year of peak oil production, oil revenues constituted 57.7 percent of Syrian government revenues. These included profit tax on the Syrian Petroleum Corporation, the largest share of oil revenues; royalties; petroleum products surcharges; and the surplus from the Syrian Petroleum Corporation.¹⁸³ It is likely oil-related revenues were higher, since oil activity also generated economic activity in the Syrian economy, and this would have generated non-oil taxes.

By 2006, while government revenues in nominal terms had risen 42.1 percent, oil revenues in the government budget had fallen by 29.4 percent, so that oil revenues constituted only 28.7 percent of all government revenues.¹⁸⁴ That ratio was projected to drop further by 2010, to 25.1 percent.¹⁸⁵ Aside from falling oil production and revenue, this shift reflected how Syria was reforming its national budget with the level of income and profit taxes and of indirect taxes rising in absolute terms and as a share of total budget revenues.

Drought

Syria before the civil war was a heavily agricultural economy. Syrian authorities estimated that agriculture was the main source of income for 47 percent of the population and that it accounted for 20 percent to 25 percent of GDP and 16 percent to 20 percent of non-oil exports.¹⁸⁶ Syria experienced four consecutive droughts starting in 2006.¹⁸⁷ The drought in 2007/2008 was particularly severe and was the worst in 40 years, affecting primarily the northeast governorates of Hassakah, Deir ez-Zor, and Raqqa. In that season, the three governorates had rainfall of 66 percent, 60 percent, and 45 percent below average, respectively.¹⁸⁸ The drought affected an estimated 1.3 million people, 800,000 of them severely and nearly all of whom lived in the northeast.¹⁸⁹

Although concentrated in the northeast this affected all of Syria since Hassakah is the leading agricultural governorate in Syria. In 2007, it had 1.2 million hectares, or 25.6 percent of all Syrian lands under cultivation, ahead of Aleppo, which had slightly less than 1.1 million hectares under cultivation. The three aforementioned northeast governorates together accounted for 41.7 percent of Syria's cultivated land.¹⁹⁰ Even after years of drought, Hassakah remained Syria's leading agricultural governorate, with 1.1 million hectares planted in 2011, or 25.4 percent of all Syrian cultivated land. Together, the three northeast governorates that year accounted for 39.3 percent of all Syrian agricultural land.¹⁹¹

¹⁸¹ Specifically, this is exports of Standard Industrial Trade Classification (Revision 3) category 33, "Petroleum, Petroleum Products and Related Materials." "Table 7-9: Foreign Trade by Sections and Divisions of S.I.T.C. Rev.(3) 2010 (Value in "000" S.P.)," in Central Bureau of Statistics (Syria), Chapter Nine: Foreign Trade, *Syria Statistical Abstract 2011*, Damascus, 2011.

¹⁸² "Table 7-9: Foreign Trade by Sections and Divisions of S.I.T.C. Rev.(3) 2011 (Value in "000" S.P.)," in Central Bureau of Statistics (Syria), Chapter Nine: Foreign Trade, *Syria Statistical Abstract 2012*, Damascus, 2012.

¹⁸³ "Table 3. Syrian Arab Republic: Summary of Fiscal Operations, 2000-06," in International Monetary Fund, 2005b, p. 31.

¹⁸⁴ "Table 11. Syrian Arab Republic: Details of Budgetary Revenue, 2003-07," in International Monetary Fund, 2009b, p. 13.

¹⁸⁵ "Table 2: Syria Arab Republic: Summary of Fiscal Operations, 2005-2010," in International Monetary Fund, 2010, p. 18.

¹⁸⁶ Ministry of Agriculture and Agrarian Reform (Syria), August 2010, "National Programme for Food Security in the Syrian Arab Republic," National Agriculture Policy Center, Damascus: Syrian Arab Republic and Food and Agricultural Organization, p. xi.

¹⁸⁷ ACAPS, February 2010, "Secondary Data Review: Syrian Arab Republic, 07.12.11-13.12.11," Emergency Capacity Building Project, Geneva, December 13, 2011.

¹⁸⁸ United Nations, "Syria Drought Response Plan 2009-2010: Mid-Term Review."

¹⁸⁹ United Nations, 2010, p. 1. The document said 95 percent of those affected lived in the three northeast governorates, but it was ambiguous as to whether this proportion applied to the 1.3 million affected or the 800,000 severely affected.

¹⁹⁰ "Table 12-4: Area of Cultivated Lands by Agricultural Stabilization Zone 2007 Thousand Ha.," in Central Bureau of Statistics (Syria), Chapter Four: Agricultural Statistics, *Syria Statistical Abstract 2008*, Damascus.

¹⁹¹ "Table 12-4: Actually Planted Land by Agricultural Stability Zone and Governorate 2011 (000 Hectares)," in Central Bureau of Statistics (Syria), Chapter Four: *Agricultural Statistics, 2012*."

The effects of these droughts were particularly devastating on wheat production, grown primarily in the northeast. Syria produced slightly more than 4 million tons of wheat in 2007. In 2008, this crashed to 2.1 million tons, rising to 3.7 million tons in 2009 and then falling again to 2.1 million tons in 2010. By 2011, it was almost back to the 2007 mark, hitting almost 3.9 million tons.¹⁹² The droughts had a significant human cost as well. The northeast was already considered the poorest region within Syria, and one estimate holds that the droughts of 2007/2008 and 2008/2009 caused lost livelihoods for 800,000 people. In addition, the droughts spurred internal migration, with an estimated 65,000 families migrating to areas surrounding Aleppo, Damascus, and Deraa.¹⁹³ By one estimate, the droughts pushed 2 million to 3 million Syrians into extreme poverty.¹⁹⁴

4.2.2. Economic Reforms and Evolution Through 2011

Despite these challenges, the outlook for the Syrian economy immediately before the war seemed positive. The IMF estimated that the economy would improve over the medium term, with growth hitting 5.6 percent in each year from 2012 through 2014.¹⁹⁵ If this had materialized, it would indeed have been promising for Syria since real GDP growth averaged 4.5 percent annually from 2000 to 2010 and only 3.4 percent from 2009 to 2010.¹⁹⁶ This outlook followed years of reforms aimed at making Syria a more market-oriented economy.

Among the broad range of reforms were so-called structural reforms, essentially an attempt to reduce the role of the government in the economy, give more influence to market forces in resource allocation, increase the role of the private sector, and diversify the economy. Some of these reforms started in the 1990s, when Syria started to allow more private-sector participation in what was then a manufacturing sector dominated by the state.¹⁹⁷ Early in the post-2000 reform period, public enterprises accounted for 30 percent to 35 percent of GDP and dominated the energy sector and banks. In manufacturing, public enterprises had monopolies in mineral water, cement, oil, sugar refining, and fertilizers.¹⁹⁸ Government employment accounted for about 20 percent of total employment, high relative to comparable countries.¹⁹⁹

As it instituted reforms, the government simplified some investment procedures and reformed the tax system, raising the minimum for exemption from wage taxes and slightly raising the top income tax rate.²⁰⁰ It also set up a one-stop office for approving private investment, although how effective this office was remains unclear.²⁰¹ The government also introduced banking reform, allowing private banks, insurance companies, and microcredit institutions.²⁰² The first private banks were established in 2004, and by 2009 there were 12 with a total of 24 percent of all banking sector assets. Deposits increased rapidly, and bank lending to businesses was increasing, despite remaining well below regional averages. Syria freed the rates at which banks could lend in addition to rates on foreign currency deposits and loans.²⁰³

¹⁹² "Table 14-4: Production of Cereals and Dry Legumes 2007-2011 (000 Tons)," in Central Bureau of Statistics (Syria), Chapter Four: Agricultural Statistics, 2012. Table URL as of November 23, 2020: <http://cbssyr.sy/yearbook/2012/Data-Chapter4/TAB-14-4-2012.pdf>

¹⁹³ ACAPS, 2011.

¹⁹⁴ Robert F. Worth, 13 October 2020, "Earth is Parched Where Syrian Farms Thrived," *The New York Times*.

¹⁹⁵ International Monetary Fund, 2010, pp. 7, 21.

¹⁹⁶ Real GDP growth rates are drawn from International Monetary Fund, *Regional Economic Outlook: Middle East and Central Asia*, Online Database, Last Updated October 19, 2020. IMF data on Syria stop at 2010 because of the war.

¹⁹⁷ Abdallah Imam Haruna, February 2021, "The Political Economy of the Violence in Syria: An Impact-Based Analysis," *EJ-SOCIAL*, European Journal of Humanities and Social Sciences, Vol. 1, No. 1, pp. 41-51.

¹⁹⁸ International Monetary Fund, 2005b, p. 9.

¹⁹⁹ International Monetary Fund, 2005b, p. 12.

²⁰⁰ International Monetary Fund, 2010, p. 6.

²⁰¹ International Monetary Fund, 2010, p. 13.

²⁰² International Monetary Fund, 2010, p. 12.

²⁰³ International Monetary Fund, 2010, p. 12.

One of the most important components of these reforms was the reduction of subsidies. In 2000, explicit and implicit subsidies on agricultural products and energy amounted to 16.9 percent of GDP. Product subsidies are generally considered to be poor economic policy because they provide benefits to everyone regardless of need and, depending on the product, can even favor upper-income people. For example, a fuel subsidy would certainly benefit farmers who require the use of heavy machinery, but it would also benefit people who owned multiple cars, and especially cars with low kilometer per liter ratings. Furthermore, what often happens with subsidized products – and what happened in Syria – is that people buy the product at the lower national price and then smuggle it across porous borders to sell it at a higher price in a foreign country. Effectively, Syria was subsidizing purchases by foreigners.

In 2004, Syria raised the domestic price of diesel by 450 percent.²⁰⁴ Even so, the IMF estimated that in 2008, energy subsidies totaled 12.9 percent of GDP.²⁰⁵ These included price subsidies (lower fuel prices) and compensatory subsidies (transfers of cash, coupons, or other benefits to consumers). This followed reforms that included increasing the price of petroleum products and, to compensate for those price increases, raising public sector wages and providing coupons to every household to purchase 1,000 liters of diesel at a lower, subsidized price. The following year, Syria replaced the coupons with targeted cash transfers. This raised the compensatory subsidies and would have raised the total subsidy, but international oil prices fell that year, lowering the price subsidy and lowering total subsidies to 4.9 percent of GDP.²⁰⁶

An additional component was the liberalization of international trade. At the start of reforms, Syria had one of the world's most restrictive trade regimes, including barring imports of most consumer goods, a variety of non-tariff barriers, public enterprise trading monopolies, a complex tariff list, and foreign exchange restrictions.²⁰⁷ As a start to reforming this trade system, Syria in 2001 applied to join the World Trade Organization.²⁰⁸ The government reduced import tariffs and converted a positive import list to a negative import list, and subsequently shortened the negative list.²⁰⁹ A positive list tells business people what can be imported, and a negative list tells them what cannot be imported; positive lists are generally far more trade-restrictive. Syria in 2004 also signed a free trade agreement covering goods trade with Turkey, with the agreement entering into force on January 1, 2007, and it initialed a European Union association agreement in 2004 as well. Previous agreements included one covering goods trade with the European Union, which had entered into force in 1997, and the Pan-Arab Free Trade Area, which also covered goods trade and entered into force in 1998.²¹⁰

The trade reforms also exemplified how all of these reform efforts were uneven. Despite tariff reductions, the government, in 2009, introduced reference prices and customs duties that varied by country, ostensibly to guard against unfair trade practices but effectively providing protectionism for domestic industries.²¹¹

The government also attempted to ameliorate the effects of the drought, which were compounded by higher diesel prices due to the removal of subsidies. Policies included tax relief for farmers, loan rescheduling, cancellation of penalties on delayed loan repayments, and increased prices paid by the government for crops. In

²⁰⁴ International Monetary Fund, 2005b, p. 36.

²⁰⁵ International Monetary Fund, 2010, p. 10.

²⁰⁶ International Monetary Fund, 2010, p. 10.

²⁰⁷ Stephane Cossé, August 2006a, "*Reforming Syria's Trade Regime: Achievements and Prospects*," Chapter IV, pp. 43-52, in International Monetary Fund, Syrian Arab Republic: Selected Issues, IMF Country Report No. 06/295.

²⁰⁸ Gobat and Kostial, 2016.

²⁰⁹ International Monetary Fund, 2005b, p. 8; International Monetary Fund, 2010, p. 13.

²¹⁰ World Trade Organization, "*Regional Trade Agreements Database*," Geneva, Last Updated November 23, 2020.

²¹¹ International Monetary Fund, 2010, p. 6.

2008, the government established the Agricultural Support Fund, providing cash transfers to farmers while effectively replacing the removal of some input subsidies.²¹²

Syria received help from abroad too. In 2005, Russia agreed to write off \$9.8 billion worth of Syrian debt, about 73 percent of total Syrian debt to that country.²¹³ The Russian parliament ratified that write-off in 2008.²¹⁴ This contributed to lowering total public sector debt from 109.8 percent of GDP in 2004 to 35.1 percent in 2005, and total external debt in those two years from 73.3 percent of GDP to 23.4 percent of GDP.²¹⁵

4.2.3. Remaining Challenges

Even with all these reforms, there was still much left to do on the eve of the civil war. Recommendations included further liberalizing prices by lowering the number of goods subject to administrative pricing (price controls) and modernizing laws and regulations.²¹⁶ Syria had intended to introduce a value added tax in 2008, then postponed to 2011. However, by 2019, there was still no value added tax.²¹⁷ In addition, the way the government handled its own finances remained opaque, with state-owned enterprises and state-owned banks carrying out economic roles that normally would be handled by the central government budget.²¹⁸

Despite GDP growth, the labor market had significant problems as well. Labor force participation rates – the share of people either holding jobs or actively looking for work – had actually fallen throughout the decade, from 52.1 percent in 2000 to 44.9 percent in 2010.²¹⁹ This was especially true of youth ages 15 to 24, for whom labor force participation fell from 42.1 percent to 29.9 percent. Among those in the labor force, the unemployment rate declined somewhat from 9.5 percent in 2000 to 8.6 percent in 2010. This was largely driven by the male unemployment rate, which fell from 7.1 percent to 6.2 percent. Among women, the unemployment rate rose from 19.5 percent to 21.9 percent, above the Middle East average. Most tellingly, the employment to population ratio had fallen from 45.5 percent in 2000, above the average for the Middle East, to only 39.3 percent in 2010, slightly below the average for the Middle East and almost 20 percentage points below the world average. So while reforms had sparked increases in GDP, these gains were not visible within the labor market.

4.3. The Macroeconomy and Trade in Wartime

The civil war has played a hugely devastating role in the destruction of Syria's economy. This section will open with an overview of estimates of the decline of the Syrian economy and move on to an analysis of trade patterns as one example of that decline. Next the section discusses wartime economic policies and sanctions and their consequences on economic activity. In doing so it sets the stage for the ensuing section, which uses trade patterns to focus on Syrian manufacturing by disaggregated sector. To conduct the analysis in both chapters, it uses mirror trade data, a method that to date has been applied only sparingly in the analysis of the Syrian economy during wartime. Mirror trade data is trade data as recorded by partner countries rather than the trading country. When the trading country has questionable statistics, mirror trade data can provide a more accurate picture and make up for gaps in data collection and reporting by the target country. As will be seen, results using

²¹² International Monetary Fund, 2010, p. 6.

²¹³ "Russia Writes Off \$9.8 Billion of Syrian Debt," The Daily Star, January, 26, 2005.

²¹⁴ Associated Press, "Russian Parliament Ratifies Write-Off of Most of Syria's Multibillion-Dollar Debt," *Taiwan News*, 6 June 6 2008.

²¹⁵ "Table 7a. "Syrian Arab Republic: Public Sector Debt Sustainability Framework, 2004-2014," in International Monetary Fund, 2010, p. 23.

²¹⁶ International Monetary Fund, 2010, pp. 16, 38-39.

²¹⁷ International Monetary Fund, 2010, p. 9; Deloitte, "Syria Highlights 2019," International Tax, Updated January 2019.

²¹⁸ International Monetary Fund, 2010, p. 3.

²¹⁹ Labor market data are from World Bank, "World Development Indicators," Online Database, Update of December 20, 2019.

mirror trade data are broadly in line with other work on the Syrian economy, but can provide different levels of detail.

4.3.1. Estimates of the Decline of the Syrian Economy

The decline of the Syrian economy has been dramatic. One analysis estimated that real GDP declined more than 15 percent each year from 2010 to 2015, with the peak decline occurring in 2012, at 21.3 percent.²²⁰ By 2015, real GDP was only 43 percent of its prewar level. The destruction of oil-related GDP was especially notable, declining at an average annual rate of almost 34 percent and by 2015, oil GDP was only 13 percent of its prewar level. Another, more recent estimate put Syrian GDP in 2019 at 36 percent of its 2010 level.²²¹ And with the economic crisis in Lebanon starting in late 2019 followed by the COVID-19 pandemic in 2020, one estimate held that the Syrian economy would decline by a further 8.5 percent in 2020.²²²

The unemployment rate is estimated to have hit 60 percent by 2014, with 3.5 million people unemployed, and 3 million having lost their jobs because of the war. That same year, the poverty rate was estimated to have been 83 percent, compared to only 12.4 percent in 2007.²²³ A separate analysis estimated the poverty rate to peak at 89.4 percent in 2016, fall slightly to 86 percent in 2019, and then start rising again toward the end of the year.²²⁴ Inflation skyrocketed, with the consumer price index rising almost 350 percent between 2010 and 2015.

No sector was spared from the devastating effects of the war. Beyond oil, manufacturing GDP is estimated to have declined by 77 percent through 2015, construction by 70 percent, wholesale and retail trade by 68 percent, and agriculture – which accounted for 20 percent of prewar GDP and was a vital sector for prewar employment – by 57 percent.²²⁵

The economy also underwent a great deal of capital flight, with Syrian business people not only moving out, but taking any available capital with them.²²⁶ The central government ran substantial deficits financed by the Central Bank of Syria which, in turn, is one of the main factors that would have spurred inflation and a depreciation of the Syrian pound in the parallel market, from 46.8 to the U.S. dollar in 2011 to 391 to the dollar in 2015.²²⁷

The outcome of these actions was a severe downturn in consumption. While the overall economy shrunk, household consumption when measured at nominal purchasing power parity fell from 54 percent of the economy in 2010 to only 34 percent in 2017 (Figure 12).²²⁸ The government share rose as Syria moved to a wartime economy, from 31 percent to 38 percent. Gross capital formation – investment (not shown) – fell from 13 percent to only 6 percent. And the previously noted faulty data collection became less and less reliable, with the share of residual trade and GDP statistical discrepancy rising from 11 percent to 28 percent.²²⁹ This signals

²²⁰ Gobat and Kostial, 2016, p. 27.

²²¹ Syrian Center for Policy Research, 2020a, p. 35.

²²² Fitch Solutions, 17 August 2020, “*Syrian Economy to Suffer Deep Contraction As Prices Surge*,” Country Risk.

²²³ Gobat and Kostial, 2016, p. 7, citing data from the Syrian Center for Policy Research.

²²⁴ Syrian Center for Policy Research, 2020a, p. 95.

²²⁵ Gobat and Kostial, 2016, pp. 10-11.

²²⁶ Magdi Edris and Ahmad Ghazal, April 2018, “The Velocity of Money in the Syrian Economy,” Research Department, Central Bank of Syria.

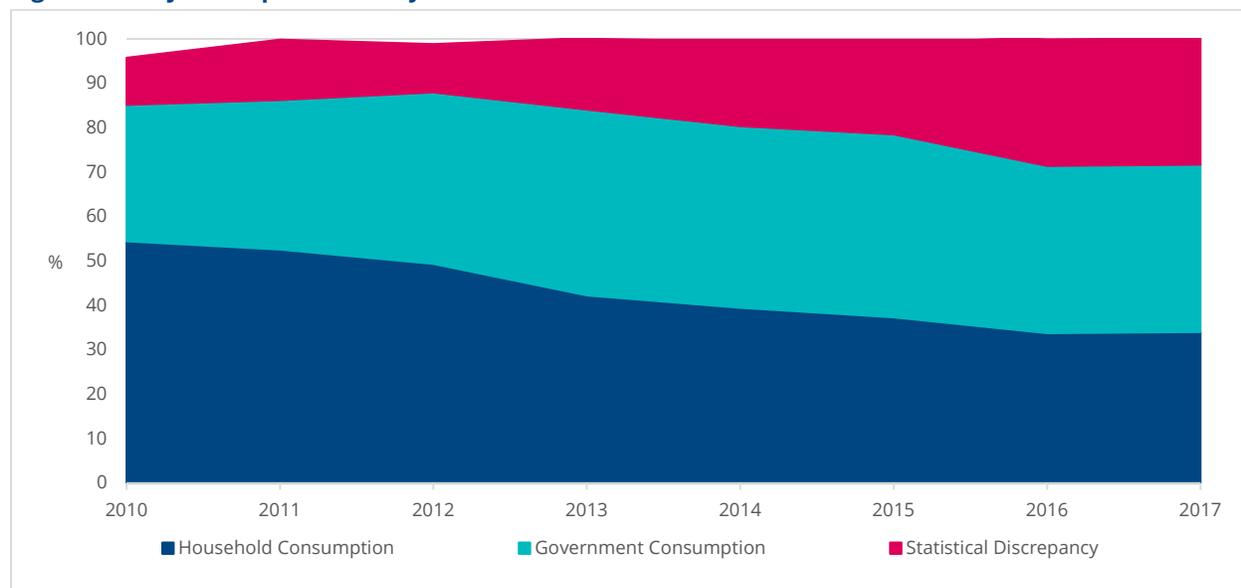
²²⁷ Edris and Ghazal, 2018.

²²⁸ Purchasing power parity is a method of adjusting prices to account for cross-country differences. Most traded goods are comparably priced worldwide. However, non-traded goods, such as haircuts, have vastly different prices, depending on the economy. Purchasing power parity adjusts for these price differences to enable cross-country comparisons of living standards.

²²⁹ Penn World Tables 9.1 (Robert C. Feenstra, Robert Inklaar and Marcel P. Timmer, “The Next Generation of the Penn World Table,” *American Economic Review*, Vol. 105, No. 10, 2015, pp. 3150-3182), retrieved from FRED, Federal Reserve Bank of St. Louis, November 17, 2020. The statistical

that there were large, unrecorded, international trade or capital flows, such as capital flight, or that there was a divergence between recorded domestic production and actual domestic production.

Figure 12: Major Components of Syrian GDP



Source: Penn World Tables 9.1 (Robert C. Feenstra, Robert Inklaar and Marcel P. Timmer, "The Next Generation of the Penn World Table," *American Economic Review*, Vol. 105, No. 10, 2015, pp. 3150-3182), retrieved from FRED, Federal Reserve Bank of St. Louis, November 17, 2020.

NOTES: All variables are measured at nominal purchasing power parity. Variables include the following, all via FRED sourced from University of Groningen and University of California, Davis; "Share of Household Consumption at Current Purchasing Power Parities for Syrian Arab Republic" [CSHCCPSYA156NRUG]; Share of Government Consumption at Current Purchasing Power Parities for Syrian Arab Republic [CSHGCP SYA156NRUG], <https://fred.stlouisfed.org/series/CSHGCP SYA156NRUG>; "Share of Residual Trade and GDP Statistical Discrepancy at Current Purchasing Power Parities for Syrian Arab Republic" [CSHRCP SYA156NRUG]; Share of Gross Capital Formation at Current Purchasing Power Parities for Syrian Arab Republic [CSHICP SYA156NRUG], <https://fred.stlouisfed.org/series/CSHICP SYA156NRUG>; Share of Merchandise Exports at Current Purchasing Power Parities for Syrian Arab Republic [CSHXCP SYA156NRUG], <https://fred.stlouisfed.org/series/CSHXCP SYA156NRUG>; University of Groningen and University of California, Davis, "Share of Merchandise Imports at Current Purchasing Power Parities for Syrian Arab Republic" [CSHMCPSYA156NRUG].

Data indicate a reversal of the outcomes of previous reforms on multiple dimensions. Using the banking sector as an example, the war dealt massive losses to the private banks and restricted formal banking to areas held by the central government.²³⁰ In 2005, just as private banks were starting, concentration of assets among the three largest banks was 97.5 percent.²³¹ All were state-owned banks. By 2012, even in the early days of the war, that had fallen to 47.8 percent. However, by 2017, it had risen to 79.7 percent. Five-bank asset concentration followed an even worse trajectory, from 99.8 percent in 2005 to 70.3 percent in 2012 and then back to 86.8

discrepancy in national accounts results from a divergence between different measures of GDP that, in theory, should be equivalent, specifically between GDP as measured by production or value added, GDP as measured by expenditure, and GDP as measured by income (Bruce T. Grimm, "The Statistical Discrepancy," Bureau of Economic Analysis, U.S. Department of Commerce, WP2007-01, March 2, 2007). In the balance of payments, the statistical discrepancy results from errors and omissions in comparing the sum of the current account (a broad measure of the trade balance) and the capital account with the financial account (a measure of flows of financial assets). If all transactions are recorded accurately, the balance on the financial account should be the same magnitude, but of opposite sign, of the balance on the other two accounts (International Monetary Fund, "Balance of Payments and International Investment Position Manual," Sixth Edition (BPM6), Washington, D.C., 2009a).

²³⁰ Joseph Daher, "The Private Banking Sector in Syria: Between Survival and Opportunity," Research Project Report, Wartime and Post-Conflict in Syria, Issue 2021/07, Middle East Directions, Robert Schuman Centre, European University Institute, May 28, 2021.

²³¹ World Bank, "Global Financial Development Database," October 2019 Version, Washington, D.C., 2019; World Bank, *Global Financial Development Report 2019/2020: Bank Regulation and Supervision a Decade After the Global Financial Crisis*, Washington, D.C., 2020.

percent in 2017. Furthermore, non-interest income relative to total income rose dramatically, from 34.2 percent in 2010 just before the war to a peak of 92.1 percent in 2015, suggesting a notable throttling back of business lending.²³² In fact, one early outcome of the war was a loss of confidence in the banks, with people withdrawing money, in part for the psychological comfort of being able to access it with certainty.²³³

In a dramatically damaged and distorted economy, not all indicators followed a negative trend. For example, the percentage of the population using the Internet rose from 20.7 in 2010 to 34.3 in 2017. And mobile cellular subscriptions per 100 people rose from 54.8 in 2010 to 90.0 in 2017 and then further to 113.6 in 2019 (implying that many people had more than one mobile telephone).²³⁴ But those advances were rare, and likely concentrated among a narrow section of the population.

A modest demographic assessment concludes this section. Although the war created millions of refugees, there was also natural population growth among those who stayed, so the Syrian population fell from 22.2 million in 2010 to a trough of 17.5 million in 2017, and then rose to an estimated 19.4 million in 2020.²³⁵ The population changed in ways that may herald future economic problems. The proportion of the prime working age population bracket, ages 35 to 59, relative to the total population, actually rose from 20.3 percent in 2010 to an estimated 24.8 percent in 2020. However, given the capital destruction and the dramatic decline of economic activity, many of these people likely were unable to turn their existing skills into productive activity and were also likely losing those skills. Furthermore, the proportion of youth ages 0 to 14 in the population fell from 26.0 percent in 2010 to an estimated 23.3 percent in 2020, while the proportion of youth ages 15 to 24 – those people about to enter the labor market – fell from 32.5 percent in 2010 to an estimated 29.7 percent in 2020. Wartime Syria became the site of an aging population offering constrained opportunities to young people to learn important job skills that they would need – and lack because of the war – for their entire working lives.

4.3.2. Aggregate Trade Patterns Using Mirror Trade Data

To gain a sense of how the Syrian economy evolved, this section presents trade data from the UN Comtrade database, specifically Syrian export data as measured by partner import data, *by commodity*. Trade data are generally recorded by commodity, rather than the industry in which commodities are produced. Section 4.4 categorizes the trade data into their respective industries. As noted above, the trade data presented are mirror data, meaning Syrian trade as recorded by its trade partners. In particular, the data show imports from Syria by 161 countries, reflecting Syrian exports. There are two advantages to using these mirror trade data. First, countries are usually more assiduous about recording imports than exports because they stand to benefit from customs duties on imports. Second, aggregating mirror trade data captures transshipments, for example, to avoid sanctions. If a good is being exported to one country in contravention of sanctions, it may be routed through a second country. That second country should, in turn, record the data as coming from Syria, so final destination should not matter. In fact, there is evidence that because of wartime sanctions, a large share of Syrian trade was rerouted through neighbors, primarily Turkey, Lebanon, and Iraq.²³⁶ The biggest flaw of mirror data is the same flaw that pertains to any official trade statistic – the data do not capture smuggled goods that are not recorded by an initial receiving country. The specific data used also do not provide information on services exports, such as tourism. However, given that tourism stopped during the civil war, this is not a major flaw.

²³² Non-interest income relative to total income registered 81.0 percent in 2013, 81.4 percent in 2014, 92.1 percent in 2015, and 84.9 percent in 2016. For reasons that are not clear, it fell to 26.4 percent in 2017 (World Bank, 2019).

²³³ Edris and Ghazal, 2018, p. 40.

²³⁴ World Bank, "World Development Indicators," Online Database, Update of October 15, 2020. The specific variables are "Individuals using the Internet (% of population)," IT.NET.USER.ZS, and "Mobile cellular subscriptions (per 100 people)," IT.CEL.SETS.P2.

²³⁵ U.S. Census Bureau, "International Data Base," Version 12.03.21, International Programs, Last Updated December 2019.

²³⁶ Samir Aita, December 2020b, "The Unintended Consequences of U.S. and European Unilateral Measures on Syria's Economy and its Small and Medium Enterprises," The Carter Center, p. 19.

Syrian goods exports crashed during the war, from \$8.5 billion in 2010 to \$731 million in 2018, a decline of 91 percent (Table 3). The steepest decline occurred from 2011 to 2012, driven by the decline of exports of mineral fuels – primarily oil and products – by almost \$4.9 billion. As discussed below, this was largely a result of sanctions placed on the Syrian Government. Agricultural products performed the best, with exports of animal and vegetable oil, fats and waxes actually *rising* by 89 percent during the war, and exports of food and live animals dropping 66 percent between 2010 and 2018.

Table 3: Syrian Goods Exports by Commodity, 2010-2018, Million U.S. \$

Commodity Code	Commodity Name	2010	2011	2012	2013	2014	2015	2016	2017	2018
0	Food and live animals	928.9	740.6	638.7	561.0	439.4	372.8	407.1	411.6	318.6
1	Beverages and tobacco	10.4	8.6	2.4	0.6	1.6	0.2	0.2	0.7	0.6
2	Crude materials, inedible, except fuels	566.1	494.7	299.4	220.8	212.2	135.9	85.7	63.7	89.4
3	Mineral fuels, lubricants and related materials	5,243.6	5,019.3	149.2	1.2	58.4	0.5	0.3	0.1	0.2
4	Animal and vegetable oils, fats and waxes	72.0	60.4	34.7	46.8	43.2	43.7	96.8	100.3	136.3
5	Chemicals and related products, n.e.s.	253.2	336.9	195.3	94.2	84.8	64.3	41.3	32.9	31.7
6	Manufactured goods classified chiefly by material	803.0	812.4	464.2	366.8	153.4	114.1	104.4	113.5	79.3
7	Machinery and transport equipment	161.0	153.3	100.1	54.1	24.1	16.4	8.8	8.8	7.9
8	Miscellaneous manufactured articles	382.1	405.6	269.4	116.1	78.5	77.4	86.2	73.3	63.2
9	Commodities and transactions not classified elsewhere in the SITC	20.7	19.4	19.9	22.5	11.6	41.7	1.0	5.7	4.1
Total	All Commodities	8,563.3	8,183.5	2,173.5	1,484.3	1,107.1	867.0	831.8	810.7	731.3

Source: United Nations, UN Comtrade Database, 2014-2017, data downloaded November 14, 2020.

NOTES: Data show imports by 161 partner countries, reflecting Syrian exports. With limited exceptions, data are classified by Standard International Trade Classification Revision 4 (United Nations, *Standard International Trade Classification Revision 4*, Statistical Papers, Series M, No. 34, Rev. 4, ST/ESA/STAT/SER.M/34/REV.4, Statistics Division, Department of Economic and Social Affairs, New York, 2006). The 2014 increase in mineral fuels, lubricants and related materials is due almost entirely to \$58.0 million worth of imports by India, from no recorded imports in 2013 and \$137.7 million in 2012. The large increases in exports of animal and vegetable oils, fats and waxes in 2016, 2017, and 2018 are largely due to Saudi Arabia (\$11.0 million in 2015, \$25.3 million in 2016, \$17.3 million in 2017, and \$31.0 million in 2018) and Spain (\$4.9 million in 2015, \$19.3 million in 2016, \$48.3 million in 2017, and \$59.1 million in 2018).

Reports on agricultural production in Syria during the war confirm that agriculture declined due to wartime conditions, but that agriculturalists continued to produce. Food production declined 40 percent through 2016, meaning that it was operating at 60 percent of its pre-war levels.²³⁷ Likewise, by 2018, the sheep population had declined by an estimated 39.7 percent, the goat population by an estimated 29.2 percent, and the cattle population by an estimated 40.2 percent, so all of these were still well above half their pre-war amounts.²³⁸

The overall result was that the war changed the commodity composition of trade. In 2010, mineral fuels, lubricants and related materials constituted 61 percent of all Syrian goods exports yet by 2018, they had fallen essentially to 0 percent. In contrast, animal and vegetable oils and food and live animals constituted 12 percent in 2010 but rose to 62 percent in 2018, replacing oil as the leading commodity export.

Beyond oil (and the tiny beverages and tobacco sector), manufactured goods suffered the steepest declines. Exports of machinery and transport equipment fell 95 percent from 2010 to 2018 – the worst performance after oil – while manufactured goods, classified chiefly by material, fell 90 percent. This is likely due to destruction of plant and capital equipment and also likely stems from the movement of capital and production to Turkey.²³⁹

Country patterns are less informative because of sanctions and transshipment, but a few notable points emerge. Before the war, the European Union had been a major destination for Syria's exports, but sanctions imposed in 2011 effectively ended most direct trade.²⁴⁰ In 2010, Germany, Italy, and France were the top three importers of Syrian goods, amounting to 41.8 percent of all Syrian goods exports. By 2018, that had fallen to only 4.8 percent.

Syrian exports were reallocated to Middle Eastern countries, at least as a first destination. In 2018, the top five destinations were all Middle Eastern: Saudi Arabia, Lebanon, Egypt, Jordan, and Turkey. In 2010, these five countries received 24.1 percent of all recorded Syrian goods exports and by 2018, they received 58.0 percent. However, this did not mean the level of trade increased. Far from it – Syrian exports to the five countries declined by almost 80 percent during that period, from \$2.1 billion in 2010 to \$424 million in 2018. Exports to some countries stayed steady or rose. Exports to Serbia measured \$8.3 million in 2010 and averaged more than \$16 million annually through 2018, although with high volatility. In addition, exports to Sweden in 2018 were above their 2010 level. But this was rare. Syrian exports declined across the board, in large part because production fell due to wartime dislocation and destruction.

4.3.3. Policy and Sanctions

War by itself was not the only influence on economic trends, although it was by far the most important. The Syrian government in Damascus did not stand still on economic policy, and neither did the world, leveling a series of punishing sanctions in response to the war starting in 2011, and in the case of the United States, building on previous sanctions. This section reviews economic policy and sanctions and begins to narrow the focus onto manufacturing.

²³⁷ Kerina Tull, "Agriculture in Syria," K4D Helpdesk Report 133, Institute of Development Studies, Brighton, United Kingdom, , June 26, 2017.

²³⁸ Food and Agricultural Organization of the United Nations and World Food Programme, 5 September 2019, "FAO/WFP Crop and Food Security Assessment Mission to the Syrian Arab Republic," Special Report.

²³⁹ Samer Abboud, 31 January 2017, "The Economics of War and Peace in Syria: Stratification and Factionalization in the Business Community," The Century Foundation, p. 9.

²⁴⁰ Gobat and Kostial, 2016, p. 13.

Economic Policy

At the formal level, the Syrian government instituted numerous laws and legislative decrees to adjust to wartime conditions and shape the hoped-for postwar future of the country.²⁴¹ These policies initially were meant to provide direct help to the population, such as by increasing subsidies, although further into the war, government budget shortfalls made this ineffective. They also included a suite of policies throughout the war that were related to land control and effectively cemented population changes and control over land by networks associated with ruler Bashar al-Assad. Additional policies were meant to help businesses, although these were largely inconsequential in their effect. As a whole, these policies did little to support the population or enable most businesses to succeed, but they did lead to a greater concentration of power in the hands of networks associated with Bashar al-Assad.

Very early in the crisis, when it was largely demonstrations rather than a civil war, the government cracked down violently on the one hand, but took minor steps to placate the public on the other hand, such as by raising salaries for some low-wage earners. It also lowered fuel prices, froze electricity prices, and initiated a program to reduce unemployment.²⁴² Specific measures included doubling the fuel compensation for public employees, hiring 10,000 new graduates into the public sector, converting numerous temporary public sector employees into permanent employees, and setting up a new fund to aid poor families.²⁴³ Notably, the government reversed course on the subsidies reforms of the 2000s, increasing them as civil unrest evolved into a civil war. However, by 2020, and faced with an ongoing serious budget crisis, the Syrian government reduced subsidies and introduced dramatic price increases to fuel oil and petrol.²⁴⁴

The most notable set of policies involved laws related to housing, land, and property. By the fall of 2020, the government had instituted approximately 50 laws and legislative decrees giving it and local governments greater control of land and specifically allowing it to take over and redevelop areas formerly held by the opposition but taken back in war.²⁴⁵ In fact, Syria introduced more laws on these issues subsequent to 2011 than it had since independence in 1946.²⁴⁶ The most impactful of these laws allowed governments and other entities to claim land through eminent domain, create public-private partnership (PPP) holding companies or other companies, and rezone and redevelop urban areas with few checks. Effectively, this was a way to expropriate internally displaced persons and refugees and keep them from returning.²⁴⁷

Throughout the war, the Assad government instituted a number of policies meant to support business, but as with other policies, these were either ineffectual, inconsistent, or swamped by war effects. Reduced and inconsistent energy supply, low internal market demand, destruction of plant and equipment, and a variety of informal payments have all worked against any formal efforts to maintain business activity.²⁴⁸

Early business-related policies included rescheduling loans to farmers and industrial entrepreneurs and providing greater ease of access to new export markets. Furthermore, greater protection was provided to

²⁴¹ For a good listing of the various measures, see the database at Syrian Law Journal, 2021, "*Syrian Law – Recent Legislation*," Webpage.

²⁴² Itamar Rabinovich and Carmit Valensi, *Syrian Requiem: The Civil War and Its Aftermath*, Princeton and Oxford: Princeton University Press, 2021, pp. 44-45.

²⁴³ Rabie Nasser, Zaki Mehchy, and Khalid Abu Ismail, January 2013, "*Socioeconomic Roots and Impact of the Syrian Crisis*," Syrian Center for Policy Research, pp. 58, 60.

²⁴⁴ Joseph Daher, 30 October 2020, "*The Political Economy of Syria: Deepening Pre-War Orientations*," Arab Reform Initiative, p. 7. Specifically, it doubled the fuel oil price and raised the petrol price by 80 percent.

²⁴⁵ Daher, 2020.

²⁴⁶ Samir Aita, September 2020a, "*Urban Recovery Framework for Post-Conflict Housing in Syria: A First Physical, Social and Economic Approach*," Paris: Cercle des Economistes Arabes, p. 67.

²⁴⁷ This is a brief summary of a series of complex laws. For more detail, see Aita, 2020a.

²⁴⁸ Syrian Center for Policy Research, 2020a, p. 43.

domestic companies in the form of an import ban, but that was soon after revoked.²⁴⁹ This and other policies to limit imports and help local production foundered on the new realities of the wartime economy. With manufacturing badly hurt by the war, importing became more lucrative and was dominated by regime-linked networks that ensured policies limiting imports would be rolled back.²⁵⁰

Aside from trade restrictions, the government instituted a number of other policies to support business. These included import tariff exemptions for production equipment, tax benefits for damaged firms, and the rehabilitation of damaged industrial zones and creation of new zones.²⁵¹

The government also started thinking in terms of broader reconstruction and reconstitution of the economy as the tide of war turned. In February 2016 it announced the “National Partnership” to replace the 2005 “Social Market Economy” policy. Central to this was a new law on PPPs that allowed the private sector to be majority shareholder and manage state assets in all sectors except oil extraction. This continued the privatization of the Syrian economy that had been part of the economic reforms of the 2000s.²⁵² Aimed primarily at reconstruction, as noted above in the discussion on housing, land, and property laws, it also extended to industry. For example, in 2019, the government partnered with the Qaterji group to rehabilitate the Msalamiyeh Cement Factories near Aleppo, with the Qaterji group investing about \$317 million and receiving a share of the profits.²⁵³ Despite this example, the use of PPPs to revitalize business beyond real estate and property development has been limited. Furthermore, as with most policies, the National Partnership has operated to transfer wealth to favored elite networks in the absence of state fiscal capacity.²⁵⁴

The next year, in 2017, the government introduced the “Rebuild Syria” strategy to more fully move the policy focus to post-war reconstruction.²⁵⁵ The strategy “aimed to revive economic and social life, minimize the negative impact of Western sanctions, overcome isolation in the Arab world... and to attract the support of UN agencies.”²⁵⁶ With limited domestic resources, it also attempted to mobilize international resources through investment from Russia, Iran, and China. Plans and potential investments have been announced, such as China’s plan to invest \$2 billion in industrial parks, but China has generally been cautious in risking any capital on Syria.²⁵⁷ Memoranda of understanding have been signed with Russia and Iran, and agreements have been made, largely for infrastructure and resources.²⁵⁸ However, the positive effects on most businesses have been minimal, and international partners have either been reluctant to risk large amounts of capital (Russia and China) or have little capital to risk (Iran).

Sanctions

Beyond the war and in addition to the varying and unsupportive domestic legal policy environment, international sanctions have aided in the destruction of the Syrian economy. Numerous countries and country

²⁴⁹ Nasser, Mehchy, and Abu Ismail, 2013, p. 60.

²⁵⁰ Daher, , 2020, pp. 8-10.

²⁵¹ Syrian Center for Policy Research, 2020a, p. 43.

²⁵² Daher, 2020.

²⁵³ Center for Operational Analysis and Research – COAR, 2019b, “Government, Qaterji Strike Cement Partnership in Aleppo City,” *Syria Update*, October 9-15, p. 10.

²⁵⁴ Samer Abboud, 31 January 2019, “From the Social Market Economy to the National Partnership: The Conflict Elite and Public-Private Partnerships in a Post-War Syria,” The London School of Economics and Political Science.

²⁵⁵ Igor A. Matveev, December 2019, “Russian-Syria Business Cooperation: Challenges and Prospects,” Discussion Paper 1, Syria Transition Challenges Project, Geneva Centre for Security Policy.

²⁵⁶ Matveev, 2019, p. 3.

²⁵⁷ Harvey Morris, “China Extends Helping Hands to Rebuild Syria,” *China Daily*, February 10, 2018; Guy Burton, Nicholas Lyall, and Logan Pauley, “China and the Reconstruction of Syria,” *The Middle East Journal*, Vol. 75, No. 1, Spring 2021, pp. 55-75.

²⁵⁸ Muriel Asseburg, July 2020, “Reconstruction in Syria: Challenges and Policy Options for the EU and its Member States,” SWP Research Paper 11, Stiftung Wissenschaft und Politik – German Institute for International and Security Affairs, Berlin, p. 12.

groupings have imposed sanctions on Syria. These include the United States, the European Union, the League of Arab States, Australia, Canada, Japan, Norway, Switzerland, Turkey, and the United Kingdom. General measures have included financial sanctions, asset freezes, arms embargoes, and travel restrictions.²⁵⁹ Although there are no United Nations sanctions on Syria, there are UN al-Qa'ida and Islamic State sanctions, overseen by a United Nations Security Council sanctions committee, that apply to Syrian territory because of the presence of the Islamic State (also known as the Islamic State of Iraq and Syria) and al-Qa'ida-related groups such as Hurras al-Din and Hayat Tahrir al-Sham.²⁶⁰ The latest innovation is the U.S. Caesar Syria Civilian Protection Act, which took effect on June 17, 2020, and will be discussed further in Section 4.5.

An important target of the initial round of sanctions in 2011 and 2012 was the Syrian oil industry. The United States also instituted a broad export ban, while the EU banned exports of several classes of goods. The majority of countries also included travel bans and financial actions.²⁶¹

The sanctions had a variety of consequences for the economy and business activity.²⁶² They slowed the formation of new small industrial enterprises. During the war years, most new companies were started in the food industry, with some new investments in detergents, plastics, and pharmaceuticals. Businesses were further affected by the difficulty of importing raw materials thus minimizing exporting output. Sanctions also hampered the growth of private banks and trade finance with financing shifting to informal channels. Relatedly, sanctions also led to over-compliance by international financial institutions, further hampering operations.

While the sanctions certainly affected business activity, they also affected the structure of the economy. Specifically, they strengthened and narrowed regime-linked business networks which could help Syria attain goods and services and interact with the outside world. For example, a government-owned company was blocked from importing petroleum products, the government changed the law to allow for private importation, and private individuals served as a front for the public company.²⁶³ The sanctions also pushed large parts of the economy into informality and indirectly created revenue sources for armed groups.²⁶⁴ Analyses of sanctions more generally have noted that they often have negative second-order consequences.²⁶⁵

Despite these effects, sanctions are not the most serious problem the Syrian economy faces. There is a valid argument that “the regime’s massive destruction of Syria’s infrastructure; mass population displacement; the collapse of the Lebanese economy [starting in 2019]; the regime’s corruption and predation; and the refusal of its major international patrons, including China and Russia, to provide any meaningful assistance” have been far more serious problems.²⁶⁶ Furthermore, should sanctions be lifted, business activity is likely to be channeled through regime networks, limiting the benefits to ordinary Syrians.

²⁵⁹ Aron Lund, 25 April 2019, “Briefing: Just How ‘Smart’ are Sanctions on Syria?” *The New Humanitarian*; Alice DeBarre, December 2019, “Making Sanctions Smarter: Safeguarding Humanitarian Action,” International Peace Institute.

²⁶⁰ United Nations Security Council, *Security Council Committee Pursuant to Resolutions 1267 (1999) 1989 (2011) and 2253 (2015) Concerning ISIL (Da’esh) Al-Qaida And Associated Individuals Groups Undertakings and Entities*, Webpage, undated. Hayat Tahrir al-Sham is a rebranded successor group to what was originally an Islamic State offshoot called Jabhat al-Nusra (Victory Front). Nusra changed its name and evolved first to Jabhat Fateh al-Sham (The Levantine Conquest Front) and then to HTS (Assembly for the Liberation of the Levant). HTS was announced as including Nusra, Harakat Nur al Din al Zinki, Liwa al Haqq, Ansar al Din, and Jaysh al Sunna, plus other groups. However, in July 2017, clashes within the group essentially led it to being largely, if not exclusively, Nusra (Counter Extremism Project, *Nusra Front [Jabhat Fateh al-Sham]*, October 2019).

²⁶¹ Nasser, Mehchy, and Abu Ismail, 2013, p. 62.

²⁶² This is summarized from Aita, 2020b.

²⁶³ Abboud, 2017, p. 8. The company was Mahrukat.

²⁶⁴ Aita, 2020b, p. 5.

²⁶⁵ Clay R. Fuller, 8 June 2021, “Can Economic Sanctions Be Replaced?” *Inkstick*.

²⁶⁶ Steven Heydemann and Jihad Yazigi, 24 March 2021, “Syrian Uprising 10-Year Anniversary: A Political Economy Perspective,” *The Syrian Observer*.

4.3.4. Conclusion

Multiple independent analyses, independent data collection, and partner-country data show the depths to which the Syrian economy crashed because of the war as well as sanctions. With a central government intent on survival, policy was supportive mostly of those activities that could quell popular unrest, strengthen the country's ability to import, and enhance the regime's wealth and power. Agriculture managed to keep operating, and the economy tilted toward trade and services, in part because those latter activities did not rely on expensive physical plant and equipment that could be destroyed or stolen or on a steady supply of reliable and affordable electricity. The next section takes a more focused look at the consequences of the war for manufacturing trade and production.

4.4. Syrian Manufacturing in Wartime

Beyond oil, the broad sector that appears to have experienced the largest decline was manufacturing. IMF research estimated that manufacturing GDP in Syria declined by 77 percent from 2010 to 2015.²⁶⁷ The number of industrial establishments by 2018 had fallen to between 65,000 and 71,000, compared to 130,000 before the war, with many investors relocating to Egypt, Turkey, and Jordan.²⁶⁸ Manufacturing experienced substantial growth in 2016 and 2019.²⁶⁹ But given the overall projected decline of the economy in 2020, manufacturing also likely slumped.

This section uses mirror trade data to take a deeper look at trends in manufacturing, focusing on industries rather than commodities as in Section 4.3.²⁷⁰ It complements previous work, for example research based on media reports, interviews, and discussions.²⁷¹ It starts first with nine aggregated manufacturing industries, and then moves to an analysis of trends in 28 disaggregated manufacturing industries. To do so, it uses trade data by disaggregated commodity that is then translated into industry-level data. The idea behind using the trade data to discuss production trends is that over the short term, industry export intensity should stay fairly steady, so that if an industry exports 10 percent of its output one year, it likely exports about the same percent of output in subsequent years. Thus, while the trade data do not necessarily reflect overall industry production, *trends* in trade data are likely to reflect *trends* in manufacturing output. In fact, the disaggregated and reassembled mirror dollar-valued trade data show that on a nominal basis, manufacturing exports declined by 92 percent from 2010 to 2015. Although larger than the IMF estimate of decline, it reflects the same large trend decline.²⁷²

There are some facets of Syrian manufacturing this method does not capture. During the war, the Syrian economy became highly geographically fragmented and this method analyzes Syrian manufacturing activity for the country as a whole, and cannot take account of geographic shifts or differential production trends by region. In addition, as international trade became more difficult and came to rely on new networks, the relationship

²⁶⁷ Gobat and Kostial, 2016, p. 10.

²⁶⁸ Joseph Daher, May 2019, "Syria's Manufacturing Sector: The Model of Economic Recovery in Question, Wartime and Post-Conflict in Syria Research Project Report 2019/08, Robert Schuman Centre for Advanced Studies, European University Institute.

²⁶⁹ Syrian Center for Policy Research, 2020a, p. 43.

²⁷⁰ As explained in Appendix A, this section relies on trade data categorized according to Standard International Trade Classification Revision 2 (United Nations, *Standard International Trade Classification Revision 2*, Statistical Papers, Series M, No. 34, Rev. 2, ST/ESA/STAT/SER.M/34/REV.2, Statistical Office, Department of Economic and Social Affairs, New York, 1975), and industry categories according to International Standard Industrial Classification Revision 2 (United Nations, *International Standard Industrial Classification of all Economic Activities*, Statistical Papers, Series M, No. 4, Rev. 2, Statistical Office of the United Nations, Department of Economic and Social Affairs, New York, 1968).

²⁷¹ Daher, 2019.

²⁷² Dollar inflation was extremely mild during this period, so the difference in magnitude does not reflect the fact that the IMF computation is in real terms and the trade data are in nominal terms. The monthly U.S. import price index for manufacturing in 2015 averaged only about 0.75 percent higher than the monthly U.S. import price index for manufacturing in 2010 (U.S. Bureau of Labor Statistics, "Table 3. U.S. Import Price Indexes for Selected Industries," *Import Export Price Indexes*, Last Modified on November 17, 2020; Table [URL](#) as of 27 November 2020.

between trade and production might have eroded, and the manufacturers who remained in Syria might have prioritized their efforts to the local rather than international markets. Accordingly, while this report provides new information on trade and production trends by disaggregated manufacturing industry, more detailed research, for example on consumption patterns in Syria, can add to the understanding of Syrian manufacturing in wartime. Appendix A provides further information on the relationship between industry trade and industry output, details on how the trade data were translated into industry categories, and additional information on why the trade data used in this report likely captures most Syrian trade, despite the likelihood of inaccuracies due to unrecorded trade flows and other statistical issues.

4.4.1. Manufacturing in Syria

Manufacturing in Syria before the war represented an important source of employment but proved to be of low productivity as indicated by its employment share of the economy and its GDP share. In 2010, manufacturing constituted 16 percent of all employment, well above its share of GDP.²⁷³ In the decade before the war, foreign and domestic investment in the manufacturing sector amounted to only 13 percent of total investment.²⁷⁴ Highlighting the problems with Syrian data, manufacturing's share of GDP was estimated to range from 3.6 percent of GDP to 8.1 percent of GDP in 2001.²⁷⁵ In 2010, it was estimated to be 9.0 percent.²⁷⁶ In comparison, manufacturing was 14.9 percent of Arab world GDP in 2001 and 13.0 percent in 2010. In the Middle East and North Africa as a whole, these figures were 15.5 percent and 13.1 percent in 2001 and 2010, respectively. Aside from providing employment, manufacturing was important to pre-war Syria for the notable reason that manufacturing exports were important to Syria's future economic development.²⁷⁷ Expansion of exports in labor-intensive, non-oil sub-sectors of the economy, such as manufacturing, was also seen as important to employment creation.²⁷⁸

Manufacturing experienced dramatic declines during the civil war due to several factors.²⁷⁹ Manufacturing relies on a number of inputs, such as energy in the form of fuel and electricity – created by capital-intensive infrastructure – and transportation, which relies on intact roads and unencumbered passage. Capital destruction has been extensive in the war and sanctions are reported to have made importing of both capital equipment and raw materials difficult.²⁸⁰ Due to the use of inventories and sometimes the use of imported inputs, manufacturers rely on finance, which was severely and negatively affected during the war.

Furthermore, the areas where manufacturing predominated – Aleppo, Homs, and the suburbs of Damascus – experienced significant conflict. Notably, Syria established four industrial cities in the 1990s, one each in Aleppo, Homs, rural Damascus, and Deir ez-Zor. By 2013, 90 percent of the businesses in the Aleppo zone were closed,

²⁷³ Samir Aita, 7-8 February 2019, "*Informality and Prospects of Economic Consolidation in Syria*," Presented at Workshop on *The Politics and Modalities of Economic Reconstruction in Syria*, Geneva.

²⁷⁴ Joseph Daher, December 2018, "*The Political Economic Context of Syria's Reconstruction: A Prospective In Light of a Legacy of Unequal Development*," Middle East Directions Research Project Report 2018/05, Robert Schuman Centre for Advanced Studies, European University Institute, pp. 3-4.

²⁷⁵ The 8.1 percent estimate is from World Bank, "*World Development Indicators*," Online Database, Update of May 25, 2021. This is variable "Manufacturing, value added (% of GDP)," series code NV.IND.MANF.ZS. The 3.6 percent estimate is from International Monetary Fund, *Syrian Arab Republic: Statistical Appendix*, IMF Country Report No. 05/355, October 2005, Table 1, p. 3, with values measured in constant Syrian pounds at 2000 prices. The same publication (Table 2, p. 4), provides a value of 6.2 percent with values measured in current prices.

²⁷⁶ Gobat and Kostial, 2016, Table 2, p. 10. This figure uses values measured in constant Syrian pounds at 2000 prices.

²⁷⁷ World Bank, 8 June 2005 "*Syrian Investment Climate Assessment: Unlocking the Potential of the Private Sector*," Washington, D.C., p. iv.

²⁷⁸ World Bank, *Deepening Trade Reforms in Syria For Improving Competitiveness and Promoting Non-Oil Exports*, Washington, D.C., September 2010, p. 2.

²⁷⁹ Some of these reasons were discussed in Gobat and Kostial, 2016, p. 12.

²⁸⁰ Daher, 2019, pp. 11-12.

and the majority of businesses in the rural Damascus zone had halted work, with the remainder operating at 30 percent capacity.²⁸¹

4.4.2. Aggregated Manufacturing Industries

Manufacturing exports declined by 92 percent between 2010 and 2018, while remaining steady between 2015 and 2018 as shown in Table 4. The table shows industry exports indexed to 100 in 2010, the last full year before the war. Because the goal is to understand industry production trends, actual values are less important for this analysis and index numbers can show trends more clearly.

²⁸¹ Daher, 2019, p. 7.

Table 4: Syrian Manufactured Goods Exports by Broad Industry, 2010-2018, Index Numbers, 2010 = 100

Industry Code	Industry Name	2010	2011	2012	2013	2014	2015	2016	2017	2018
31	Food, Beverages and Tobacco	100	85	45	41	40	38	53	63	65
32	Textile, Wearing Apparel and Leather Industries	100	84	42	23	13	10	12	11	8
33	Wood and Wood Products, Including Furniture	100	118	114	31	16	13	17	15	12
34	Paper and Paper Products, Printing and Publishing	100	90	63	33	23	14	12	12	13
35	Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products	100	96	8	3	4	2	1	1	1
36	Non-Metallic Mineral Products, Except Products of Petroleum and Coal	100	140	93	61	58	50	43	37	31
37	Basic Metal Industries	100	122	85	104	36	24	18	20	21
38	Fabricated Metal Products, Machinery and Equipment	100	91	57	33	16	11	7	8	7
39	Other Manufacturing Industries	100	110	74	49	34	20	16	19	18
Total	All Manufacturing Industries	100	94	24	15	11	8	8	9	8
Addendum										
	Manufacturing Industries Net of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastics Products	100	91	52	37	23	19	21	22	21

Source: Author's calculations based on United Nations, "UN Comtrade Database," 2014-2017, data downloaded November 25, 2020, and on Keith E. Maskus, "Comparing International Trade Data and Product and National Characteristics Data for the Analysis of Trade Models," Chapter One in Peter Hooper and David J. Richardson, 1991, "International Economic Transactions: Issues in Measurement and Empirical Research," National Bureau of Economic Research Studies in Income and Wealth, Chicago: The University of Chicago Press.

NOTES: Data show imports by 170 partner countries, reflecting Syrian exports, reallocated by industry classification. Trade data are classified by Standard International Trade Classification Revision 2 (United Nations, *Standard International Trade Classification Revision 2*, Statistical Papers, Series M, No. 34, Rev. 2, ST/ESA/STAT/SER.M/34/REV.2, Statistical Office, Department of Economic and Social Affairs, New York, 1975), and industry classifications are according to International Standard Industrial Classification Revision 2 (United Nations, *International Standard Industrial Classification of all Economic Activities*, Statistical Papers, Series M, No. 4, Rev. 2, Statistical Office of the United Nations, Department of Economic and Social Affairs, New York, 1968).

By sector, the largest decline came in chemicals and chemical, petroleum, coal, rubber and plastic products, a category that includes petroleum refineries and petroleum products. This was by far the largest manufacturing industry, accounting for 41 percent of gross manufacturing output in 2010 (52 percent in 2011 with the rebound of oil prices) and 64 percent of Syrian manufacturing exports in 2010 (65 percent in 2011).²⁸² Excluding this industry, total manufacturing exports by 2015, the lowest year, fell to only 19 percent of their 2010 figure but had risen slightly to 21 percent by the next year, staying largely steady through 2018. Other industries that experienced large declines included fabricated metal products; machinery and equipment, a highly capital intensive sector that, worldwide, relies on imported goods and services; and textile, wearing apparel, and leather industries.

The decline in textile exports is especially notable. Before the war, the textile and apparel sector was a major contributor to the overall economy, accounting for 22 percent of manufacturing net domestic product in 2011.²⁸³ It was the second largest industrial sector, after agro-industries and it was hoped that the textile industry could serve as a main driver of non-oil export growth, especially important given that oil production was declining.²⁸⁴ The textile industry was also a major purchaser of cotton, supporting the agricultural sector. Well before the war, an IMF analysis noted that cotton farming employed 2.7 million farmers and their dependents, or 15 percent of Syria's population.²⁸⁵

The war was devastating to the industry, with most of the decline in the textile industry occurring through 2014, the first three years of the war. An independent report from June 2014 found that, at that point in the war, only 10 percent of Syrian textile factories were operating.²⁸⁶ New investment that occurred during the war tended to avoid textiles.²⁸⁷

Several industries faced much milder declines, based on their export data. Exports of food, beverages and tobacco fell to only 38 percent of their prewar level and then rose rapidly after 2015, reaching 65 percent of their prewar level by 2018.²⁸⁸ Had production tracked exports, this would have made the industry the one bright spot in the Syrian economy, especially due its close links to the agricultural sector. In 2010, this industry accounted for 17 percent of gross manufacturing output, placing it second to the broad industry that included petroleum refining, and 24 percent of net manufacturing domestic product, slightly behind the metal products industry.²⁸⁹

Exports of non-metallic mineral products fell by 69 percent by 2018. Although steep, this made it a comparatively strong performer compared to other industries. However, unlike the food manufacturing or textile industries, this was a relatively small part of overall manufacturing, accounting for 7 percent of gross manufacturing output and 14 percent of net manufacturing product in 2010.²⁹⁰

²⁸² "Table 13-5: Output and Net Domestic Product in the Industrial Sector at the Cost of Production's Factors 2008-2011, Value in M.S.P. At Current Prices," in Central Bureau of Statistics (Syria), Chapter Five: Industrial Statistics, 2012. United Nations, *UN Comtrade Database*, 2014-2017.

²⁸³ "Table 13-5: Output and Net Domestic Product in the Industrial Sector at the Cost of Production's Factors 2008-2011, Value in M.S.P. At Current Prices," in Central Bureau of Statistics (Syria), Chapter Five: Industrial Statistics, 2012.

²⁸⁴ Cossé, Stéphane, August 2006b, "Could the Textile Sector be a Main Driver of Non-Oil Export Growth?" Chapter V, pp. 53-59, in International Monetary Fund, *Syrian Arab Republic: Selected Issues*, IMF Country Report No. 06/295.

²⁸⁵ Cossé, 2006b.

²⁸⁶ Abdullah Hammada, June 2014, "Repercussions of the Syrian Crisis on the Textile Industry," Analytical Field Study, Syrian Economic Forum, p. 1.

²⁸⁷ Aita, 2020b, p. 42.

²⁸⁸ This industry includes food manufacturing, beverage industries, and tobacco manufactures. Food manufacturing includes slaughtering, preparing, and preserving meat; manufacture of dairy products, such as butter and cheese; canning and preserving fruits and vegetables; canning, preserving, and processing of fish; manufacture of vegetable and animal oils and fats; manufacturing of grain mill products; manufacture of bakery products; sugar factories and refineries; manufacture of cocoa, chocolate, and sugar confectionary; manufacture of food products not elsewhere classified; and manufacture of prepared animal feeds (United Nations, 1968).

²⁸⁹ "Table 13-5: Output and Net Domestic Product in the Industrial Sector at the Cost of Production's Factors 2008-2011, Value in M.S.P. At Current Prices," in Central Bureau of Statistics (Syria), Chapter Five: Industrial Statistics, 2012.

²⁹⁰ "Table 13-5: Output and Net Domestic Product in the Industrial Sector at the Cost of Production's Factors 2008-2011, Value in M.S.P. At Current Prices," in Central Bureau of Statistics (Syria), Chapter Five: Industrial Statistics, 2012.

The patterns revealed in the trade data are broadly in line with other reports on manufacturing. One analysis found that manufacturing declined dramatically through 2015, grew in 2016, and then grew much more mildly in 2017 and 2018.²⁹¹ Growth in 2016 and 2017 can be seen in Table 4.

The export data present a bleak picture of the Syrian manufacturing industry. On a broad industry basis, exports of six out of nine manufacturing industries fell by more than 80 percent between 2010 and 2018, and three by more than 90 percent. Excluding petroleum refining, manufacturing exports overall fell by 79 percent through 2018. Production, and with it, employment likely fell in great numbers as well. In some cases, their declines might have been moderated by the ability to smuggle goods to export markets, or by redirecting goods that would have been exported to domestic markets. However, given that domestic markets were performing poorly, the latter option probably would not have helped.

4.4.3. Disaggregated Manufacturing Industries

Translating trade classified on a commodity basis to an industry basis is always inexact. Errors are often smoothed out at an aggregated industry basis. However, there is also value to viewing exports at a more disaggregated industry level, recognizing that there might be large errors. Table 5 shows export indexes for 28 disaggregated manufacturing industries. The disaggregated data are consistent with the trends shown in Table 4, which featured aggregated industry data.

The consequences of the sanctions are immediately apparent from the data with declines of exports of petroleum refineries and of other petroleum and coal products to zero by 2015. If we include those sectors, total manufacturing exports declined to only 8 percent of their prewar total by 2015; without those sectors, manufacturing exports declined to 19 percent. As stated, the food manufacturing industry was the best performer, with exports falling to 39 percent of prewar levels by 2015, but rising back to 66 percent by 2018. Other notable industries that did experience relatively more mild declines included glass and glass products, and pottery, china, and earthenware. Both of these industries are part of the broader non-metallic mineral products industry, the second-best performer among the nine aggregated industries.

Exports of non-ferrous basic metal industries fell by 69 percent through 2018 while exports of other chemical products fell by 75 percent through 2018. This particular industry includes pharmaceuticals, which had been a success in Syria before the war. As of 2010, the 63 pharmaceutical factories in Syria employed 17,000 people and accounted for \$150 million in exports to at least 52 countries.²⁹²

Among those industries experiencing the largest declines, the disaggregated export data make clear that the decline in the broad industry of textiles, wearing apparel and leather industries was largely due to textiles, the exports of which plummeted to only 5 percent of their 2010 levels by 2018. Exports of clothing experienced a steep decline, yet less dramatic, of 87 percent. Exports of capital intensive industries or those that generally rely on imported inputs also experienced the largest downturns. These included electrical machinery, basic iron and steel, plastics (which rely on petroleum as a feedstock), and industrial chemicals. Notably, the export of tobacco manufactures, a comparatively small manufacturing industry and a state monopoly, also crashed. With the onset of the war, many factories closed and imports of tobacco stopped, leading to imports of cheaper brands of cigarettes.²⁹³

²⁹¹ Syrian Center for Policy Research, 2020a, p. 43.

²⁹² Dirar Kutaini, July-September 2010, "Pharmaceutical Industry in Syria," *Journal of Medicine and Life*, Vol. 3, No. 3, pp. 348-350.

²⁹³ Bassem Mroue, 18 August 2016, "Because of Syrian War, Lebanon's Tobacco Industry is Booming," Associated Press.

Table 5: Syrian Manufactured Goods Exports by Narrow Industry, 2010-2018, Index Numbers, 2010 = 100

Industry Code	Industry Name	2010	2011	2012	2013	2014	2015	2016	2017	2018
311/312	Food Manufacturing	100	85	45	42	40	39	54	65	66
313	Beverage Industries	100	55	20	6	25	3	3	5	8
314	Tobacco Manufactures	100	119	27	4	0	0	0	11	2
321	Manufacture of Textiles	100	75	33	24	11	6	8	8	5
322	Manufacture of Wearing Apparel, Except Footwear	100	93	57	20	13	18	21	16	13
323	Manufacture of Leather and Products of Leather, Leather Substitutes and Fur, Except Footwear and Wearing Apparel	100	122	62	33	36	26	18	9	9
324	Manufacture of Footwear, Except Vulcanized or Moulded Rubber or Plastic Footwear	100	123	70	31	26	21	22	17	14
331	Manufacture of Wood and Wood and Cork Products, Except Furniture	100	126	187	34	21	15	18	12	10
332	Manufacture of Furniture and Fixtures, Except Primarily of Metal	100	114	71	29	12	12	17	17	13
341	Manufacture of Paper and Paper Products	100	75	54	22	15	9	9	7	8
342	Printing, Publishing and Allied Industries	100	108	75	48	33	19	16	19	18
351	Manufacture of Industrial Chemicals	100	119	47	18	24	16	14	5	5
352	Manufacture of Other Chemical Products	100	96	83	59	52	36	24	26	25
353	Petroleum Refineries	100	94	3	0	1	0	0	0	0
354	Manufacture of Miscellaneous Products of Petroleum and Coal	100	95	3	0	1	0	0	0	0
355	Manufacture of Rubber Products	100	111	73	29	14	9	8	4	10
356	Manufacture of Plastic Products Not Elsewhere Classified	100	131	65	21	11	8	4	4	3
361	Manufacture of Pottery, China and Earthenware	100	141	101	72	75	65	72	62	43

362	Manufacture of Glass and Glass Products	100	142	101	73	76	66	73	63	44
369	Manufacture of Other Non-Metallic Mineral Products	100	138	88	55	48	41	25	23	24
371	Iron and Steel Basic Industries	100	103	107	124	31	7	5	4	3
372	Non-Ferrous Metal Basic Industries	100	134	72	92	39	34	26	30	31
381	Manufacture of Fabricated Metal Products, Except Machinery and Equipment	100	92	60	45	24	19	14	14	12
382	Manufacture of Machinery Except Electrical	100	79	67	47	21	14	7	8	8
383	Manufacture of Electrical Machinery Apparatus, Appliances and Supplies	100	88	40	11	2	4	2	2	1
384	Manufacture of Transport Equipment	100	120	59	24	21	9	8	9	9
385	Manufacture of Professional and Scientific and Measuring and Controlling Equipment Not Elsewhere Classified, and of Photographic and Optical Goods	100	91	73	36	22	17	5	6	8
390	Other Manufacturing Industries	100	110	74	49	34	20	16	19	18
Subtotal	All Except Petroleum Refineries and Petroleum and Coal Products	100	94	53	36	24	19	20	21	19
Total	All Manufacturing Industries	100	94	24	15	11	8	8	9	8

Source: Author's calculations based on United Nations, "UN Comtrade Database," 2014-2017, data downloaded November 25, 2020, and on Keith E. Maskus, "Comparing International Trade Data and Product and National Characteristics Data for the Analysis of Trade Models," Chapter One in Peter Hooper and David J. Richardson, 1991, "International Economic Transactions: Issues in Measurement and Empirical Research," National Bureau of Economic Research Studies in Income and Wealth, Chicago: The University of Chicago Press.

NOTES: Data show imports by 170 partner countries, reflecting Syrian exports, reallocated by industry classification. Trade data are classified by Standard International Trade Classification Revision 2 (United Nations, *Standard International Trade Classification Revision 2*, Statistical Papers, Series M, No. 34, Rev. 2, ST/ESA/STAT/SER.M/34/REV.2, Statistical Office, Department of Economic and Social Affairs, New York, 1975), and industry classifications are according to International Standard Industrial Classification Revision 2 (United Nations, *International Standard Industrial Classification of all Economic Activities*, Statistical Papers, Series M, No. 4, Rev. 2, Statistical Office of the United Nations, Department of Economic and Social Affairs, New York, 1968).

4.4.4. Conclusion

The export data connected to disaggregated industries illuminates the broader trends. Food manufacturing continued to operate relatively well, at least in relation to an industry in the midst of a disastrous war. Pharmaceuticals also performed better than average, although an export decline of 75 percent cannot be counted as a success. Notably, both of these industries attracted private-sector investment before the war.²⁹⁴ However, other industries that were important to the economy and to future development, especially textiles, declined inordinately. Textiles also had attracted large amounts of private-sector investment before the war.²⁹⁵

A number of factors can explain the differential pattern of industry decline. Even with war, food manufacturing had access to raw materials produced in Syria and likely to raw materials produced in Turkey, while manufacturing of pottery, glass, and related products could have relied on domestic inputs. In contrast, other manufacturing sectors globally generally rely on a more widespread network of imported inputs, and of more complex imported inputs, which may explain why such industries as machinery manufacturing declined. Furthermore, sectors with high capital intensity would have been more negatively affected. The apparel industry is labor intensive, and index values declined from 100 to 13, whereas the related textile industry is more capital intensive, and index values declined from 100 to 5 (Table 5). In addition, industries that rely on steady and affordable electricity would have been adversely affected by wartime disruptions. This may explain the record of iron and steel basic industries, the index values of which declined from 100 to 3.²⁹⁶

These patterns also complement other evidence about the decline of Syrian manufacturing during the war. Given that some were capital intensive; reconstruction may prove difficult unless investors have confidence in the investment environment. The following conclusion section builds on these findings to discuss several other aspects of the Syrian economy and raise issues for the future.

4.5. Broader Economic Transformation, and Outlook for the Future

The analysis of this chapter has treated the Syrian macroeconomy as that of a normal economy, albeit one in wartime. However, Syria is far from a normal economy, with cronyism from the top controlling much of the economy. Criminal activities, including expanding production and trade of illegal recreational drugs, mixed with insurgency and rebellion can be found throughout the country.²⁹⁷ And as noted above, Syria is under one of the harshest sanctions regimes in the world.

4.5.1. A Restructured Economy

Vast changes have taken place in economics, economic geography, and governance during the war in Syria. Sectorally, economic activity has shifted toward trade, services, and construction while geographically, population and economic activity have shifted from Homs, Aleppo, and Idlib to Latakia, Tartus, and Hama.²⁹⁸ For most people,

²⁹⁴ Joseph Daher, 2019, p. 6.

²⁹⁵ Joseph Daher, 2019, p. 6.

²⁹⁶ World Steel Association, "Energy Use in the Steel Industry," Fact Sheet, Last Updated June 2016.

²⁹⁷ Center for Operational Analysis and Research – COAR, *Captagon*, April 2021, "Hashish, and the Syrian Narco-State: The Syrian Economy at War Part 3," COAR Global Ltd..

²⁹⁸ The Synaps Syria Team, 30 September 2019 "War by Other Means: Syria's Economic Struggle," Synaps.

economic opportunities are limited. Armed group salaries are well above those of government employees, further prolonging militarization.²⁹⁹

The government has dramatically cut down on services, even in areas it controls, and has offloaded some basic government responsibilities to public-private partnerships and the private sector.³⁰⁰ At the same time, it has expanded methods to finance itself, including exercising predatory policies on society with creative regulatory policies and inspections that funnel money to the government or to government officials.³⁰¹ The government and the business class, tightly bound before the war, have moved closer since. Compounding problems even more, the banking crisis in Lebanon and the collapse of the Lebanese economy in 2019 have, according to Syrian President Bashar al-Assad, locked up between \$20 billion and \$42 billion deposited by Syrian business people in Lebanese banks.³⁰² Along with sanctions and poor government economic policy, the Lebanon debacle has also fueled a depreciation of the Syrian pound. Once set at an official rate of 46.5 to the dollar in 2010, the official rate rose to 1,256 in June 2020, and the black market rate rose above 3,000 before settling back to between 2,600 and 2,800.³⁰³

4.5.2. New Sanctions on the Economy

One of the newest innovations in sanctions is the entry into force of the U.S. Caesar Syria Civilian Protection Act, which took effect on June 17, 2020 – the same day the Syrian Central Bank devalued the pound from 704 to the dollar to 1,256 to the dollar. Since the act took effect and up to July 2021, the United States has rolled out seven waves of sanctions, designating 130 people and entities under various authorities, including 15 under the Caesar Act.³⁰⁴

The law's primary intent was to target the new oligarchs who rose around the Assad regime in wartime and were both enriching it and being enriched by it. The law mandated sanctions on anyone providing support to the Syrian government and senior political figures, supporting the Syrian oil and gas industry, providing military aircraft or parts, and providing construction or engineering services directly or indirectly to the Syrian government. Beyond that, it mandated sanctions on anyone effectively doing business with a person or entity designated under other Syria-related authorities, broadening its application.³⁰⁵

When rolled out, many Syria specialists projected that these sanctions would cause further grave damage to the Syrian economy. What is notable, however, is that the biggest effects of the law have not been direct. As noted above, only 15 people have been sanctioned under the act. Rather, the effects lie in the secondary nature

²⁹⁹ Center for Operational Analysis and Research – COAR, *Armed Group Mobilization as Livelihood and Protection Strategy: The Syrian Economy at War Part 1*, COAR Global Ltd., September 2020b.

³⁰⁰ The Synaps Syria Team, 2019; Center for Operational Analysis and Research – COAR, March 2019a, *Beyond Checkpoints: Local Economic Gaps and the Political Economy of Syria's Business Community*, COAR Global Ltd.; Center for Operational Analysis and Research – COAR, November 2020c, *Labor Pains Amid the Blurring of the Public and Private Sectors: The Syrian Economy at War Part 2*, COAR Global Ltd..

³⁰¹ The Synaps Syria Team, 2019.

³⁰² Center for Operational Analysis and Research – COAR, 9 November 2020d, *Assad: Blame the Businessmen*, Syria Update, Vol. 3, No. 42, p. 2.

³⁰³ AFP, June 17, 2020, *Syria Devalues Currency as New US Sanctions Hit*, France 24.

³⁰⁴ Michael R. Pompeo (Secretary of State), 17 June 2020a, *Syria Caesar Act Designations*, Press Statement, U.S. Department of State; Michael R. Pompeo (Secretary of State), 29 July 2020b, *Syria Sanctions Designations*, Press Statement, U.S. Department of State; Michael R. Pompeo (Secretary of State), 20 August 2020c, *Syria Sanctions Designations*, Press Statement, U.S. Department of State; Michael R. Pompeo (Secretary of State), 30 September 2020d *Syria Sanctions Designations on the Anniversary of Assad's Attack Against the People of Armanaz, Syria*, Press Statement, U.S. Department of State; Michael R. Pompeo (Secretary of State), 9 November 2020e *Syria Sanctions Designations on the Anniversary of Assad's Attack Against the People of Douma, Syria*, Press Statement, U.S. Department of State; Michael R. Pompeo (Secretary of State), 22 December, 2020f, *Syria Sanctions Designations on the Anniversary of UN Security Council Resolution 2254*, Press Statement, U.S. Department of State; Antony J. Blinken (Secretary of State), 28 July 2021 *Imposing Sanctions in Defense of Human Rights in Syria*, Press Statement, U.S. Department of State.

³⁰⁵ Howard J. Shatz, *The Power and Limits of Threat: The Caesar Syrian Civilian Protection Act at One Year*, RealClearDefense, July 7, 2021.

of the sanctions – people and entities outside of Syria risk running afoul of U.S. policy and thereby losing access to the U.S. banking system and the U.S. market.³⁰⁶ For example, shortly after the Caesar Act took effect, CSCGroup of Lebanon stopped servicing Syrian automatic teller machines.³⁰⁷ More important, the law has discouraged investors, from Gulf countries for example, from engaging in reconstruction projects in Syrian government-held areas. Such projects would necessarily involve engaging with Assad regime networks, exposing investors to Caesar sanctions, which would cut them off from the U.S. financial system.

The explanations given for these sanction actions when they are instituted shed light on the nature of the Syrian economy under wartime, the tight relationship between the government and favored business people, and how reconstruction might benefit Bashar al-Assad and his networks. Consider the Caesar designation of Wassim Anwar al-Qattan on July 29, 2020.³⁰⁸ According to the U.S. Department of the Treasury, al-Qattan's company, Muruj Cham Investment and Tourism Group, in 2017 won an auction to reinvest in Qasioun Mall in the Barzeh District of Damascus following Muruj Cham's offer to pay the Syrian government a higher fee than that offered by the incumbent investor, leading the government to strip the incumbent investor of the contract. The following year, the Ministry of Tourism contracted with al-Qattan's Muruj Cham to invest in Al-Jalaa Hotel in Damascus, with Muruj Cham to pay an annual fee of about \$5 million for 25 years. That same year, Adam Trading and Investment LLC, half-owned by al-Qattan, gained a contract from the Damascus governorate to develop and manage Massa Plaza Mall in Damascus. The next year, Intersection LLC, another company owned by al-Qattan, gained a 48-year contract to invest in the Yalbagha Complex, owned by the Ministry of Religious Endowments, with the plan being to make the development a tourist commercial complex. Despite the participation of ostensibly private business people and companies, the U.S. Treasury considers the Qasioun Mall, Al-Jalaa Hotel, Massa Plaza Mall, and the Yalbagha Complex all to be "owned or controlled by, or for having acted or purported to act for or on behalf of, directly or indirectly, the Government of Syria."³⁰⁹

Such relationships can be found in Marota City as well, possibly the largest investment project in Syria and being built on expropriated land, and in Grand Town Tourist City, a luxury tourist city near Damascus International Airport.³¹⁰ In the case of the former, the governorate of Damascus formed wholly owned Damascus Cham Holding Company to oversee Marota City. Damascus Cham then established a joint venture with two private-sector companies to develop two mixed-use properties in Marota City, and separately established another company in partnership with four other companies owned in whole or in part by Syrian businessman and Assad cousin Rami Makhluaf to develop three properties in Marota City. The Grand Town development stems from a 45-year contract granted by the government of Syria to develop Grand Town in return for 20 percent of the revenues; the two businessmen who were granted the contract also manage the government-owned Ebla Hotel, Syria's largest, which will be part of Grand Town.

In all the above cases, given the impoverishment of the Syrian population, it is likely that these projects will benefit the investors and a narrow portion of the government, but are unlikely to generate sustainable and broad-based economic activity. Furthermore, given the nature of the Syrian economy, it is likely that major manufacturing investments will involve business people in networks close to the Assad government, exposing investors to the Caesar Act and forestalling such investments. It may be the case that smaller investments in manufacturing could be independent of Assad-government networks and thus take place without attracting sanctions.

³⁰⁶ Aita, 2020b, p. 68.

³⁰⁷ Igor Matveev, 10 August 2020a, "The Caesar Act: A New Challenge for Syria?" Russian International Affairs Council.

³⁰⁸ U.S. Department of the Treasury, 29 July 2020b, "Treasury Continues to Pressure Investors and Companies Supporting the Assad Regime's Corrupt Reconstruction Efforts," Press Release.

³⁰⁹ U.S. Department of the Treasury, 2020b.

³¹⁰ U.S. Department of the Treasury, 17 June 2020a, "Treasury Sanctions Investors Supporting Assad Regime's Corrupt Reconstruction Efforts," Press Release.

4.5.3. Further Decline

Even though the most vicious fighting had concluded by 2016, and many Syria experts considered that, by 2017 or 2018, Assad had won, Syria remains in a frozen conflict and there is little notable economic improvement anywhere in the country. Conditions have even worsened with the 2019 Lebanon economic crisis and the 2020 COVID-19 pandemic.

Early in the Syrian crisis, and throughout much of it, Syrian government policy was directed to providing basic benefits to the population it considered loyal, such as civil servants and people in regime-held cities that had not gone over to the opposition. Even this is now difficult, with reports that the Syrian central government can no longer provide the benefits that ensured at least grudging support.³¹¹ For example, despite increases in terms of Syrian pounds, the average monthly salary for civil servants has sunk from about \$400 per month in 2010 to \$15 per month in 2021 due to the collapse of the exchange rate. Hardships are further increasingly magnified in former opposition areas recaptured by the Syrian government.

By one calculation, Syria's per capita budget spending has fallen by 70 percent since 2010, even with taking account of the reduced population.³¹² Within this reduced spending, which forecasts negative implications for the future, the investment share of the budget declined from 44 percent in 2010 and 46 percent in 2011, to an average of less than 27 percent from 2012 through 2020. In the proposed 2021 budget, this was 18 percent, the lowest since the start of the war. Faced with a decline of formal revenues, the government has attempted a variety of alternative fundraising techniques, including the introduction of new taxes and fees.³¹³

4.5.4. Looking to the Future

By all accounts, Syria's recovery will take years, if not decades. Pre-war, one analysis estimated that real GDP would have grown by an average of 5.3 percent annually between 2011 and 2018. Instead, it fell by an estimated 12 percent per year, resulting in a cumulative GDP loss of between \$289 billion and \$300 billion in real terms. Rather than reaching real GDP of \$91 billion in 2018, it has shrunk to an estimated \$23.2 billion.³¹⁴ The same analysis found that if the war would had reached its conclusion in 2018, it would take Syria between 10 years and 20 years to reach the level of GDP it had before the war, and 10 years to 30 years to reach the level of per capita GDP it enjoyed prior to the war.

The experience of other countries sets a sobering example. Lebanon took 20 years to catch up to the GDP level it had before its 16-year war, while Kuwait, with its substantial oil wealth, took seven years to catch up after the two years of war and disruption following the invasion by Iraq. Neither of those countries faced the kinds of sanctions that Syria will likely need to endure even following some kind of a political settlement.³¹⁵ With these challenges, there has been considerable discussions about what reconstruction might look like and how to accomplish it.³¹⁶

³¹¹ Elizabeth Tsurkov, 4 June 2021, "Syrian Regime No Longer Able to Provide for Loyalists," Terrain Analysis, Newlines Institute for Strategy and Policy.

³¹² William Christou and Karam Shaar, 1 December 2020 "2021 Budget Reveals the Depth of Syria's Economic Woes," MENASource, The Atlantic Council.

³¹³ Igor Matveev, 9 November 2020b, "Pandemic Amid an Economic Crisis: Challenges for Syria," Russian International Affairs Council.

³¹⁴ Devadas, Elbadawi, and Loayza, 2019.

³¹⁵ Gobat and Kostial, 2016. This paper also suggests a 20-year catch-up period.

³¹⁶ See, for example, Asseburg, 2020; Daher, 2018; Eugenio Dacrema and Valeria Talbot, Eds., September 2019, "Rebuilding Syria: The Middle East's Next Power Game?" Istituto per gli Studi di Politica Internazionale – ISPI.

As suggested by the trade data, the food manufacturing sector had begun to recover towards the end of the 2010s, with exports in 2018 realizing a 72 percent increase over levels in 2015. Furniture manufacturing also recovered slightly, as did the manufacture of rubber products. The government has also adopted new policies to encourage investment and, in some parts of the country, has restored some services necessary to industry.³¹⁷ In fact, nine of the disaggregated industries showed a rise in exports from 2017 to 2018, implying a rise in production, but the vast majority of industries, and manufacturing as a whole, showed sustained declines.

When it comes to reconstruction, there are Syrians who are certainly capable of restoring manufacturing, but many have emigrated and are unlikely to return. Essential to any reconstruction, Syrian business people left the country and established operations in Egypt, Turkey, and Jordan. Syrian business people invested \$800 million in Egypt between 2012 and 2018, including in major textile facilities; \$381 million had been invested in almost 8,000 joint ventures in Turkey between 2011 and 2018; and in Jordan, Syrian investments totaled \$273 million between 2012 and 2018.³¹⁸

Furthermore, the war has seen the rise of new business actors and dramatically fragmented the country. These new actors are likely to remain part of the Syrian economy in any post-war environment and need to be incorporated into reconstruction and investment activities. Country-wide trade networks will need to be reestablished to improve the functioning of the internal market, both for inputs and final consumption, and people who profit from that fragmentation will also need to be incorporated into reconstruction and investment activities.

Capabilities and capital for Syrian reconstruction and growth are available – but mobilizing them depends entirely on whether business people opt to return to Syria and the new economic actors can be incorporated and support legitimate business activity. The decision of business people outside the country to return will depend on a host of factors, the most important of which will include whether they will have personal safety upon their return and whether they can invest and trade with reasonable assurance that investments will be secure and that they will be able to retain, and perhaps reinvest, the benefits of their business operations. Given wartime destruction, should peace return and appropriate policies be put in place, the opportunity to profitably invest in Syria is present in every manufacturing sector.

³¹⁷ Daher, 2019, p. 16.

³¹⁸ Daher, 2019, p. 10.

Appendix A: The Relationship Between Production and Trade, and the Calculation of Trade by Industry

This report uses trade data as a proxy for production in the Syrian economy. This appendix expands on three data-related issues. First, it presents evidence that exports and production are related. Even if the trade data cannot provide insight into detailed production changes, it can indicate trends in production. Second, the appendix provides more information about the conversion of trade data by commodity into data by industry. Third, it compares trends in the trade data used to trends in trade data from other sources.

The Relationship Between Exports and Output

The 2012 *Syria Statistical Abstract* presents data on output and net domestic product by industry in the Syrian industrial sector from 2008 through 2011.³¹⁹ The analysis in this appendix uses the data from 2008 through 2010. Although not labeled, the data are clearly organized according to International Standard Industrial Classification (ISIC) Revision (Rev.) 2, with manufacturing industries ranging from Industry 31, Manufacture of Food, Beverages and Tobacco, to Industry 39, Other Manufacturing Industries.³²⁰ There are a total of nine broad manufacturing industries in the Syrian data, as there are in the ISIC Rev. 2 classification, and they go by similar names.

Comparing these output data with trade data cannot be done as a direct one-to-one comparison, since trade data are recorded on a commodity basis, whereas output data are recorded on an industry basis. Fortunately, crosswalks, known as concordances, exist. This analysis of the relationship between exports and output has utilized one such crosswalk between ISIC Rev. 2 data and Standard International Trade Classification (SITC) Rev. 2 data.³²¹

The concordance shows what proportion of the value of trade in a particular commodity at the 2-digit SITC Rev. 2 level is related to which particular industry at the 3-digit ISIC level. For example, the value of trade in SITC commodity 69, Manufactures of Metals, Not Elsewhere Specified, should be divided as follows into the following ISIC Rev. 2 industries:

- 20 percent into ISIC 371, Iron and Steel Basic Industries,
- 10 percent into ISIC 372, Non-Ferrous Metal Basic Industries,
- 50 percent into ISIC 381, Manufacture of Fabricated Metal Products, Machinery and Equipment,
- 10 percent into ISIC 382, Manufacture of Machinery Except Electrical, and
- 10 percent into ISIC 390, Other Manufacturing Industries.

After first assembling the output data, the next step was to download appropriate trade data to compare exports to output. In this case, the trade data used was Syrian exports, as reported by Syria, to the world at the SITC Rev. 2 2-digit level, downloaded from the United Nations Comtrade Database.³²² Exports for 60 SITC 2-digit commodities were downloaded for 2008, 2009, and 2010. Trade data by 2-digit commodity classification were translated into data by ISIC 3-digit industry classification. This data was then further aggregated into an ISIC 2-

³¹⁹ "Table 13-5: Output and Net Domestic Product in the Industrial Sector at the Cost of Production's Factors 2008-2011, Value in M.S.P. At Current Prices," in Central Bureau of Statistics (Syria), Chapter Five: Industrial Statistics, 2012.

³²⁰ United Nations, 1968.

³²¹ Keith E. Maskus, 1991, "Comparing International Trade Data and Product and National Characteristics Data for the Analysis of Trade Models," Chapter One in Peter Hooper and David J. Richardson, *International Economic Transactions: Issues in Measurement and Empirical Research*, National Bureau of Economic Research Studies in Income and Wealth, Chicago: The University of Chicago Press. This and other concordances can be downloaded from Jon Haveman and Raymond Robertson, *Jon Haveman's Industry Concordances*, Webpage, Undated. The specific SITC Rev. 2 to ISIC Rev. 2 concordance can be [found](#) as of November 25, 2020.

³²² United Nations, 2014-2017. Data were downloaded November 25, 2020.

digit industry classification to match the production data, which was recorded at the 2-digit industry classification level.

The final step was to run a simple statistical analysis, specifically a regression analysis, comparing the production data to the trade data. The production data were in units of millions of Syrian pounds and the trade data were in units of millions of U.S. dollars, but for purposes of the statistical analysis, the different units did not matter since converting one of the units to the other would just involve a linear transformation. The regression equation is as follows:

$$Q_{i,t} = \alpha + \beta X_{i,t} + \varepsilon_{i,t}$$

In this equation $Q_{i,t}$ is output of industry i at time t ; $X_{i,t}$ is exports of industry i at time t ; α is a constant; β is a coefficient showing the relationship between a one-unit change in X and a change in Q , and $\varepsilon_{i,t}$ is a random error term. For purposes of this analysis, the magnitude of the coefficient is not the variable of interest. Rather, the *statistical significance* of coefficient β is of interest. Specifically, the idea is to establish whether there is a relationship between exports and output, and whether that relationship is not occurring at random.

The regression was run with the data in levels and with the data transformed into natural logarithms. Results are in Table 6. In the table, output is the dependent variable, and trade is the explanatory variable. The table also shows the output for statistical tests, specifically the standard errors of the estimated coefficients and their associated t-statistics. The data include three years of output and trade data in one regression analysis.

Table 6: The Relationship Between Output and Trade

Variable	(1) Data in Levels	(2) Data in Natural Logs
Intercept (α)	16,215.26 (10,567.02) <i>1.53</i>	5.75*** (1.31) <i>4.41</i>
Trade (β)	90.50*** (6.92) <i>13.07</i>	0.81*** (0.22) <i>3.74</i>
Adjusted R ²	0.87	0.33
N	27	27

NOTE: In regression 1, the dependent variable is the level of output in million Syrian pounds and the explanatory variable is the level of exports in million U.S. dollars. In regression 2, the dependent variable is the natural logarithm of output, and the explanatory variable is the natural logarithm of exports. Standard errors are in parentheses, and t-statistics are in italics. *** = significant at the 0.001 level. N is the number of observations, specifically nine industry-year observations over three years.

As can be seen in the table, output by industry is positively related to exports by industry. Not only are they related, but the relationship is highly statistically significant. In the simplest terms, there is a less than one in 1,000 chance that the two variables are not related.

These results stem from an analysis that aggregated three years of industry data into one regression. Regressions were also carried out year-by-year (results not shown). This is a much harder test, since achieving statistical significance with only nine observations is difficult. Nonetheless, when the regressions were done in levels, the coefficient on exports was about the same magnitude and statistical significance remained better than the 0.001 level. When the regressions were done in natural logs, the coefficient on exports was again about the same magnitude, but statistical significance varied. The coefficient on exports was statistically significant at the 0.05 level in 2008, slightly above the 0.05 level in 2009 (p-value of 0.0505), and not significant in 2010.

Although the evidence is not conclusive, these results when taken together provide support for using export data to analyze trends in output absent more direct measures.

Generating Exports by Industry

As noted in the first part of this appendix, trade data is recorded by commodity. However, one industry might produce several commodities, and one commodity might be produced by several different industries. There are a variety of commodity and industry classification systems, but two of the most common, respectively, are the SITC and the ISIC. Both have been revised several times, and are, as of 2020, up to revision 4.³²³ However, Syrian industry data appear to be maintained according to ISIC Rev. 2 (not every country updates to the latest version at the same time). In addition, a useful concordance between trade and industry data is available at the SITC Rev. 2 level for the ISIC Rev. 2 level.³²⁴

Trade data can be retrieved according to different commodity classifications, depending on the needs of the researcher. Accordingly, for purposes of reporting commodity trade flows (Table 3), this report used the latest commodity classification system, SITC Rev. 4. However, for purposes of reporting trade flows by industry (Tables 4 and 5), this report used SITC Rev. 2 data and transformed it into ISIC Rev. 2 data.³²⁵

Both SITC and ISIC classifications follow a logical ordering, with a code of fewer digits related to broadly aggregated commodities or industries, and a code of more digits related to more disaggregated commodities or industries. For example, drawing from SITC, Rev. 4,

- 5 is chemicals and related products
- 57 is plastics in primary forms
- 571 is polymers of ethylene, in primary forms,
- 5711 is polyethylene, and
- 57111 is polyethylene having a specific gravity of less than 0.94.

Each disaggregated code follows from the more aggregated code, using the leading digits of the more aggregated code and adding to them.

³²³ United Nations, *Standard International Trade Classification Revision 4*, Statistical Papers, Series M, No. 34, Rev. 4, ST/ESA/STAT/SER.M/34/REV.4, Statistics Division, Department of Economic and Social Affairs, New York, 2006; United Nations, 2008, *International Standard Industrial Classification of all Economic Activities (ISIC), Rev.4*, Statistical Papers, Series M, No. 4, Rev. 4, ST/ESA/STAT/SER.M/4/Rev.4, Statistics Division, Department of Economic and Social Affairs, New York.

³²⁴ Maskus, 1991.

³²⁵ United Nations, 1968; United Nations, 1975.

Rather than relying on Syrian export statistics, especially during the period of the war, trade data used is mirror trade data, the trade data reported by partner countries. In this case, the research used imports from Syria as reported. These should be equivalent to Syrian exports.

For reporting commodity trade flows, mirror trade data was accessed for 161 countries and economies for 10 SITC Rev. 4 1-digit commodities, as well as overall totals, for 2010 through 2018. This gave an initial dataset of 7,597 observations (not every country imports every commodity in every year). These were aggregated into totals for each 1-digit commodity by year. The 1-digit commodities are named in Table 3.

For reporting trade flows by industry, mirror trade data was accessed for 170 countries and economies for 67 SITC Rev. 2 2-digit commodities, as well as overall totals, for 2010 through 2018.³²⁶ This gave an initial dataset of 18,961 observations. These were then aggregated into totals for each 2-digit commodity by year, and then run through the commodity-to-industry concordance. The concordance creates totals by ISIC Rev. 2 3-digit industries. These were then aggregated into ISIC Rev. 2 2-digit industries. The names and codes for the 2-digit industries appear in Table 4. The names and codes for the 3-digit industries appear in Table 5.

Comparing the Trends in Different Trade Data Series

This report uses official trade data, as reported by all countries of the world, and then relies on the mirror trade data as a measure of Syrian trade data. There is substantial criticisms of the trade data used in this report. The most important is that official trade data will not include unrecorded trade, such as trade in goods that are smuggled across borders or that are transported through an official port of entry but that are not recorded by customs officials. The core of the analysis of this report relies on trends in trade data, and so an important question is whether the trends in the Comtrade data differ systematically from other trade data series.

Table 6 presents trends in Syrian exports as reported by five different sources: the UN Comtrade database, the Syrian Center for Policy Research (SCPR), the International Monetary Fund, the European Commission (sourced in part from the IMF), and the Observatory of Economic Complexity (sourced from the BACI database). Specifically, the table reports annual changes from 2011 through 2017, and then the cumulative change from 2011 through 2017. This period was chosen because that was the period available for SCPR data. All data except the SCPR data is in nominal terms in either US dollar (the UN Comtrade, IMF, and Observatory of Economic Complexity data) or euros (the European Commission data). The SCPR data is in constant values of Syrian pounds and so is not directly comparable to the other data series, although because dollar and euro inflation were mild during this period and the period is short, the nominal and constant values should not be far off.

Trends among the five series are generally similar, although there is variability across sources in specific years. For example, the SCPR data show a small change from 2013 to 2014, whereas the other sources show larger changes. Likewise, the Comtrade data show a small decline, and the OEC data show a small increase from 2015 to 2016, whereas the other three sources show double-digit declines.

Table 7: Trends in Syrian Goods Exports, Alternate Data Series, Percent Change from Previous Year

³²⁶ Nine countries had data under the SITC Rev. 2 classification but not under the SITC Rev. 4 classification. These included Afghanistan, Barbados, Belize, the Federated States of Micronesia, Gabon, Grenada, Libya, Vanuatu, and Venezuela. The omission of these countries from the SITC Rev. 4 data is unlikely to make a difference in the analysis.

Year	Comtrade	SCPR	IMF	EC	OEC
2012	-73.5	-70.6	-70.9	-68.5	-72.7
2013	-31.7	-44.6	-44.1	-45.9	-30.1
2014	-25.7	-2.8	-32.0	-32.0	-25.7
2015	-22.3	-7.5	-23.7	-8.7	-25.0
2016	-3.9	-14.7	-19.6	-19.4	1.5
2017	-2.7	0.7	-0.2	-2.2	-2.9
Cumulative Change					
2011-2017	-90.2	-87.4	-93.2	-91.7	-89.5

Sources: Comtrade: United Nations, UN Comtrade Database, 2014-2017, data downloaded November 14, 2020; SCPR: Unpublished data received from the Syrian Center for Policy Research in a data file dated November 27, 2019, and based on the World Integrated Trade Solution database and Syrian Center for Policy Research estimations; IMF: International Monetary Fund, *Direction of Trade Statistics*, Last Updated July 30, 2021, data downloaded July 31, 2021; EC: European Commission, Directorate-General for Trade, Syria Trade Factsheet, Linked from “Countries and Regions: Syria” Webpage, Factsheet Dated June 2, 2021, Webpage Last Updated July 5, 2021; OEC: The Observatory of Economic Complexity, “Syria,” OEC 4.0, Online Data Visualization and Distribution Platform, Undated, data downloaded July 31, 2021.

NOTES: The period 2011-2017 was selected because that was the period for the data from the SCPR. Comtrade, IMF, and OEC data are in nominal U.S. dollars; SCPR data are in constant Syrian pounds; and EU data are in nominal euros. The EU document notes that it draws its trade data from the IMF, but the series have somewhat different trends, likely because of exchange rate effects. For more on OEC, see Alexander J. G. Simoes and César A. Hidalgo, “The Economic Complexity Observatory: An Analytical Tool for Understanding the Dynamics of Economic Development,” Workshops at the Twenty-Fifth AAAI Conference on Artificial Intelligence, San Francisco, 2011. OEC data are drawn from the BACI database, 2021 version, available at the website of the French research center, CEPII.

Notably, the declines for the full period, from 2011 through 2017, are very similar, ranging from -87.4 percent for the SCPR data to -93.2 percent for the IMF data, with the UN Comtrade data in the middle. The similarity in trends across data sets by year, and especially the similarity in the decline for the whole period, provide support that the mirror trade data used in this paper provide a valid measure of Syria’s export trends for the period analyzed.

Another criticism of the official trade data is that it will misrepresent bilateral trade values. For example, Iran may not necessarily report imports from Syria. Instead, that trade might be routed through Lebanon, Turkey, or Iraq and then be reported by those countries as imports. This is a valid criticism and cannot be overcome with the data used. However, because the paper aggregates the bilateral data into overall values, this flaw in the data does not detract from the analysis. The data, when aggregated, accounts for all Syrian exports except for those values that are unrecorded, as discussed above, and the overall value of Syrian exports is used to proxy for trends in manufacturing output.

4.6. References

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5. Conclusion

Abdulla Ibrahim

The devastation of the Syrian economy is the subject of wide consensus. The causes of its woes, however, are disputed amongst experts. While the current debate on Syria's economy is focused on the impact of sanctions, it should also consider the two other critical factors – the war itself and public policies. This report aimed to explain the confluence of these three factors on three economic sectors: the effects of war, public policies, and sanctions on trade institutions, the health sector, and manufacturing during war time. Each of the three papers addressed a sector, employing new data and approaches. The report makes a distinction between the combination of factors that led to the destruction and those that will contribute to the recovery. A comprehensive approach to understand the trajectories of destruction and possible paths for recovery is important for policy analysis and design.

The three chapters aimed at explaining how the three factors directly affect the economy's destruction and recovery. The paper on trade institutions by Omar S. Dahi examined the trends and dynamics prior to and during the war time. He highlighted the continuation elements in addition to new dynamics. The paper on the health sector by Rabie Nasser and Amr Dukmak deployed a human capabilities and political economy approach to further understand the extent of the flailing Syrian health sector. An assessment of the impact of each factor was provided and further supported by data gathered from multiple sources. The paper on manufacturing by Howard J. Shatz used mirror trade data to explain the changes within Syrian industry during wartime, relying on diverse sources to build a picture of the sector, the factors that shaped it since 2011, and that will potentially determine its future.

The chapters have contributed to the research on Syria's economy in different ways:

Firstly, the three chapters drew direct connections between pre-war dynamics and intra-war trends. For example, the informality and the blurred boundaries between economic and political/security spheres far predated the conflict. War time exacerbate these phenomena, rather than cause them. While the deterioration of the health sector started prior to the start of the conflict due to the neoliberal policies adopted in the 2000s, oil revenues and agricultural outputs also began witnessing insurmountable declines well before the crisis in 2011.

Secondly, the war exacerbated old trends but also created new ones. While informalization was a trend before and during the war, formalization and institutionalization also took place during the conflict. The financial consolidation that the Syrian government conducted included limiting the privileges of many of the cronies that proliferated since 2011 in addition to empowering official trade institutions allowing them to play a larger role in order to satisfy the growing public anger towards the deterioration of the economic situation.

Thirdly, no single factor is responsible for the Syrian economy's destruction or recovery. Omar S. Dahi showed how the three factors interact in a dynamic multi-order fashion to detrimental effect. Pre-war public policies laid the foundation for the war, which in turn afflicted the situation further. The public policies instated in response to war and sanctions have come to shape the economic structure and outcome in a second order. Other factors, such as the Lebanese economic crisis and Covid-19, in addition to the introduction of the Caesar Act, came together to affect the situation in what could be considered a third or fourth order.

Fourthly, the war is the major and primary contributor to destruction while its legacy will affect recovery, Meanwhile, public policies and sanctions are sharing more responsibility for any future recovery. War legacy, still,

is likely to continue play a role in post-conflict reconstruction settings. Since 2011, the war is the dominant contributor to the killing of Syrians, destruction of the economic infrastructure and health facilities, and the misery of the Syrian population. Public policies adopted by warring parties contributed as well via economic (financial, trade, and monetary policies) and non-economic policies. Sanctions constrained financial transactions, exchange rates, imports of oil, bringing in spare parts, and affected the institutional settings within regime circles. The three factors of war, public policies, and sanctions frequently overlap, and their effects are often inseparable.

Lastly, there is a need to distinguish between state developmental capacity and coercion capacity. The sanctions are designed to weaken the Syrian regime and limit its coercive capacity. Assessing the effectiveness of sanctions is beyond the scope of this report, however a consideration of their negative impact on the developmental capacity of the state is crucial. The widening gap of humanitarian needs in Syria is unlikely to be filled by supporting civil society efforts or a massive scale intervention by international organizations. It is challenging to distinguish between the regime and its coercive capacity, and the state and its developmental capacity, and will remain a challenge for future policy designs for Syria.

This report provides a framework for analysis and a guide to the exploration of possible paths for recovery in Syria, although despite the best intentions, it does not provide answers. The lack of accurate and updated data on Syria is likely to remain an obstacle for future researchers. Therefore, resorting to clear analytical frameworks, and refraining from assertive conclusions could help build bridges and provide an incubator for common ground. Future research could apply the framework used in this report to other important sectors for recovery such as agriculture and tourism. There could be an effort to deploy the framework on a sub-national level through comparing the three factors' impact across regions, or over time, using more nuanced data and analysis. Putting Syria into the perspective of recovery from civil wars in other cases or regions will be also useful to imagine the various pathways under different circumstances.